

EPA Sustainability Tools & Resources for Tribal Casinos & Hotels

SEPTEMBER 29, 2021

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U.S. EPA, Region 10

A Holistic Approach to Managing Materials

“Mother Earth is not a resource. She is an heirloom.”

—David Ipina, Yurok artist

“The relationship between Native nations and their environment is sacred. It is the foundation of their cultures and world view.”

—U.S. Senator Daniel Akaka

“When all the trees have been cut down, when all the animals have been hunted, when all the waters are polluted, when all the air is unsafe to breathe, only then will you discover you cannot eat money.”

— Cree Prophecy

(From “13 Quotes That Remind Us To Protect Mother Earth”, *Indian Country Today*)

From Waste Management to Sustainable Materials Management

Sustainable Materials Management:

An approach to using & reusing resources most productively and sustainably throughout their lifecycles; shifts focus from end of life.

Minimizes the amount of materials involved

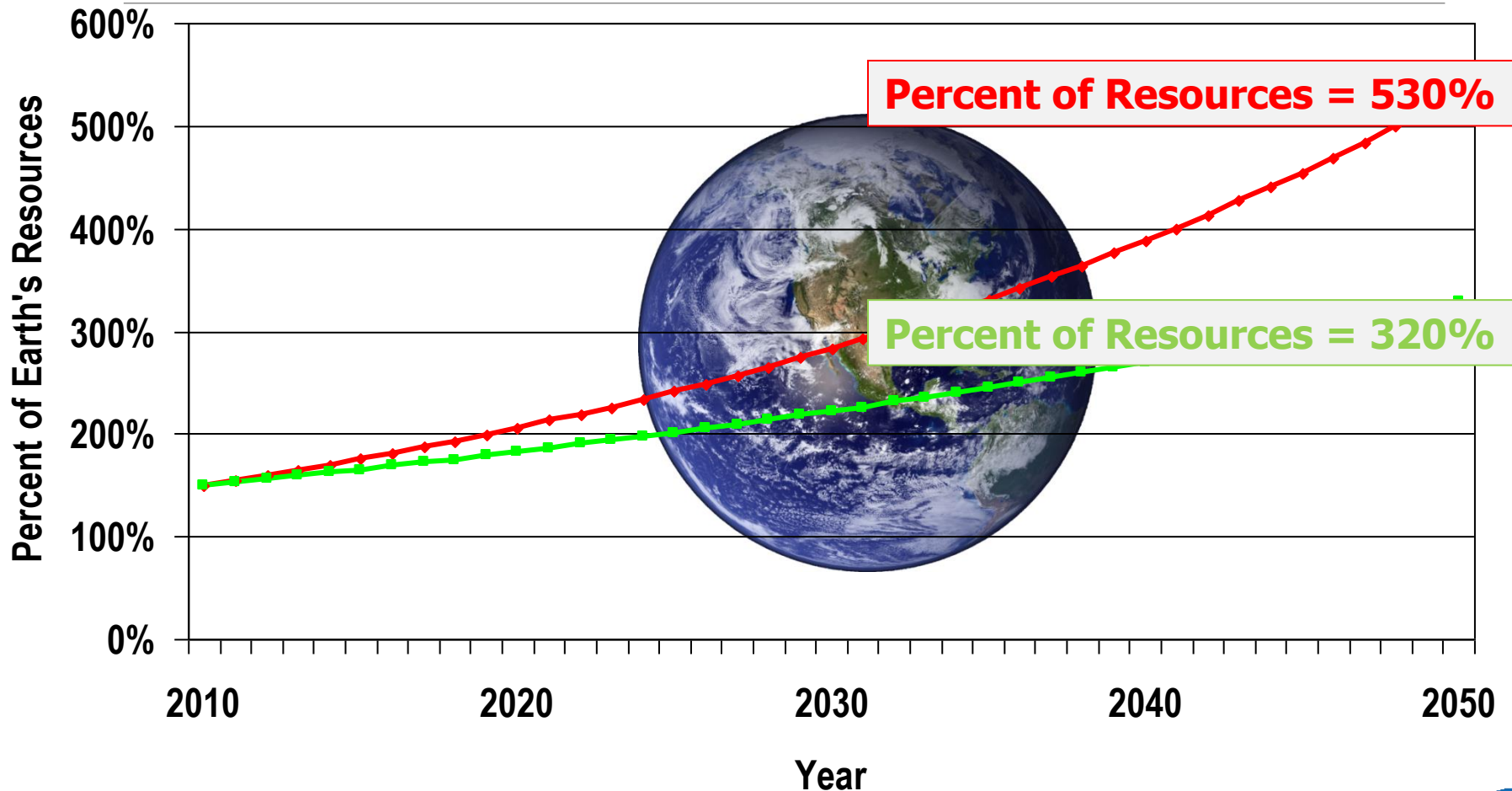
Minimizes the associated environmental impacts at each stage of products' lifecycles

Can result in significant GHG savings at all stages



Resources Needed to Support Global GDP

2.5% per capita GDP x .7% pop. x 1.2% efficiency

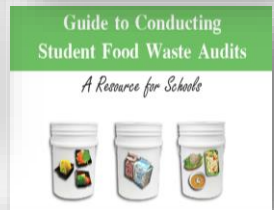


—●— Resources per Global GDP —◆— Resources with Efficiency



SMM Program Implementation

Tools



WaRM
Excess Food Opportunities
Map
Model

Challenges (redesigning)



Convening (on hold)



Partnerships





“Through its Energy Star program, EPA is proud to partner with TripAdvisor to help launch this breakthrough initiative to help foster greener travel across the country,” said Jean Lupinacci, chief of EPA’s Energy Star program for Commercial Buildings and Industrial Plants.

TripAdvisor®, the world's largest travel site*, created a TripAdvisor GreenLeaders™ program, helping its community of more than 200 million travelers plan greener trips by highlighting U.S. accommodations engaging in environmentally-friendly practices. Developed in partnership with U.S. Environmental Protection Agency's ENERGY STAR® program, the U.S. Green Building Council, and the United Nations Environment Programme, qualifying hotels and B&Bs are awarded TripAdvisor GreenLeaders status based on the green practices the property has in place.

Technical Resources

WaterSense provides tools to help hotels reduce water use:

- Water Assessment Worksheets
- WaterUSE Tool to evaluate projects with ROI and payback
- *WaterSense at Work* Best Management Practices Guidebook
- Technical and outreach webinar series – recorded and live
- Hotel case studies
- Saving Water in Hotels fact sheet
- Monthly email with tips and examples on how to save water
- Partner webpage so you can look up your local utility at http://www.epa.gov/watersense/meet_our_partners.html



Recognition and Outreach Tools

look for



WaterSense also developed a suite of tools to help hotels promote their participation in the H₂Otel Challenge:

- Participant logo
- Signed certificate of participation
- Sample press release
- Sample website and in-room language



WaterSense also regularly posts an updated list of participating hotels on its website – more than 800 hotels so far!

Sustainable Management of Food

Microsoft Excel - foodcost.xls [Read Only]

File Edit View Insert Format Tools Data Window Help

Food Waste Management Inputs

Food Waste Management Inputs	
Source Reduction	
4 What type of facility are you?	Grocery Store
6 How many pounds of non-perishable food waste do you generate per week?	0
7 What percentage of non-perishable food waste are you willing to source reduce?	0%
8 How many pounds of pre-consumer prepared/whole food waste do you generate per week?	0
9 What percentage of pre-consumer prepared/whole food waste are you willing to source reduce?	0%
10 How many pounds of pre-consumer trim waste do you generate per week?	0
11 What percentage of pre-consumer trim waste are you willing to source reduce?	0%
12 How many pounds of post-consumer plate waste do you generate per week?	0
13 What percentage of post-consumer plate waste are you willing to source reduce?	0%
14 How much yellow grease do you generate per week?	0
15 What is your average purchasing cost per pound for non-perishables?	\$0.00
16 What is your average purchasing cost per pound for pre-consumer prepared/whole foods?	\$0.00
17 What is your average purchasing cost per pound for foods that comprise trim and plate waste?	\$0.00
Non-Perishable Food	
19 Does your facility have access to a local food bank that will accept non-perishable foods?	No
Pre-Consumer Prepared/Whole Foods, Trim Waste, and Plate Waste	
Food Rescue	
34 Does your facility have access to a local food rescue service that accepts prepared meals?	No

Notes and Instructions
Choose the facility type that best fits the description of your business.

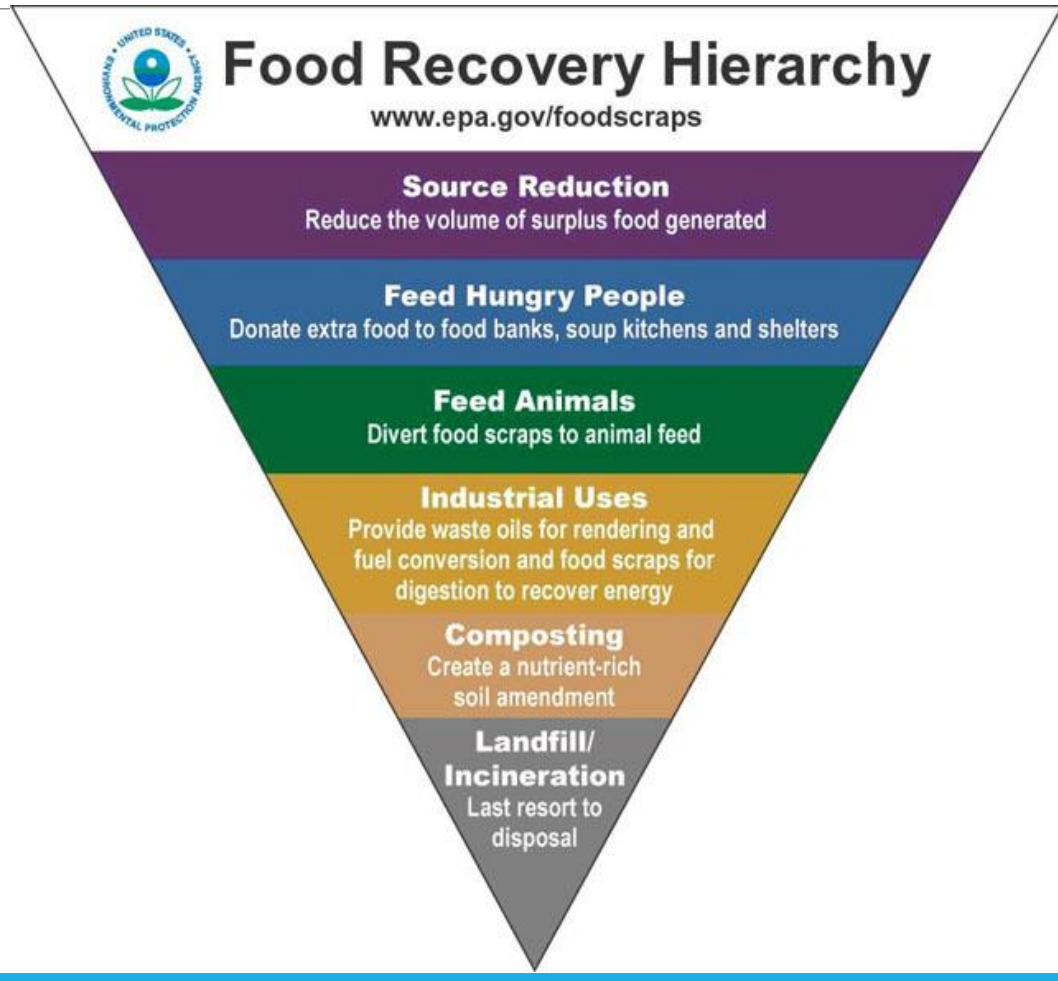
Food Waste Definitions:
Non-perishable food waste - surplus food that does not require refrigeration. **Non-pre-consumer prepared/whole food waste** - surplus cooked foods and prepared meals. **Pre-consumer trim waste** - food waste generated during food preparation, such as trim. **Post-consumer plate waste** - food that is plated, but not eaten by the consumer.

Source Reduction and Food Waste Tracking:
Source reduction, the practice of reducing the overall volume of food waste generated, is the most effective and least expensive waste management strategy. Many institutions have succeeded at source reduction through menu changes, and using a la carte menus. To achieve source reduction, many Paper Tracking is simple and inexpensive, but may be time consuming and less accurate. Paper tracking is typically more effective at capturing wasteful practices. A typical facility typically result in source reduction of 2% or more. **The costs of food tracking calculator, however, facilities looking to achieve cost savings from waste.** Enter your source reduction goals for each food waste category in the cells and Food Waste Tracking on the Resource tab, or click this cell.

Yellow grease consists of used frying oils. Yellow grease does not in general per week can be entered in pounds or gallons. Choose the Purchasing costs per pound by food category may vary greatly depending on the size of your facility. Enter your facility specific costs per pound. If available, use estimates that are \$1.00 per pound data is not available for your facility, you may wish to enter Leaflet's

To locate a local food bank near you, visit <http://feedingamerica.org/foodbank-locator>

Food rescue, also called food recovery, is the practice of safely removing edible food from a food service. For more information, see Food Rescue on the Resource tab or click this cell.



Sustainable Materials Management: FY21 Anaerobic Digestion Funding Opportunity

- The goal of this funding opportunity is to accelerate the development of new or enhance/increase existing anaerobic digestion capacity and infrastructure in the United States.
- **Range of awards:** The total amount of funding for this program is \$2,000,000. Individual grant awards may potentially be in the range of \$50,000-\$200,000 for the funding period.
- **Set-Aside Amount:** Up to \$800,000 of the estimated total will be set-aside specifically for underserved communities and/or Tribal projects.
- **Visit [Grants.gov](https://www.grants.gov)** for more information. Funding Opportunity EPA-OLEM-ORCR-21-02
- **Applications are due on October 7, 2021.**

Thank You For Your Time!

Domenic Calabro

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206-553-6640



FireKeepers Food Recovery

Vice President of Food and Beverage Michael A. Hamilton

Executive Chef Brant Coulter

Director of Food and Beverage Brandon Coco

FireKeepers Casino Hotel

Many Approaches

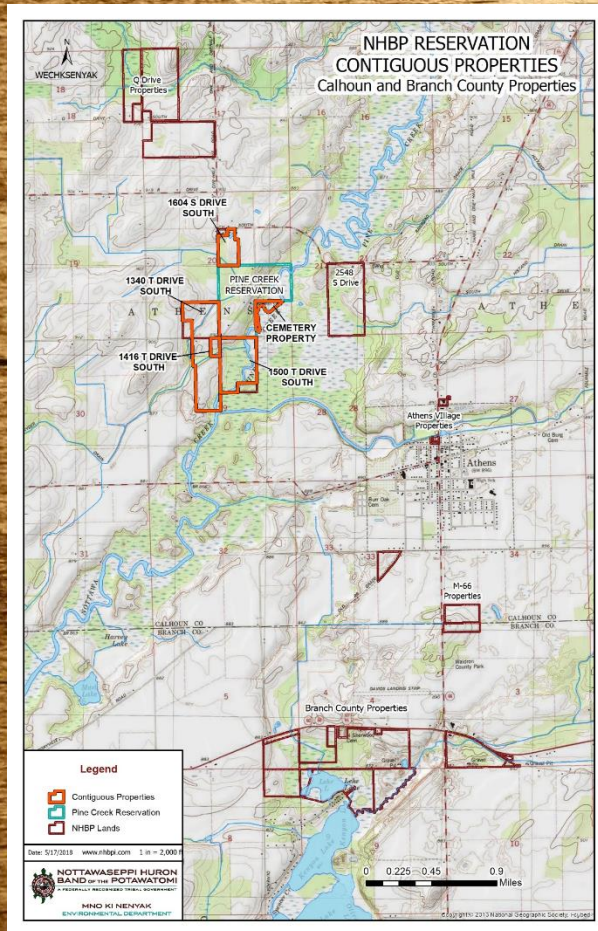
Our Property uses Solar Panels and Solar technology

Currently constructing an electric Charging lot, 12 stations

Reviewing and Discussing a partnership with My Green Michigan

NHBP Tribe has programs for traditional rice growing and harvesting and a program for producing their own syrups also.

Lands and Rice



Syrup Production



Solar Panels



Salads for Schools

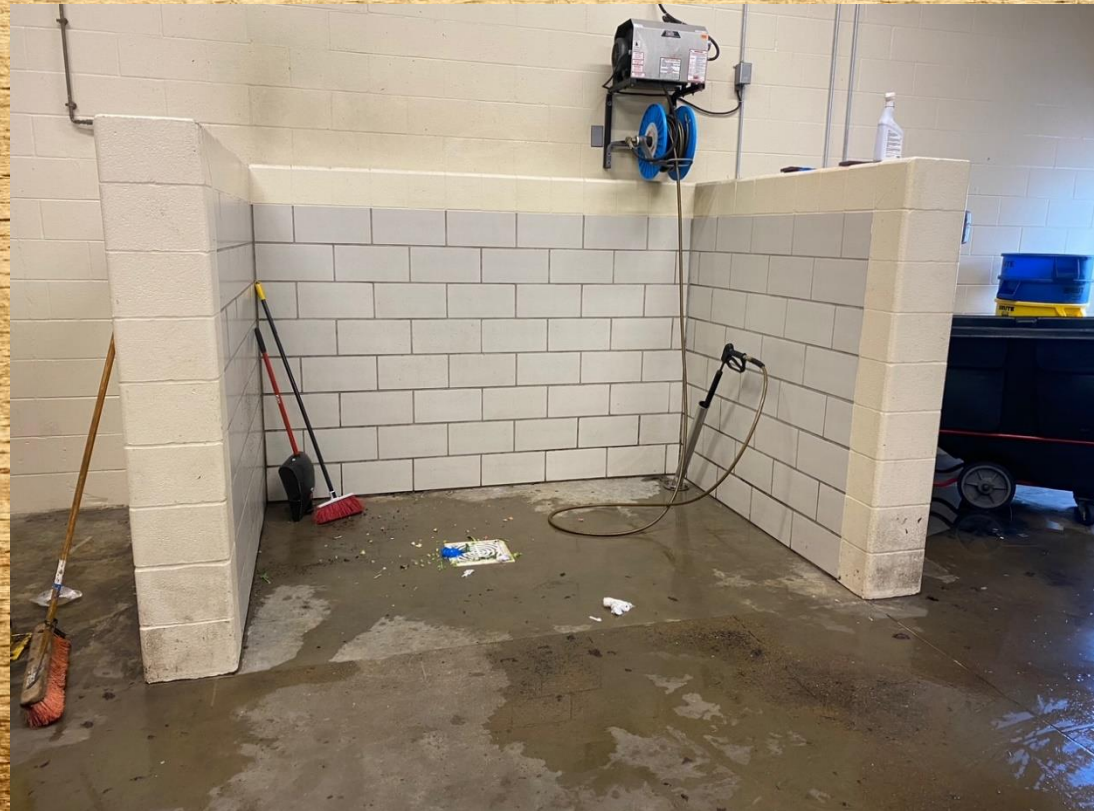
- Provide produce to local school for their lunches
- Romaine, Cucumbers, Tomatoes, Carrots, Peppers, Croutons, Salad Dressings
 - Produce grown on the Reservation in our Greenhouse or purchased
 - 3 Schools twice a week
- Deliver the products to the schools for them to have a healthy option for lunch



Glass Recycler



Specialized Washing Bays



Specialized Washing Units



Cardboard Compactors



Water Stations



FireKeepers Culinary

- **7 Restaurants**
 - Nibi
 - Dacey's Taphouse
 - Mijem Buffet
 - Café 24/7
 - Smoke 'n Fire
 - Chi Mon-ee's
 - Aurora VIP Lounge
- **Average 2.5 Million Meals Served Yearly**



Bakery & Cake Shop

- Provides Breads and Desserts for all Restaurants
- Custom Cakes and Desserts for Special Events
- 2 Gapi Coffee Shops



FireKeepers Culinary Team



Education

- Partner with Food Bank
- Fresh Food Initiatives
- 8 Counties Served
- 106,566 People Impacted
- Food Safety Training



Operation Fit

- Partnered in March
- 3 sites in the beginning,
14 currently
- 60,000 Pounds of Produce
- 2400 plus Cases of Snacks



Food Rescue

- Reclamation
- Blast Chilling
- Repacking
- 1,393 Pounds Reclaimed This Year
- On track to donate 1 Ton



Food Recovery Challenge

- Food saving methods
- Conscientious of purchasing
- More care in prep
- Outreach and educate



The Fire Hub & Kendall Street Pantry

- Non-Profit Restaurant
- Historic Building
- Located Downtown Battle Creek
- Shared Entrance



Kendall Street Pantry

- Partner with FBSCM and FireKeepers
- Pantry Track
- Open 1 Day/Week
- Dignified Shopping Experience
- Available for Emergency Distros
- 1,407 Households Served
- 64,169 pounds distributed



Greenhouse



Greenhouse



Greenhouse



Greenhouse





KALISPEL TRIBE OF INDIANS

Stewardship

A historical black and white photograph showing a Native American village on a riverbank. In the foreground, a group of people are seated in a long, narrow canoe on the water. The background features a dense forest of evergreen trees and several teepees. The image is overlaid with a dark blue semi-transparent rectangle containing the text 'Ntx^we'.

Ntx^we

Connection to ntx^we and Kalispel stewardship

- Kalispel good land
- Stewardship for the next generation
- Language preservation and educational programs





NORTHERN QUEST RESORT & CASINO SUSTAINABILITY

Northern Quest Resort & Casino

- Sustainability started with LED conversion
- Grew organically
- More to come... electric vehicles, water conservation etc.

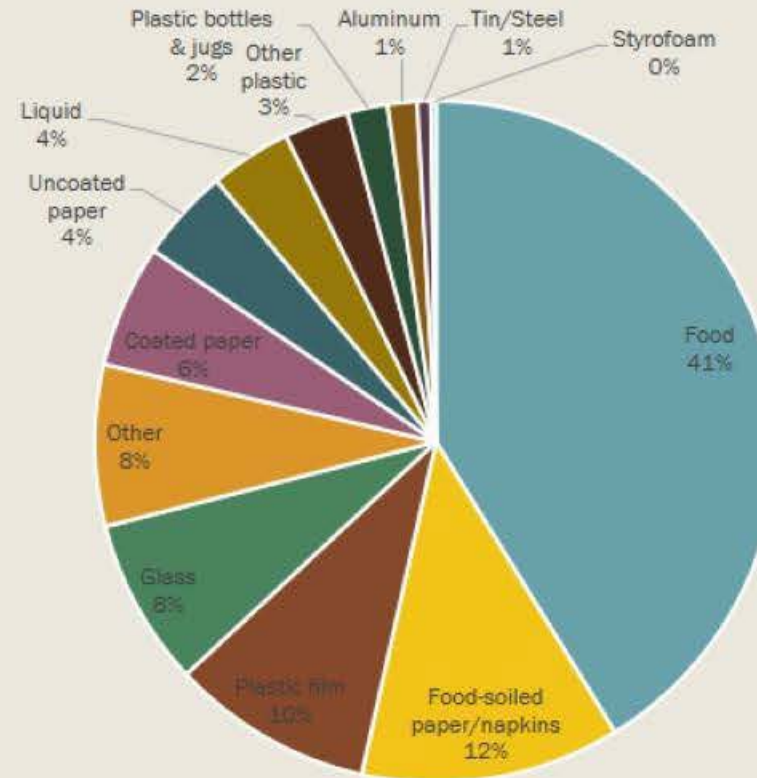


A dark blue-tinted photograph of a campsite on a lake. In the foreground, several people are in canoes on the water. In the background, there are tents and a small building on a shoreline, with mountains in the distance. The text 'WASTE REDUCTION' is overlaid in white, bold, sans-serif font.

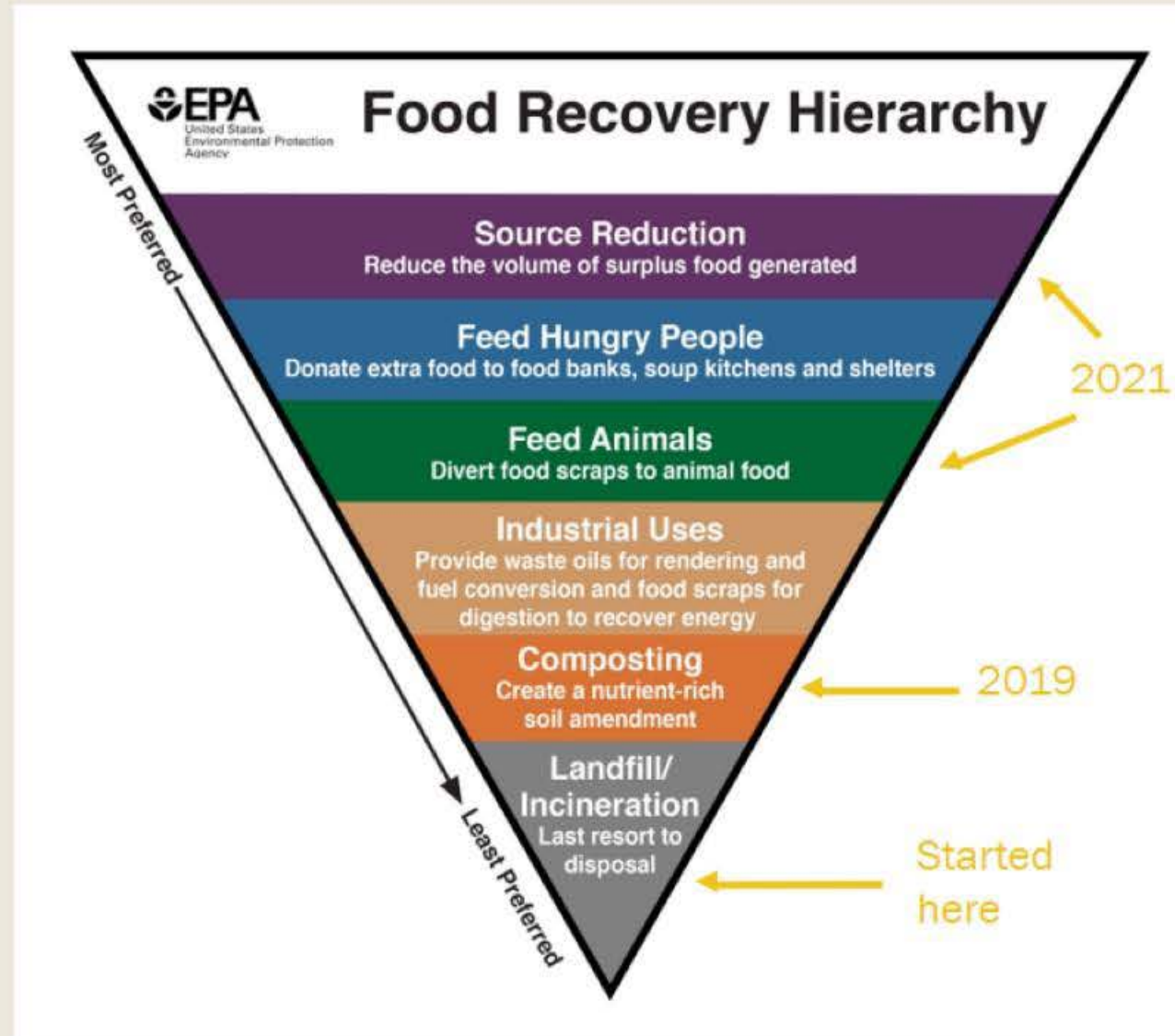
WASTE REDUCTION

Waste Characterization

- 41% of the trash (by weight) was food
- Over 1/2 of trash compostable
- 77% of cost attributed to weight
- 5.3x more dense than remaining waste
- Some edible, some inedible food



EPA Food Waste Hierarchy



Composting

- Implemented first in Masselow's
- Then back-of-house property-wide
- Team member dining room
- 43% savings achieved
- 7.5 tons/week (pre-COVID)
- Highlighted waste prevention opportunity



Source Reduction

- LeanPath tracks food waste generated
- Quantifies waste in purchase \$
- 2% reduction in food purchases = 100% reduction in trash cost
- Production of lost or wasted food in US generates the equivalent of 32.6 million cars' worth of greenhouse gas emissions. - WWF.org



Feeding Animals

- Kalispel Casino more remote than NQ
- \$60k grant from EPA
- Food scraps will be donated to pig farmer
- Pork purchased back by casino





THANK YOU.

QUESTIONS?

Snoqualmie Indian Tribe

Cindy Spiry
Environmental and Natural Resources
Department Director

Snoqualmie Casino Opened November 2008



The mission of the Snoqualmie Indian Tribe (SIT) Environmental and Natural Resources (ENR) Department is to protect, preserve and enhance the natural and cultural resources of the Snoqualmie Reservation and traditional tribal lands for the benefit of current and future generations.



Solid Waste Code was Developed

- ▶ All Snoqualmie Tribal Facilities shall participate in a recycling program.
- ▶ All Snoqualmie Tribal Facilities shall be required to compost their food-waste as part of their overall recycling program.
- ▶ The Snoqualmie Casino shall participate in a kitchen grease recycling program.
- ▶ Funded by the EPA as part of the ISWMP development

Beginning Waste Reduction and Recycling Efforts

- ▶ Food waste composting
- ▶ Recycle fryer oil for bio-fuel



Additional Waste reduction efforts implemented

- ▶ Cardboard recycling
- ▶ Elimination of Styrofoam to-go containers and cups
- ▶ Buying recycled products
- ▶ Mixed recycling
- ▶ Reduction of plastic water bottles

Waste Oil

Fryer Oil Recycling

Approximately 182,640 gallons in 10 years

- ▶ 1/1/2021- 9/20/21:
 - ▶ Total Gross lbs. 41,799
 - ▶ Total Net lbs. 29,260
 - ▶ Average lbs. per pick up: 2989
 - ▶ Pick up frequency : every 3 weeks.
- ▶ 1/1/20-12/31/21
 - ▶ Total Gross lbs. 6,799
 - ▶ Total Net lbs. 4,759
 - ▶ Average lbs. per pick up 3,399
 - ▶ Pick up frequency: as request.



Snoqualmie Valley Foodbank

- ▶ Composting Partnership



Pandemic Impacts

- ▶ Shut down for 2 months
- ▶ Waste sort delayed
- ▶ Using more water bottles
 - ▶ Water stations on the floor not in use
 - ▶ Returned to use 9/20/2021
- ▶ Lots more waste



- ▶ We have a total of 2 on the casino floor and 3 on the service level for the employees.
- ▶ September 2018 - 1,383,557 water bottles saved since installation in 2012
- ▶ Can't get current counts
 - ▶ One of the stations was re-set
- ▶ Still purchasing water bottles. A little more during Covid
 - ▶ Water stations of the floor not in use. Returned to use 9/20/2021
- ▶ Casino floor (no change since February 2019)
- ▶ Service level (Active)

All LED lights

- ▶ We Began with the MR16 lights over the gaming tables about three years ago and then we changed out the main casino lighting about 1.5 years ago.
- ▶ There are 180 MR 16 lamps that originally used 50 watts of power each and when we went to the LED lamps they use 6 watts of power each. $50 * 180 = 9000$ watts vs $6 * 180 = 1080$ watts now being consumed.
- ▶ Then the Main casino lighting originally used 985, 100 watt par lamps or 98,500 watts and with the LED lamps the power consumption is $985 * 8 = 7880$ watts.
- ▶ An additional savings was the heat load from all of the incandescent lamps was reduced and lowered the cooling loads in the casino.
- ▶ **The bottom line in savings is around \$6000.00 per month.**
- ▶ Another side benefit is reduced maintenance labor as the bulbs last a long time.
- ▶ We are also looking at changing out the Parking lots and Garage lights to LED in 2015. This was delayed due to a possible garage addition and I wanted to wait to match the new light fixtures if we built a new garage.
- ▶ Another side bar on this is the slot machine and slot sign manufactures are moving to all LED lights and LCD display screens which has lowered the slot machine electrical loads over time.
- ▶ Also casino years are like dog years regarding lighting. All of our lighting is on 24/7 as compared to a typical office building, so they are used up a lot faster. We are in the process of changing out the MR16 bulbs over the gaming tables as they are starting to dim down being three years old with over 26,000 hours on them. (needed to consider glare)

LED Games

- ▶ We currently have 1583 machines, 90% of which has LED lights/ signs on. Approximately 1400 machines with LED

Beginning Food Waste Program at the Snoqualmie Casino

- ▶ Initial conversations about starting the composting program were met with some resistance
- ▶ We were able to show that the cost of composting is less than sending to the land fill
 - ▶ 2008 Garbage \$100/ton-Compost Cedar Grove \$50/ton
 - ▶ 2018 Garbage \$135/ton-Compost \$71/ton

Waste Sort

- ▶ 2010 we performed a waste sort at the Casino to see how the composting and other recycling programs were going.
 - ▶ Data was needed to inform our Integrated Solid Waste Management Plan (ISWMP), funded by the EPA.
 - ▶ We received assistance from the Tribal Solid Waste Advisory Network (TSWAN) with both the plan and the waste sort

First Waste Sort 2010

- ▶ Mid week sample
- ▶ Weighed and separated 25% of every bag of garbage
- ▶ Total weight was 489.4 lbs
- ▶ 359.8 lbs of compost + 37.9 lbs of other recyclables
- ▶ 397.7 lbs recyclable/compostable

Issues found

- ▶ Waste sort revealed some internal issues
- ▶ Only 18.75% of the waste was sampled was Non Recyclable Trash. This was all being sent to the landfill
- ▶ Why so much food waste in the garbage???

Compostable bags



Challenges and Solutions

Recycling and Food Waste in Garbage



Double Bagging Solved the Problem



Waste Sort 2021

- Contracted with Resource synergy
- Waste sort conducted in May
- Issues found
 - Food waste represents 37% of Trash
 - 18% of trash is recyclable
 - Lots of back-of-house glass



Compost Numbers

2016	2017	2019-2021
198.01 tons	182.19 tons	Reduction in diverted food waste revealed
65/ton	71/ton	Corrections being made



**Approximately
2000 tons of food
waste diverted
from the landfill
2008-2018**

Steps to Improve our Program

The following steps are being taken to improve the Casino Composting and Recycling Program:

- ▶ Water bottles still in use, but will be tracked and reduction efforts determined moving forward
- ▶ The F&B team giving guests options of bottle of water. Most guest who play at the machines preferred bottle of water over the cups. Most Gold and Black card preferred Fiji water over regular (Crystal or Nestle).
- ▶ Since we now open the water station back on, I will keep track of the bottles vs. # of gallons or # bottles saved from water station.
- ▶ Adjustments have been made in the Sno Café Front (front the house) and the Café Drip (coffee grounds)
- ▶ Working with Chefs and restaurant managers to increase/ sort all compostable waste at 12 moons, Vista, Buffet, Sno Café (Back of house).
 - ▶ compost went up from 3 tons in June to 12 tons.
- ▶ Recycling is being sorted on the service level(all offices).
- ▶ We are working on specific program for recycling and have increased the frequency of pick up time per week as of 9/1.
- ▶ Regular communication and assessments

Keys to success!

- ▶ Communication



- ▶ Education/Training



- ▶ Partnerships





Questions?

Cindy Spiry

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