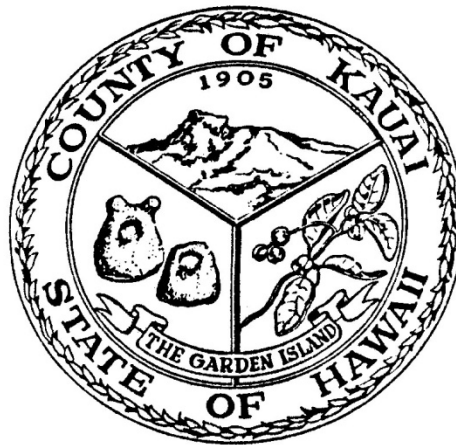


County of Kaua'i Waste Reduction



June 2014

Department of Public Works

Environmental Section, Solid Waste Division

Allison Fraley, Solid Waste Program Coordinator

Waste Management Models

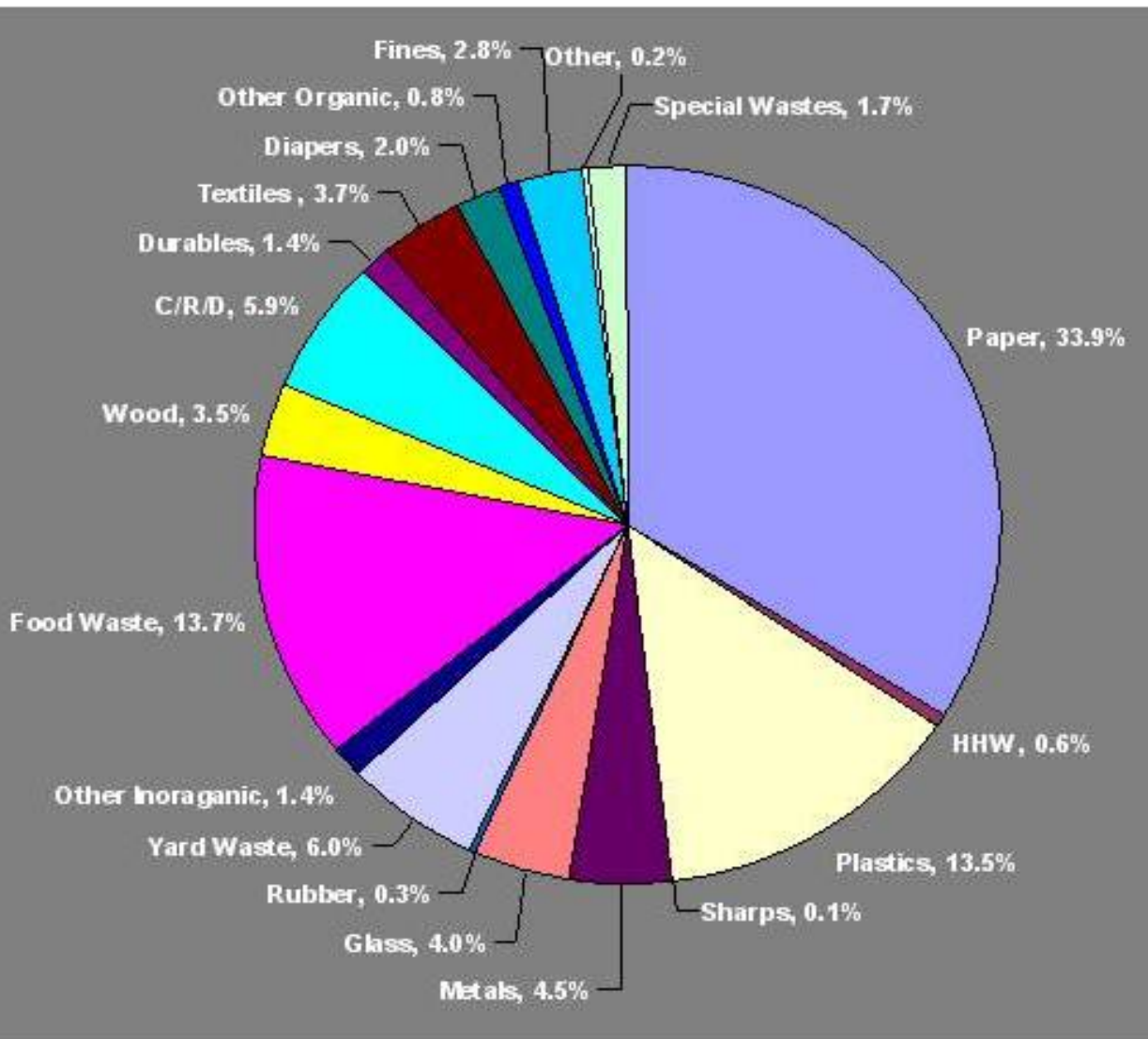
- ▶ REDUCE
- ▶ REUSE
- ▶ RECYCLE



Waste Management Hierarchy



Kaua'i Waste Stream



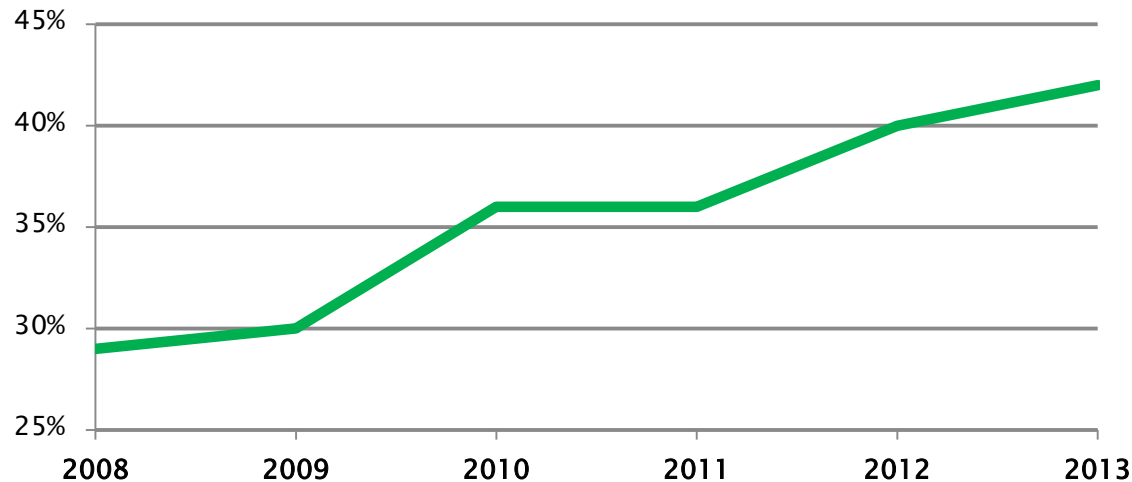
Fiscal Year 2013:

- ▶ 55,600 tons was recycled
- ▶ 77,500 tons of trash was disposed at landfill (210 tons per day)

Kaua'i Recycling Rate

- Kaua'i Recycling Rate was 42% in 2013
- The National average for recycling is 35%
- Kaua'i is doing extremely well for a rural community

Kaua'i Recycling Over Time



Kaua'i Recycles Program

- ▶ Residential Recycling Program
- ▶ Drop Bins at 8 locations throughout Kaua'i
- ▶ Continued increase in participation over last 10 years



Items Accepted:

- ▶ Newspaper
- ▶ Mixed paper
- ▶ Magazines
- ▶ Corrugated Cardboard
- ▶ Plastics # 1 & # 2
- ▶ Glass bottles & jars
- ▶ Aluminum Cans
- ▶ Steel Food Cans
- ▶ Aluminum Foil and Pans

HI5 Deposit Beverage Container Redemption Program

State Deposit Beverage Container Program (HI 5 / Bottle Bill) implemented January 2005

- Aluminum cans
 - Glass bottles
 - Plastic bottles < 64 oz.
 - Bi-metals
 - NO milk, wine, liquor
- ▶ 70% Recycling Rate Statewide



8 Redemption Centers throughout Kauai:

www.kauai.gov/hi5
or call 241-5120

Green Waste Diversion

- ▶ Green Waste Accepted at all Transfer Stations & Landfill for Conversion to Compost
- ▶ Program accepts:
 - Lawn trimmings
 - Tree branches & logs
 - Shrubbery
 - Christmas trees



Nearly 30,000 Tons of Green Waste Diverted from Landfill by County and Commercial Generators in FY 2013

Metals Recycling

▶ Puhi Metals Recycling Center accepts:

- Appliances
 - Automobiles
 - Scrap Metal
- Drop off is free to residents. Charges apply to businesses for freon containing items
 - Residential metal collected at refuse transfer stations transferred to Puhi metals



- In FY 2013 approximately 2,500 tons of scrap metal recycled on Kaua'i

Kaua'i Resource Center

- Garden Isle Disposal Operations:
 - Recycling Drop Off for Residents and Businesses
 - HI 5 Redemption Center
- County Operations:
 - Composting Bin Distribution
 - Packing Peanut & Bubble Wrap Drop and Swap
 - Household Battery Recycling
 - eWaste Recycling 2x a month



***3,700 bins
distributed
since 2001***

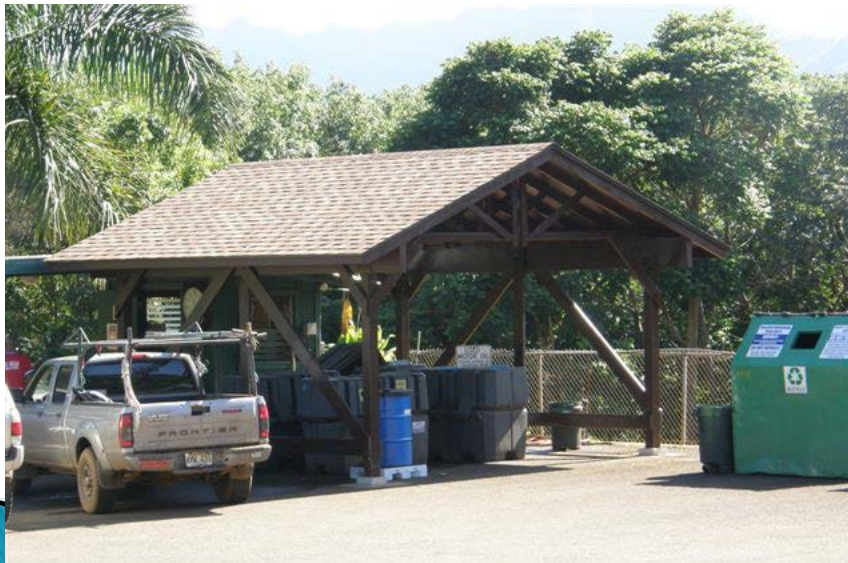


Home Composting

- Free Earth Machine Home Composting Bins available
- Recipients required to view a 20 minute training video.
- Each bin diverts an average of 1,500 lb. of additional food and yard waste per year
- Most economical waste diversion program estimated at \$5 per ton

Used Motor Oil Recycling

- ▶ Accept used oil for Recycling at all Transfer Stations and the Landfill
- ▶ Distribute free buckets for Motor Oil and Motor Oil Filters at the Solid Waste Office in Mohikea Building 241-4841
- ▶ Accept USED FILTERS for all Transfer Stations



Special Wastes

Residential Items
accepted for Recycling at
all
Transfer Stations and the
Landfill:



- ▶ *TIRES*
- ▶ *PROPANE TANKS*
- ▶ *USED COOKING OIL* to be reinstated in FY 2015



Household Battery Recycling

- ▶ New program started in March 2011
- ▶ Residential collection year-round at the Kaua'i Resource Center in Līhu'e.
- ▶ Types of batteries accepted:
 - Lithium
 - Dry Cell (Alkaline)
 - NiCad



Household Hazardous Waste

- ▶ Semi-annual program to accept Corrosive, Flammable, Explosive, and Poisonous material commonly found throughout the home – in garage, workshop, kitchen, and yard
- ▶ Items accepted at 4 locations

eWaste Recycling

- ▶ Hawai'i Waste and Television Recycling and Recovery Law passed in 2010 requires manufacturers to provide recycling programs for specified items.
- ▶ Free eWaste recycling at the County's Kaua'i Resource Center every second Friday and Saturday of the month. Operated by T&N Computers.
- ▶ Accept eWaste from residents and business free of charge, no limits.





Plastic Bag Reduction Law

- ▶ Went into effect in January 11, 2011
- ▶ Requires all retail establishments to provide only recyclable paper bags or reusable bags to their customers effective
- ▶ County Recycling Office enforces the law
- ▶ Observing overall compliance
- ▶ Next focus is increasing reusable bags

Reuse & Recycling Partners

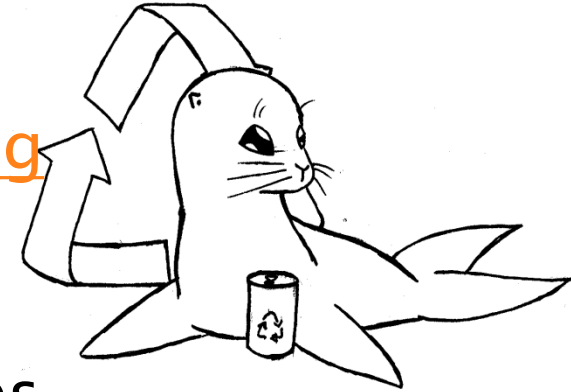
- ▶ Household Items REUSED at Thrift Stores
- ▶ Building Materials & other items REUSED at Kaua'i Restore in Kapa'a and Habitat for Humanity
- ▶ Auto Battery and Commercial Tire Recycling at PS&D Napa Auto
- ▶ CFL bulbs accepted at Home Depot



Non-Ferrous Scrap Metal Recycling at Reynolds in Nāwiliwili & EH International

County Education & Assistance

- ▶ Recycling Hotline 241-4841
- ▶ Website www.kauai.gov/recycling
- ▶ Kaua'i Recycles Guide
- ▶ News Releases
- ▶ Presentations – Schools & Groups
- ▶ Mayor's "Together We Can" TV show
- ▶ Mayor's Community Outreach Meetings
- ▶ Recycling Education Booths
- ▶ Radio Ads & Live Radio Interviews
- ▶ Newspaper Ads
- ▶ Recycling Grants to Businesses & Non-Profits
- ▶ Free Technical Assistance to Businesses
- ▶ Signage & Flyers e.g. "What Goes Where"



Successes & Challenges

- ▶ County has significantly grown programs over the last decade
- ▶ Businesses, residents, and visitors show a strong interest in recycling
- ▶ Cost of recycling is high with limited infrastructure on island
- ▶ Available services are limited
- ▶ Programs are inconvenient



Zero Waste Resolution

- ▶ Established a diversion goal of 70% by 2023
- ▶ Adopted in October 2011
- ▶ The Council, the Mayor, all County agencies and employees, as well as residents, visitors, and businesses shall follow the concepts of Zero Waste Management, and take the necessary steps to pursue Zero Waste in our work and in our daily lives.
- ▶ County is currently expanding diversion programs to meet this goal

Potential to Increase Diversion

Programs	Current Diversion (tons)	Maturity (tons)
Landfill Bans (Concrete, Asphalt, Pallets)	6,000	7,500
Business Recycling ¹	11,000	19,000
C&D Recycling	0	2,500
Residential Recycling ²	4,800	11,000
Residential Greenwaste	20,700	23,700
Commercial Foodwaste ³	700	6,300
Residential Foodwaste ³	0	5,500
TOTAL	43,200 tons/yr⁴	75,500 tons/yr



Fast Track the Construction of the Materials Recovery Facility (MRF)

- ▶ Finalize Site Selection
 - Former Papaya Disinfestation Facility
- ▶ Initiate Construction
 - Conceptual Design / Environ Assessment (FY 2013)
 - Engineering Design & Equipment Specification (FY 2014)
 - Construction & Equipment Installation (FY 2015)
- ▶ Complete Construction / Contract for Operation



Maximize Commercial Diversion Through Ordinances

- ▶ Proposed Business Recycling Ordinance
 - Mandatory recycling programs for Cardboard, Mixed Paper, Scrap Metal, Greenwaste, Glass Containers, HI-5 Containers
 - Estimated to divert 8,000 tons per year
- ▶ Proposed Construction & Demolition Debris Ordinance
 - Building permit applicants required to recycle Cardboard, Scrap Metal, Greenwaste, Concrete, Asphalt, Salvage (Reuse)
 - Estimated to divert 4,000 tons per year
- ▶ Currently working with Advisory Committee to finalize ordinances

Implement Variable Rate Pay As You Throw

Concept: the more residents dispose, the more they pay for refuse collection.

- ▶ Phase 1 – add 64 Gal Cart Option
 - Adjust rates to incentivize use of existing drop-off programs
- ▶ Phase 2 – add 32 Gal Cart Option
 - Implement curbside recycling & greenwaste
 - Adjust rates to incentivize use of curbside diversion programs

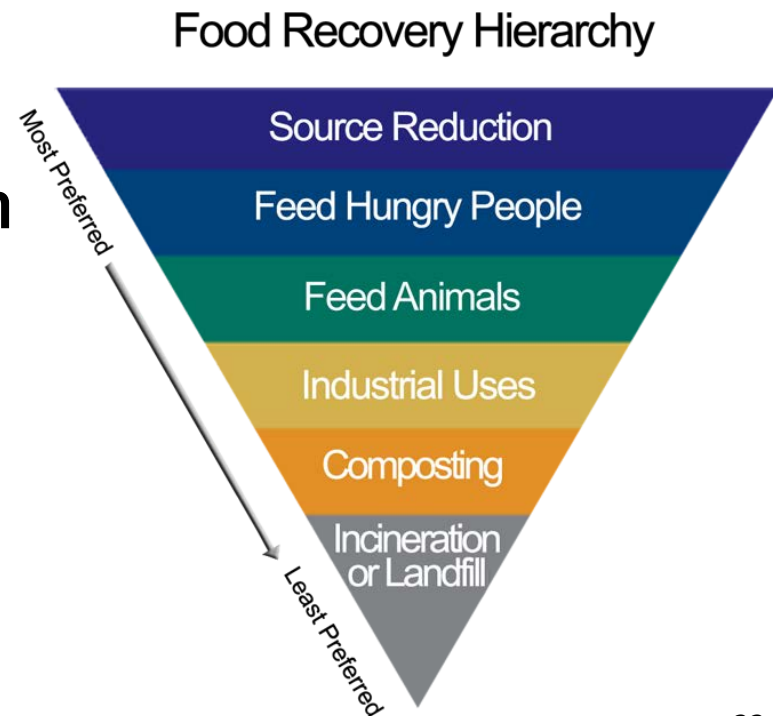


Foodwaste Diversion

- Potential for Commercial Food Waste
 - Investigate feasibility of using existing anaerobic digestors in Līhu'e
 - Provide technical assistance in developing an efficient collection system

- **Initiate Residential Collection with Green Waste**

- Would require major education and outreach effort



Future of Waste Diversion Resource Recovery Park



Questions

- ▶ Allison Fraley
Solid Waste Program Coordinator
County of Kaua'i
(808) 241-4837
afraley@kauai.gov

County Recycling Hotline
(808) 241-4841

www.kauai.gov/recycling