Integrated Solid Waste Management Plan

of the

Squaxin Island Tribe

Developed in coordination with

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with assistance from

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CHAPTER 1 : INTRODUCTION

1.1 PURPOSE

This Integrated Solid Waste Management Plan (ISWMP) has been prepared by the Squaxin Island Tribe (SIT) to establish tribal-wide solid waste management goals to be implemented by each sector of the Tribe. The plan was developed with input from departments and entities of the Tribe to reflect tribal-wide needs. Community and employee surveys were also used to help guide the development of this plan. The purpose of this plan is to:

1. Outline current waste management practices and establish tribal-wide goals for future practices;
2. Establish Squaxin Island Tribe's Solid Waste and Recycling Program;
3. Identify funding opportunities;
4. Establish authority to carry out the program by stating approval from Squaxin Island Tribal Council; and
5. Provide a base data set for future program comparison and growth.

This Plan includes the identification of existing solid waste systems, limitations of the current system, proposed practices, and a description of the Solid Waste and Recycling Program. It also includes a base data set to be used as an indicator of future growth and expansion.

1.2 PROCESS FOR DEVELOPING THE ISWMP

The development of the ISWMP is a project funded by the United States Environmental Protection Agency (EPA). Prior to receiving the grant, SIT did not have an ISWMP or an organized program for carrying out solid waste and recycling activities.

1.2.1 Leadership Circle

At initiation of this project the Solid Waste and Recycling Leadership Circle (Leadership Circle) was established as an advisory body to develop the Plan. Leadership Circle participants represented Natural Resources, Planning, Construction Management, Janitorial Services, Education, Public Works, Housing, Emergency and Safety Management, Northwest Indian Treatment Center, Executive Services, Island Enterprises, Inc., Cultural Resources, Community Development, Health and Human Services, Casino/Hotel, Housing Commission, and Logistics and Maintenance. The Leadership Circle met four times over the course of the project to determine needs of the Tribe and to review the plan.

1.2.2 Tribal Solid Waste Advisory Network (TSWAN)

In November 2010 Squaxin Island Tribe joined TSWAN with resolution number 10-113. Established in 1997 as a means to address solid waste and environmental issues in Indian Country, TSWAN is made up of 34 federally recognized Tribes throughout Washington, Oregon, Idaho, and Alaska. TSWAN provided technical assistance to the development of this Plan.

1.3 GOALS OF THE INTEGRATED SOLID WASTE MANAGEMENT PLAN

This Plan has been developed to provide the tribal decision makers and members with a set of goals and policies to implement, monitor and evaluate future solid waste activities. Goals were developed based

on needs indicated by the Leadership Circle and community and employee surveys. The following goals have been adopted for the Squaxin Island Tribe and will be the basis by which future solid waste and recycling activities are carried out:

1. Cultivate leadership collaboration in program growth;
2. Increase education and outreach to youth, community members, and employees;
3. Explore ways to make waste reduction and recycling services/infrastructure convenient;
4. Manage solid waste in a way that honors our connection with the earth; and
5. Increase awareness and opportunities related to reduction, reuse, and recycling.

CHAPTER 2 : DESCRIPTION OF COMMUNITY SERVICE AREA

2.1 COMMUNITY BACKGROUND

The people of the Squaxin Island Tribe (SIT) are descended from maritime people who lived and prospered along the shores of the southernmost inlets of Puget Sound for untold centuries. The original reservation was established in Southern Puget Sound and located downstream of seven southern inlets—Case Inlet, Hammersley Inlet/Oakland Bay, Totten/Little Skookum Inlet, Eld Inlet, Budd Inlet, Henderson Inlet, and Nisqually/Carr Inlet. The Island totals approximately 265 acres and, though currently uninhabited, continues to be used for fishing, hunting, shellfish gathering, camping, and other activities. An additional 960 acres have been purchased at Kamilche (a portion of which has been put into trust) which house the headquarters of the Tribe and a thriving community. The Squaxin Island Community at Kamilche is relatively unincorporated with a government campus, housing development, casino/hotel, tobacco factory, and some small businesses. The reservation at Kamilche lies within the unincorporated parts of Mason County, just off of Highway 101 and approximately eight miles south of Shelton and 15 miles northwest of Olympia. Table 2-1 presents a brief description of the characteristics of the Squaxin Island Tribe

Table 2-1. Characteristics of Squaxin Island Tribal Lands.

Federally Recognized/Created	**Established by the Medicine Creek Treaty in 1854**
Location	**Current residential, commercial, and administrative buildings are located near the southern inlets of Puget Sound in western Washington, approximately eight miles south of Shelton and 15 miles northwest of Olympia**
Acreage	**1,225.09 acres**
Natural Resources/Industries	**Fishing and shellfish harvesting, oyster processing, casino/hotel, tourism**
Population Data	**1,036 enrolled members**
Income sources	**Casino/hotel, tobacco, fish and shellfish harvesting, oyster processing, child development center, gas stations**

2.2 COMMUNITY ASSETS AND RESOURCES

The Squaxin Island Tribe is a historic steward and a conscientious co-manager and protector of natural and cultural resources, working in cooperation with numerous federal, state and county government agencies and organizations. The Tribe is committed to preserving, protecting and managing ancient and contemporary cultural use sites, natural resources and intact, dynamic ecosystems that are fundamental to traditional life ways, modern wellbeing, cultural values, and the histories of our people.

Our stories and culture implore us to acknowledge and deepen the innate human relationship with the earth, which includes a dedicated practice of environmental stewardship. At the same time, we are keenly aware that the Squaxin Island Tribal community's wellbeing is intrinsically linked to economic and

community development that has and will continue to result in land use changes. It is our responsibility to ensure that the wisdom of Squaxin ancestors is applied to contemporary tribal economic and community development.

2.2 CLIMATE

The climate of the area is mild, with the proximity to Puget Sound and the Pacific Ocean eliminating periods of extreme heat or cold. Average summer temperatures range from 48 to 77 degrees F and average winter temperatures range from 33 to 53 degrees F. Precipitation averages about 66 inches per year. The abundance of rainfall can cause an abundance of drainage into the wastewater treatment plant, causing the sludge to be transported more often than usual. On occasion snowfall can make local roads dangerous to drive which can affect solid waste transportation.

2.3 POPULATION AND DEMOGRAPHICS

2.3.1 Housing

The existing number of housing units on the Squxin Island Reservation is 141. Of those units, 99 are rented and managed by the Office of Housing and subject to Housing Policies and Procedures. Forty-three homes are conveyed are subject to Land Management Agreements and Tribal Code.

2.3.2 Population

The total population of the Squaxin Island reservation in 2010 was estimated at 431 persons based on data from the U.S. Census Bureau. The reservation population has remained relatively stable over the past ten years with an estimated 445 persons on the reservation in 2000. The number of enrolled tribal members, however, has increased over the past ten years. The current number of enrolled tribal members in 2011 was estimated at 1036 based on data from the Enrollment Office. Table 2-2 shows the enrollment growth in the past ten years. During that time the enrollment has increased at an average annual rate of 4%.

Table 2-2. SIT Population Growth Rate.

YEAR	POPULATION IN DECEMBER	GROWTH RATE
2001	702	
2002	728	4%
2003	783	7%
2004	833	6%
2005	891	7%
2006	918	3%
2007	939	2%
2008	998	6%
2009	1015	2%
2010	1034	2%
2011	1036	0%
Average annual growth rate		**4%**

2.3.3 Tenants and Visitors

The Little Creek Casino/Resort hosts 2,737,500 visitors from outside the reservation each year. This population inflow must be considered in the design and implementation of integrated solid waste management program for the Squaxin Island reservation.

During the summer of 2012 Squaxin Island Tribe hosted the annual Canoe Journey with 15,000 visitors. Planning for future tribal events must also be considered in the design of the Solid Waste and Recycling Program.

2.4 ECONOMY

Squaxin Island Tribe with its associated businesses is the largest employer in Mason County with a service population reaching into Thurston County. However,

the employment rate of Squaxin Island Tribal members is unknown. Tribal members have hiring preference when applying for Tribal administration and business employment. Table 2-3 shows the number of employees by sector.

Table 2-3. Squxin Island Tribal and Business Employees as of June 2011.

	TOTAL EMPLOYEES	SQUAXIN EMPLOYEES
Government Administration	225	91
Commercial and Industry	183	53
Little Creek Casino/Hotel	727	50

Tribal government includes Tribal Administration, Museum Library and Research Center, Natural Resources, Family Services, Ta-Ha Buts Learning Center, Clinic, Outpatient Services, Northwest Indian Treatment Center, Public Safety, and Legal Services. Tribal administration employs 255 employees, 96 of which are tribal members.

As of June 2011 Little Creek Casino Resort employed 727 employees, 50 of which are Squaxin Island Tribal Members and 17 are spouses of tribal members. Island Enterprises, Inc. and associated tribal businesses employ 151 employees, 51 of which are tribal members.

CHAPTER 3 : SOLID WASTE PROGRAM STRUCTURE AND ADMINISTRATION

3.1 PROGRAM ADMINISTRATION AND MANAGEMENT

Squaxin Island Tribe has not had a specified department or office for managing solid waste. Tribal Government and housing garbage and recycling collection is currently administered by the Department of Community Development. Island Enterprises, Inc. administers garbage and recycling collection for Tribal businesses and entities while the garbage and recycling at Little Creek Casino/Resort is administered by in-house personnel. Outreach is administered informally by departments and entities as needed. Illegal dumping and burning is enforced by Tribal Police and the Office of Housing. Table 3-1 lists personnel who participate formally or informally in the management of solid waste.

Table 3-1. Personnel Involved in Management of Solid Waste.

POSITION	DUTIES
Program Manager	The Program Manager in the Department of Planning and Community Development currently manages garbage and recycling collection for Tribal Government program and the residential community. The Program Manager oversees the contract between Squaxin Island Tribe and the local hauler, monitors and purchases totes, and tracks revenue and expenditures.
Housing Enforcement Officer	The Housing Enforcement Officer reports illegal dumping and vehicle abandonment in residential areas.
Tribal and Housing Maintenance Personnel	Tribal and Housing Maintenance Personnel remove illegally dumped garbage, attempt to identify responsible parties, and report responsible party to Tribal Police. Tribal maintenance personnel remove faulty equipment from government buildings and dipspose accordingly while Housing maintenance personnel remove faulty equipment from homes and dispose accordingly. Maintenance personnel oversee the community dumpsters during community cleanup events.
Tribal Police	Tribal police enforce fines for illegal dumping and burning.
Utilities Specialist	The Utilities Specialist operates and maintains the wastewater treatment plant.
Janitors	Janitors collect garbage and recycling and dispose in appropriate collection containers.
Health Officer	The Health Officer provides emergency response to hazardous spills and removes contaminated solid waste. The Health Officer administers and updates the Tribe's Emergency Management Plan.
Construction Manager	The Tribal Construction Manager oversees the removal of construction waste.

3.1.1 Tribal Codes

Squaxin Island Tribe is in the process of developing a Solid Waste and Recycling Code. Preexisting sections of Tribal Code are described in Table 3-2.

Table 3-2. Squaxin Island Tribe Laws and Codes Regarding Solid Waste Management.

LAW AND CODE NUMBER	DESCRIPTION
Squaxin Island Tribal Code: Title 9 Law and Order – Chapter 9.12.940: Littering http://www.squaxinisland.org/wp/wp-content/uploads/2010/04/T9LawAndOrder.pdf	Tribal regulation regarding littering.
Squaxin Island Tribal Code: Title 9 Law and Order – Chapter 9.12.950: Abandoning refrigeration equipment http://www.squaxinisland.org/wp/wp-content/uploads/2010/04/T9LawAndOrder.pdf	Tribal regulation regarding refrigeration abandonment.
Squaxin Island Tribal Code: Title 9 Law and Order – Chapter 9.12.962: Placing trash, soap, or other substances in ponds or fountains prohibited http://www.squaxinisland.org/wp/wp-content/uploads/2010/04/T9LawAndOrder.pdf	Tribal regulation regarding placing foreign substances in public ponds or fountains.
Squaxin Island Tribal Code: Title 9 Law and Order— Chapter 9.16: Fire Code http://www.squaxinisland.org/wp/wp-content/uploads/2010/04/T9LawAndOrder.pdf	Tribal regulation regarding limitations on ceremonial or religious burning, open burning, and recreational burning. Addresses the automatic discontinuance of open burning.
Squaxin Island Tribal Code Title 11 Buildings and Utilities – Chapter 11. 08: Utility Code http://www.squaxinisland.org/wp/wp-content/uploads/2010/04/T11BuildingsUtilities.pdf	Establishes rules and regulations for operation, maintenance and management of various public utilities owned and operated by the Squaxin Island Tribe, including curbside residential garage collection.

3.1.2 Federal Regulations

Native American tribes play an increasingly critical role in regulating the environment on Indian lands. Although tribes are increasing their own regulatory authority, the Environmental Protection Agency retains jurisdiction over all pollution sources until a program has been delegated to the tribe. Indian tribes must qualify for the "delegation" of a program under the various environmental protection laws administered by the EPA. A list of Federal laws and regulations concerning solid waste management issues is included in Appendix A.

3.1.3 State Regulations

State power over activities on Indian reservations is generally very limited. Tribes are not required to follow state laws and regulations, but may choose to voluntarily incorporate these (if applicable) when addressing environmental issues. Squaxin Island Tribe must follow state regulations when transporting any solid waste off the reservation. A list of State laws and regulations in Washington State is included in Appendix B.

CHAPTER 4 : CURRENT AND PROPOSED WASTE MANAGEMENT PRACTICES

4.1 CURRENT WASTE MANAGEMENT PRACTICES

4.1.1 Solid Waste Generation

Squaxin Island Tribe's waste stream is primarily generated in the Kamilche Valley by tribal housing, the government campus, and tribal businesses, with some waste generation by Tribal-affiliated entities outside the area. Characteristics of the waste stream can vary from households to government buildings to businesses. It is therefore useful to categorize the Tribe's generators into sectors. Squaxin Island Tribe's waste stream is best categorized into the following three sectors:

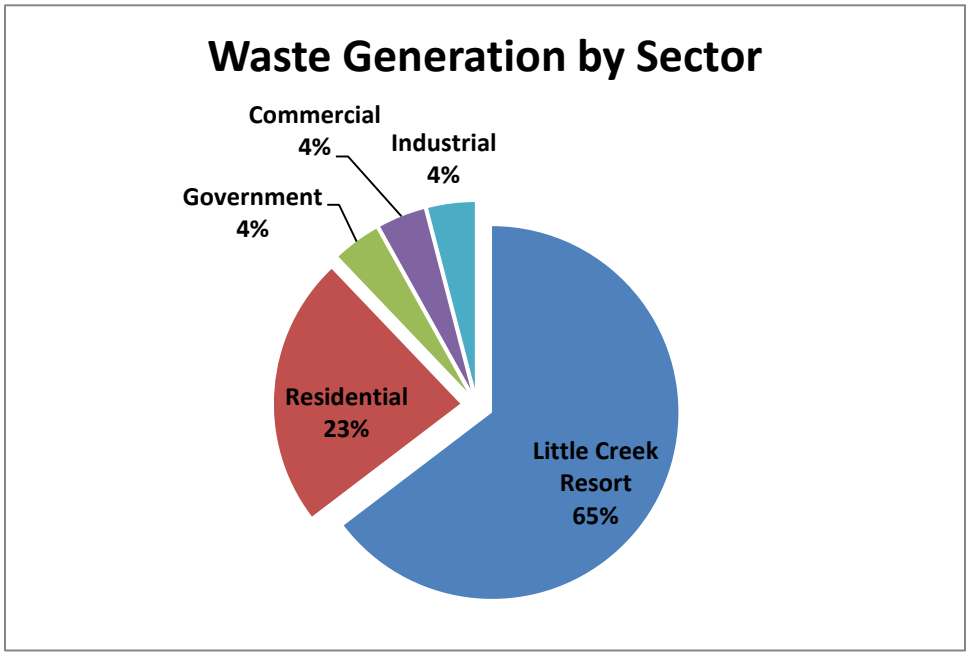
- The *Residential Sector* includes curbside collection of waste and recycling generated by Tribal housing as well as rental, hauling, and disposal charges for semiannual community cleanup events.
- The *Government Sector* includes all buildings and organizations with garbage and recycling managed by Tribal Administration, including the administration building, museum, maintenance shed, natural resources building, family services building, learning center, clinic, outpatient services building, Northwest Indian Treatment Center, public safety building, legal services building, Arcadia Boat Launch, Wastewater Treatment Plant, and the sequencing batch reactor.
- The *Commercial Sector* includes all commercial and industrial businesses, including Island Enterprises, Inc., Kamilche Trading Post (KTP) and KTP Express, The Landing, Child Development Center, and Business Development Center. For the purpose of this plan, Little Creek Casino-Resort is included separately.

The generation rate by sector for the year 2010 is shown in Tables 4-1 and 4-2. A detailed table of waste generation with associated costs is shown in Appendix C.

Table 4-1. Waste Generated by Squaxin Island Tribe in 2010, by Sector.

SECTOR	TONS DISPOSED	TONS DIVERTED	TONS GENERATED (DISPOSED + DIVERTED)
Residential	355	11	366
Government	49	13	63
Commercial	52	12	63
Casino-Resort	938	62	1,000
Industrial	49	24	66
TOTAL	**1,443**	**122**	**1,565**

Table 4-2. Waste Generated by Tribal Sector in 2010.



4.1.2 Waste Stream Composition

A detailed waste composition study has never been performed for SIT or for Mason County. Each year the Washington State Department of Ecology conducts a statewide waste characterization study using a sampling from ten counties across the state. A summary of the 2009 Washington Statewide Waste Characterization Study is shown in Table 4-3 and it is assumed that SIT has a similar waste stream.

Table 4-3. Waste Composition of Squaxin Island Tribe.

MATERIAL	COMPOSITION BY PERCENTAGE
Organics	27.20%
Paper	19.20%
Construction materials	12.80%
Plastic	11.40%
Wood debris	8.80%
Consumer products	7.10%
Metal	6.30%
Hazardous/special wastes	4.00%
Glass	2.40%
Residues	0.60%

It is useful to understand the composition of the waste stream by sector. For this purpose the residential waste composition is shown in table 4-4 and the commercial waste composition is shown in table 4-5.

Table 4-4. Residential Waste Composition of SIT.

MATERIAL	COMPOSITION BY PERCENTAGE
Organics	41.20%
Paper	21.30%
Plastic	12.70%
Hazardous/special wastes	7.00%
Consumer products	6.20%
Metal	4.30%
Construction materials	2.70%
Glass	2.70%
Wood debris	1.10%
Residues	0.80%

Table 4-5. Commercial Waste Composition of SIT.

MATERIAL	COMPOSITION BY PERCENTAGE
Organics	23.90%
Paper	22.00%
Plastic	12.50%
Construction materials	17.60%
Wood debris	8.30%
Metal	6.70%
Consumer products	4.00%
Glass	1.80%
Hazardous/special wastes	2.80%
Residues	0.30%

In addition, the Little Creek Casino-Resort conducted a waste characterization study of all restaurants. The results, shown in Table 4-6, are conservative numbers as they do not include waste generated from special events, the golf course, or private parties.

Table 4-6. Waste Composition of Little Creek Casino-Resort Restaurants.

MATERIAL	COMPOSITION BY ANNUAL TONS
Glass	7.5
Plastic	10.5
Metal	10.9
Organic Trash	385

4.1.3 Future Generation and Growth Rate

The population growth rate of a reservation is typically used to project waste generation and program growth into the future. However, the growth rate of the Squaxin Island Reservation is not a good indicator of future waste generation. The reservation population has remained relatively stable over the past ten years while the enrollment rate and services provided by the Tribe have continued to grow. For this purpose the waste projection table shown in table 4-7 is based on the average annual enrollment growth rate of 4%. The table projects the waste generation of the next ten-year planning period.

In order to maintain current levels of service, the Squaxin Island Tribe would need to provide waste management programs for an additional 2,270 tons generated by 2020.

Table 4-7. Waste Generation Projection.

YEAR	TONS GENERATED	INCREASE TONAGE
2010	1,565	--
2011	1,624	59
2012	1,686	62
2013	1750	64
2014	1,816	66
2015	1,885	69
2016	1,956	71
2017	2,031	74
2018	2,107	77
2019	2,187	80
2020	2,270	83

4.1.4 Waste Collection, Transfer, and Disposal

Contracted Garbage and Recycling Services

Collection is provided through contracted services with Mason County Garbage and Recycling (MCG) and the waste is hauled to the Mason County Transfer station and ultimately disposed in the Roosevelt Regional Landfill (owned and operated by the Rabanco Company of Seattle) in Klickitat County, Washington.

Residential Curbside Garbage Collection

Residents choose a combination of 35-, 65-, and 95-gallon garbage totes to meet their disposal needs and are responsible for placing their trash at curbside for waste collection on Mondays. Residents also have access to the Mason County Transfer Station (12 miles north of reservation) to dispose of household hazardous waste.

Community Cleanup Events

Tribal Council and the Office of Housing each sponsor a community cleanup event in the Fall and Spring. Mason County Garbage and Recycling rents four 40-yd containers and provides the hauling service to the Mason County Transfer station.

Community Recycling

Residents may choose to recycle through the residential curbside collection program at a small cost. Residents are responsible for placing their recyclables at curbside for collection every other Monday and MCG transports the recyclables to the appropriate area markets. A community recycling bin is also available and free of cost to the community and additional recyclables may be taken to the Mason County Transfer station or to local stores or businesses.

Business and Administration Garbage and Recycling

Businesses and administration buildings are responsible for disposing of their waste in a waste collection container, typically located adjacent to their building. They are also responsible for placing their recyclables in designated collection containers. Mason County Garbage and Recycling collects and transports garbage separately from paper recycling and commingle recycling to the appropriate facility located off the reservation. Garbage collected at Northwest Indian Treatment Center is transported by EGH Disposal and garbage from The Landing is transported by LeMay. Administrative paper shredding is transported by LeMay Mobile Shredding. Janitors at the administrative buildings utilize the community recycling bin for recyclables.

4.1.5 Special Wastes

Ink Toners

Ink toners from the administrative buildings are currently collected by the Department of Information Services (DIS) and personally transported to Staples in Olympia, WA. SIT is given a store credit for these recyclables. Ink cartridges are also collected by DIS and are donated to local schools or to school children for fundraising.

Electronic Waste

Computers from the administration buildings are collected by Department of Information Services and taken by Jim Dandy Computer Repair in Olymipa, WA where they are refurbished or recycled. Tribal members are then referred to the company for purchasing used computers at a discount.

Residents and Tribal programs and businesses have access to local E-cycle, Washington sites, Shelton Goodwill and Wilson Recycling.

Construction and Demolition

Construction, demolition, and renovation contractors are responsible for providing their own garbage and recycling. Material is typically collected in 20- or 40-cubic yard open-top roll-off containers. Currently, tribal members and contractors must transport all C&D debris off the reservation for disposal. MCG is typically utilized for hauling the waste to the county transfer station.

Household Hazardous Waste and Tires

The reservation generally does not provide household hazardous waste (HHW) or tire collection, nor does it partner with the local community for collection events. It is left to the discretion of each resident to properly dispose of HHW and tires. HHW can be taken free of charge to the Mason County Solid Waste Facility. Tires can be disposed of for a small fee at the Mason County Solid Waste Facility, Les Schwaub, Cary's Tire and Wilson Recycling. It is likely, however, that HHW is disposed of in the garbage and tires are disposed of through the community clean-up events.

4.1.6 Debris Management

Squaxin Island Tribe currently does not have designated debris management personnel or procedures for waste removal following an emergency or disaster. Emergency and disaster waste cleanup will be handled according to SIT's Comprehensive Emergency Management Plan. Ongoing professional development of Solid Waste and Recycling Program staff in the area of debris management will be necessary.

4.1.7 Illegal Dumping and Burning

Squaxin Island Tribal lands do not have any known open dumps. However, the reservation does experience illegal dumping on lands adjacent to the housing area. Occasionally a bag of trash or a pile of carcass will be found in the woods just outside reservation housing. Trash is currently cleaned up by tribal or housing maintenance and attempted to be identified. When identified, the responsible party if fined. Carcass is generally left to decay.

Junk vehicles are impounded if found on tribal public lands, such as the apartment parking lot. They are tagged by the Housing Enforcement Officer or Tribal Police then impounded through a local tow company if not removed within 24 hours.

Burning of garbage does occur on the reservation. The Solid Waste and Recycling Code has been developed to reflect the EPA Region 10 FARR Rule.

4.1.8 Waste Reduction and Reuse

Waste reduction and reuse prevents materials from entering the waste stream thereby reducing demands on transfer and disposal facilities. It reduces the overall impact on the earth. Reduction and reuse includes waste elimination, product reuse, and composting. While some employees, programs and residents employ personal reduction practices, SIT does not have a formally organized waste reduction and reuse system.

4.1.9 Facility and Equipment: Descriptions and Capacities

Wastewater Treatment Plant

SIT has a Wastewater Treatment Plant (WWTP) which collects wastewater from all local tribal buildings and recycles the water for the golf course. The facility has the capacity to collect sludge for drying but the facility does not currently have a dryer and the sludge is transported by AAA Septic. This is a costly option for the Tribe and a cost benefit analysis of purchasing a dryer is expected to be completed in the next year.

Totes

All residents utilize garbage totes which are owned by Squaxin Island Tribe. All other containers and totes are the property of the waste/recycle hauler and are either leased or borrowed by the Tribe. The Tribe's trucks are occasionally used to transport maintenance waste to the county transfer station. Available equipment is shown in Table 4-8. Squaxin Island Tribe also has 60 clearstream containers for loan.

Table 4-8. Equipment Owned and Leased for the Collection and Transfer of Solid Waste.

EQUIPMENT	BOUGHT/LEASED	YEAR	COST	LIFE EXPECTANCY
95-gallon waste carts	64 purchased 59 in use 15 destroyed 0 extra	2005	$44.00-53.72/tote	10-year warranty
65-gallon waste carts	90 purchased 68 in use 14 destroyed 8 extras	2005	$41.00- $47.02/tote	10-year warranty
35-gallon waste containers	77 purchased	2005	$38.00- $40.32/tote	10-year warranty
2-yd dumpster	9 Leased	N/A	Rental: $13.62/ month	N/A
1.5-yd container	2 Leased	N/A	Rental: $9.43/ month	N/A
Blue, green, and black cleartainers with lids and transporter	20 of each color owned	2012	$5,596	3-year warranty on lids. Lifetime warranty on frames and transporter.

4.1.10 Revenue

SIT currently offsets the cost of residential curbside collection through residential fees. Residents pay a monthly fee for their choice of 35-, 65-, or 95-gallon totes. Residents also pay a monthly fee for 95-gallon single-stream recycling totes.

4.1.11 Regional Infrastructure

Mason County Solid Waste Facility

The Mason County Solid Waste Facility is located 12 miles north of the SIT reservation. The facility is open Tuesday through Saturday 8am-4pm, offering commercial and non-commercial solid waste disposal and recycling services. A current price list can be found at http://www.co.mason.wa.us/utilities_waste/solid_waste/rates.php.

The following items can be recycled at this location for free:

- Newspaper and magazines
- Mixed paper
- Corrugated cardboard
- Brown paper bags
- Glass
- #1 Pete Plastic Bottles
- #2 HDPE Bottles and Jugs
- Tin cans
- Aluminum cans
- Motor oil
- Transmission fluid
- Antifreeze
- Clothing
- Household rechargable batteries

In addition, automobile batteries are accepted for a small fee.

Mason County Household Hazardous Waste Facility

Located at the Mason County Solid Waste Facility, Household Hazardous Waste Facility offers free disposal of household hazardous waste to all Mason County residents on Fridays 8am -12pm. Materials accepted include:

- Used motor oil
- Oil filters
- Transmission fluid
- Household batteries
- Oil based paint
- Pesticides
- Herbicides
- Fluorescent lights

The Mason County HHW Facility is for HHW only and will not accept small quantity generator waste.

Kitsap County Household Hazardous Waste Facility

Located 43 miles northeast of the reservation, the Kitsap County Household Hazardous Waste Facility can accept small quantity generator waste from Mason County for a fee. More information about this facility can be found at http://www.kitsapgov.com/sw/modwaste.htm.

Silver Springs Organics

Silver Springs Organics is a commercial composting facility located 30 miles south of reservation in Ranier, WA. This facility accepts the following for a fee:

- Mixed yard/garden waste
- Wood waste
- Pre and post consumer food waste
- Farm waste

The current incoming waste recycling fees can be found at **http://www.silverspringsorganics.com/fees.html**.

Wilson Recycling

Wilson Recycling is an award winning local recycler located eleven miles north of the SIT reservation. They are open seven days a week 8:30am to 5pm. A current list of accepted recyclables can be found **www.willsonrecycling.com**. They participate in the E-cycle, Washington program and accept more recyclables than accepted by Mason County or Mason County Garbage and Recycling.

2good2toss.com

Mason County is one of 13 counties participating Washington State Department of Ecology's 2good2toss.com program. Through this website residents can exchange used items in an effort to reuse items that would otherwise go into the waste stream.

Construction and Demolition Recycling

There are many additional local businesses which can be utilized for construction and demolition recycling. These include:

- Concrete Recyclers, Tumwater
- Hand in Hand Recycling, Centralia
- J&J Salvage, Tumwater
- Jones Quarry, Tumwater
- Liberty One Resources-Weiks Corporation, Tumwater
- Mason County Wood Recyclers, Shelton
- McTurnal Enterprises, Kamilche
- Quality Rock, Littlerock
- Recovery One, Tacoma
- Schnitzer Steel, Tacoma
- South Sound Steel & Recycling, Tumwater
- Woodworth & Co

4.1.12 Current Contracts

Mason County Garbage and Recycling

Mason County Garbage and Recycling (MCG) is a private Waste Connections Inc. company providing collection, transfer, and recycling services to the Shelton, Mason County area. Services provided include:

- Residential curbside garbage collection
- Residential curbside recycling collection
- Commercial containers and collection
- Industrial containers and collection
- Roll off containers and collection
- Storage containers

MCG can also provide a compost collection service to Silver Springs Organics. Current services and price lists can be found at http://www.masoncountygarbage.com/.

LeMay Mobile Shredding

LeMay Mobile Shredding provides hauling service and containers for confidential document shredding.

4.1.13 Public Involvement

Public Surveys

A survey was conducted at the May 2011 General Body Meeting and 56 Tribal members and spouses responded. The complete results can be found in Appendix D.

The results indicate that the population surveyed found waste reduction, reuse, and recycling to be important because it is good for the environment. As a trend, tribal members want to recycle and seek out opportunities to do so, though participation increases as convenience increases. The most commonly recycled items can be recycled on the reservation or through curbside recycling. The least commonly recycled items are not commonly recycled because people do not know where to do so. The surveys indicated the following needs:

1. A need for education on a variety of topics including where and how to recycle, composting, and where to dispose of bulky items such as boats, vehicles, parts, carcasses, etc;
2. A need to expand recycling opportunities; and
3. A need for composting services.

Employee Surveys

Surveys were conducted in Spring 2011 to determine the level of interest and area of needs for tribal administration and business employees. Employees have a desire to recycle and opportunities are available in most work environments, though convenience could be improved. Patrons and visitors are able to recycle in most departments and business, though it is limited in some locations and not available in others.

Departments and businesses are challenged when attempting to reduce, reuse, and recycle because of the difficulty in changing habits, lack of interest from employees, lack of training, and lack of funds, respectively. In summary, employees indicated the following needs:

1. More convenient recycling opportunities for employees and patrons;
2. Training on available reduction, reuse, and recycling opportunities and ideas;
3. Funds to implement reduction, reuse, and recycling opportunities;
4. Organized collection system for hazardous waste materials; and
5. Departmental and business policies on waste reduction, reuse, recycling, and positive procurement.

Leadership Circle

The Squaxin Island Solid Waste and Recycling Leadership Circle (Leadership Circle) is an advisory body composed of representatives from businesses and departments throughout the tribe who have a vested interest in Solid Waste and Recycling Programs. The Leadership Circle was organized to provide feedback and support in the development of this plan. In a work session conducted in April 2011 the following needs were indicated:

1. Leadership to champion solid waste management issues and provide guidance and traction for action;
2. Awareness and willingness;
3. Solid waste and recycling education and outreach programs and activities;
4. Funding and a clear link to short and long-term cost benefit;

5. Infrastructure and resources such as staff, budget, policies, and guidelines;
6. Employee training;
7. Incentives and rewards; and
8. Improved enforcement.

4.2 PROPOSED WASTE MANAGEMENT PRACTICES

4.2.1 Limitations and Inefficiencies of the Current System

Squaxin Island Tribe currently requires residential curbside garbage collection and offers recycling opportunities to residents. Garbage and recycling opportunities are available to tribal government and business entities. This system meets basic waste management needs but has some limitations. The system does not take full advantage of local recycling opportunities, does not address waste stream reduction, does not incorporate composting opportunities, and household hazardous waste disposal opportunities are limited and inconvenient.

4.2.2 Waste Management Goals

Current waste management practices were reviewed and a list of issues was developed as a first step in developing the solid waste management plan. Based on the issues identified, the following goals for the solid waste management plan have been adopted.

1. Increase leadership buy-in and direction to help develop a solid waste management program including policies such as positive procurement,
2. Increase education and outreach to youth, community members, and employees,
3. Explore ways to make waste reduction services convenient,
4. Manage solid waste in a way that honors our connection with the earth, and
5. Increase awareness and opportunities related to reduction, reuse, and recycling.

Note: The following assumptions should be made regarding managing solid waste in a way that honors our connection with the earth:

1. Honoring our connection with the earth means *reducing* the resources we take from the earth,
2. Honoring our connection with the earth means *reusing* the resources we have already taken from the earth to minimize further extraction of the earth,
3. Honoring our connection with the earth means *recycling* the resources that can no longer be reused to minimize further extraction from the earth, and
4. Materials *disposed* into the earth do not contain substances that will harm the earth, the animals, or our families.

4.2.3 Alternatives Analysis

The current waste management practices and limitations were considered and alternatives were developed to meet waste management goals. Alternatives were developed for disposal, recycling, composting, and household hazardous waste disposal practices.

Disposal Alternatives

Collection options include curbside collection, drop-off sites, direct access to an off-reservation transfer station, access to an on-site transfer station, or access to an on-site landfill. Table 4-8 compares these options. Squaxin Island Tribe currently utilizes curbside collection and has access to an off-reservation

transfer-station and will continue to utilize these options. However, expanding disposal options may reduce some illegal dumping on tribal lands adjacent to the Tribe's housing development and reduce bulky materials from accumulating in residential yards. Table 4-9 shows current practices and compares expansion alternatives.

Recycling Alternatives

Expanding recycling options and/or requirements may increase the amount of solid waste diverted from the waste stream. Table 4-10 shows current practices and compares alternatives that would increase the amount of solid waste diverted from the waste stream.

Composting Alternatives

Squaxin Island Tribe currently does not compost food or yard waste. Providing composting opportunities would divert a large amount of solid waste from the waste stream, particularly from food waste-producing programs and businesses. Table 4-11 shows alternatives to current composting practices.

Household Hazardous Waste Alternatives

County HHW disposal opportunites are currently inconvenient for residents. By providing HHW collection opportunities SIT would divert HHW from entering the waste stream. Table 4-12 shows alternatives to current HHW collection alternatives.

Construction and Demolition Waste Alternatives

Construction, demolition, and renovation contractors are responsible for providing their own garbage and recycling and are not required to divert materials from the waste stream. There is also no system in place to ensure that hazardous materials are disposed of properly. Based on Table 4-2 C&D waste makes up approximately 13% of Squaxin Island Tribe's waste stream and monitoring procedures would help divert a relatively large volume of materials from the waste stream.

No alternatives are currently being considered in this ISWMP for C&D waste, as options for these materials are still being explored and developed. Alternatives for C&D waste will be developed as part of the work plan for the next three years.

Table 4-2. Reservation Collection Options.

Collection Options	Cost- Effective		Criteria Important To Squaxin Island Tribe		
	Cost-Effective for Tribe	**Affordable for Community Members**	**Convenience for Community Members**	**Minimizes Litter, Odor, Dust, Noise, and Vermin**	**Potential for Source Reduction and Recycling**
Curbside Collection (Individual household or shared with neighbors)	• Cost-effective if paid for by tribal members through fees. • Tribally operated service can lower costs, but requires investment in collection vehicle and staff	• Typically costs more than drop-off sites or transfer stations. • Tribal subsidies can make it affordable for community members. • Community participation increases as disposal options become more affordable.	• Extremely convenient for community members. • Minimal effort to place trash outside of a home or business for collection. • Fosters high participation rates and reduces illegal dumping incidents.	• Waste is stored outside for a short time before it is collected, reducing litter, odor, and vermin problems. • Noise and dust from collection vehicles are limited.	• Convenience encourages recycling. • Combining with Pay-As-You-Throw waste disposal creates incentive for recycling. • Requires separate containers and possibly separate collection vehicles. • Sorting of recyclables needed before sale to processors.
Drop-Off Sites	• Costs for transporting waste from consolidated points (drop-off sites) to transfer station/ landfills are lower than costs transporting waste from individual homes and businesses to transfer station/ landfills.	• If not subsidized, tribal members will pay more for curbside collection than to use drop-off sites or transfer stations. • Direct access to a single, centrally located transfer station is less expensive than consolidating and transporting materials from multiple drop-off sites.	• Less convenient than curbside pickup service, but more convenient than direct access to transfer station. • Convenience increases with multiple drop-off sites. • As convenience increases, participation increases and illegal dumping decreases.	• Storing large quantities of waste at one site for more than a few hours can produce litter, odor and vermin problems. • Litter can accumulate if sites are not cleaned frequently. • Staffing, fencing, or enclosed sites minimizes these problems. • Appropriate site selection can minimize noise and dust impacts.	• Separate collection bins required eliminating need for sorting of recyclables before sale to processors. • Providing free recycling with Pay-As-You-Throw waste disposal creates incentive to recycle. • Convenience dependent upon number of sites, locations, and hours of operation. • Can arrange for direct pickup from sites by processors.

Collection Options	Cost- Effective		Criteria Important To Tribes		
	Cost-Effective for Tribe	**Affordable for Community Members**	**Convenience for Community Members**	**Minimizes Litter, Odor, Dust, Noise, and Vermin**	**Potential for Source Reduction and Recycling**
Direct Access to Transfer Station	• If the tribe does not operate its own transfer station, it can enter an agreement with a surrounding town or county. • Tribe can compensate surrounding town or county for direct assess to a transfer station off the reservation. • Collection costs increase if tribe compensates town or county from tribal funds.	• Tribe can reduce the tipping fees or solid waste fees it charges tribal members. • Tribe does not have to pay for transportation to a consolidation point. • Although these costs are not reflected in the tipping fees or solid waste fees, tribal members absorb them.	• Not convenient if transfer station is located far away from the tribal members who will be using it. • Days and hours of drop off sites may not be convenient	• Storing large quantities of waste at one site for more than a few hours can produce litter, odor and vermin problems. • Litter may accumulate if sites are not cleaned frequently. • Staffing, fencing, or enclosing sites minimizes these problems. • Appropriate site selection can minimize noise and dust impacts.	• Requires separate areas and containers for recyclables. • Combining free recycling with Pay-As-You-Throw waste disposal creates incentive to recycle. • Can sort to reduce contamination, bale for easier handling, or store at facility until find acceptable market price.

Adapted from the Tribal Decisions-Maker's Guide To Solid Waste Management

Table 4-3. Disposal Alternatives Analysis.

Option	Net Annual Program Financial Cost	Social-Environmental Cost	Recommendation
Currrent Practice: Contracted mandatory residential curbside collection. Residents pay for mandatory curbside garbage collection. SIT pays for totes.	**$3,500**	**Pro:** Convenient for residents. SIT's discount allows for leverage to reduce cost to residents or pay for additional program costs. **Con:** Residents are required to pay for garbage collection. SIT subsidizes delinquent payments.	**Continue**--Mandatory curbside collection optimizes the amount of garbage removed from the reservation on an ongoing basis. Contracted curbside collection is the most cost-efficient for a small reservation.
Current Practice: Contracted semiannual community dumpsters. Office of Housing and Tribal Council fund four 40-yd dumpsters twice each year.	**$6,000-$8,000**	**Pro:** Residents can conveniently dispose of bulky items. **Con:** Only available to residents two times each year. SIT subsidizes the events in whole. Dumpsters are too tall for residents.	**Continue**--Consider expanding the event to include recycling (see Alternative 5 in tablle 4-10.) Consider building docks.
Current Practice: Contracted government waste collection.	**$11,000**	**Pro:** Contracted services are convenient for SIT. **Con:**	**Continue**--Contracted services is the most cost-efficient way to remove government waste from the reservation.
Current Practice: Businesses contract for waste collection.	**$0**	**Pro:** No cost to SIT. **Con:**	**Continue**--Contracted service is the most cost-efficient for a small reservation.
Current Practice: Sludge removal.	**$100,000**	**Pro:** No up-front capital costs. **Con:** High long term financial cost.	**Continue--**until a cost-benefit analysis has been conducted for sludge dryer.

Option	Net Annual Program Financial Cost	Social-Environmental Cost	Recommendation
Alternative 1: Borrow collection carts. Borrow collection carts from hauler rather than purchasing.	**$0**	**Pro:** SIT does not pay for totes. **Con:** Replacement of totes will take longer. Reduces discount leveraging with the hauler.	Decision will be made at a later time.
Alternative 1: Animal carcass disposal. Provide a means for disposing of animal carcass.	**$637**	**Pro:** Reduce illegal dumping of wild animal carcasses **Con:** Could have unpleasant odor. Unlikely to be used properly; difficult to triple bag and lift heavy carcass into dumpster	**NO--**Survey community needs at this time.
Alternative 2: Marine equipment removal. Remove boats and other marine equipment as applicable.	**$4,000**	**Pro:** Reduce the number of unused boats on the reservation. Service would be open to conveyed and rented homes. **Con:** Service can be costly. May not be necessary after the pre Canoe Journey cleanup.	**NO--**Reassess community needs every 3-5 years.

Table 4-4. Recycling Alternatives Analysis.

Option	Net Annual Program Financial Cost	Social-Environmental Cost	Recommendation
Current Practice: Optional residential curbside recycling. Squaxin Island Tribe contracts with local hauler to collect single-stream curbside recycling. Residents pay for the service.	**$0**	**Pro:** Convenient for residents. **Con:** Recyclables limited to plastic bottles, aluminum cans, and paper. Does not take full advantage of local recycling opportunities.	**Continue**--Residents can continue to pay for this convenience.
Current Practice: Government contracted recycling collection. Government programs pay for commingle or paper recycling and local hauler collects the recycling.	**$2,500**	**Pro:** Recycling is confusing, particularly for employees from outside Mason County. **Con:** Recyclables limited to plastic bottles, aluminum cans, paper, and glass. Does not take full advantage of local recycling opportunities	**Continue--**Until a satellite recycling center is in place (see Alternative 6). Staff training is needed for proper recycling.
Current Practice: Community recycling container. Residents drop off plastic bottles, aluminum cans, and paper at a centralized container.	**$2,400**	**Pro:** Free for residents **Con:** Less convenient for residents than curbside recycling. Tribe subsidizes this service. Does not take full advantage of local recycling opportunities.	**Discontinue**--Continue curbside collection as an alternative.
Current Practice: Volunteer recycling. A volunteer from the community collects appliances from conveyed homes and recycles items through Twin Harbor Recycling.	**$0**	**Pro:** No cost to SIT. **Con:** Volunteerefforts are not always consistent and reliable. Recycling rates are not tracked.	**Continue--**At this time this recycling effort appears to be effective and is offered at no additional cost to SIT.

Option	Net Annual Program Financial Cost	Social-Environmental Cost	Recommendation
Current Practice: Residential vehicle removal. Office of Housing arranges for junk vehicle removal upon owner's request.	**$0**	**Pro:** No cost to SIT. Available to rented and conveyed homes. **Con:** Junk vehicles can remain on properties for extended periods of time creating a potential for vermin and pollution.	**Continue--**Could be a potential revenue generator for Office of Housing or Solid Waste and Recycling Program if taken to Wilson Recycling.
Current Practice: Residential Appliance take back program. When the Office of Housing orders new appliances through Lowes the company collects and recycles the old appliances.	**$0**	**Pro:** No cost to SIT. **Con:** Recycling service only available to rental units. Service is inconsistent.	**Continue--**At this time this recycling effort appears to be effective and is offered at no additional cost to SIT.
Alternative 1: Incentive-based residential curbside collection: Raise disposal rates to Mason County rate and use excess funds to subsidize curbside recycling.	**$0**	**Pro:** Increase residential recycling rate. No extra cost to SIT. Recycling would be offered at a reduced cost or free for residents. **Con:** Substantial garbage collection rate increase. There are very few residents who would benefit financially from the changes.	**YES--**Residents may be more open to recycling additional materials not collected at the curb if they are not required to do curbside collection.
Alternative 2: Incentive-based mandatory curbside collection. All residents would be required to pay for curbside recycling but disposal rates would be raised and recycling offered at a discount or for free.	**$0**	**Pro:** Increase residential recycling rate. No extra cost to SIT. **Con:** Substantial garbage collection rate increase.	**NO--**Alternative 1 would would be a more favorable approach.

Option	Net Annual Program Financial Cost	Social-Environmental Cost	Recommendation
Alternative 3: Mandatory business recycling. All businesses would be required to contract for a commingle service at minimum.	**$0**	**Pro:** Increase business recycling rate. **Con:** May not be cost effective for businesses.	A waste audit would help businesses assess needs.
Alternative 4: Expanded recycling box. A 20-yd collection box would be available to collect electronics and small appliances for recycling.	**$1,575**	**Pro:** Convenient and consistent access to electronics recycling. **Con:** Tribe will need to subsidize.	**No--**Not necessary with biannual recycling pickup (see Alternative 6).
Alternative 5: Education and outreach. Provide ongoing education and outreach opportunities.	**$500**	**Pro:** Takes advantage of local recycling opportunities **Con:** If outreach is the only tool used for increasing recycling it will not improve convenience.	**YES**--Ongoing education and outreach will be necessary for any chosen recycling alternatives.
Alternative 6: Expand biannual cleanup to include recycling pick up. Contract with local recycler to collect bulky residential recyclables the week before biannual dumpsters arrive.	**$0**	**Pro:** Reduce cost of binannual disposal fees **Con:** Bulky material recycling only available two times each year.	**YES**--Recycling pick-up can be used for electronics and some bulky items at no extra cost to SIT.
Alternative 7: Satellite recycling center. Develop a plan to partner with Wilson Recycling to establish a satellite recycling facility at Kamilche.	**TBD**--Potential cost or revenue source	**Pro:** Most convenient and expansive recycling opportunity for residents, government programs, and businesses. Provides job opportunities for full time and temporary employees. **Con:** Recyclables will not be diverted until the recycling center opens.	**YES**--A satellite recycling center should be considered as a long-term goal.

Table 4-5. Composting Alternatives Analysis.

Option	Net Annual Program Financial Cost	Social-Environmental Cost	Recommendation
Current Practice: None. No composting available for food or yard waste.	**$0.00**	**Pro:** No financial cost recognized. **Con:** Food waste is not currently composted. SIT falls short of its commitment to the earth. Unrecognized financial cost.	**NO**--Compost
Alternative 1. Residential backyard composting workshops. Provide workshops for residents who desire to compost in their back yards.	**$750**	**Pro:** Low in cost. Builds on existing community interest in composting. **Con:** Minimal food waste diversion. There may be offensive odors if compost is not done correctly. Ongoing support would be necessary to ensure effectiveness.	**YES--**Provides a self-help strategy for community members on and off the reservation. This alternative would be a natural first phase before implementing alternative 2.
Alternative 2: Residential backyard composting materials. Provide materials for residents who desire to compost in their back yards.	**$7,225**	**Pro:** Builds on existing community interest in composting. Community members are more likely to participate when materials are provided. Opportunity for buy-in to Solid Waste and Recycling Program. **Con:** Minimal food waste diversion. There may be offensive odors if compost is not done correctly. More expensive than workshops only.	**YES**--Provides an incentive for learning about backyard composting. This alternative would be a natural second phase after implementing alternative 1.

Option	Net Annual Program Financial Cost	Social-Environmental Cost	Recommendation
Alternative 3: Government and business sector backyard composting program. Provide technical support to government programs and small businesses desiring to implement backyard composting.	**$2,000**	**Pro:** Diverts more food waste from the waste stream than in alternative 1. Can be a learning tool for youth and other community members. **Con:** Requires employee buy-in which to this point has been limited. Inconsistent food waste volumes is undesirable for backyard composting. There may be offensive odors if compost is not done correctly.	**NO--**A compost hauling service would be more effective given that food waste is inconsistent for some programs. See Alternative 5.
Alternative 4: Earth Tub. Install an Earth Tub for composting government program or business food waste.	**$10,000 +**	**Pro:** Diverts more food waste from the waste stream than in alternative 1. Less work for employees than alternative 2. **Con:** Requires employee buy-in which to this point has been limited. Inconsistent food waste volumes is undesirable for composting.	**NO--**A compost hauling service would be more effective given that food waste is inconsistent for some programs.
Alternative 5: Compost transport service. Transport food and yard waste off site.	**$500**	**Pro:** Diverts the majority of tribal-wide food waste from the waste stream. **Con:** May not be able to transport all compostable materials off site at this time.	**YES**--Contracting for a compost hauling service would divert the majority of organic waste until a compost feasability study is completed.
Alternative 6: Compost facility feasability study. Conduct a feasability study for constructing a compost facility.	**TBD**--Potential revenue source	**Pro:** If feasible, a compost facility would divert the majority of tribal-wide food waste from the waste stream and would be self-sustaining. **Con:** Food waste would not be diverted from the waste stream until completion of the feasability study.	**YES**--A compost facility should be considered as a long-term goal. A feasability study should be conducted.

Table 4-6. Hazardous Waste Alternatives Analysis.

Option	Net Annual Program Financial Cost	Social-Environmental Cost	Recommendation
Current Practice: Access to HHW collection facility. Residents have access to local HHW collection site on Friday mornings.	**$0.00**	**Pro:** No financial cost to Tribe. **Con:** Inconvenient for residents.	**NO**--The current practice is unreasonable for HHW diversion.
Alternative 1: Universal waste collection site and transportation service. Provide a collection site and tronsportation service for universal waste.	**Cost of transportation and collection containers**	**Pro:** Diverts some HHW from the waste stream. More convenient for residents than current practice. **Con:** HHW diversion is limited. Requires staff time and transportation cost.	**YES**--This is a relatively inexpensive option which promotes ongoing waste diversion of some HHW.
Alternative 2: HHW collection events. Contract for one HHW collection event per year.	**$20,000**	**Pro:** Diverts the majority of HHW from the waste stream. Convenient for residetns. **Con:** Only available once or twice each year.	**YES**--Collection events divert the majority of HHW from entering the waste stream.
Alternative 3: HHW site feasibility study. Conduct a feasibility study for constructing a HHW collection site.	**$2,500**	**Pro:** If feasable, a HHW collection site would provide the most ongoing convenience for residents. **Con:** HHW could not be diverted from the waste stream until completion of the feasability study.	**NO**--A HHW site is costly and the Tribe currently has no way to sustain it. A feasibility study would not be of value.

4.3 Selected Alternatives

Alternatives were selected to meet solid waste management goals. The following additional practices have been chosen to be implimented:

- Incentive-based curbside collection,
- Education and outreach,
- Expand semiannual cleanup to include electronics and bulky recycling pick-up,
- Explore the feasibility of establishing a satellite recycling facility at Kamilche,
- Provide workshops and materials for residential backyard composting,
- Contract with a local hauler to collect tribal-wide food and yard waste,
- Conduct a feasibility study for constructing a compost facility,
- Provide a collection site and transportation service for universal waste, and
- Contract for a household hazardous waste collection event each year.

For the purpose of projecting waste diversion, new solid waste and recycling activities have been categorized into two phases. Phase one includes those activities that can be implemented immediately and phase two includes those activities that will only be implemented if found to be feasible.

Phase 1 (implimted in FY 13):

- Provide incentive-based curbside collection,
- Provide education and outreach,
- Expand semiannual cleanup,
- Provide residential backyard composting workshops,
- Transport Compost off site
- Collect and transport universal waste, and

Phase 2 (implemented in FY 14):

- Provide household hazardous waste collection event,
- Expand education and outreach to include an intership and summer youth worker,
- Provide residential backyard composting materials
- Conduct a feasibility study of a recycling facility, and
- Conduct a feasibility study of a compost facility.

Phase 3 (implemented in FY 18):

- If applicable, open a satellite recycling facility and
- If applicable, open a compost facility.

Waste diversion projection and cost savings for phase one is shown in table 4-13. Diversion rates will not change in phase 2. Assuming that phase 3 activities are found to be feasible, table 4-14 shows waste diversion if phase 3 activities are implemented after five years. Associated cost savings are funds that can be used to offset the cost of the compost and recycling facilities.

If Squaxin Island Tribe implements the selected alternatives, potentially 47% of materials will be diverted from the waste stream over the next five years with the potential for up to 64% waste diversion in the future.

Table 4-7. Projected Waste Diversion and cost savings for Phase 1 and 2 Activities.

YEAR	TOTAL TONS	TONS DISPOSED (AT 53%)	TONS RECYCLED (AT 24%)	TONS COMPOSTED (AT 23%)	TONS DIVERTED	COST SAVINGS
2013	1,750	927	420	402	822	$3,431
2014	1,816	963	436	418	854	$3,431
2015	1,885	999	452	434	886	$3,711
2016	1,956	1,037	470	450	919	$3,859
2017	2,031	1,076	487	467	954	$4,013

Table 4-8. Projected Waste Diversion and cost savings for Phase 2 Activities.

YEAR	TOTAL TONS	TONS DISPOSED (AT 36%)	TONS RECYCLED (AT 41%)	TONS COMPOSTED (AT 23%)	TONS DIVERTED	COST SAVINGS
2018	2,107	759	864	485	1,349	$176,588
2019	2,187	787	897	503	1,400	$183,652
2020	2,270	817	931	522	1,453	$190,998
2021	2,356	848	966	542	1,508	$198,638
2022	2,446	880	1,003	562	1,595	$206,584

4.3.1 Meeting Waste Management Goals

The Solid Waste and Recycling Program, housed in the Department of Community Development and Planning, will carry out the goals of the plan. The Solid Waste and Recycling Program staff will work in coordination with each government program and with the business sector to carry out these goals.

4.3.2 Compliance and Enforcement

A solid waste code has been developed to reflect the goals of this plan and to provide a vehicle for compliance and enforcement. The code will be enforced by the Tribal Police and Housing Enforcement Officer.

4.3.3 Tribal Solid Waste Management Plan Review and Updating

The Solid Waste Management Plan and Code will be formally reviewed annually and updated every four years with feedback from the Solid Waste and Recycling Leadership Circle. The updated plan will be presented to Council for approval. Program planning for the Solid Waste and Recycling Program will take place yearly in the Fall.

CHAPTER 5 : PROPOSED SOLID WASTE AND RECYCLING PROGRAM

The Solid Waste and Recycling Program will be established with the approval of this plan. The program will be responsible for carrying out activities that meet the goals of this plan within the residential and government sectors and will assist the business sector with carrying out the goals of this plan.

5.1 PURPOSE, GOALS, AND OBJECTIVES

Current waste management practices were reviewed and a list of issues was developed as a first step in developing a solid waste management program. Based on the issues identified, the following purpose statement, goals, and objectives for Solid Waste and Recycling Program have been adopted:

5.1.1 Purpose Statement

The purpose of the Squaxin Island Solid Waste and Recycling Program is to manage solid waste of the Squaxin Island Tribe in a healthy, cost-effective, and culturally relevant way to protect our natural environment and honor our connection to the Earth.

5.1.2 Goals and Objectives

Goal 1. Formalize the Solid Waste Program and infrastructure through the adoption of the ISWMP and codes.

- **Objective 1.** Work with Legal Department to develop solid waste ordinance and codes by year 1.
- **Objective 2.** Adopt ISWMP through tribal resolution by year 1.
- **Objective 3.** Adopt solid waste ordinance and codes through tribal resolution by year 1.
- **Objective 4.** Develop program operating policies and procedures in year 1.
- **Objective 5.** Review and adjust the ISWMP, relevant codes, and policies and procedures annually (Fall).
- **Objective 6.** Evaluate the future role of the Leadership Circle by December of year 1.

Goal 2. Provide culturally relevant education and outreach to youth, community members, and employees regarding reduction, reuse, recycling, and safe disposal practices.

- **Objective 1.** Develop and coordinate a solid waste and recycling outreach program for community members and employees.

Goal 3. Provide convenient opportunities to community members, employees, and patrons for reducing the waste stream and protecting the environment.

- **Objective 1.** Develop and coordinate a government reduction, reuse, recycling, and safe disposal program.
- **Objective 2.** Coordinate with the Office of Housing to develop and coordinate a residential reduction, reuse, recycling, and safe disposal program.
- **Objective 3.** Work with Squaxin Island businesses and entities to develop best solid waste and recycling practices.

Goal 4. Build program sustainability.

Objective 1. Research and pursue funding opportunities on an ongoing basis.

Objective 2. Train the next generation of environmental stewards.

Objective 3. Develop and manage an internship program in coordination with Human Resources for native high school and college students.

Objective 4. Maintain adequate staffing levels and provide professional development in years 1-3.

Objective 5. Cultivate and maintain partnerships that provide resources to the program.

Objective 6. Assess the program annually.

5.2 PROPOSED AND FUTURE WASTE MANAGEMENT PRACTICES

The Solid Waste and Recycling Program will focus on community outreach and education regarding waste reduction, expansion of household hazardous waste collection opportunities, expansion of recycling opportunities, establishment of composting opportunities and education, preferential purchasing list development, and technical assistance to tribal businesses and entities.

5.3 PROPOSED PUBLIC EDUCATION AND COMMUNITY INVOLVEMENT

Public involvement and community education is essential for successful waste stream diversion. Substantial community feedback and leadership circle guidance indicated that the best place to start is with the youth. It is therefore proposed that the Solid Waste and Recycling Program coordinate youth cross program activities based on program interest with Summer Recreation, Stepping Stone Program, Canoe Family Youth, Tribal Youth Council, and others. In addition, outreach will be provided through Klah-Che-Min articles, regular bulk mailings, presentations and displays at the Education and Housing Fair, Health Fair, and other community events, coordinate with the Office of Housing to provide community workshops, develop and manage a program webpage, and develop brochures and handouts to be distributed in public locations.

Education and outreach to employees will include employee training sessions, new employee training, and information distribution through the Daily Scoop.

5.4 SUSTAINABILITY OF THE PROGRAM: PROGRAM FUNDING

Solid waste and recycling activities are currently funded by Squaxin Island Tribe. Costs associated with operating the program over the next five years include base program costs, special program costs, and those tribal costs which are outside the scope of the program.

5.4.1 Base Program Costs

Program costs for implementing the chosen alternatvies are illustrated in this section. Table 5-1. shows base program costs which include the cost of continuing current practices, the cost of funding a staff person to manage the Solid Waste and Recycling Program, and administrative costs. Administrative costs include universal waste transportation, education and outreach, advertisement, and supplies. With this budget current practices can continue to be implemented and some new practices, such as

incentive-based curbside collection, universal waste transportation for residents, expanded semi-annual clean-up events, and some ongoing outreach can also be implemented. Table 5-2 shows projected costs over the next five years.

Table 5-1. Projected Base Costs for Fiscal Year 2013.

DESCRIPTION	DETAIL	COST	Revenue	Balance
Personnel				
Solid Waste and Recycling Program Manager				
	Annual Salary 0.5 FTE	$23,627		$23,627
	Fringe Benefits at 62%	$14,649		$14,649
Travel and Training		$2,000		$2,000
Indirect	46%	$18,527		$18,527
Total		**$58,803**		**$58,803**
Existing Disposal and Recycling Service				
Contracted Curbside Collection		$37,056	$37,056	$0
Contracted garbage collection for government buildings				
	Container rental, transportation, and disposal	$11,197		$11,197
	LeMay Mobile Shredding	$517		$517
Contracted recycling collection for government buildings				
	Container rental, transportation, and disposal	$2,253		$2,253
Government to transfer station direct haul		$480		$480
Small Quantity Generator disposal				
	Transportation	$50		$50
	Disposal	$375		$375
Waste sort supplies		$200		$200
Total		**$52,128**	**$37,056**	**$15,072**
Expanded Disposal and Recycling Service				
Universal Waste transportation		$200		$200
Education and outreach		$750		$750
Advertisement		$210		$210
Supplies		$750		$750
Indirect	46%	$879		$840
Total		**$2,789**		**$2,789**
Grand Total		**$113,720**	**$37,056**	**$76,664**

Table 5-2. Projected Base Program Costs.

DESCRIPTION	2013	2014	2015	2016	2017
Personnel	$58,803	$61,115	$63,560	$66,102	$68,746
Existing Disposal and Recycling Service	$15,072	$15,675	$16,302	$16,954	$17,632
Expanded Disposal Service	$2,789	$2,901	$3,017	$3,138	$3,264
Total	**$76,664**	**$79,691**	**$82,879**	**$86,194**	**$89,642**

5.4.2 Special Program Costs

In addition to base program costs, special activities and their associated costs must also be considered for the chosen alternatives. Some Phase 1 alternatives, including universal waste transporation, expanded semi-annual clean-up, and some education and outreach have a minimal cost and have therefore been included in the base program costs (See Table 5-1). All other selected alternatives and their associated costs are shown below.

Phase 1: Backyard Composting Workshops

Workshops will be provided by the local Washington State University Mason County Extension Office at no cost. Minimal supplies will be provided for workshop attendees and the workshops will be advertised. Table 5-3 shows associated costs for providing these workshops.

Table 5-3. Projected Cost for Backyard Composting Workshops

Backyard Composting Workshops		
Advertisement		$70
Supplies		$450
Indirect	46%	$239
Total		**$759**

Phase1: Compost Transport

Food waste may be transported to an off-site facility. This alternative continues to be explored at the cost is expected to begin at $500.

Phase 2: Household Hazardous Waste Collection Event

Cost of a Household Hazardous Waste Collection Event includes the use of a HHW contractor and transportation. Other associated costs include advertisement and education and outreach regarding HHW materials. Associated costs with this event is shown in Table 5-4.

Table 5-4. Projected Cost for Household Hazardous Waste Collection Events.

Household hazardous waste collection events		
HHW Contractor/transportation		$20,000
Advertisement		$250
Education and outreach		$500
Indirect	46%	$955
Total		**$21,705**

Phase2: Expand Education and Outreach

A component of Education and Outreach is to train the next generation of environmental stewards through program internships and summer youth experiences. Interns and summer youth workers will expand the education and outreach arm of the program by developing and distributing outreach materials and information. Costs associated with these positions is showin in Table 5-5.

Table 5-5. Projected Cost for Education and Outreach Alternative

Personnel		
Outreach intern		
	Annual Salary	$15,000
Summer Youth Worker		
	Hourly Salary	$2,000
Travel		
	Training ($350 x 4 trips x 1 people)	$1,400
Indirect	46%	$8,464
Total		**$26,864**

Phase 2: Backyard Composting Materials

One way to promote backyard composting is by providing residents and community members with supplies and equipment to get started. Workshops ill be provided by the WSU Mason County Extension Office at no cost. Additional associated costs include education and outreach regarding composting, advertisement, supplies such as compost bins and tools, equipment such as rototillers, and maintenance. Associated costs are shown in Table 5-6.

Table 5-6. Projected cost of Backyard Composting Workshops and Supplies.

Backyard Composting Workshops and Supplies		
Education and Outreach		$500
Advertisement		$250
Supplies	Compost bins and tools	4,000
Equipment	Rototillers	$1,500
Maintenance		$1,000
Indirect	46%	$3,335
Total		**$10,585**

Phase 2: Recycling Facility Feasibility Study

The recycling facility feasibility study option continues to be explored. The cost associated with this project will be indicated in a future draft of this plan.

Phase 2: Compost Facility Feasibility Study

The compost facility feasibility study option continues to be explored. The cost associated with this project will be indicated in a future draft of this plan.

5.4.3 Projected Outside Tribal Costs

Solid waste and recycling costs outside the Solid Waste and Recycling Program include sludge removal, Casino compost hauling cost, fireworks stands, and community cleanup events. These costs are noted here because fulfilling the selected alternatives may reduce the cost of some of these services. For example, an on-site compost facility will reduce the cost of transporting casino food waste off-site. A projection of these costs over the next five years is shown in Table 5-7.

Table 5-7. Projected Outside Tribal Costs.

DESCRIPTION	2013	2014	2015	2016	2017
Sludge Removal	$100,000	$104,000	$108,160	$112,486	$116,986
Casino Compost Hauling Cost	$22,000	$22,880	$23,795	$24,747	$25,737
Fireworks stands	$844	$878	$913	$949	$987
Total	**$122,844**	**$127,758**	**$132,868**	**$138,183**	**$143,710**

5.4.4 Potential Program Funding

There are three primary sources of solid waste funding. Squaxin Island Tribe will require a combination of both sources to support their solid waste programs. These include federal funding, private funding, and internal funding.

Federal Grants

There are a number of federal agencies that provide funding for tribal solid waste programs. The following grants are currently available for the types of needs identified in this plan:

1. *USDA Solid Waste Management Grant:* Supports projects that improve planning and management of solid waste sites in rural areas and reduce or eliminate pollution of water resources in rural areas. Potential activities to be funded include technical assistance and/or training to help communities reduce the solid waste stream.
2. *EPA Tribal Hazardous Waste Grant Program:* Provides grants to federally recognized tribes and tribal organizations to encourage comprehensive integrated hazardous waste management practices that are protective of human health and the environment. Potential activities to be funded include building tribal capacity for developing and implementing hazardous waste activities, developing tribal organizational infrastructure, achieving economic sustainability of tribal hazardous waste programs, and building partnerships among tribes, federal agencies, states and local communities.
3. *EPA Environmental Justice Small Grants Program:* Supports activities designed to educate, empower and enable communities to understand the environmental and public health issues and to identify ways to address these issues such as conducting and promoting the corrdination of research, investigations, experiments, training, demonstration projects, surveys, public education programs, and studies relating to solid waste.

Private Grants

Private grant opportunities are also available for funding some activities of the program. These include:

1. *The Russell Family Foundation:* The Environmental Sustainability Project focuses regionally on Puget Sound, polluted runoff, green infrastructure and environmental education. Potential activities to be funded include educational outreach.
2. *The Bullitt Foundation:* This foundation focuses on environmental urban issues, business and technology, ecosystem service planning, and civic engagement. The foundation would be a good match for educational outreach andrecycling and composting business development opportunities.

Internal Program Funding Opportunities

Internal funding opportunities are available through a variety of routes. For example, tribal funds saved as a result of Solid Waste and Recycling Program activities can be rerouted to sustain continued program activities. Additional funding opportunites to be considered in the future include a green tax, loaner program, code enforcement fees, distribution of environmentally safe products, and revenue from a satellite recycling facility and composting facility.

APPENDIX A

FEDERAL GUIDANCE DOCUMENTS RELATING TO
SOLID WASTE MANAGEMENT ISSUES FOR TRIBAL RESERVATIONS

GUIDANCE DOCUMENT	**DESCRIPTION OF DOCUMENT**	**AFFECTS TO TRIBES**
Federal Laws	*Federal Laws can be found on the following website: http://www.epa.gov; click on Laws and Regulations; and click on Major Environmental Laws.*	
Resource Conservation and Recovery Act (RCRA)	Enacted in 1976, RCRA is the primary federal law governing solid waste. • RCRA addresses the issue of managing and disposing of municipal and industrial waste nationwide. • RCRA establishes federal programs to regulate and manage treatment, storage, transport, and disposal of non-hazardous solid waste and hazardous waste. • Municipal solid waste (MSW) is regulated under Subtitle D of RCRA by technical standards for solid waste management facilities.	RCRA applies to all Tribal reservations, including ones with established landfills on-site. Tribes may also be held liable for RCRA violations for hazardous waste sites on reservation lands.
	Under Sections 2002, 4004, and 4010 of RCRA, the EPA has the authority to promulgate site-specific rules concerning municipal solid waste landfill (MSWLF) criteria, including small landfill exemptions.	Owners/operators of landfills on Tribal reservations can request design and operating flexibility in states with EPA-approved MSWLF permitting programs.
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)	Congress enacted CERCLA, also known as the Superfund Law, in 1980. CERCLA provides a broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. • CERCLA establishes a ban on and select requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified.	Tribal lands that have illegal dumping and hazardous materials disposed of in their municipal solid waste stream can be subject to potential CERCLA risks.

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GUIDANCE DOCUMENT	**DESCRIPTION OF DOCUMENT**	**AFFECTS TO TRIBES**
Waste management practices that directly or indirectly impact groundwater, surface water, and air resources on Tribal lands also can be subject to federal regulatory requirements. In addition to a tribe's inherent regulatory authority, certain federal regulatory programs, including the Clean Water Act, the Clean Air Act, and the Safe Drinking Water Act also are applicable to tribes.		
Clean Water Act (CWA)	The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States. • It gives EPA the authority to implement pollution control programs such as setting wastewater standards for industry, and has requirements to set water quality standards for all contaminants in surface waters. • The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions.	To obtain "treatment as state" (TAS) status under the CWA, a tribe must meet criteria reflecting its ability to effectively implement the program.
Clean Air Act (CAA)	• The CAA gives authority to the EPA for setting limits on how much of a pollutant can be in the air anywhere in the United States. This ensures that all Americans have the same basic health and environmental protections. • The law allows individual states to have stronger pollution controls, and take the lead in carrying out the CAA, because pollution control problems often require special understanding of local industries, geography, housing patterns, etc.	Tribes had limited powers under the CAA. The EPA allows tribes to regulate indirect emissions from sources near the reservation. Tribes having landfills should be concerned with methane emissions.
Safe Drinking Water Act (SDWA)	Congress originally passed the SDWA in 1974 to protect public health by regulating the nation's public drinking water supply. • Amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells.	Tribes may be treated as states by the EPA to delegate certain program authority if a tribe demonstrates its ability to administer a program effectively.
Federal Regulations	Federal Regulations can be found at: http://www.epa.gov; select "Laws, Regulations & Dockets" and then select "Code of Federal Regulations".	

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FEDERAL GUIDANCE DOCUMENTS RELATING TO
SOLID WASTE MANAGEMENT ISSUES FOR TRIBAL RESERVATIONS

GUIDANCE DOCUMENT	**DESCRIPTION OF DOCUMENT**	**AFFECTS TO TRIBES**
40 CFR 243: *Guidelines for the Storage & Collection of Residential, Commercial, & Institutional Solid Waste*	Applicable to the collection of residential, commercial, and institutional solid wastes and street wastes. • Recommended for state, interstate, regional, and local governments for use in their activities. • Outline minimum levels of performance required of solid waste collection operations, including solid waste collection containers, types of collection vehicles and associated safety precautions, and frequency of collection to inhibit the propagation or attraction of vectors and the creation of nuisances.	Tribes should follow guidelines for the storage of solid wastes to avoid health concerns created by animals and unsanitary conditions.
40 CFR 257: *Criteria for Classification of Solid Waste Disposal Facilities and Practices*	Establishes regulatory standards to satisfy the minimum national performance criteria for sanitary landfills. • Establishes standards for determining whether solid waste disposal facilities and practices may pose adverse effects on human health and the environment. • Governs only those solid waste disposal facilities that do not meet the definition of a MSWLF.	Tribal facilities failing to satisfy either the criteria in CFR 257 are considered “open dumps”, which are prohibited under Section 4005 of the RCRA.
40 CFR 258: *Criteria for Municipal Solid Waste Landfills*	Establishes minimum national criteria under RCRA for protecting human health and the environment, while allowing states/tribes to develop more flexible MSWLF criteria. • Applies to owners and operators of new MSWLF units, existing MSWLF units, and lateral expansions, except otherwise noted.	Indian tribes can maintain lead roles in implementing and enforcing the revised MSWLF criteria through approved state/Tribal permit programs.

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FEDERAL GUIDANCE DOCUMENTS RELATING TO SOLID WASTE MANAGEMENT ISSUES FOR TRIBAL RESERVATIONS

GUIDANCE DOCUMENT	**DESCRIPTION OF DOCUMENT**	**AFFECTS TO TRIBES**
	Subparts D and E exempt certain landfills (Exemptions for Small Landfills) if they meet the following criteria. To qualify, a landfill must: • Receives less than 20 tons of waste per day (averaged yearly), receive less than 25 inches of rainfall per year, and have no other practical waste disposal alternative. • Have no evidence of ground-water contamination from the landfill. • Be considered an extremely remote community that has no ready access to other disposal sites for an extended period of time	
40 CFR Parts 260-271: *Hazardous Waste Management Guidelines*	Sets forth rules and identifies solid wastes which are subject to regulation as hazardous wastes and which are subject to the notification requirements in RCRA. Parts 260-271 sets guidelines for: • Defines criteria for identifying the characteristics of hazardous waste. • Provides a listing of hazardous wastes. • Establishes standards for generators and persons transporting hazardous wastes. • Establishes minimum national standards for acceptable management practices for owners and operators of all facilities that treat, store, or dispose of hazardous waste.	In addition to RCRA violations, tribes may also be held liable for 40 CFR Parts 260-271 violations for hazardous waste sites and storage on reservation lands.
40 CFR Part 273: *Standards for Universal Waste Management*	Establishes standards for the management of universal wastes (batteries, pesticides, thermostats, and lamps). • Reduces the regulatory management requirements • Fosters environmentally sound recycling or disposal practices of these select wastes commonly generated as hazardous wastes.	Tribes generating universal wastes should comply with storage requirements, but may recycle the materials instead of disposing.

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GUIDANCE DOCUMENT	**DESCRIPTION OF DOCUMENT**	**AFFECTS TO TRIBES**
40 CFR Part 279: *Standards for the Management of Used Oil*	Establishes standards for the generation, transportation, reuse, recycling, and disposal of used oil.	Tribes generating used oil should comply with storage requirements, but may recycle the materials instead of disposing.
Other Legislation		
Public Law 103-399: *(The Indian Lands Open Dump Clean Up Act) October 22, 1994*	Identifies the location of open dumps on Indian lands. • Assesses the relative health and environment hazards posed by those sites • Provides financial and technical assistance to Indian Tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities. For further information, go to: http://www.ihs.gov	
Executive Order 13175: *Consultation and Coordination With Indian Tribal Governments, November 9, 2000*	Executive Order (EO) 13175 establishes a working relationship with Indian Tribal governments for the development of regulatory practices on Federal matters that have great impact on their communities. • Reduces the burden of unfunded mandates upon Indian Tribal governments and simplifies the process for waivers to Indian Tribal governments. For further information, go to: http://www.epa.gov/fedrgstr/eo/eo13175.htm.	

APPENDIX B

WASHINGTON STATE GUIDANCE DOCUMENTS

RELATING TO SOLID WASTE MANAGEMENT ISSUES FOR TRIBAL RESERVATIONS

STATE OF WASHINGTON	
GUIDANCE DOCUMENT	**DESCRIPTION**
Revised Code of Washington (RCW)	To access the State of Washington's Revised Code administered by the Department of Ecology, go to: http://www.ecy.wa.gov/laws-rules/ecyrcw.html
Chapter 36.58 RCW: *Solid Waste Disposal*	Establishment of regulations for obtaining authorization to locate solid waste disposal sites (including transfer stations), funding mechanisms on solid waste disposal fees, and the establishment of solid waste disposal districts.
Chapter 70.93 RCW: *Waste Reduction, Recycling, and Model Litter Control Act*	Establishment of the Department of Ecology as the authority to regulate litter control, increasing waste reduction, and motivation of all recycling components throughout the state. • It is a violation of this section to abandon a junk vehicle upon any property. • It is a violation of this section for anyone to throw, drop, deposit, discard, or otherwise dispose of litter upon any public/private property and in the waters of the state. • Requires the operator of a vehicle transporting solid waste to a staffed transfer station or landfill to secure or cover the vehicle's waste in a manner that will prevent spillage.
Chapter 70.95C RCW: *Waste Reduction*	Implementation of the highest waste management priority for the most cost-effective and environmentally sound manner of reducing the generation of waste.
Chapter 70.95I RCW: ***Used Oil Recycling***	Establishment of used oil recycling regulations and guidelines, including: • Goals for household used oil recycling • Violations against anyone disposing of used oil improperly.

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WASHINGTON STATE GUIDANCE DOCUMENTS

RELATING TO SOLID WASTE MANAGEMENT ISSUES FOR TRIBAL RESERVATIONS

STATE OF WASHINGTON	
GUIDANCE DOCUMENT	**DESCRIPTION**
Chapter 70.105 RCW: *Hazardous Waste Management*	Establishes a comprehensive statewide framework for the planning, regulation, control, and management of hazardous waste. • Includes provisions for household hazardous waste (HHW) guidelines
Washington Administrative Code (WAC)	To access the State of Washington's Rules administered by the Department of Ecology, go to: http://www.ecy.wa.gov/laws-rules/ecyrcw.html
Chapter 173-425 WAC: *Outdoor Burning*	Establishes a program to implement a limited burning policy to reduce outdoor burning to the greatest extent practical, establish a permit program for limited burning, and foster and encourage development of reasonable alternatives to burning.
Chapter 173-300 WAC: *Certification Of Operators Of Solid Waste Incinerator And Landfill Facilities*	Guidelines for certification of solid waste landfill operators and in the operation and maintenance of the facility.
Chapter 173-304 WAC: *Minimum Functional Standards for Solid Waste Handling*	Regulations to protect public health, to prevent land, air, and water pollution, and conserve the state's natural, economic, and energy resources • Sets minimum functional performance standards for the proper handling of all solid waste materials originating from residences, commercial, agricultural and industrial operations and other sources.

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WASHINGTON STATE GUIDANCE DOCUMENTS

RELATING TO SOLID WASTE MANAGEMENT ISSUES FOR TRIBAL RESERVATIONS

STATE OF WASHINGTON	
GUIDANCE DOCUMENT	**DESCRIPTION**
Chapter 173-331 WAC: *Vehicle Battery Recycling*	Establishes procedures for implementation and enforcement of the waste reduction law. • Addresses recycling of used vehicle batteries through a system of exchanging batteries at the point of sale.
Chapter 173-351 WAC: *Criteria For Municipal Solid Waste Landfills*	Establishes minimum statewide standards for all municipal solid waste landfill (MSWLF) units.
Chapter 173-350 WAC: *Solid Waste Handling Standards*	Sets minimum functional performance standards for the proper handling, on-site storage, collection and transportation, and disposal of solid waste originating from residences, commercial, agricultural and industrial operations and other sources. • Includes operational standards for composting facilities.

APPENDIX C

Waste Generation of Squaxin Island Tribe in 2010

	Tons disposed	Tons diverted (tons/yr)	Tons generated (disposed + diverted)	Population (residents or visitors or patrons/year)	Cost in 2010
Residential					
Curbside collection	316	11	327	438	$37,056
Community Cleanup	38		38		$6,012
Total	**355**	**11**	**366**	**438**	**$43,068**
Service Buildings					
Administration Building and Museum	3	4	8		$1,988
Maintenance Shed	3	3	6		$2,037
Natural Resources and Family Services	3	1	5		$1,698
TLC	7	1	7		$2,976
Clinic	3	1	5	2,700	$1,579
Outpatient Services	2		2		$228
NWITC	5	3	8	25	
Public Safety Building	3		3		$185
Legal	1	1	2		$424
Arcadia Boat Launch	5		5		$1,168
Wastewater Treatment Plant	7		7		$1,227
Wastewater Treatment Plant Sludge			0		$135,380
SBR	7		7		$1,281
Total	**49**	**13**	**63**		**$150,171**
Commercial					
Casino	**938**	**62**	**1,000**	**2,737,500**	**$106,800**
IEI (FY 10)	3	1	4		$1,845
KTP (FY 10)	22	4	25		$13,137
KTP Express (FY 10) (& Kamilche Café?)	3	1	5		$1,760
The Landing (FY 10)	10	0	10		$2,483
Child Development Center	14	5	19		$5,879
Business Development Center (FY 10)	0	0	0		$106
Total	**52**	**12**	**63**		**$25,211**
Industrial					
Skookum Creek Tobacco Factory/Distribution	42	24	66		$16,444
Salish Seafoods	7	0	7		$2,154
Total	**49**	**24**	**73**		**$18,598**

APPENDIX D

2011 Community Survey Results

Survey Results

A solid waste and recycling survey was conducted at General Body Meeting on May 7, 2011. Below are the results of the survey:

Total Number of Surveys: 56

1. Do you Currently Live on the Reservation?

27 Yes

25 No

4 Undeclared

Recycling

2. How important is recycling to you?

33 Very important (I would do anything to recycle as much as I can)

15 Important (I will do it if I know how and where to do it)

8 Somewhat important (I will only do it if it is cost effective and convenient)

0 Not important (I won't do it at all)

1 Undeclared

3. Where do you currently recycle?

21 I recycle at home through city/county services (off-reservation residents)

17 I use the new curbside recycling (Reservation residents)

11 I recycle at local stores (i.e. plastic bags at Walmart, batteries at Home Depot, Oil at Shucks, etc.)

10 I use the large community recycling bin near the public safety buildings

4 I take my recyclables to one of the county transfer stations

3 I do not recycle

1 I recycle through a private recycler

4. If you currently use the large community recycling bin and if the bin was removed, would you

17 Continue recycling by taking your recyclables elsewhere for free (such as to a private recycler or transfer station)

16 I do not use the community recycling bin

14 Continue recycling by participating in curbside recycling ($8.00/month)

4 Stop recycling

8 Undeclared

5. Do you believe that waste reduction, reuse, and recycling are important?

55 Yes

1 No

If yes, please explain why

9 Good for the environment.

5 It is good for the Earth/It honors the Earth/It is important to take care of the earth.

3 It is important for future generations.

2 It helps our earth and environment be clean.

2 Keeps neighborhoods clean.

1 It saves room for actual garbage.

1 It is important to take care of the earth.

1 We are stewards for Mother Earth.

1 It is good for everything.

1 Because landfills are huge and why not reuse what we can?

1 Landfills are overflowing. We cannot continue to create so much waste.

1 Its good for the planet and for my next kids to grow up on.

1 It is part of our culture and good for the earth.

1 If it supplies jobs and the product produced pays for the workers then it is a good idea.

1 Scarcity.

1 I would like to leave this earth better than it is now.

1 Make use of what we have and don't be wasteful.

1 Staying green.

1 It helps the earth rejuvenate itself and keeps our air quality good, etc.

1 Helps with garbage day.

1 Beautifies where we live and the surrounding areas.

1 Native Americans have always used all parts of animals and such. We should continue honoring our past.

1 We are Native Americans and should be #1 in caring for Mother Earth.

1 "Dumps" are overflowing. Many materials can be reused.

1 Saves the land.

1 Lowers cost for garbage and reduces waste in the landfills.

1 If there was more recycling areas around there would be less garbage on streets and around.

1 So our children can have an earth left.

1 Be kind to Mother Earth and she will be kind to you.

1 Its just a good thing to do (think about it).

1 Just know its better.

6. What do you think would be some good goals for a tribal-wide recycling program?

5 Recycle all materials that can be recycled in a cost-effective way.

5 Compost.

3 Obtain maximum support for, and participation in, the recycling program.

2 Compost all food waste.

2 Recycle all materials.

1 Recycle easily and cost effective materials; proper disposal of hazardous materials (computers, etc.)

1 Compost station spot, curbside recycling, workshop to help people distinguish recyclables.

1 More education and more information on what is and isn't and how.

1 Fully implemented. Give incentives to recycle.

1 Have a site for free recycling.

1 Educate us on the recycling program so it will be used.

1 Any recycling is good.

1 Recycle plastics, cardboard, glass, etc.

1 Awareness efforts.

1 Obtain maximum support for a tribal-wide recycling program.

1 Tribal community garden and compost.

1 More education.

1 Buy some pigs for food from elders' dinner and bigger boxes for recycling or pick-up.

1 Have a recycling center and put people to work and provide jobs.

1 Assistance in picking up recyclable, larger items, on an ongoing basis.

1 It is better for the environment.

1 Need curbside glass recycling.

1 Teach the youth to recycle.

1 Compost food waste at Little Creek Casino/Resort.

1 First of all, participate.

1 Cost effective.

1 If people had more opportunity to learn about recycling as well as more things to recycle they would personally want to learn how to do compost.

1 Assist one on one with interested tribal members. They would be more apt to ask questions and participate.

1 Add glass.

1 Make it a job.

1 Enforce on burning, especially mattresses.

1 Add solar power to light posts.

1 If we implement a plan it should benefit our community but not others.

1 A place where we can recycle all recyclable materials and get money for our aluminum.

1 Definitely need compost sites .

1 To be the cleanest reservation and area around.

7. Of the following recyclable items, please check the appropriate box

	I recycle it!	Didn't know I could recycle it	Don't know where to recycle it	Not convenient	Don't care	Undeclared
Glass	13	2	5	2	0	35
Plastic bottles such as water bottles	44	1	3	2	1	5
Plastic bottles such as moyonnaise, peanut butter, etc	37	6	7	2	0	7
Plastic bottles such as laundry soap, shampoo, etc	35	7	5	3	1	7
Plastic lids, caps, butter and yogurt containers	28	13	7	3	0	7
Newspaper	45	0	2	1	0	7
Mixed paper/books/magazines	45	1	2	2	1	5
Tine cans	38	4	2	3	0	8
Aluminum (including aluminum foil	44	5	1	0	0	7
Household electronics (toaster, computer mouse, keyboard, vcr,	20	10	15	1	0	10

heater, dvd player, fan, etc)						
Food waste	21	9	9	7	1	11
Yard waste	21	9	7	5	1	13

Special Wastes

8. What are some items that you would like to properly dispose of but do not know where?

10 Boat
10 Boat parts
7 Vehicle parts
6 Vehicle
5 Animal carcass
4 Fishing nets
3 Yard waste compost
3 None
2 Gas
2 Electronics
2 Batteries
2 Oil
2 Computer components
2 Vehicle tires
1 Gas cans
1 Big old lawn mowers
1 Not sure
1 Paint
1 Cable shavings
1 TVs
1 Old metal
1 Large items
1 Furniture

If you knew where to dispose of these items, would you do so if it required paying a fee?

24 Yes

11 No

12 Undeclared

1-Maybe

1-Depends on the fee

1-If the fee was minimal

9. Please indicate your current exposure to, and interest in, backyard composting

15 I would like to compost and I would even attend a special workshop to learn how.

12 I am not interested in composting.

11 I currently compost!

10 I do not have a use for compost but would donate my food waste for someone else to compost.

5 I would like to compost and would purchase my own equipment if I knew what I needed.

3 Other:

Squaxin Reservation Housing--Tribe handles compost.

I used to compost but on 2 person household and it was smelly. Wished we had community ones placed in multiple areas.

I have a yard waste container picked up every other week.

3 Undeclared

10. Do you currently have scrap tires?

39 No

15 Yes

2 Undeclared

If yes, what prevents you from disposing of these tires?

5 Don't know where to dispose of them

4 Don't want to pay to dispose of them

2 It is inconvenient to dispose of them

1 Don't want to dispose of them

5 Other

Used for my boats to sit on.

Saving for landscaping.

42 Unmarked

11. Do you separate your hazardous waste from your regular garbage?

27 Yes

26 No

2 Undeclared

1-Not Applicable

If yes, please list the items that you separate from your regular garbage

7 Oil

6 Batteries

4 Paint Cooking oil

2 Car oil

2 We don't generally have hazardous waste at my house

2 Medication

2 Household sprays (all aerosol cans)

1 Gas

1 Cleaning things

1 Enbiel shot needles

1 Paint cans

1 Drano

If no, please list the reasons

15 I don't know what hazardous waste is.

9 It is not convenient to take my hazardous waste to a hazardous waste site.

0 I don't care.

28 Unmarked

1-Do not have any

Education

12. Would you be interested in learning more about garbage-related issues and recycling opportunities?

30 Yes

19 No

8 Undeclared

If yes, what would you like to learn about?

2 Everything.

1 Proper disposal of computer equipment containing LED, mercury, and arsenic.
1 Separation.
1 Already know how to recycle.
1 Hazardous waste.
1 I would like a detailed list of things I can recycle and how and compost and how.
1 What can and can not be recycled.
1 Are there places we can clean up in public and in return dump our garbage?
1 How to recycle easily.
1 Reading materials.
1 What things go in the recycling bin and what it is made into.
1 Boat and hazardous waste recycling.
1 How to set up a transfer station on the reservation.
1 Where to recycle.
1 Composting

What would be the most effective way to distribute this information?

33 Klah-Che-Min articles
26 Mailings
21 Community events
15 Trainings
11 Website
5 Undeclared
2 Other

Additional Comments

Glad to hear the reservation now has a better recycling system.
Glad to see this come back. Hope it stays around longer.
Thank you for your concern in environmentally friendly waste habits.
Ways to reduce personal cost of service.
Go survey!
Your department is doing a wonderful job! Keep it up!!
Monthly hazardous waste, boat, and metal disposal.
Need to add a container to curbside recycling for glass.

Appendix E

2011 SQAUXIN ISLAND TRIBAL ADMINISTRATION, COMMERCIAL, AND INDUSTRIAL EMPLOYEE SURVEY RESULTS

1. Please mark your current reduction and reuse in the work place. (Mark all that apply)

	Response Percent	Response Count
I print on both sides of paper whenever possible (reduction practice)	57.7%	30
Whenever possible, I read emails on the computer screen instead of printing them (reduction practice)	98.1%	51
I circulate information electronically whenever possible (reduction practice)	84.6%	44
I use black ink instead of colored ink whenever possible (reduction practice)	80.8%	42
I pack waste-free lunching using reusable water bottles and containers (reduction practice)	46.2%	24
I use dishes instead of disposable dishware (reuse practice)	69.2%	36
When printing drafts and taking notes, I reuse scrap paper that has already been printed on on side (reuse practice)	30.8%	16
Other:	7.7%	4

I turn off lights whenever I leave a room (where it is allowed) and I turn off lights in unoccupied rooms when I pass them.

I refill hand sanitizers, use oils for air fresheners, reuse old files-new labels on them

Take phone messages using scrap cut paper instead of using post-it notes

Sometimes I use scrap paper for notes and draft, but I throw all my paper out at the end of the day. I guess I will throw it in a box instead and reuse it…duh.

2. Please rate your current priority level of recycling in the work place

	Response Percent	Response Count
I will do anything to recycle, even if it is inconvenient	40.4%	21
I recycle when it is convenient	59.6%	31
I never recycle	0.0%	0

3. What kind of recycling is available to you at work? (Please mark all that apply)

	Response Percent	Response Count
Paper	96.0%	48

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2011 SQAUXIN ISLAND TRIBAL ADMINISTRATION, COMMERCIAL, AND INDUSTRIAL EMPLOYEE SURVEY RESULTS

Plastic bottles	86.0%	43
Aluminum cans	84.0%	42
Tin cans	34.0%	17
Glass	38.0%	19
Ink cartridges	48.0%	24
Other:	12.0%	6

Cardboard

I do my best to recycle, but not sure how the material gets disposed of from there. This is a concern.

Magazine paper, cardboard, oil, glue

Cardboard box

Ink cartridges are recycled, but by individuals choosing to do so of their own accord. No office-wide ink/toner recycling exists.

Cardboard

4. Please rate the current level of recycling convenience in your work place

	Response Percent	Response Count
Recycling opportunities are very limited	21.6%	11
There are some recycling opportunities but they are very inconvenient	15.7%	8
There are some recycling opportunities and they are convenient	62.7%	32

Comments:

Not everywhere at work but in DIS it is pretty convenient

Would be great to start recycling glass also

I like the way there is signage for what goes in what container

Some members of our office would like to compost as well but cannot find a convenient way to do so

Please let me know what can be put in my recycling bin at my desk. I get conflicting answers.

We could use some recycling containers in the open downstairs…

5. Are patrons and visitors able to recycle when they visit your department/business

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2011 SQAUXIN ISLAND TRIBAL ADMINISTRATION, COMMERCIAL, AND INDUSTRIAL EMPLOYEE SURVEY RESULTS

	Response Percent	Response Count
Yes	51.0%	26
No	15.7%	8
There are very limited recycling opportunities for patrons and visitors	33.3%	17

6. What challenges do you, your department, or business face as you attempt to reduce, reuse, and recycle? (Please mark all that apply)

	Response Percent	Response Count
Lack of interest from employees	47.9%	23
Lack of funds	6.3%	3
Difficulty in changing habits	52.1%	25
Lack of training	39.6%	19
Other:	27.1%	13

Work off site, there is a lack of recycling resources available

Office use mainly

Not observed as a priority, takes time to recycle

Recycle receptacle needs to be accessible

No program at all

Limited opportunities for recycling

For items such as batteries, cooking oil, etc

That one is just me

Lack of staff time to implement recycling

Patrons use the recycling bin for trash and we need to separate the mess

No recycle bins available

Space

Only paper recycling bins under desk

7. At work, have you noticed hazardous waste materials being thrown in the trash (i.e. ink toners, fluorescent light bulbs, batteries, etc) and if so, what do you believe is the reason? (Mark all that apply)

Appendix E

2011 SQAUXIN ISLAND TRIBAL ADMINISTRATION, COMMERCIAL, AND INDUSTRIAL

EMPLOYEE SURVEY RESULTS

	Response Percent	Response Count
I have not noticed hazardous waste materials being thrown in the trash	62.0%	31
I have noticed—people don't know that it is illegal and unhealthy for the environment	20.0%	10
I have noticed—There is no place designated for these materials	28.0%	14
I have noticed—People don't know what to do with them	30.0%	15
I have noticed—It is not convenient to put them in the right place	8.0%	4
I have noticed—People don't care	14.0%	7
Other:	4.0%	2

Batteries and old toner cartridges: what do we do with them? Where do they go?

Its not a Council backed policy.

8. Does your department or business have recycling codes and procedures?

	Yes but they are not followed	Yes and they are followed	My department/business does not have recycling codes and procedures	Not sure
Reduction codes and procedures	0.0% (0)	3.9% (2)	43.1% (22)	52.9% (27)
Reuse codes and procedures	0.0% (0)	2.0% (1)	44.0% (22)	54.0% (27)
Recycle codes and procedures	0.0% (0)	4.0% (2)	46.0% (23)	50.0% (25)
Green purchasing (purchasing items that have been made out of recycled materials) codes and procedures	0.0% (0)	7.8% (4)	39.2% (20)	52.9% (27)

Comments:

To recycle all materials that can be recycled in a most cost effective way to better our environment including our water

We have practices but no office codes that I know of

We have recycle bins but no codes or procedures

Never paid attendtion. Someone makes the rules, it comes to the office and I follow them.

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2011 SQAUXIN ISLAND TRIBAL ADMINISTRATION, COMMERCIAL, AND INDUSTRIAL

EMPLOYEE SURVEY RESULTS

I'm not sure about codes and procedures, but plan to find out.

Probably need additional funding to cover expenses to maximize reduction, re-using, recycle and purchasing green along with having full council support.

9. What do you think would be some good goals for a tribal-wide recycling program?

I think that our program should have a compost pile available for employees to use because we use a lot of food in our building and it just gets thrown in the trash

I think it would be great

Composting opportunities would be nice

I think the Tribe puts a recycle policy in place (not necessarily mandatory initially) that would be a huge step in the right direction

Having recycle bins placed in convenient areas and clearly marked for what belongs in them. Recycle education; explain the benefits of recycling to increase participation in the programs

Ditto

Buying products that promote health practices

Designated bins to put recycling materials throughout the office and a place to empty those bins when they are full.

Make recycling convenient; also give us training

I will participate in whatever becomes available

Recycling all recyclable materials: glass, plastic, cardboard, paper, batteries, ink toner, etc.

Bins everywhere. Do a recycle awareness month. Signs and flyers…

Measurable improvement on a yearly basis, self-sustaining program

Get everyone involved!!

More cost effective. We pay out of finances to cover recycling cost.

Main goal is to get everybody involved. Train! Train! Train! Educate.

I think we should have more education about what these items do to our earth. How long they stay, etc. Need more info on compost, how to, etc.

Educate people on the importance of reuse recycle & reduction

Recycle all materials that can be recycled in a cost-effective way, use waste cooking oil to make bio diesel to fuel tribal machinery and perhaps eventually to offer as a fuel alternative at KTP.

Cost effective. Everyone wants more money. Find a way to cut cost down. I want to do refill jugs for water at store, costs, hard to carry (elder) use fresh food (get rid of packaged food) costs more, help by buying in bulk at our store so we can bring to our Tribe instead of Wal-Mart.

Tribe to adopt recycling codes and procedure for department/businesses to follow

Appendix E

2011 SQAUXIN ISLAND TRIBAL ADMINISTRATION, COMMERCIAL, AND INDUSTRIAL

EMPLOYEE SURVEY RESULTS

I think the tribal offices create a lot of waste. I think that time spent on educational materials and visible bins/receptacles would help. I think the Tribe also should start using compostable silverware, plates, cups, etc. at its various private and public functions.

Education, education, education. Bring the youth in, get them involved, Didn't wear a seatbelt until my 9 year old taught me.

Composting

I'm not sure

All of the above along wITH adequate education and opportunity.

Educate employees with statistics. Have recycling containers available throughout the building not just in the office or in the kitchen.

Recycle all materials that can be recycled in a cost-effective way.

Provide centralized recycling stations in public areas (Admin Lobby, Elders Lobby, MLRC Entrance, TLC and Pool, Health Clinic, New Cafeteria)-Train Janitorial and Maintenance staff on enhanced services and have them conduct technical assistance to all departments. Give them incentives to recycle. Make it a job requirement. Provide event recycling and coordinate volunteers to help. Have a Green Team that includes Council Rep who will champion a body of volunteers. Have a Green casino!

Recycled paper. Additional recycle bins to make it easier for folks.

10. Optional: Please list you department/business. This space can also be used for additional comments and ideas.

Squaxin Island Education Department

Squaxin Natural Resources

Legal

Finance

We take ink toners for the organization

Law enforcement

Law enforcement

Finance

Health Clinic

LCCR

I am just really glad that we are in the right step and moving green.

TLC

Start with kids

Appendix E

2011 SQAUXIN ISLAND TRIBAL ADMINISTRATION, COMMERCIAL, AND INDUSTRIAL EMPLOYEE SURVEY RESULTS

Planning

SIT Finance

CRD

Squaxin Island Tribe Natural Resources

Skookum Creek Tobacco

LCCR Table Games

Skookum Creek Tobacco

Natural Resources-back trailer

NR

Rhonda Foster CRD

NR

DCD Housing

Planning & DCD

Natural Resources Department