

Institute for Tribal Environmental Professionals
Tribal Solid Waste Education and Assistance Program (TSWEAP)

**Developing and Using a
Tribal Integrated Solid Waste Management Plan**

Session 1: Five Elements of
an Integrated Solid Waste
Management Plan (ISWMP)



Todd Barnell, ITEP

Where Did These Five Elements Come From?

- In the fall of 2005 the USEPA Regions submitted 22 tribal ISWMPs for consideration -Five “critical elements” common to these were identified.
- Other agencies were asked their opinion, as well as tribal committees and training organizations
- “The use of these criteria is meant to be optional but optimal.”
- Key point: your plan should be relevant to your situation and a useful tool for your planning

What is an ISWMP?

3

- ▣ The ISWMP is a product
 - A tool that will enable you to evaluate needs, detail current structure and practices, prioritize concerns, plan for the future, and consider ways to implement activities
 - Many ISWMPs cover long span of time (15-20 years) and are reviewed every few years (3-5 years)
- ▣ The ISWMP is a process
 - The preparation of the plan sets the tone for community and governmental acceptance/support as well as the internal administration and implementation of the plan
- ▣ Product + Process = Successful Plan

Process: Developing A Planning Team

- Building consensus
 - Other tribal agencies
 - Local business leaders
 - Community members
 - Local non-profit groups
 - Educational facilities – teachers and students
 - Outside consultants?

- Your planning team is essential to the process

What Does the Plan Cover?

- An ISWMP describes current and recommended methods, arrangements, and facilities for waste reduction, materials recycling, and the collection, transportation, processing, and disposal of waste.
- It should also describe the organization, administration, and funding of the solid waste system operations, programs, and policies.

What Does the Plan Do?

- ▣ The preparation of an ISWMP, and the public involvement and participation process that accompany it, provide a framework for systematically reviewing options and determining the priorities/direction of a solid waste management system.
- ▣ The ISWMP itself is a tool for action – it should help you implement strategies and evaluate their success
- ▣ It provides a framework for your audience
 - Tribal governing authority
 - Other tribal agencies
 - Members of the public

Why Prepare a Plan?

- It might be required
- Resolve issues
- Demonstrate leadership, influence events
- Balance public and private sectors
- To educate and communicate
- Helps insure equity and fairness across the community



ISWMP – Advantages

- Identifies issues, concerns, opportunities
- Provides comprehensive, objective analysis
- Promotes cooperation, coordination among involved parties
- Formalizes commitment to, and responsibility for, recommendation actions
- Sets priorities, allocates resources

ISWMP - Disadvantages

- Investment of time
- Investment of money
- Creation of controversy, conflict
- Avoidance of hard decisions
- Agenda that's unrealistic, too ambitious

Community Service Area: Understanding the Lay of the Land

- ▣ Populations and Households
 - How many people need to be served? How much growth is expected?
 - Where are the homes that need service? Is housing increasing?
- ▣ Community and Natural Resources
 - Developing community pride in the program.
 - What community assets you can work with?
 - A program that complements protection of natural resources.
- ▣ Geography, Climate, Cultural and Land Use Concerns
 - How will geographic features affect the program?
 - How will climate affect collection, storage, transfer, and disposal?
 - What cultural and land use concerns need to be factored into the plan?
- ▣ Economy
 - How can the local economy support the plan?
 - What special economic or business concerns need to be addressed?
 - How will economic development affect the program?

Structure and Administration: Establishing Your Framework

- Developing a Planning Team
 - Who needs to be involved in the planning process?
 - How will the community be involved?
- Program Administration
 - Who will manage the program? (e.g. utilities, environment, land use, or a special board)
 - Developing job descriptions, accounting practices, certification/training needs, etc.
- Codes and Ordinances
 - What types of codes are currently in place?
 - Using the ISWMP to map out current regulatory gaps.
- Compliance and Enforcement
 - Defining goals in both compliance and enforcement.
 - Establishing and delegating authority.

Current and Proposed Practices: Where Am I? Where Am I Going?

- ▣ Waste Stream Characterization
 - Generators: residential, commercial and industrial
 - Weight/volume and composition
 - Possibilities for diversion
- ▣ Illegal Dumping and Open Dumps
- ▣ Special and Hazardous Wastes
- ▣ Waste Diversion Strategies
- ▣ Limitations of Current Operations
- ▣ Planning for the Future
- ▣ Public Participation and Developing Partnerships

Funding and Sustainability: Making Sure Your Goals Can Be Met

- ▶ Funding Your Plan
 - ▶ Grant monies?
 - ▶ Tribal funding?
 - ▶ Customer fees?
- ▶ Long-Term Goals and Priorities
 - ▶ Establishment of transfer stations?
 - ▶ Regulated landfill?
 - ▶ Waste diversion activities?
- ▶ Improvements Beyond Basic Compliance
 - ▶ Conservation and innovation
- ▶ Additional Resources
 - ▶ Partnerships with other entities?

Putting it All Together and Getting it Approved

- ▶ Putting the Pieces All Together
- ▶ Generating Support for the Plan
- ▶ Documenting Community Involvement and Support
- ▶ Who Approves the Plan? YOUR Choice
- ▶ Who Implements the Plan?

Small Group Activities

- ▣ Each of you will be assigned to a group, which you will stay with the next few days.
- ▣ This afternoon you'll be sharing your own plans with one another. Each of you should write down two or three things you want to achieve with your plans. This is a time for you to brainstorm with your colleagues.
- ▣ On Wednesday you'll revisit what you wrote down and see if you can come up with some strategies. Each group will then share some of these strategies with the whole class.
- ▣ Hopefully these activities will help you sharpen your ideas during the course, and provide you with colleagues you can turn to after the course.



Developing a Tribal Integrated Solid Waste Management Plan (Part I)

Presented by Shawn Muir
February 26-28, 2019
in Palm Springs, California

Outline

- **Overview of the process**
 - Where to begin
 - How to stay on track
 - Finish strong
- **Element 1: Description of the community service area**
 - Collect data about the Reservation
- **Element 2: Description of the Tribe's waste management program structure and administration**
 - Organizational chart

Where to begin



“Begin at the beginning and go on till you come to the end; then stop.”

Where to begin

- Decision-Makers
 - Tribal Council
 - Chairperson
 - Department head
- Set yourself up for success
 - Get an initial team together
 - Set a general timeline



How to stay on track

- Commit to the plan
- Set reminders
- Break it up
- Use ideas from other ISWMPs



Finish strong



- Multiple reviewers
- Get people involved
- Present with confidence
 - Know the answers to the questions you will be asked
- Don't get discouraged if it's not approved the first time

Five Elements of a Tribal Integrated Waste Management Plan

1. Description of the community service area
2. Description of the Tribe's waste management program structure and administration
3. Description of the Tribe's current and proposed waste management practices
4. Description of the funding and sustainability and the long-term goals of the Tribe's waste management program
5. Documentation of approval of the IWMP

Element 1

- Who will be affected by the Plan's Implementation?
- Consider land base:
 - Reservation with boundaries?
 - Allotments?
 - Checker-boarding?
 - Neighbors?

Reservation Lands of the Twenty-Nine Palms Band of Mission Indians



0 3.75 7.5 15 22.5 30 Miles



Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China



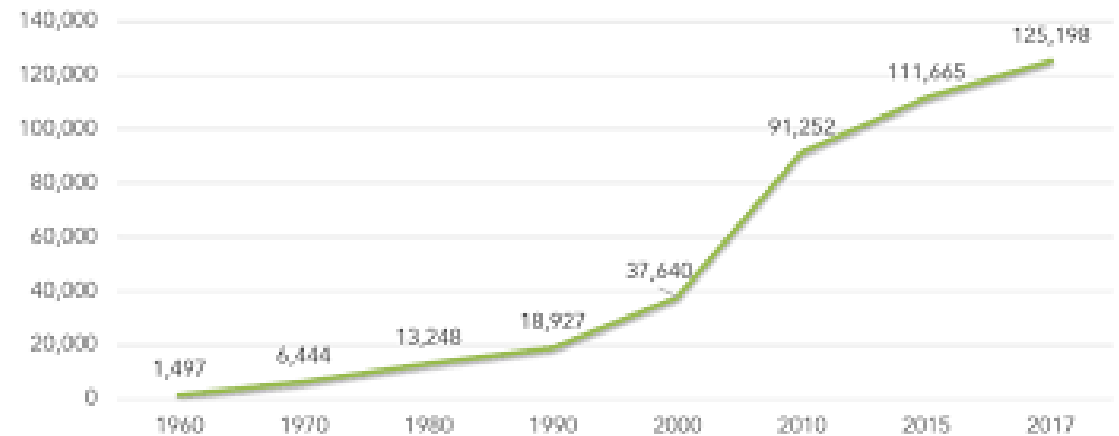
Coachella, CA Section

Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Population and Demographics

- Number of people
- Age
 - Median Age
 - Number of Adults (18-64 years)
 - Number of Seniors (65+ years)
 - Number of Children (0-17 years)
- Number of households
- Description of housing
- Distribution of population
- Population projections



Community Assets and Resources

Tribal Government

- Tribal Council
 - How many members?
 - Term length
- Number of Tribal Government Employees
 - Departments
 - Number of staff in each department
 - Department roles and responsibilities

Community Assets and Resources

- Basic Infrastructure

- Roads – paved, gravel, low-maintenance
- Wastewater treatment
- Electrical
- Water
- Fuel
- Utilities
- Emergency systems



- Land

- Fee
- Trust

- Communication Strategies

- Community events
- Committee meetings
- Newsletters or newspapers
- Tribal website
- Community message boards



Community Assets and Resources

Tribal Judicial System

- Environmental Protection
- Trespass
- Solid Waste
- Sanitation
- Building Codes



Partnerships

- Neighbors – Other tribes, city, county, state
- Indian Health Service – open dump survey, annual sanitation deficiency system review, technical assistance, information exchange, general program support
- Tribal Police Department
- U.S. EPA
- ITEP



Community Assets and Resources

- Economic Considerations
 - Gas stations
 - Markets
 - Casinos
 - Tourism



Community Assets and Resources

Climate

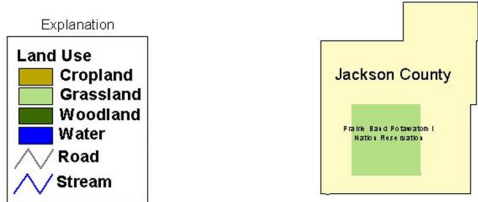
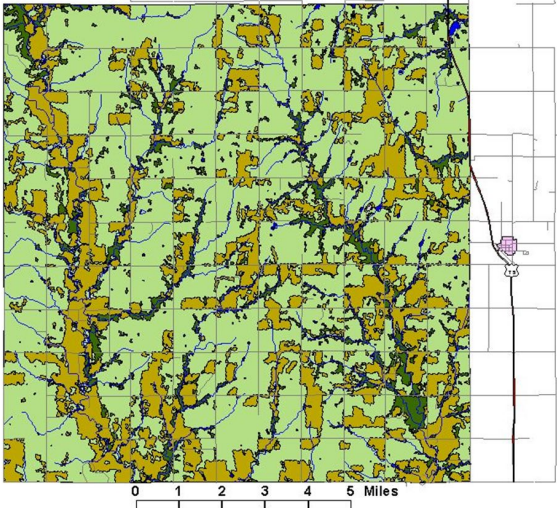
- Annual Precipitation 22.83 inches
- High Mean Temperature 73.6° F, Mean Low Temperature 48.4° F
- Prevailing Wind Direction – South, Southeast, Southwest

Geography and Natural Resources

- Land use – cropland, grassland, woodland, water

Develop Land Use Maps

Prairie Band Potawatomi Nation Reservation Land Use

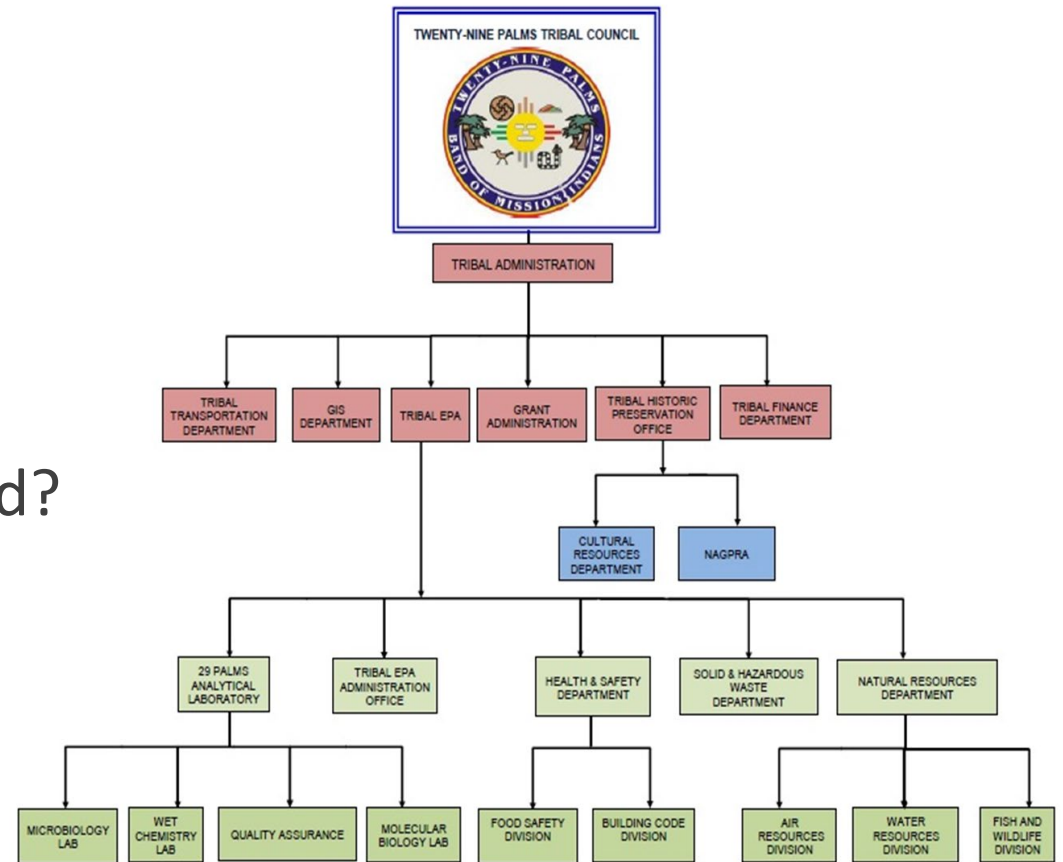


Element 2

- What do community members know about the current waste program, or lack thereof?
- Is there an organizational structure?
- Is there community involvement?
- How will the Plan be administered and enforced?

Organizational Chart

- Does your tribe have one?
- If not, consider developing one for this purpose
 - Coordination with leadership
 - Coordination with other departments
- If one exists, does it need to be updated?
- Where does the waste management program fit?



Waste Program Administration & Management

- Decision-makers
 - Who makes long-term management plans to maintain a successful solid waste program?
- Program Management
 - Day-to-day operation
- Program Implementation
 - Waste haulers
 - Recycling sorters
 - Education & Outreach
- Financial Management
- Data & Information Management
- Compliance and Enforcement

Waste Program Enforcement

- Tribal Solid Waste Code
- Federal Waste Laws
 - In general, applicable on Tribal Lands
 - Administered and enforced by U.S. EPA
 - Other agencies may provide assistance (BIA, BOR, BLM)
- Resource Conservation and Recovery Act (RCRA)
 - Subtitle C – Hazardous Waste Program
 - Subtitle D – Solid Waste Program
 - Subtitle I – Underground Storage Tank Program
- State Waste Laws
 - Typically do not apply on Tribal Lands

Waste Program Enforcement

- If you do have a Tribal Waste Code or Ordinance
 - Tribe is responsible for implementation
 - Can designate a branch of the Tribal Government for enforcement
- What resources are needed to effectively operate a compliance and enforcement program?
- Develop policies, procedures, forms, permits, citations

- Remember, start at the beginning!



Questions?





Developing a Tribal Integrated Solid Waste Management Plan (Part 2)

Presented by Shawn Muir
February 26-28, 2019
in Palm Springs, California

Outline

- **Element 3: Description of the Tribe's current and proposed waste management practices**
 - Illegal or unwanted activities
 - Ideas for change
- **Element 4: Description of the funding and sustainability and the long-term goals of the Tribe's waste management program**
 - General Assistance Program (GAP)
 - Clean Water Act (CWA)
 - Brownfields
- **Element 5: Documentation of approval of the IWMP by appropriate governing body**
 - Getting your Plan approved

Element 3

- What are the current waste management issues?
 - Negatives and positives
 - Opportunities to make improvements
 - Limitations
- Starting new programs?
 - Composting
 - Recycling

Twenty-Nine Palms Band of Mission Indians

Solid waste issue of concern - Encampments







Current and Proposed Practices

- Illegal Dumping and Open Dumps
- Special and Hazardous Wastes
- Waste Reduction Strategies
- Limitations of Current Operations
- Planning for the Future
- Public Participation and Developing Partnerships

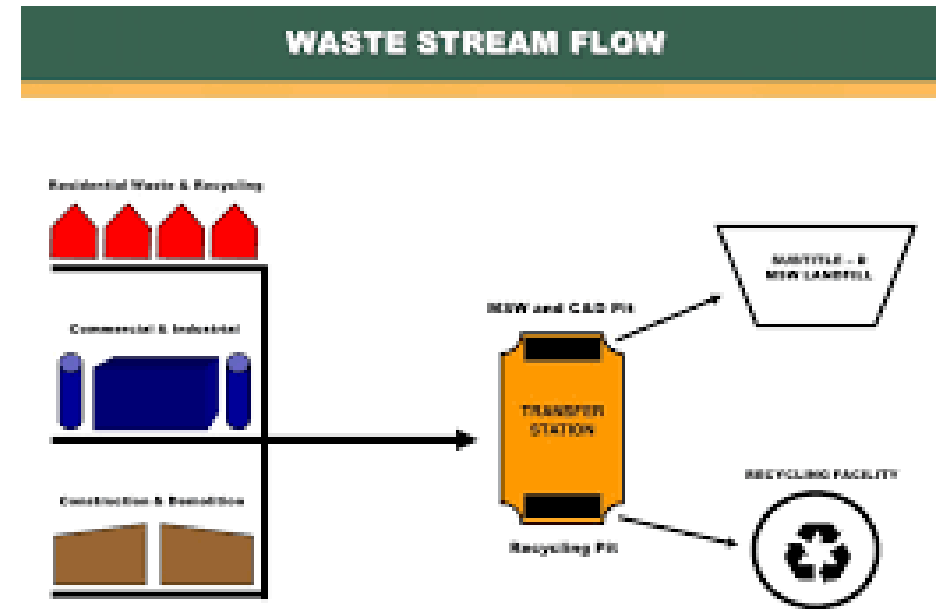


Current and Proposed Practices

- Refer back to Element 1
 - Who are your current waste stream generators?
 - What do they produce?
 - How much?
- Types of Generators – Community, business, government, industry, agriculture

Current and Proposed Practices

- Waste Stream Characterization
 - Generators: residential, commercial and industrial
 - Weight/volume and composition
 - Possibilities for diversion

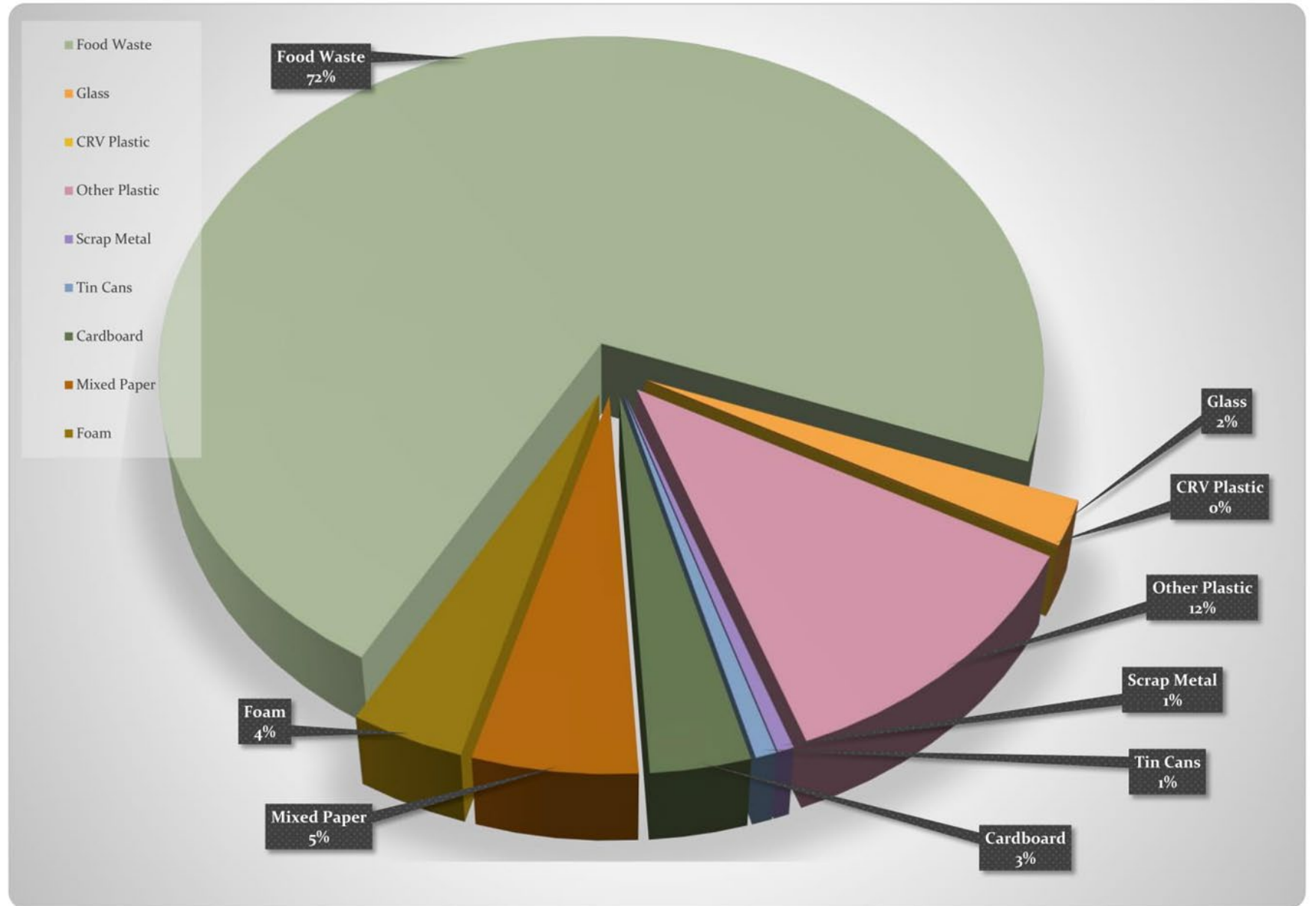






Waste Characterization Assessment Totals 4/10/2018

Product	Net Weight (Lbs.)
Food Waste	2352
Glass	70
CRV Plastic	0.3
Other Plastic	381
Scrap Metal	18
Tin Cans	23
Cardboard	109
Mixed Paper	179
Foam	124



Proposed Waste Practice

Twenty-Nine Palms Band of Mission Indians

- Recycling Feasibility Study
 - Burtec Invoices for 12 months
 - Extrapolate data using percentages from waste characterization
 - Convert weights to dollars
- How much would the Tribe make in recycling?
- How much would the casino save in tipping fees?
- How much would it cost to operate the program?
- Does the program have Tribal support?



Current and Proposed Practices

- Who is managing each waste stream?
- How is it being managed?
- What would you propose to change about each waste stream?
- What would the waste producers want to change?



Element 4

- What resources are needed?
 - IWMP Development
 - IWMP Implementation
- Support from tribal leadership?
- Support from the community?

Identify Resources Needed

- Your time or other staff time
- Outreach tools
 - Presentation materials
 - Pamphlets
 - Web development
- Legal review
- We will go over this in more detail in Sections 9 and 10

Plan for Success

- Set realistic time goals:
 - Concurrent projects
 - Number of dedicated staff
- Outreach
 - Plan for the most effective venues
 - Purchasing supplies
 - Working with consultants
 - Presentations to Council
- Various levels of review and approval

Available Resources

- Technical Assistance:
 - ITEP Library
 - ITEP staff
 - Other tribes
- Training
 - You're already taking a great first step
- Funding
 - U.S. EPA Programs
 - General Assistance Program (GAP)
 - Brownfields (CERCLA 128(a))
 - Water Pollution Prevention and Nonpoint Source (CWA § 106 and 319)

U.S. EPA Grant Programs

- Grant programs available to address solid waste issues:
 - General Assistance Program (GAP)
 - Clean Water Act (CWA)
 - Brownfields
 - Environmental Justice
 - Hazardous Waste Grants
 - DERA funding for trash trucks?

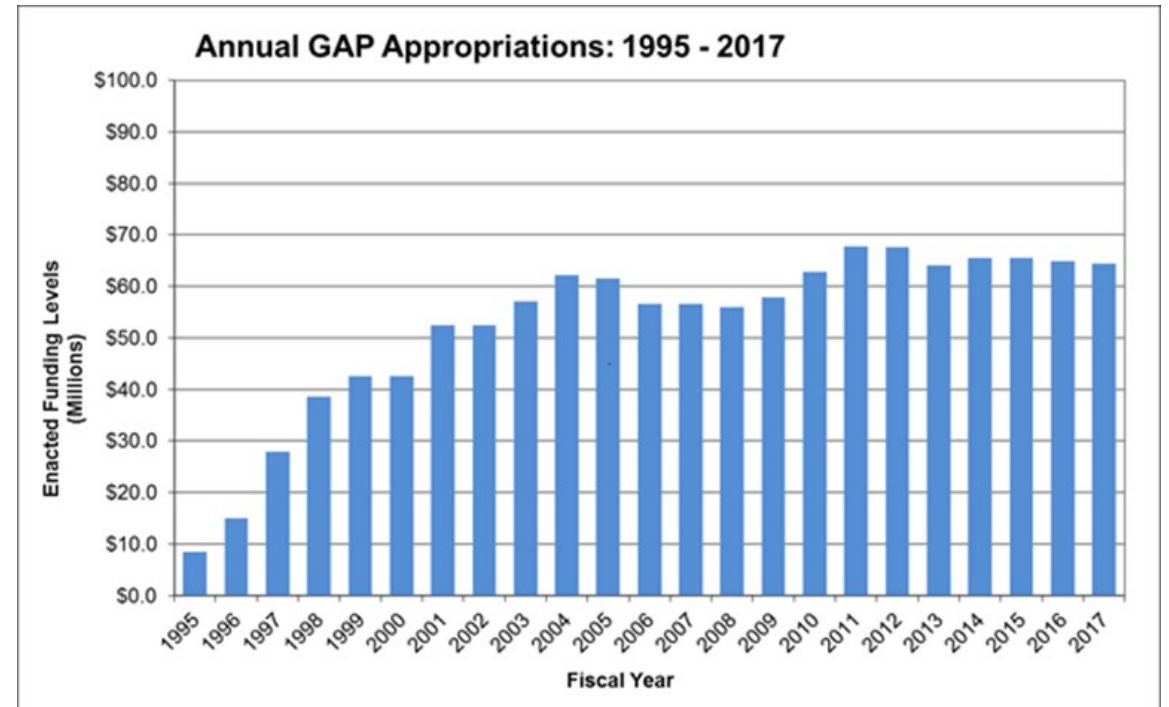
Other Grants

- Examples from California
 - Farm and Ranch Solid Waste Cleanup and Abatement Grant Program
 - Household Hazardous Waste Grant Program – Construction
 - Recycled Fiber, Plastic, and Glass Grant Program
 - Beverage Container Recycling Grants



General Assistance Program (GAP)

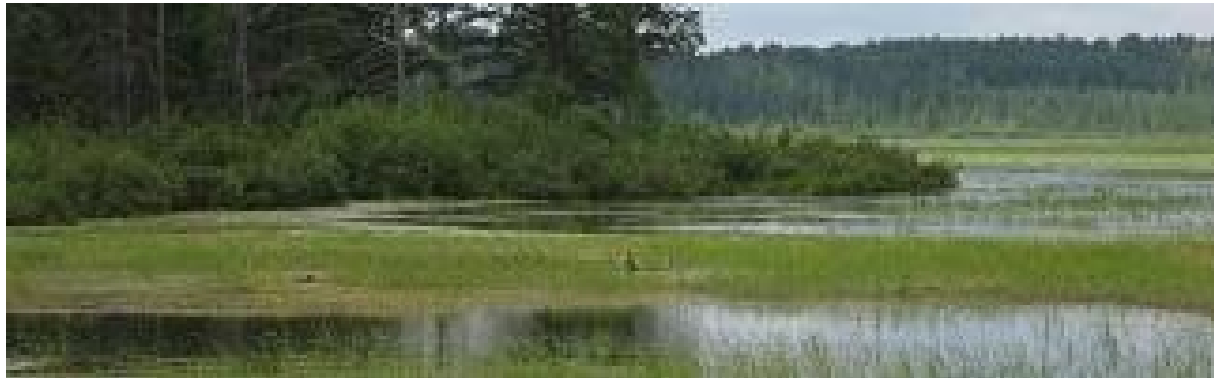
- Hire staff
- Develop legal capacity
- Compliance monitoring
- Education and outreach
- Solid & Hazardous Waste Program Capacity Building



Clean Water Act (CWA)

CWA § 106 Water Pollution Prevention Program

- Surface water and groundwater
- Hire staff
- Education and outreach
- Reducing pollution that may affect water



Clean Water Act (CWA)

CWA § 319 Nonpoint Source Program

- Surface water only
- Hire staff
- Monitoring
- Education and outreach
- Best Management Practices
- Nonpoint Source Assessment
- Nonpoint Source Program Plan



Brownfields

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) § 128(a)

- State and Tribal Response Program
 - What is it?
 - No Brownfield required to start
- Other resources available
 - Technical Assistance, Training and Research



Brownfields

- Hire staff
- Conduct assessments
- Education and outreach
- Attend training
- Purchase equipment/supplies
- Vehicle leases
- **Development of Ordinances & Environmental Laws**



Brownfields Required Tasks

Four Elements

1. Timely survey and inventory of brownfields sites on tribal land
2. Oversight and enforcement authorities or other mechanisms and resources
3. Mechanisms and resources to provide meaningful opportunities for public participation
4. Mechanisms for approval of a cleanup plan and verification and certification that cleanup is complete

Brownfields Required Tasks

- Establish and maintain the public record
- Enhance the response program
- Site-specific activities

Which funding source could be used for this?





Questions about funding and other resources?

Element 4 (continued)

- What resources are needed?
 - IWMP Development
 - IWMP Implementation
- **Support from tribal leadership?**
- **Support from the community?**

Leadership Input and Support

Know your organization (See Element 5)

- Tribal leaders
- Tribal Council
- Business Committee
- Ad Hoc Work Group



Community Input and Support

- Who are your stakeholders?
- How can you get their involvement and input?
- How can you inform them about the waste program?



Stakeholders

A stakeholder is anyone who:

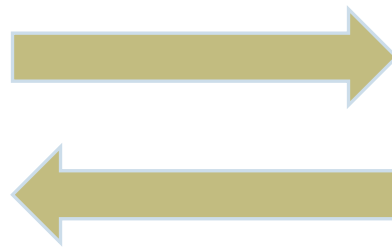
- Will be affected (positively or negatively) by the program or project
- Has knowledge related to the program or project
- Has some authority related to the program or project
- Has an interest in the program or project
 - A “potentially affected interest” (Hans and Annemarie Bleiker, Institute for Participatory Management and Planning, www.ipmp.com)

Stakeholders

- Environment/natural resource programs
- Cultural resource leaders and programs
- Traditional leaders and organizations
- Constitutional governments
- Multi-tribal organizations
- Neighboring communities
- Regional planning organizations
- State agencies
- Federal agencies
- Environmental organizations
- Housing authorities/TDHE's
- Neighborhood watch groups
- Utility companies
- Public Works
- Transportation agencies
- Transit providers
- Health care providers
- Public safety
- Law enforcement
- Emergency management
- Groups of employees
- Businesses and business groups
- Schools
- Children and youth groups
- Elders and elder associations
- Women
- Religious groups
- and many others

Two Approaches to Involvement

1. Get information, ideas, input, feedback
 - Increase knowledge
 - Support



2. Give information, educate
 - Ensure implementation
 - Create enthusiasm
 - Mobilize
 - Encourage input



Settings for Public Involvement

- Individual, one on one
 - In person ○ ▲
 - Office visit /field office
 - By phone, e-mail ○ ▲
 - Survey ○
- Small, targeted group
 - Technical committee ○ ▲
 - Focus group ○
 - Retreat ○
 - Field tour ○

Getting information ○
Giving information ▲



Settings for Public Involvement

- Larger group, open to all
 - Public meeting ▲ ●
 - Public hearing ▲
 - Open house ● ▲
 - Public event ▲

Getting information ●
Giving information ▲



Getting Information

- Interview
 - Formal questions
 - Informal dialogue
- Audio and video recordings
 - Interview
 - Self-conducted
- Mapping
- Consulting with elders
- Photo journaling
- Visioning
- “Sticky-dot” voting
 - approval and ranking
- Audience response systems (clicker voting)
- Surveys – *do a test run*
- Comment cards
- Letters
- Websites and social media: blogs, Facebook
- E-mail
- Listening at other groups’ meetings and events
- Document review

Getting Information

- What kind of information do you need?
- Who has the information?
- Are there any methods you are currently using to get this information?
- What are new methods you might use to get the information?
- Why you think the new methods would be effective?

Methods – Getting Information

Document the results!!

- Validate stakeholder involvement
 - Appreciation and validation of input
 - Justification of decisions
- Protect confidentiality
- Prepare a final report
 - Record for your use, and future use
 - Executive summary for key stakeholders, public

Element 5

- Understanding your organization
- Process of adoption
 - Who gets input?
 - Who needs to approve?



Organizational Chart

Community Outreach and Involvement

- How can you involve the public / community?
- How can you involve other tribal departments?
- How can you engage council prior to formal process (if?

Process of IWMP Adoption

Community Outreach and Involvement

- How can you involve the public / community?
- How can you involve other tribal departments?
- How can you engage council prior to formal process (if needed)?



Process of IWMP Adoption

Small Tribes' Advantage

- Easier to work through barriers / issues with process

Small Tribes' Disadvantage

- Process may not be transparent

Twenty-Nine Palms Band of Mission Indians Process

1. Tribal EPA describes need and gets approval from Tribal Chairman to move forward with Plan development.
2. Tribal EPA staff meet regularly to discuss Plan, review drafts, make changes.
3. Drafts are discussed periodically with the Tribal Chairman. Any planned outreach is also discussed. Chairman may provide guidance or ask you to seek input from specific sources.
4. Outreach is conducted.
5. Final Draft IWMP is presented at a Tribal Council meeting. Important aspects of the Plan's implementation are highlighted. Summary of outreach is given.¹
6. May be adopted or requests for revisions may be made.
7. Tribal Council votes to pass resolution for new Plan at a Tribal Council Meeting.

Other Considerations

- If IWMP is held up, what changes could be made to help it move forward?
- What is the tribe's record keeping process for new plans?
- Does the tribe publish its plans?
- Are there forms that need to be drafted to compliment new plan?
- Remember to look around: has anyone been through a challenge you are currently facing?

Questions?





**SESSION 4: MCT ISWMP CASE STUDY –
WORKING WITH AN EXISTING ISMWP, ADAPTING IT TO
NEW APPROACHES AND REALITIES, AND PLANNING FOR
REVISION**

**MICHAEL NORTHBIRD,
ENVIRONMENTAL PROGRAM MANAGER
MINNESOTA CHIPPEWA TRIBE**

The Minnesota Chippewa Tribe Total Pop. Today - 41,317

Membership Per Band is as Follows:

Bois Forte Band of Lake Superior Chippewa –	3,527
Fond du Lac Band of Lake Superior Chippewa –	4,215
Grand Portage Band of Lake Superior Chippewa –	1,101
Leech Lake Band of Ojibwe –	9,615
Mille Lacs Band of Ojibwe –	4,725
White Earth Band of Ojibwe –	18,134



Right - Leech Lake Band of Ojibwe Delegates to Washington 1899



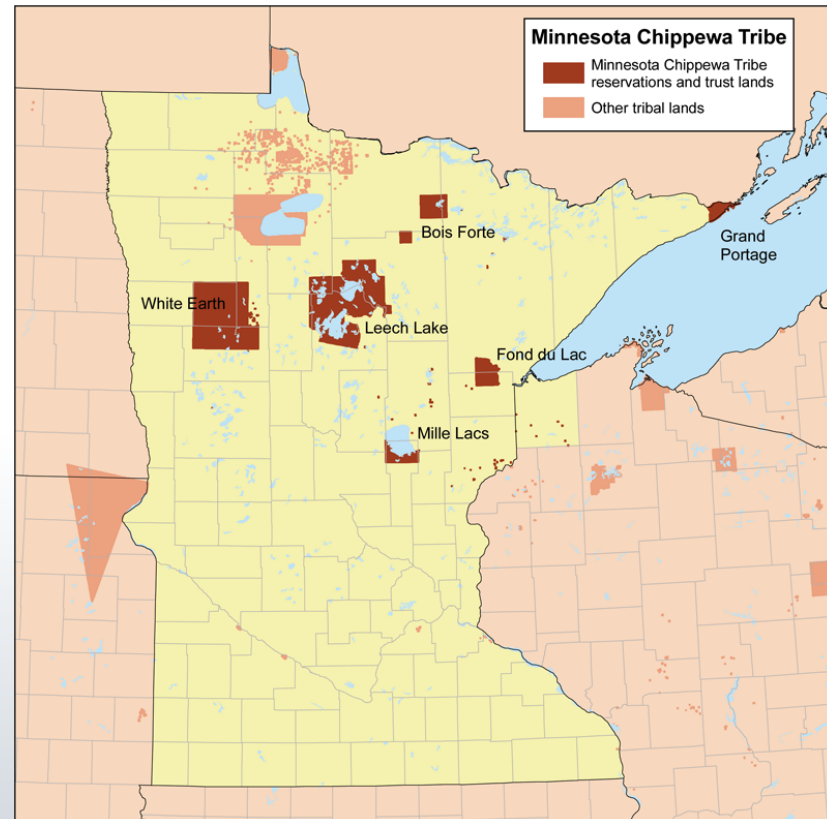
Left – Tribal Seal

1,309.9 sq
miles total

972.5 sq
miles of
land

337.4 sq
miles of
water

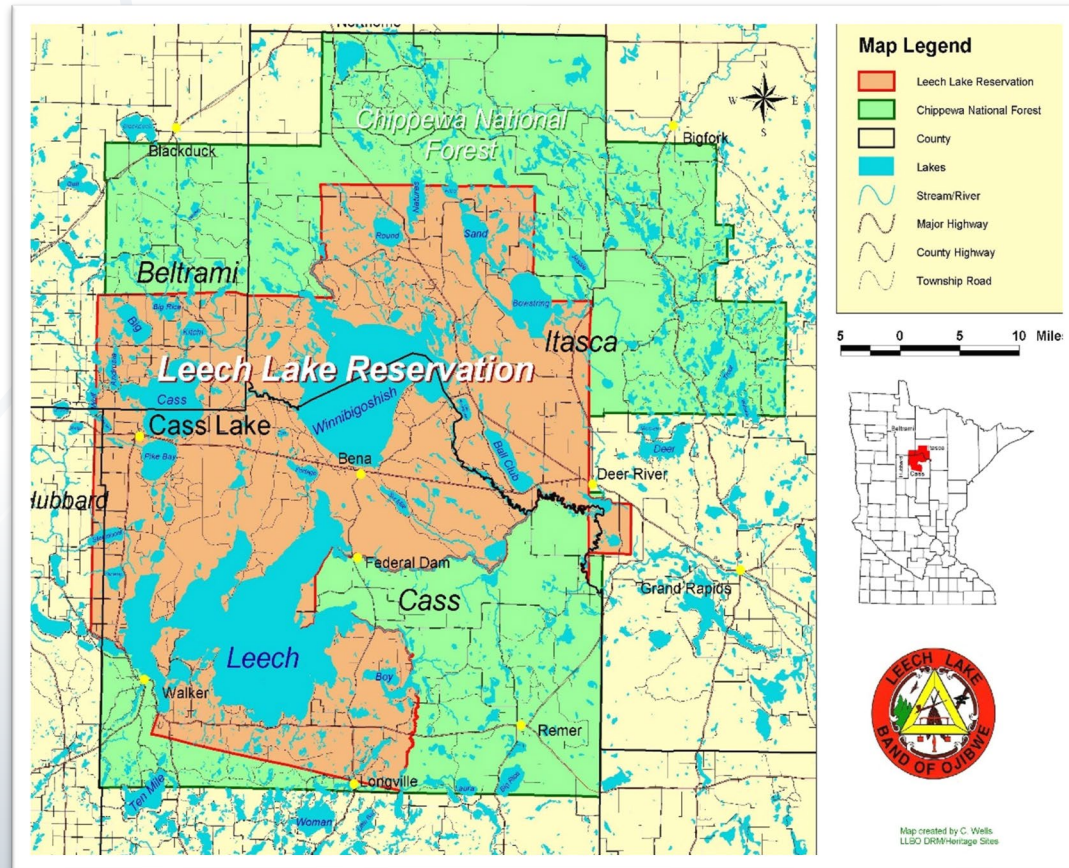
Largest Reservation in MN
in terms of total area.



Thirteen communities make up the reservation

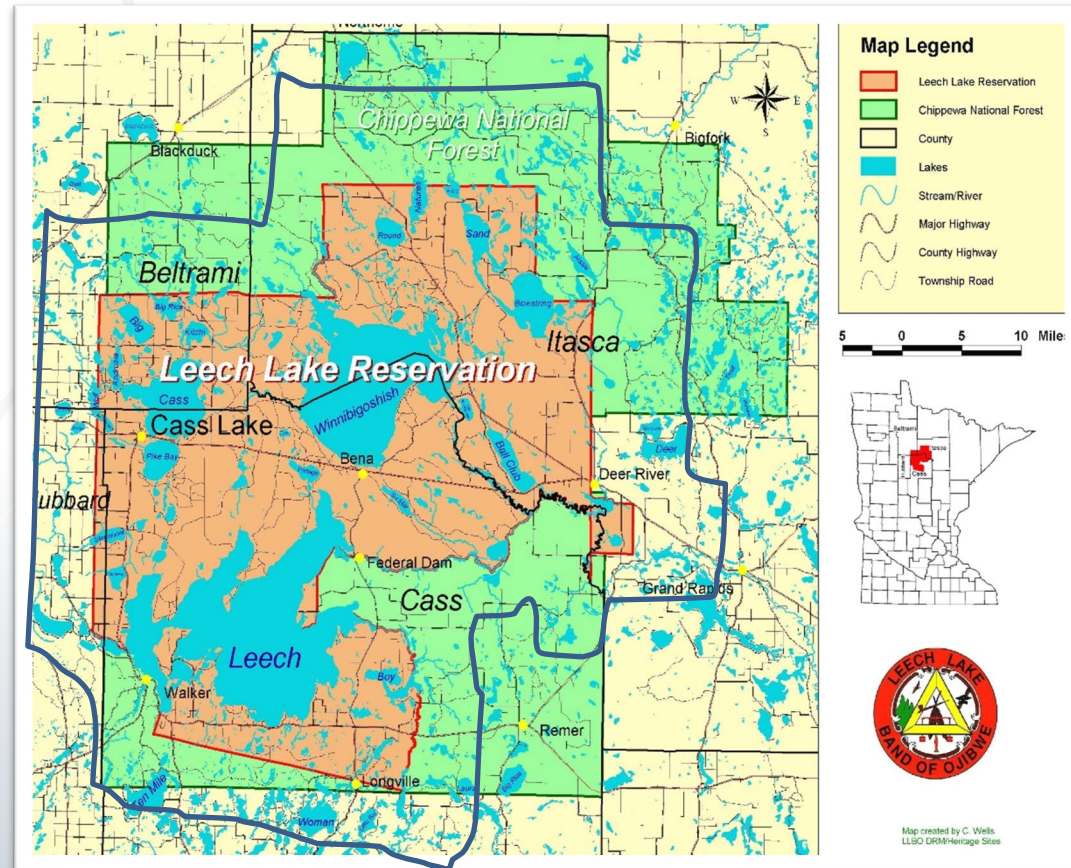
The people have organized their own community councils to give a political voice to their concerns. These community councils are called, Local Indian Council or LIC's. The smaller communities have facilities for community events and services such as medical clinics and programs for elders.

Cass Lake – Location of Tribal HQ; Ball Club; Bena; Cass River; Inger; Kego Lake; Onigum; Mission; Smokey Point; Sugar Point; Oak Point; S. Lake; and Prescott.





Primary healthcare services are provided by an IHS hospital and clinic in Cass Lake, but there are also Sanford Health clinics in various places in or near the Reservation including Cass Lake. There are 4 State Counties that split the Reservation: Beltrami, Cass, Hubbard, and Itasca. The Reservation itself is split into 3 districts as well. Leech Lake Waste Management provides curbside garbage collection services to both Tribal and non-Tribal residents within an area that extends 15 miles beyond the Reservation boundary. (\$20/month per residence)





There is a main transfer station and recycling center, as well as, 4 satellite stations spread throughout the Reservation. There are also county drop-off sites for general waste and recycling located within the Reservation. There is also a few C&D (construction & demolition) sites in or near the Reservation. The Tribe does not allow non-Tribal members drop-off access to the satellite stations, but there is a punch card purchase process in place for the main station and recycling center located in Cass Lake. Leech Lake Waste Management provides Roll-off bins for demo and mixed waste, plus recycling and dumpster rental (contracting) that includes regularly scheduled tip ups.

*Main Transfer Station's Recycling Center
US Dept. Of Energy funded – Tribal Energy Program*



COMPARING EXISTING ISWMP, ADAPTING, AND PLANNING FOR REVISION

Existing plan utilized data from 2000, and although the preparation of the first draft ISWMP was being prepared and revised between 2007 and 2009, the following year in 2010 provided more up to date data that required amending the plan again.

Population of Reservation in 2000 – 10,205

Population of Reservation in 2010 – 10,660

Tribal Members as of 2005 – 8,909

Tribal Members as of 2014 – 9,426

Eleven Communities identified in old ISWMP

Thirteen Communities identified as of today

Eleven Community Centers existed at the time of old plan

Thirteen Community Centers exist as of today

Tribal Government infrastructure has also increased, such as old plan = 1 convenience store, but 2 convenience stores today

Total Housing Units in old plan – 6,828/1,878 serviced by LLWM

Total Housing Units in 2010 Census – 7,756/2,256 serviced by LLWM





Capacity of 1 Acre
Prior to 2010



Total Tribal Property Capacity – 17 Acres



After 2010
Capacity of 2.3 Acres

*Community of
Inger, MN*



*1 of 4 Satellite
Transfer Stations –
0.5 Acres Full Capacity*



Previous funding sources included the following:

- Direct Funding from the Tribe that covers general O&M costs
- Profits from Casinos that partially offset costs of Tribal members (free to drop off gen. waste and recyclables)
- HUD Funding for housing units managed by the Tribe's Housing Authority
- Other Tribal Government Programs, including 3 Casino's through service contracts, often paying for their own dumpsters or compactors
- Services provided by Cass County in exchange for payments received from the sale of punch cards
- Grant funding from other Federal Agencies in the form of assistance for trash hauling, storage, equipment, and maintaining transfer stations
- Specific funding from the USDA Forest Service for cleaning up illegal dumps on Chippewa National Forest land located within the boundaries of the Reservation
- Revenue from contracting disposal services to area businesses and schools

Additional funding sources not previously included/mentioned are:
community contracts both private and Tribal; grocery and retail stores; local resorts; campgrounds; curbside collection services; and recycling revenue

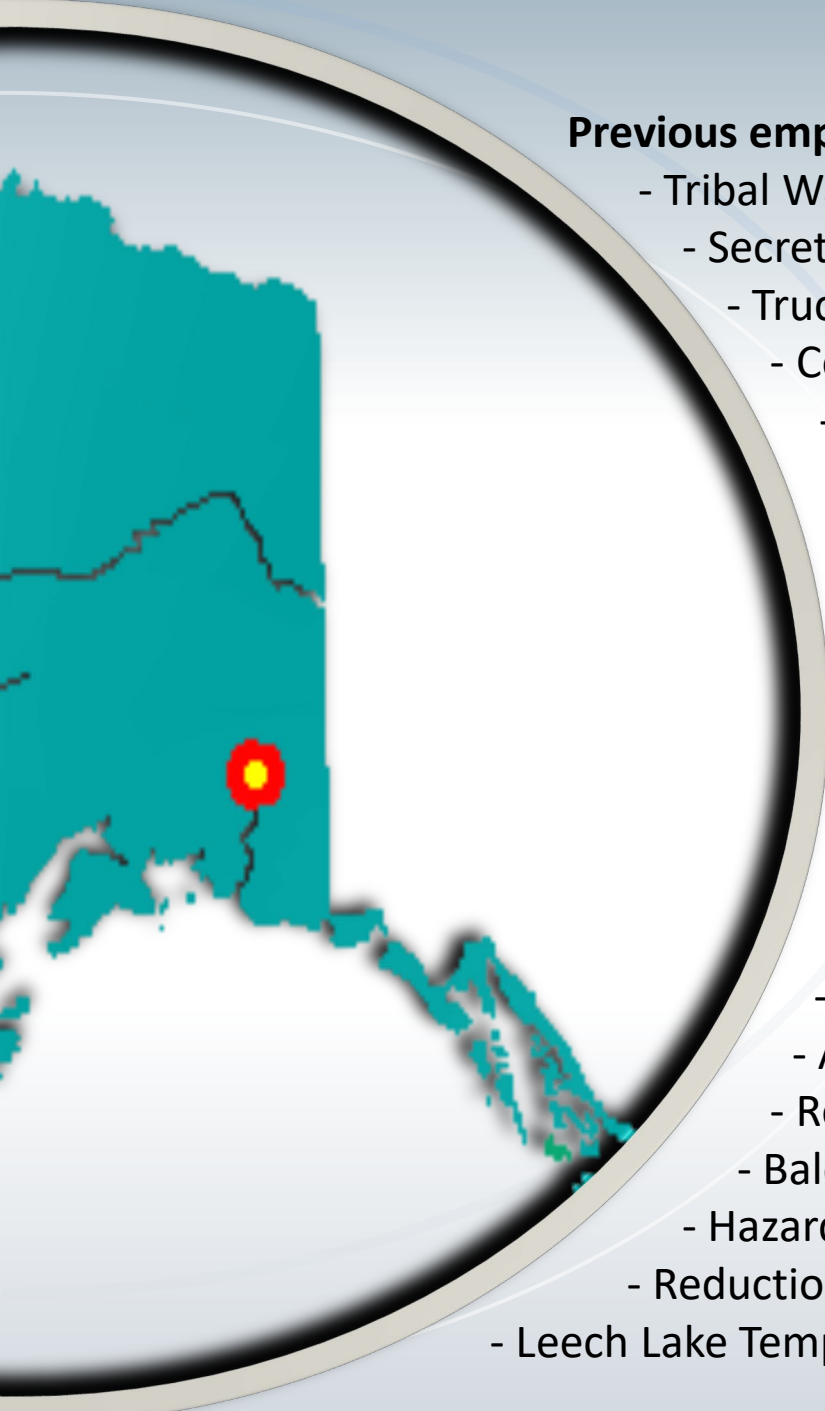
EMPLOYEE STRUCTURE

Previous employee structure included the following positions:

- Tribal Waste Management Operations Manager (1)
- Secretary (1) *retained
- Truck Drivers/Operators (2) *retained
- Compactor (roll-off) Driver/Operators (2) *retained
- Attendants – Cass Lake Main Station (3)
- Recycling Balers – Cass Lake Main Station (2)
- Attendants – Ball Club Station (2)
- Attendants – Bena Station (2)
- Attendants – Onigum Station (2)
- Attendant – Inger Station (1)
- Education Temporary Employees (varies)

Changes to employee structure include the following:

- Tribal Waste Management Director of Operations (1)
- Tribal Waste Management Office Manager (1)
- Attendants – Cass Lake Main Station (4)
- Recycling Specialist – Cass Lake Main Station (1)
- Baler Operators – Cass Lake Main Station (2)
- Hazardous Waste Technician – Cass Lake Main Station (1)
- Reduction of Satellite Station Attendants to (1) each location
- Leech Lake Temporary Employment Program “Day Labor” (up to 5 daily)



ENFORCEMENT, CODES, AND ORDINANCES

Leech Lake Tribal Waste Management began with the passing of the Leech Lake Reservation Solid Waste Transportation, Disposal, & Recycling Ordinance in 1995. This prohibited the disposal of waste within the exterior boundaries of the Reservation except at designated collection sites approved by the Tribal Council and in a manner consistent with approved waste management operations. Main components included the following:

- Procedures for handling, storing, collecting, transporting, transferring, processing, and disposing
- Responsibilities of owners, occupants, individuals, transporters, administrators, and enforcers
- Disposal conditions for Hazardous Waste
- Encouragement for recycling
- Designation of enforcement officers and enforcement procedures including fine schedule
- Responsibility for the Tribal Council and its delegates to administer and enforce the ordinance and for any Tribally owned and operated solid waste collection facilities or equipment

Leech Lake Division of Resource Management Conservation Officers were delegated the authority to enforce the ordinance and they created a *Notice of Solid Waste Violation, Citation, and Imposition of Penalty Form*.





The ordinance as written did not specifically mention E-Waste and only encouraged recycling. Amendments were proposed, but no changes were ever made to the original ordinance. The Tribal Council viewed the ISWMP as the avenue for addressing the proposed changes and felt amending the ordinance was unnecessary at that time.

This was partially due to the fact that ISWMP's are living documents meant to be reviewed and revised on a regular basis, such as every 5 to 10 years. Also, the original ordinance was considered to be so generalized that any additional changes to it were already covered and therefore considered approved. Basically the portion that mentions waste disposal activities are deemed approved as long as they are performed in a manner consistent with Tribal waste management operations. Meaning approved by the Tribal Waste Management Operations Manager.

In addition, any violations of the ordinance were to be deemed at the discretion of the Enforcement Officers, and in extreme cases the ordinance already provided a provision that included confiscation of vehicles and equipment used in the act of the violation. (Although this provision was never anticipated to ever be used) Often times, a warning and designated timeframe were given to correct the infraction and more often than none they were then corrected.

WASTE MANAGEMENT PRACTICES – CURRENT AND PROPOSED AT THE TIME

Based on a 2001 USEPA *Characterization of Municipal Solid Waste Report* that stated an average rate of MSW generated per person is 4.4 pounds per day, of which 2.5 pounds is generated at home, and using an average of 4 occupants per household generated the estimates used for this portion of the plan. This amounted to an estimate of 3,427 tons annually or 6,854,000 pounds a year for Tribal Waste Management.

* This has changed along with the number of households that were newly constructed since then, 928 additional units (generating an average of 10 pounds daily) that amounts to an additional 1,694 tons or 3,387,200 pounds generated within the Reservation annually. Of the 928 additional units, Leech Lake Waste Management acquired 378 new service agreements accounting for an increased volume of 690 tons or 1,379,700 pounds a year since then.*

Waste generation statistics from 2003, published by the USEPA, was also utilized to obtain general baseline information regarding percentage of volumes generated. Utilizing Census 2000 data also provided future generation and growth rates which predicted a rate increase of 18% between 2005 and 2015. (predicted increased units = 220)





Even though the Tribal Waste Management Department had existed for over 10yrs at the time of the first draft ISWMP, the thought of revenue still was not being taken into consideration, and subsequently the Tribe was still paying to have material capable of revenue generation removed from the Reservation. The ability to recycle has always been available via drop-off, but no curbside collection or outreach was conducted to increase participation. Which wasn't necessarily viewed as a bad thing, since so little of it was generated which reduced the overall costs of having it removed. It also wasn't a good thing because someone else was not only making money by simply being paid for receiving it from the Tribe, but then they would also be able to sell the product for additional revenue. Often times, whether aware or not, the Tribe would allow haulers to simply remove material of high value at no cost thinking it didn't cost them money so it must be a good deal. This resulted in years of lost revenue.

*Changes were then made to accommodate the loss, such as seeking out buyers for glass, plastic, aluminum, steel, iron, newspaper and magazines, appliances/white goods, and tires.



Initial funding for the creation of the Transfer Stations came from the Indian Community Development Block Grant (ICDBG) in 1998. The Tribe provided a 25% match of the \$400,000 received for a total of \$500,000 to develop the Main Station and 3 Satellite Stations. Direct funding from the Tribe maintains the operation costs, which at the time of the draft ISWMP was over \$800,000, and included \$200,000 in revenue from program fees at that time costing the Tribe \$600,000. Today the annual budget exceeds \$1,000,000, but the revenues now exceed \$400,000. The cost for the Tribe is still around \$600,000, but Tribal Waste Management has continued to increase its capacity while maintaining costs at a level from a decade ago.

The original proposed plan did not include construction of a Haz-Waste building or Recycling Center, but these have been acquired since then through the use of other grant funding available such as \$30,000 from the USEPA Brownfields 128 (a) program for a Haz-Waste collection and storage building and \$184,000 from the US Dept. of Energy – Tribal Energy Program for the new Recycling Center. The previous main building at the Main Station was simply a garage to house the curbside truck and 2 roll-off trucks.



Using a Tribal ISWMP in Conjunction with Tribal Solid Waste Codes

Presented by Shawn Muir
February 26-28, 2019
in Palm Springs, California

Comprehensive Program

- Key to developing a *comprehensive* solid and hazardous waste program
 - Can build the elements individually
 - ISWMP is a good place to start
 - Work toward codes and regulations
- How does your ISWMP work with Tribal Solid Waste Code?
 - Code may delegate authority for implementation to Tribal EPA, or other department
 - Code enforces Plan




Tribal Waste Codes

- A code, law, or ordinance are the same thing
- These are adopted by the Tribal Council
- Regulations are a subset of rules under the Ordinance or Code
 - Give more specific information
 - Incorporate forms, checklists, fines & fees, etc.
 - Specific to one topic

Tribal Waste Codes

- Applicability
 - Native Americans on Tribal Lands
 - Sometimes “non-Indians” according to the Montana test
 - But no criminal jurisdiction over “non-Indians”
- Enforcement
- Tribal Court
- Tribal Council
- General Council

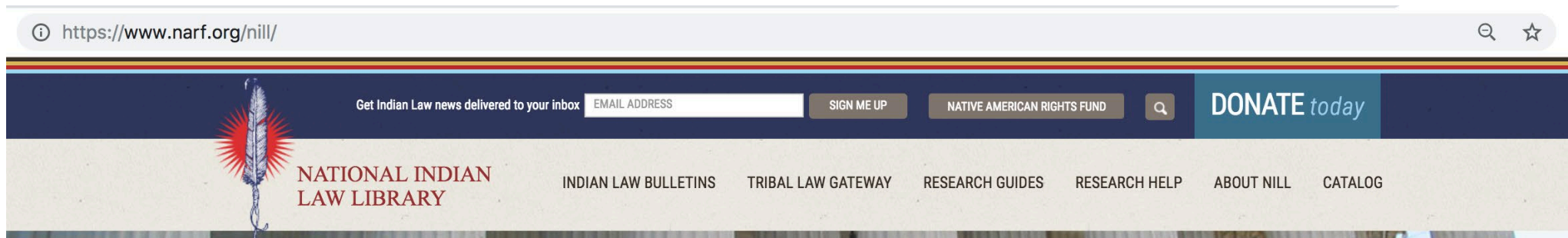
Developing a Solid Waste Code

- Find your current code
- Begin a running list of updates/needs/wants
- Talk through at staff meetings
-  Warning: Shameless plug ahead
(Check out ITEP's course!)
- Create an outline



Online Resources

- <https://www.narf.org/nill/>
- <https://www.municode.com>
- <http://www.nijc.org/resources.html>
- <http://www.tribal-institute.org/lists/codes.htm>
- <http://thorpe.ou.edu>



Rule of Law

Four main parts:

- Accountability
- Just Laws
- Open Government
- Accessible and Impartial Dispute Resolution

Background Information

- Who will be governed by the law?
- Consider land base:
 - Reservation with boundaries?
 - Allotments?
 - Checkerboarding
 - Neighbors
- How do community members know what laws govern them?
- Is there a process for passing tribal laws?
- Is there community involvement?
- How will the law be enforced?

Background Information

- Does your tribe have a solid waste code? Are you starting from scratch or updating?
- Is there a specific issue which needs to be addressed? Be proactive, not reactive.
- Have a clear picture of your end result: 1 year, 5 years, 10 years

Code Development Process

- Understand your tribe's code structure
- Who must be involved in the process vs. those who may be helpful in developing/facilitating
- Who must review and comment on the draft, and who gets the final say of what goes in and what stays out?
- What is your tribe's process for adopting new laws? Updating laws?

Identify Resources Needed

- Your time or other staff time – **You don't have to do it all in one year!**
- Outreach tools
 - Presentation materials
 - Pamphlets
 - Web development
- Legal review

Enforcement Mechanisms

- General enforcement authority
- Judicial enforcement
- Administrative assessment of penalties
- Ability to bring citizen suits under certain circumstances

Enforcement Actions

- Complaints
- Cease & desist orders
- Remedial action
- Revocation & suspension of permits
- Hearings
- Compliance Orders
- Appeals
- Penalties associated with each of these

Alternative Enforcement

- Enforce trespassing laws
 - Patrol
 - Signage
- Eliminate Homeless Encampments
 - Work with local law enforcement/BIA
- Education & Outreach through Solid Waste Program
 - Community clean-up days
 - Awareness campaigns
 - Citizen reporting

Twenty-Nine Palms Band of Mission Indians

Solid waste issue of concern - Encampments





What are Encampments?

- Makeshift dwellings set up by individuals or groups
- Often concealed by trees and brush
- Large or small scale
- Creates refuse and litter
- Brings in hazardous/biohazard materials
- Creates a dump site after eviction

Discovery

- Encampments initially discovered by Tribal Public Safety Department
- Entire area was scouted to identify all encampment sites
- Public Safety made the Tribe aware
- Sheriff aided in conducting a sweep of the area
- 12 Camps, 24 People in all
- Consolidated into ~7 “dump sites”

Map of Encampment Sites





Human Health and Environmental Hazards

- Biohazards
- Fire
- Unknown chemicals
- Motor oil
- Potential contamination of surface water and groundwater
- Wildlife area
- Cultural biological beneficial uses







Eviction Process

- Tribe sent a letter to BIA Superintendent making them aware of the issue
- A coordination meeting was held
- Tribe updated its Trespassing Ordinance
- A Citation of Trespass was developed and served by a BIA representative with Tribal Public Safety
- Meal cards and information from a local shelter were also handed out







NOTICE
This is a notice to inform you that the
land on which you are currently occupying
is the property of the State of California.
You are hereby notified that you are
in violation of the laws of the State of
California and are being removed from
this land. You are to vacate this land
immediately and are to remove all
personal property and belongings from
this land. Failure to comply with this
notice may result in legal action being
taken against you. This notice is being
posted on the land for your information.
State of California
Department of Public Safety
Office of the Attorney General
Sacramento, California

Open Dump Clean-up

- Tribal EPA contacted EPA office of solid waste
- Filled out forms for Indian Health Service STARS system and EPA Solid Waste Survey Form
- Our site was ranked among other open dump sites and received a high priority for clean-up
- GAP funding was allocated to clean up the site
- Condition: Develop Integrated Waste Management Plan





Types of Engagement on the Project

- Tribal Public Safety
 - Identifying common goals
 - Reaching out to County law enforcement
- Coordination with Federal partners
 - BIA - Issued a categorical exclusion. No environmental assessment was required
 - EPA (funding contingent on development of IWMP)
- Engagement with Tribal Council
 - Created awareness of environmental hazards associated with solid waste
 - Identified need to update Trespass Ordinance
 - Tribal buy-in and support

Sign Installation

- BIA funded installation of “No Trespassing” signs
- BIA provided the signs to the Tribe
- The Tribe installed the signs along Reservation boundaries

**NO
TRESPASSING**

Federal Indian Reservation.
Violators subject to prosecution
under Tribal Ordinance #050912;
Federal Law (25 U.S.C. § 415); and
California State Penal Code 602.

**PROHIBIDO
EL PASO**

Reservación Federal Indígena.
Transgresores serán procesados
bajo la Ordenanza Tribal #050912;
la Ley Federal (25 U.S.C. § 415); y el
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Enforcement Alternatives: Signage

- Creates immediate awareness
- Cost effective
- Grant funding
- Partnerships
 - City
 - County
 - BIA

Enforcement Alternatives: Partnerships & Community Outreach

- You can't implement your programs and projects entirely on your own
- Good community outreach builds relationships for your current *and future* programs and projects

Plus:

- Public participation may be required by laws and regulations

Twenty-Nine Palms Annual Pow Wow Winter Gathering



Inter Tribal Earth Day at La Jolla

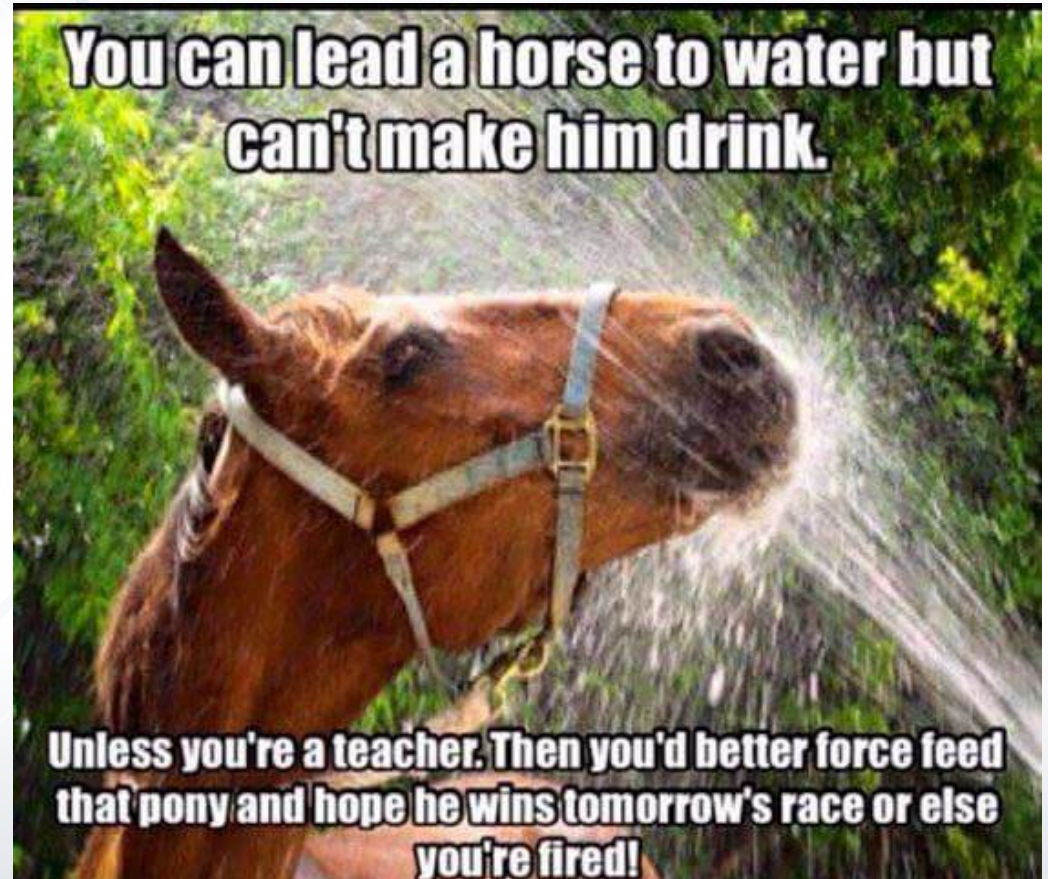


thank you



SESSION 6: CASE STUDY, LEECH LAKE BAND OF OJIBWE -
USING AN ISWMP AS PART OF WASTE DIVERSION
ACTIVITIES

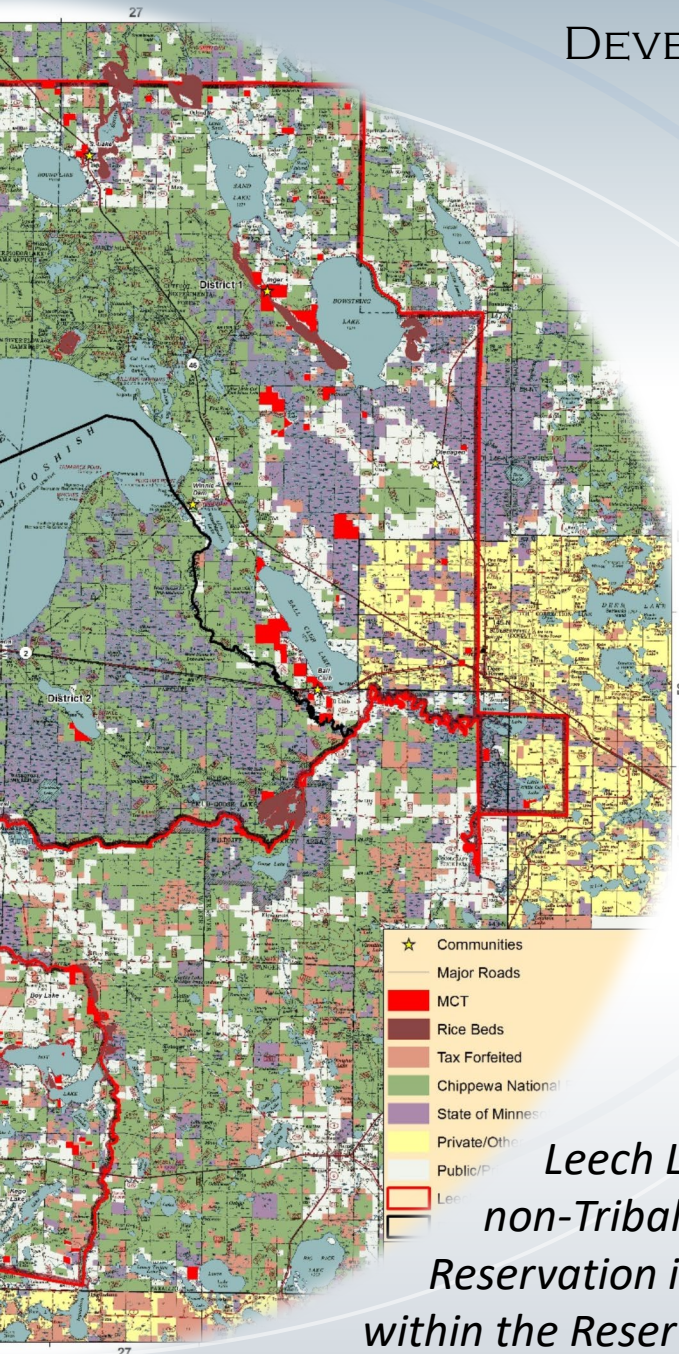
MICHAEL NORTHBIRD,
ENVIRONMENTAL PROGRAM MANAGER



<https://www.census.gov/popfinder/?#>

Easy to use Census Interactive Population Search

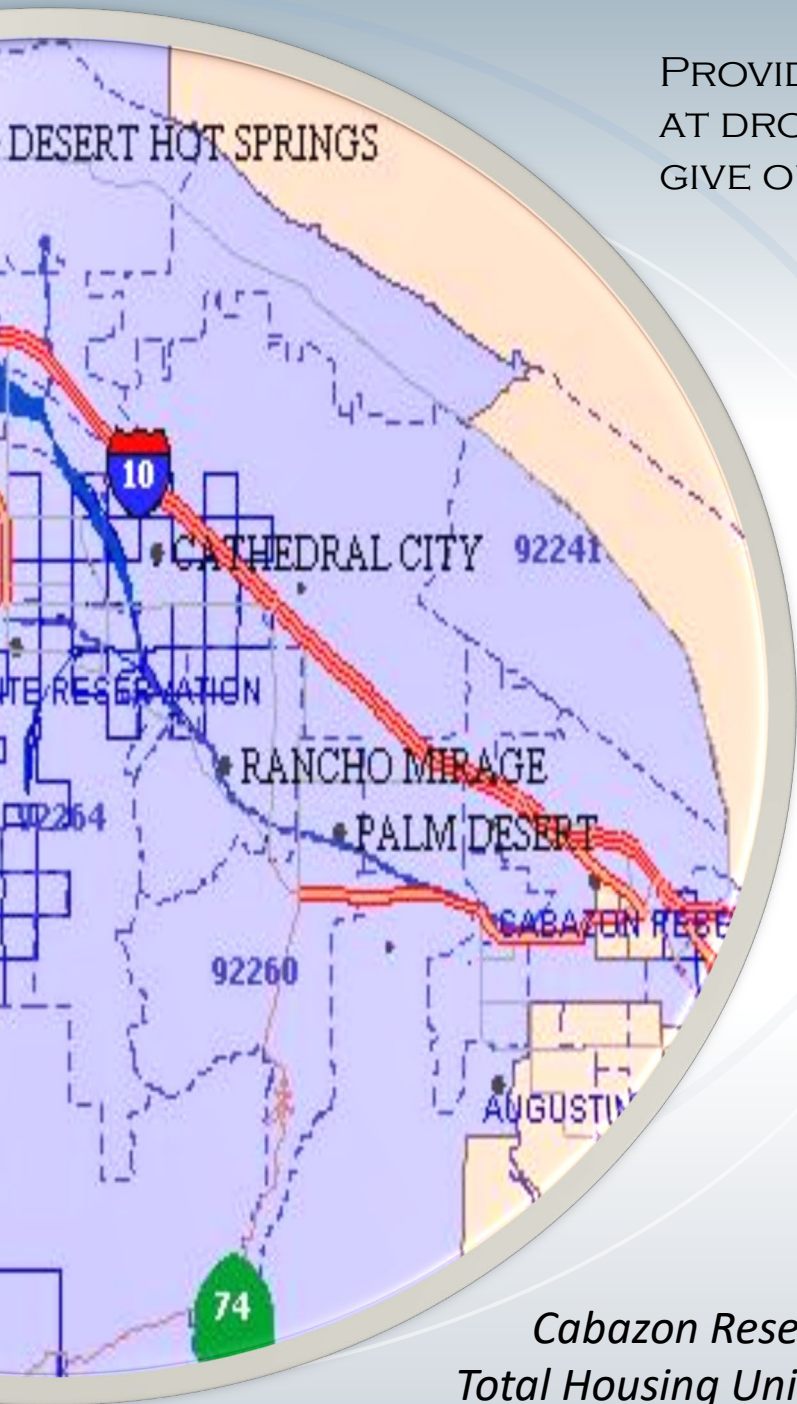
DEVELOPING SIGNAGE AND INFORMING YOUR COMMUNITY



Site	Hours	Location
Ball Club	Tues. - Sat. 8am - 4:30pm	From Ball Club, go 2 miles North on Hwy 39 to Whispering Pines Road, turn left and follow to station.
Bena	Tues. - Sat. 8am - 4:30pm	From Hwy 2 in Bena go South on County Road 8 one (1) mile. Take a Left at the Radio Tower Road and follow to station.
Cass Lake	Mon. - Fri. 7am - 5:30pm Saturday 8am - 4:30pm	6250 152nd St. NW, Cass Lake, MN 56633 From intersection of Hwy 2 and 371 in Cass Lake. Go 2 miles South of Cass Lake on Hwy 371 then left on County Road 146/ 152nd St NW and follow to station..
Inger	Tues. - Sat. 8am - 4:30pm	From Highway 2, take Highway 46 North of Deer River/Ball Club. Turn right on County Road 35, then turn on the first right after crossing the Inger Bridge and follow BIA Road 12 to station.
Onigum	Tues. - Sat. 8am-4:30pm	From Hwy 200, East of Northern Lights Casino, take Onigum Road North until you pass the Onigum Community Center then take a Right at Cedar Point Road, follow to station.

Fees	Curbside Pick-up	Transfer Station	Recycling
Leech Lake Band Member	\$20.00 month Fill out application and we bill you	Free with proof of enrollment	Free
Non-band Member	\$20.00 month Fill out application and we bill you	\$3.00 bag - must purchase a \$12.00 punch card from Teals	Free
Elder & Handicap	Free	Free	Free

Leech Lake Band of Ojibwe 2010 Census – 10,660 residents (Tribal and non-Tribal) living within the Reservation boundary, the most of any Reservation in the State of MN. Note: not all 9,615 enrolled members live within the Reservation. Total Housing Units – 7,756 Occupied – 3,930



PROVIDE INFORMATION ONLINE, IN NEWSLETTERS, POSTED AT DROP OFF SITES, OTHER LOCAL PUBLICATIONS, AND GIVE OUT FLYERS AT COMMUNITY EVENTS.

Acceptable Drop Off	Unacceptable Drop Off
<ul style="list-style-type: none"> • Household Hazardous Waste (HHW) • Household Garbage • Tires • Appliances • Scrap Metal • Used Motor Oil • Batteries and E-Waste • Furniture • Mixed Solid Wastes • #1 & #2 plastics • Aluminum • Tin • Glass • Paper • Corrugated Cardboard 	<ul style="list-style-type: none"> • Construction Waste • Concrete • Asphalt • Yard Waste • Ashes • Medical Waste • Needles • Explosives • Styrofoam

Keep them up to date and notify the community of adjustments, such as ...

**Tribal Waste Management is
NOW ACCEPTING YARD
WASTE AND ASHES!**

*Cabazon Reservation pop. 2010 Census – 835 Enrolled Members – 36
Total Housing Units 2010 Census – 219 Occupied - 198*

ALWAYS HAVE INFORMATION READILY AVAILABLE



“When do you pick up my area?”
 “If I get your service, when can I expect pick up?”

Curbside Pick-up Day 1			
Beaulieu Ville	9:00 a.m.	Palace Drive	10:00 a.m.
Sugar Bush	9:15 a.m.	Mac Flats	10:15 a.m.
Buck Lake	9:20 a.m.	Thunder in Sky	10:20 a.m.
Little's Road	9:25 a.m.	Tooterville	10:25 a.m.
Plantation	9:30 a.m.	Strawberry Field	10:30 a.m.
Quill	9:40 a.m.	Allen's Bay	10:45 a.m.
Porcupine	9:45 a.m.	Wilkinson	12:00 p.m.
Mission	9:50 a.m.	Oak Point	12:30 p.m.

Curbside Pick-up Day 2	
Wildwood (Tract 34)	9:00 a.m.
Moccasin Flats (Tract 33)	9:30 a.m.
Elders Place	
Heritage Manor	
Northwood Apts	
Fox Creek	11:00 a.m.
Prescott	11:30 a.m.

Curbside Pick-up Day 3			
Breezy Point	9:00 a.m.	Boy Lake	11:00 a.m.
Old Agency	9:30 a.m.	Sugar Point	11:30 a.m.
Midway	9:35 a.m.	Bena - South	12:00 p.m.
Onigum	9:45 a.m.	Bena	12:10 p.m.
Smokey Point	10:10 a.m.	Old Housing	12:20 p.m.
Whipholt	10:20 a.m.	Portage Lake	12:40 p.m.
Kego Lake	10:40 a.m.		

Existing customers and potential customers call all the time and having basic operating information at hand will go a long way!

Curbside Pick-up Day 4	
Pennington	9:00 a.m.
Deer River	9:30 a.m.
Ball Club	9:45 a.m.
Jackson Village	10:45 a.m.
S Lake	11:00 a.m.
Sugar Bush	11:20 a.m.
Inger	11:45 a.m.

Kiowa-Comanche-Apache-Fort Sill Apache
 Oklahoma Tribal Statistical Area pop. 2010 Census – 11,621
 Total Housing Units – 5,033
 Comanche members – 16,372
 Occupied – 4,208
 Living in/around Lawton – 7,763

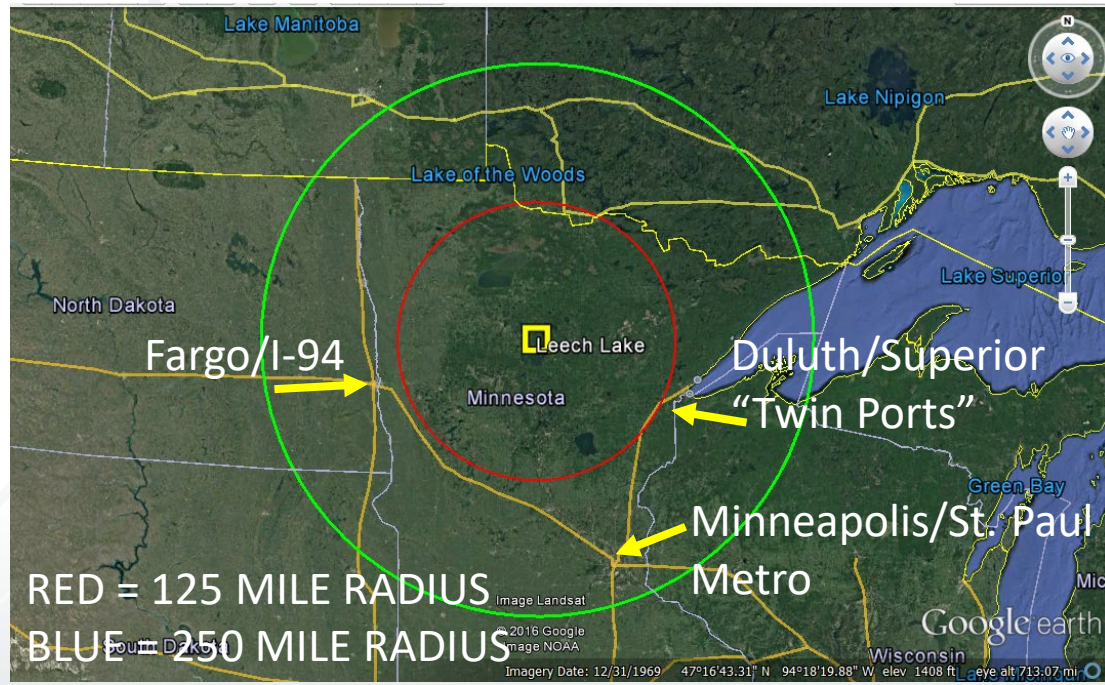


DO NOT HESITATE TO EXPAND AND GROW YOUR SERVICE AREA
IN ORDER TO OBTAIN VOLUMES NECESSARY FOR FULFILLING
OPERATION GOALS

PROXIMITY TO MINNEAPOLIS/ST. PAUL: 213 MILES
3 HRS 40 MIN ONE-WAY

PROXIMITY TO DULUTH/SUPERIOR: 136 MILES
2 HRS 30 MIN ONE-WAY

PROXIMITY TO FARGO: 134 MILES 2 HRS 30 MIN ONE-WAY



Coushatta Reservation pop. 2010 Census – 88
Member of the Inter-Tribal Council of Louisiana
Total Housing Units – 38 *Occupied - 34*

TAKE ADVANTAGE OF OPPORTUNITIES THAT MAKE CENTS

When evaluating potential vendors that purchase recyclables, it is important to gain perspective of their operations and capabilities. Ask questions and do some research, identifying the differences in costs compared to potential revenue may prove beneficial.

THE DIFFERENCE IN REVENUE:

THEY PICK UP = \$150/TON

YOU HAUL = \$160/TON

TYPICAL LOAD = 20 TONS/QUARTERLY (Every 3 months)

TOTAL REVENUE:

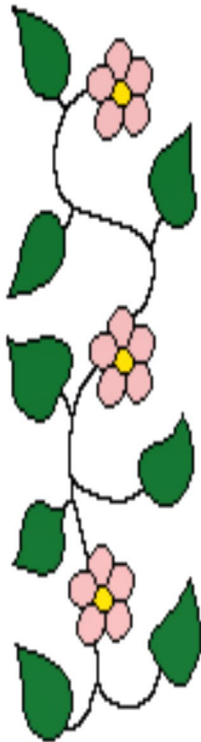
THEY PICK UP = \$3000 PER TRIP

YOU HAUL = \$3200 PER TRIP

\$200 difference does not cover expenditures, such as, driver wages and benefits, fuel used, and maintenance.

(Some deals that sound too good to be true, may be just that. E-waste story 😊)

White Earth Nation Reservation pop. 2010 Census – 9,562
Total Housing Units – 5,372 *Occupied – 3,540*



PROGRAM INCENTIVES AND GAINING COMMUNITY SUPPORT

IN GENERAL –

SOLID WASTE IS CONSIDERED A RENEWABLE RESOURCE

IT WILL NEVER GO AWAY AND IS READILY AVAILABLE

IT PROVIDES JOB SECURITY

IT IS CAPABLE OF SELF-SUSTAINMENT IF DONE PROPERLY

WASTE MANAGEMENT IS A BILLION DOLLAR INDUSTRY

WORLDWIDE

AS THE POPULATION INEVITABLY GROWS, SO DOES THE

NEED FOR IMPROVEMENTS IN WASTE MANAGEMENT

208 FT

TRIBALLY –

DEVELOPS AND PROMOTES SELF-GOVERNANCE

ENHANCES TRIBAL KNOWLEDGE AND CAPACITY

CREATES JOBS THAT HELP MEMBERS DEVELOP SPECIAL SKILLS

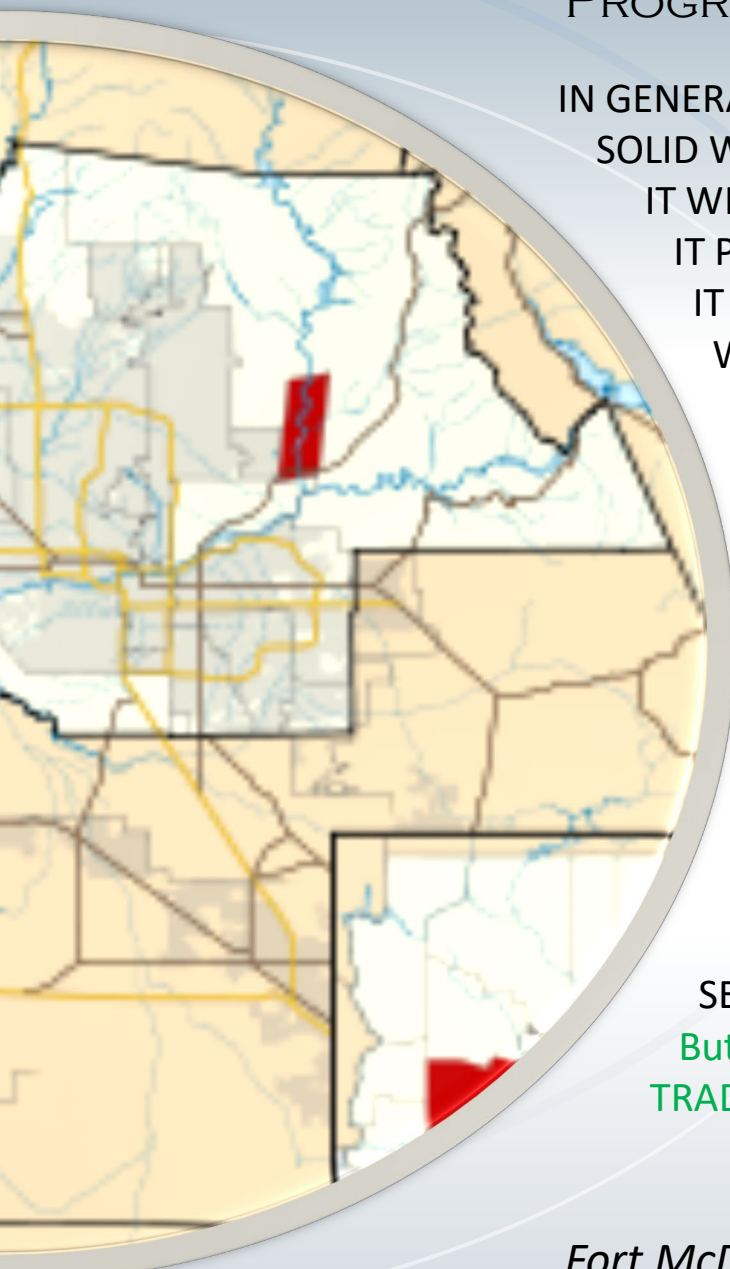
PROVIDES REVENUE FOR POTENTIALLY OFFSETTING O&M COSTS

ADDITIONALLY MAY PROVIDE REVENUE FOR OTHER PROGRAMS

EDUCATION, FUNERAL ASSISTANCE, MEDICAL ASSISTANCE, GOVT SERVICES

But Most Importantly – IT PROMOTES THE CULTURAL HISTORY AND TRADITIONS OF CARING FOR MOTHER EARTH

*Fort McDowell Yavapai Nation Reservation pop. 2010 Census – 971
Total Housing Units – 308
Occupied - 283*



GAINING TRIBAL COUNCIL BUY-IN

TODAY – HOW MUCH VOLUME DO YOU CURRENTLY HAVE?
(ITS COMING IN WITHOUT EFFORT) EX. 5 TONS

TODAY – HOW LONG DID IT TAKE TO ACCUMULATE THAT
VOLUME? (HOW OFTEN DOES IT GET REMOVED FROM
COMMUNITY) EX. QUARTERLY

5 TONS/QUARTERLY = 20 TONS ANNUALLY
COST = \$50/TON TOTAL = (-\$1000/YR)

TOMORROW – YOU START ACTUAL COLLECTION
AND NOTIFYING THE PUBLIC THAT YOU SEEK
DESIRED PRODUCT (FOR YOUR SECURED BUYER)

5 TONS/QUARTERLY = 20 TONS ANNUALLY
REVENUE = \$100/TON TOTAL = +\$3000/YR

ALSO – YOU ENSURE YOU PLAN TO HAVE THE NEW CAPACITY
TO DOUBLE INPUT/OUTPUT OF TODAY

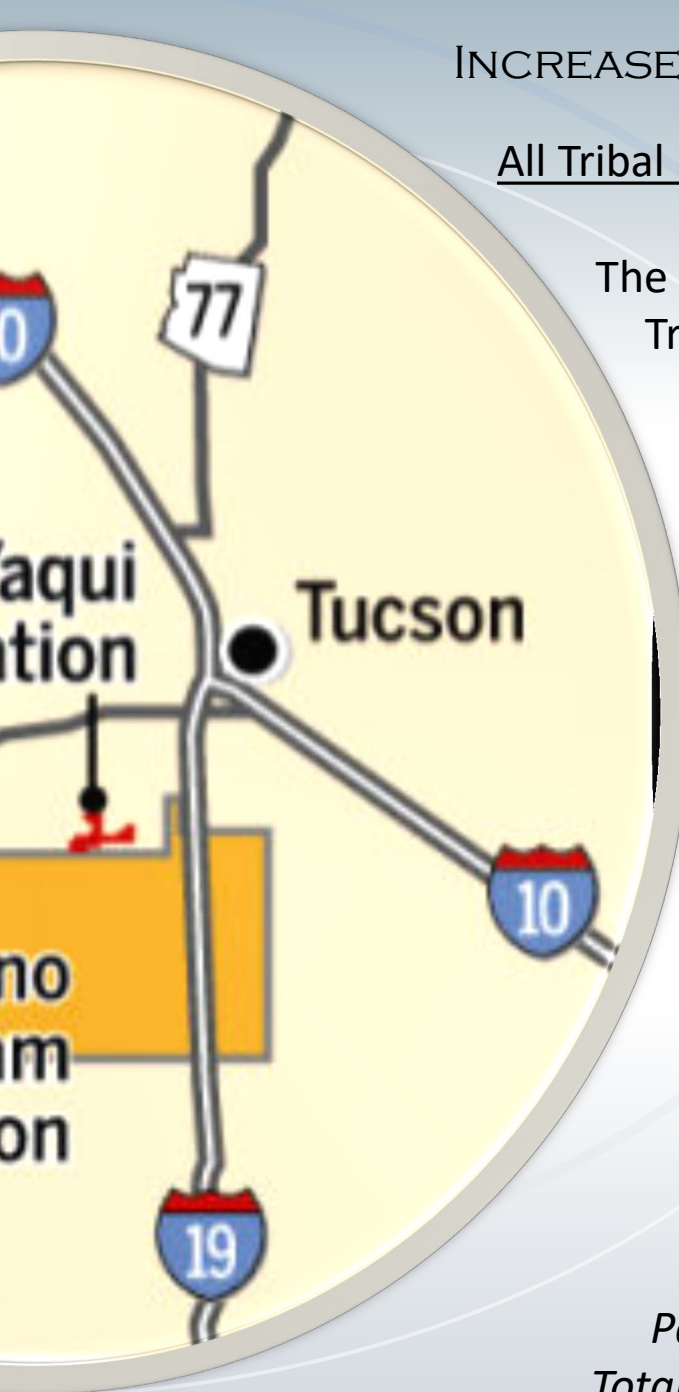
Grand Portage Reservation pop. 2010 Census – 565
Total Housing Units – 313 *Occupied - 257*



INCREASE VOLUMES BY PROVIDING OUTREACH AND EDUCATION

All Tribal Programs, Departments, Divisions, and offices generate waste.

The Government Recycling Initiative, which was only directed at Tribal Government operations (authorized/ordered by the Tribal Council), was a tool used to skyrocket recycling and waste management within the Reservation. The driving factor of this tool, was that these programs were given mandates for better budget management, and we provided a solution to assist in achieving that mandate. By reducing the costs of waste disposal, through recycling in offices and educating visitors, these programs seen immediate savings in their billing statements. Leech Lake Solid Waste seen immediate results too, like increased volume, utilizing developed capacity, demonstrating additional need, and bringing in revenue. This required a team effort beyond the waste management staff.



*Pascua Pueblo Yaqui Reservation pop. 2010 Census – 3,484
Total Housing Units – 833
Occupied - 804*

INCREASE VOLUMES BY PROVIDING OUTREACH AND EDUCATION


All Tribal members, community members, and tourists/visitors within the Reservation and surrounding area generate waste.

Building on this momentum, Leech Lake Solid Waste began to engage the community, which was already noticing the changes being made. The education and cooperation received at the Tribal Government level was beginning to trickle down into the neighborhoods where employees lived. Additionally, local businesses, schools, and County/State/Federal governments began calling for services (Why?). Through demonstrating the capability, increasing awareness, conducting public outreach, and getting out from behind the desk, the Leech Lake Solid Waste Department was able to strengthen the foundation developed with all of its waste management staff.



*Pueblo of Jemez Pop. 2010 Census – 1,815 (99% Native, 58% of Members)
Total Housing Units – 522 Occupied - 474*

INCREASE VOLUMES BY PROVIDING OUTREACH AND EDUCATION



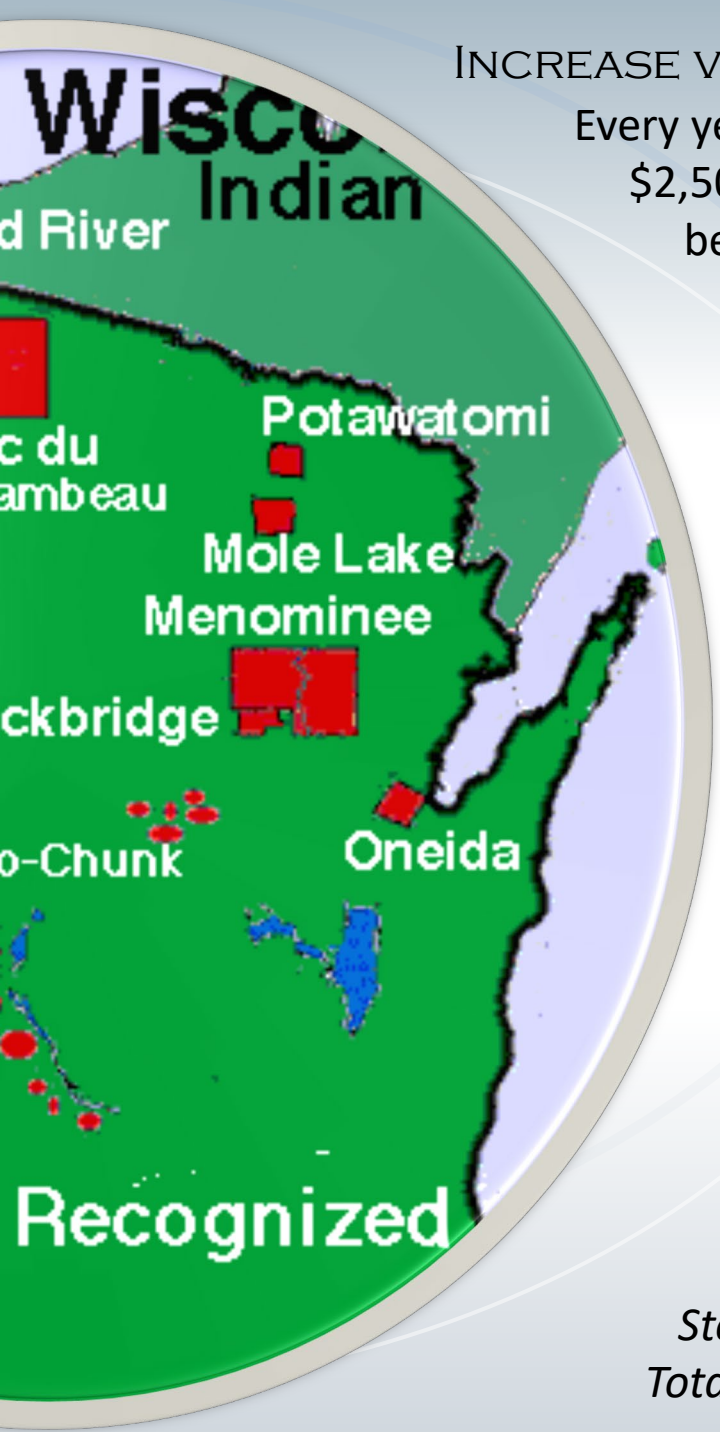
Spring – Earth Day is always a popular time to hold an event that highlights your program’s progress. Other community events during that time should be taken advantage of as well. For example, we utilize our maple sugar/syrup camps to provide education to the community too.

Summer – Summer Youth Programs are an excellent opportunity to spread awareness and get the community motivated. Powwows are a given. Campgrounds and resorts will help increase summer volumes.

Fall – Leech Lake Waste Management developed a new event called Rezycle Day, which coincided with America Recycles Day, but was meant to be a fall Earth Day type event focused on just waste management.

Winter – Besides indoor winter powwows, there are also several feasts periods around the holidays, and large winter events like ice fishing and snowmobile gatherings.

Pick a State from Region 10



INCREASE VOLUMES BY PROVIDING OUTREACH AND EDUCATION
Every year we make a special request from the Tribal Council for \$2,500 in order to showcase materials that the community can benefit from, that are products of recycled material, in order to demonstrate direct results of their recycling efforts.



Mittens handmade by local elder from recycled donated sweaters.



Pizza Cutters made from recycled plastic.

*Stockbridge Munsee Community pop. 2010 Census – 644
Total Housing Units – 273
Occupied - 254*

INCREASE VOLUMES BY PROVIDING OUTREACH AND EDUCATION



Mens, Womens, and Youth Jackets – made from recycled plastic bottles.



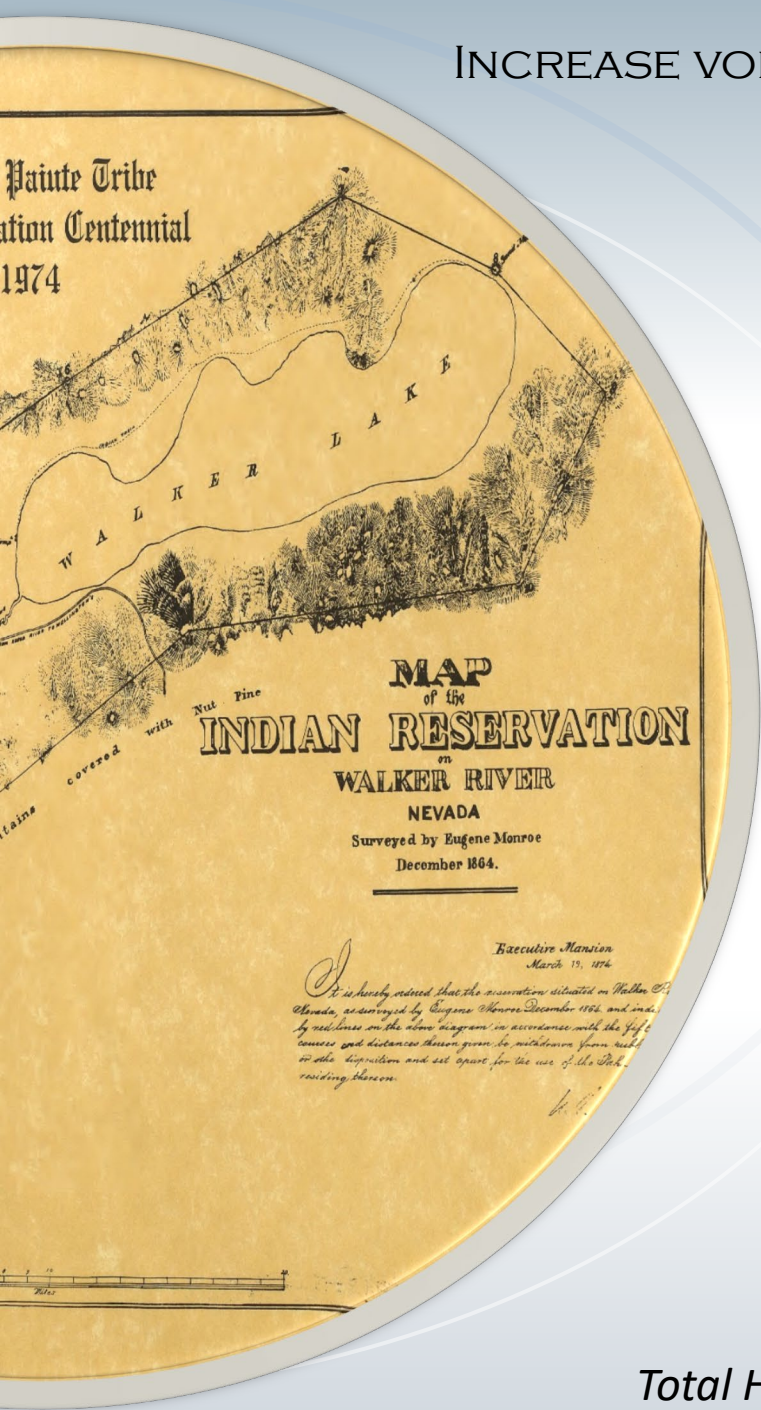
Mini-notebook w/pen made from recycled material:
paper/cardboard,
plastic, and aluminum.



*Tetlin Alaska Native Village Statistical Area pop. 2010 Census – 130
Total Housing Units – 68
Occupied - 44*

INCREASE VOLUMES BY PROVIDING OUTREACH AND EDUCATION

Create a “Brand” and get your name out there!



Develop departmental relationships and build internal bridges for support to increase team effort.



Walker River Reservation pop. 2010 Census – 746
Total Housing Units – 363
Occupied - 316

INCREASE VOLUMES BY PROVIDING OUTREACH AND EDUCATION

Be creative and don't be afraid to think outside the box!



LEECH LAKE COMPOSTING



COMPOSTING CAN

- Suppress plant disease and pests
- Reduce or eliminate the need for chemical fertilizers.
- Promote higher yields of flowers and garden vegetables.
- Facilitate reforestation, wetlands restoration, and habitat revitalization efforts by amending contaminated, compacted, and marginal soils.
- Cost-effectively remediate soils contaminated by hazardous waste.
- Remove solids, oil, grease, and heavy metals from storm water runoff.
- Capture and destroy 99.6% of industrial volatile organic chemicals (VOC's) in contaminated air.
- Provide cost savings of at least 50% over conventional soil, water, and air pollution remediation technologies, where applicable.



COMPOSTING

Meat bones and dairy products are not recommended. Not only because they create odor, can become rancid, and attract animals, pests and insects but because fatty food wastes are very slow to break down and the fat can actually exclude/eliminate the air/oxygen that composting microbes need to do their work.

Fat, grease, lard, and oil - are not recommended. Due to the same factors as meat, bones, and dairy.

THINGS THAT CAN BE COMPOSTED

- Coffee Grounds & Filters
- Tea Bags
- Corrugated Boxes
- Stale Bread
- Stale Beer and Wine
- Paper Egg Cartons
- Hair from your hairbrush
- 100% Cotton Balls
- Cotton Swabs from 100% Cotton and Cardboard (not plastic) Sticks
- Dryer Lint
- Wool Clothing & Cotton Clothing
- Newspaper (Shredded or torn)
- Dead houseplants & their soil
- Used matches
- Ashes from the Fireplace, BBQ Grill, or outdoor Fire Pit
- Latex Balloons
- Pumpkins
- Hay Bales
- Christmas Tree
- Pet Fur
- Old Pet Food



Middletown Rancheria of Pomo Indians pop. 2010 Census – 56
Total Housing Units – 19
Occupied - 19

WHEN ALL ELSE FAILS - WASTE TO ENERGY

<http://energyrecoverycouncil.org/wp-content/uploads/2016/06/ERC-2016-directory.pdf>

According to the Energy Recovery Council, there are 77 Waste to Energy facilities in 22 States as of 2016.



REFUSE DERIVED
FUEL
(RDF) –
Mixed Municipal
Waste for Energy

This fuel is considered a biomass fuel, similar to plant matter and animal waste. Municipal waste is a renewable resource and using it to generate electricity reduces dependence on fossil fuels like oil and coal for energy.

Reduces the amount of waste entering landfills in Minnesota by as much as 300,000 tons per year.

W-T-E FACILITIES
PREVENT 30 MILLION
TONS A YEAR FROM
ENTERING LANDFILLS
NATIONWIDE

Elk River's 3 generators produce up to 29 megawatts of electricity from up to 1,000 tons of processed municipal solid waste daily.

*White Mountain Apache Fort Apache Reservation pop. 2010 Census – 13,409
Total Housing Units – 3,815
Occupied – 3,301*

**Institute for Tribal Environmental Professionals
Tribal Solid Waste Education and Assistance Program (TSWEAP)**

Designing and Using a Tribal Solid Waste Management Plan

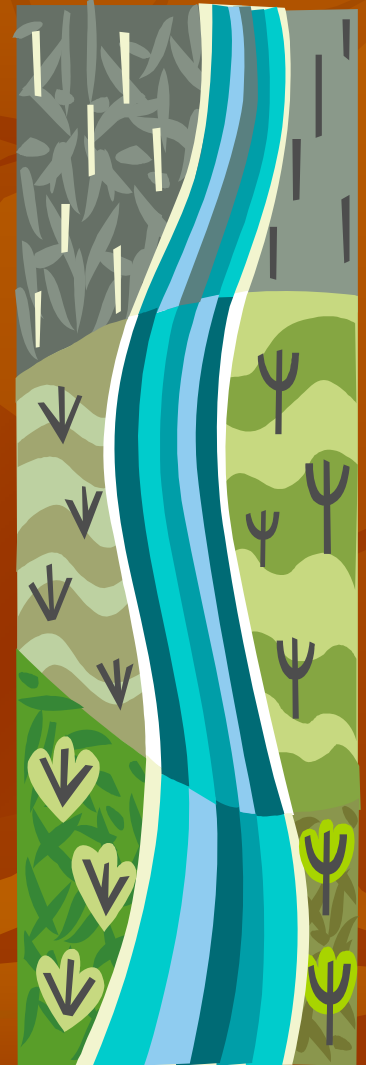
**Session 7:
The Joy of Waste Audits**

Todd Barnell, ITEP

Waste Stream Characterization:

What Is It?

- Every man, woman and child in your community is generating waste – and recent trends show we are all generating more waste every year
- Your waste stream includes all of this waste, as well as waste from offices, businesses, industries, etc.
- You need to know:
 - How much waste is being generated?
 - What types of waste are present in your community
 - Where is it coming from?
 - Are there certain types that are increasing? Are any decreasing?



Waste Stream Characterization: Benefits

- Once you understand your total waste stream, that knowledge can help:
 - Guide source reduction and waste diversion strategies
 - Establish different purchasing/use guidelines
 - Influence you over all solid waste management activities
- This study is the foundation on which many of your future decisions will be made
- The amount of detail you go in to should be based on what you plan to do – more detail up front is always better than having to go back and do it all again!

What Is In Your Stream?

- The three types of waste that make up the majority of a typical solid waste stream are:
 - Paper
 - Organic material
 - Packaging/Containers

- All three of these waste types are prime candidates for waste diversion strategies



Waste Stream Characterization: Elements

- The following elements need to be determined
 - Generators
 - Residential
 - Nonresidential
 - Weight/Volume
 - Composition/Categories
 - Future trends in generation



Waste Stream Characterization: Generators: Residential

- Needs to be representative
 - What are your primary population centers?
 - Is your housing mostly clustered or non-clustered?
 - Do you need different samples from different areas?
 - What is your time frame?
 - Samples from routes, transfer stations, bins, others?
- Communities off reservation?
 - What effect might these populations have on your waste stream? Are partnerships possible?

Waste Stream Characterization: Generators: Nonresidential

- Needs to be representative
- Some possible generators may include:
 - Government offices (Tribal? Nontribal?)
 - Healthcare and educational facilities
 - Commercial sources (e.g. stores, casinos)
 - Construction/demolition activities
 - Industrial (possible source of “special wastes”)
 - Could there be sources off your tribal land?
- Prioritize sample activities and time frames

Waste Stream Characterization: Getting Ready for the Sort

- First you need to decide on when and how the samples are going to be taken
 - Ranges from simple sorts of paper being thrown away at a school each week to very involved sorts at transfer stations over long periods of time
 - Keep in mind elements that might affect waste generation, such as seasonal variations, climate issues, etc.
- Recent studies show the accuracy of sorting is more important than the quantity of waste sorted
 - The more people you have to do the sorting the more accurate your sorting will be (usually)

Waste Stream Characterization: Three Step Sorting Process

- Primary: Establish broad categories and sort the waste into separate piles
- Secondary: Each category from the primary sort is broken up into multiple, specific sub-categories
- Weighing: Each category of waste is weighed in tared containers or you may do a volume analysis instead

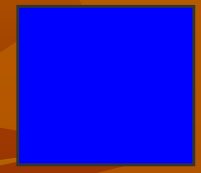
Waste Stream Characterization: Primary Sort

- Paper
- Plastic
- Glass
- Metal
- Organic Material
- Durables/White Goods
- Construction and Demolition Debris
- Hazardous Waste
- Special Waste
- Other

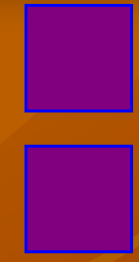
Waste Stream Characterization: Secondary Sort (Paper Example)

- Newspaper
- Cardboard
- Glossy
- Telephone Books
- High Grade Office
- Mail/Paperboard
- Non-recyclable Paper

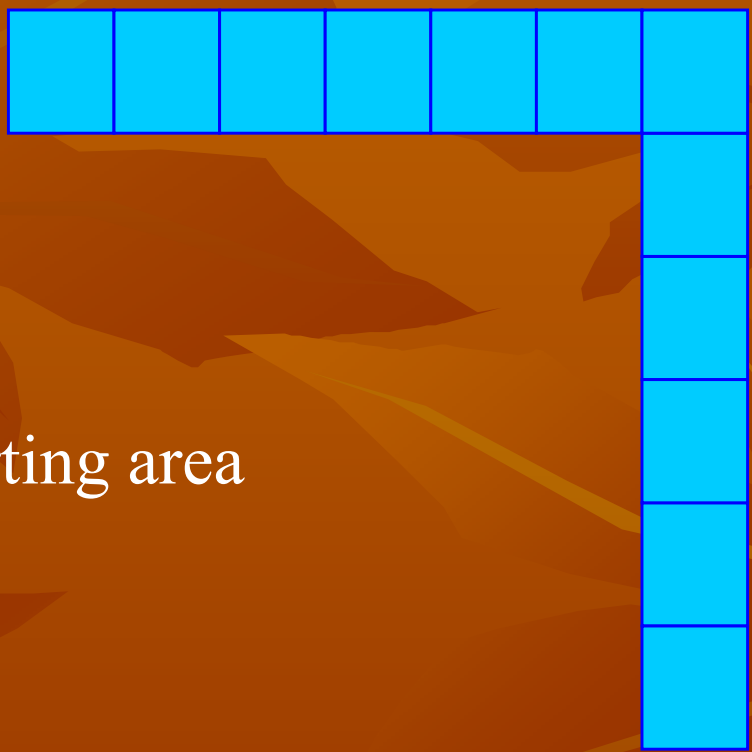




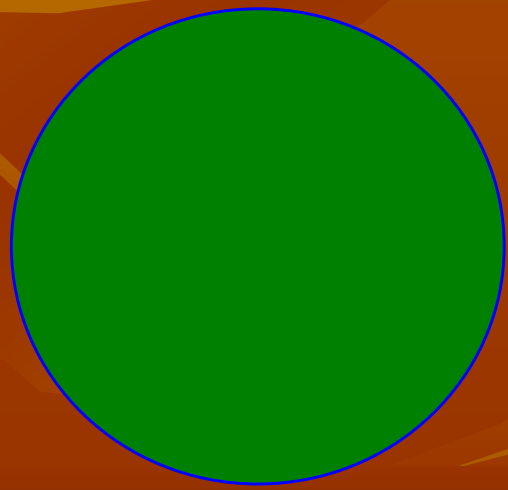
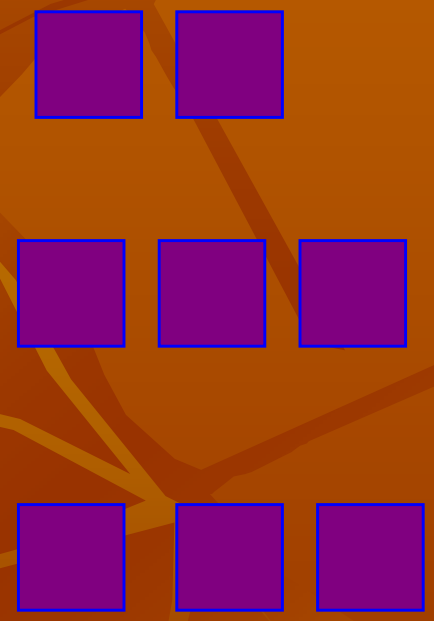
Scale



Sorting containers



Sorting area



Waste

Waste Stream Characterization: Sample Considerations

- Safety first in all sampling activities
- Staffing: How many are sorting what types?
- Will seasonal issues affect samples?
 - Tourism
 - Weather or Climate
 - Construction
- Documentation of the samples
 - Where did it come from? How does it fit into your overall understanding of your waste streams?

Waste Stream Characterization: Future Generation

- Develop projections for future solid waste generation by all identified sources (population trends, housing plans or construction, new businesses or job creation)
- If necessary, include estimates of future generation by neighboring communities
- Linking waste stream characterizations to developing/revising a strategic, or other, plans can save time and effort
 - Population and economic projections done as part of this process can be combined with weight/volume data to make per capita projections of future waste generation
 - Projections should match the “lifespan” of your plan – if the plan covers the next 10 years, the projections should also cover 10 years

Make It Work For You

- Determine what kind of an analysis makes sense given your needs
- Small, targeted waste diversion activities might only need small, targeted waste stream characterizations
 - A school project focused on recycling paper
 - A casino project focused on food waste
 - A battery collection project based at local stores
 - An office project focused on office equipment and paper
- Desktop Estimates