

## INFRASTRUCTURE AND PUBLIC FACILITIES



*A Central Maui Landfill employee directs traffic, Pu'unēnē.*

## SOLID WASTE

*According to the U.S. Environmental Protection Agency (EPA), the United States has witnessed a steady rise in total tons of waste generated and pounds generated per person. Management of this waste will increasingly rely on a sophisticated array of strategies. However, landfill disposal remains the most common method of dealing with waste both on the mainland and in Maui County. Maui's waste management strategies include landfill disposal, source reduction, recycling, and composting. Source reduction and waste diversion will continue to contribute to solid waste management on the island. The use of alternative technologies for converting waste to energy can contribute to extending the life of the landfill.*

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*Committee Chair*



## ***INFRASTRUCTURE AND PUBLIC FACILITIES***

The County of Maui Department of Environmental Management's Solid Waste Division is responsible for the planning, operation, and maintenance of the County's landfills. The Central Maui Landfill is located off Pūlehu Road. It is owned and operated by the County and accepts all types of municipal waste, except for regulated hazardous wastes and commercial construction/demolition debris. In 2009 the Department of Environmental Management's Solid Waste Division updated its county-wide Integrated Solid Waste Management Plan (ISWMP). The ISWMP provides a comprehensive blueprint for the planning and expansion of the County's solid waste management system. The updated ISWMP addresses several issues including the finite capacity of the County's landfills, the growing waste stream, the rising cost of energy, and the desire to provide more and better services to Maui's residents. The island's landfill facilities on Maui include:

1. The Hāna Landfill serves the Hāna community plan area and has a total area of approximately 35 acres and accepts residential, commercial and green waste.
2. The Olowalu Convenience Center located adjacent to the former Olowalu landfill, accommodates self-haul residential waste from residents of Lahaina for transfer to the Central Maui landfill. The site also includes a limited recycling drop station.
3. The Maui Demolition and Construction Landfill is a privately owned and operated facility that accommodates the island's construction waste.



*Maui County Landfill, Pu'unēnē.*

### **CHALLENGES AND OPPORTUNITIES**

#### ***Limited Landfill Capacity***

Most of the island's waste goes to the Central Maui Landfill. The Central Maui Landfill accepts about 500 tons per day of waste on average, although with the recent economy this tonnage is less. If nothing is done to divert waste from this landfill through increased recycling and WasteTEC (waste to energy), the landfill capacity will be reached by 2026. Efforts to increase diversion as recommended by the ISWMP could increase landfill capacity until 2042.

Based on the ISWMP, Hāna Landfill is expected to accommodate the needs of its community through the planning period as its projected capacity will be reached by 2096.

#### ***Source Reduction and Recycling***

The National Recycling Coalition (NRC) and the Environmental Defense Fund (EDF) view source reduction as a viable means to reduce municipal solid waste. Recently, the NRC broadened its mission statement to include source reduction. It states: "ton for ton, source reduction is more valuable to society than recycling." The EDF has stated that eliminating excessive layers of packaging is one of the most obvious and important





*Recycling containers at Pa'uwela Recycling Center, Ha'ikū*

forms of source reduction, and that source reduction has the potential to alleviate natural resource depletion.

In recent years, the County has diverted around 30 percent of its waste to recycling, composting, and other uses; this doesn't meet the State's goal of 50 percent diversion by 2000. The ISWMP sets forth an implementation plan that aims to attain an 83 percent waste diversion by the year 2040. To achieve this, the County is moving towards full automation of its trash collection (where feasible) and curbside recycling. Implementation of curbside recycling will require the acquisition and development of property to support a materials recovery facility (MRF).

The ISWMP explores options for waste-to-energy for Maui that would divert waste from landfills and convert the waste stream to a beneficial project such as electricity. The County's waste stream projected to the year 2030 could sustain such a facility and a 54 percent recycling rate. Currently the recycling rate is about 30 percent. The recycling program, gas to energy program, waste-to-energy and waste diversion programs will need to be coordinated and integrated in the overall management of our solid waste stream to extend the capacity of our landfills.

### **GOAL, OBJECTIVES, POLICIES, AND ACTIONS**

#### **Goal:**

- 6.1** Maui will have implemented the ISWMP thereby diverting waste from its landfills, extending their capacities.

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### **Objective:**

- 6.1.1** Meet our future solid waste needs with a more comprehensive planning and management strategy.

### **Policies:**

- 6.1.1.a** Update and publicize the ISWMP every ten years.
- 6.1.1.b** Strengthen inter-agency coordination including Planning and Environmental Management departments.
- 6.1.1.c** Divert waste from the landfills and educate the public about the recommendations of the ISWMP.
- 6.1.1.d** Minimize future active, unlined landfill cells to the extent feasible.

### **Implementing Actions:**

- 6.1.1-Action 1** Implement the ISWMP through programs/improvements/upgrades of the solid waste management system and the Capital Improvement Project (CIP) budget in a timely manner.
- 6.1.1-Action 2** Regularly update waste generation, reuse, recycling, and disposal data for monitoring and implementation purposes.
- 6.1.1-Action 3** Educate the public about the importance and cost savings of solid waste reduction.

### **Objective:**

- 6.1.2** Divert at least 60 percent of solid waste from the island's landfills.

### **Policies:**

- 6.1.2.a** Require residents and commercial enterprises that generate waste to pay a fair proportion of disposal costs.
- 6.1.2.b** Encourage environmentally safe waste-to-energy solutions.
- 6.1.2.c** Facilitate the reduction of solid waste generated by packaging, food service products, construction waste, etc.
- 6.1.2.d** Educate residents and visitors about the impacts of and methods to reduce, reuse, and recycle.
- 6.1.2.e** Discourage the disposal of landfill leachate by diversion to wastewater treatment plants, where practicable.



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### **Implementing Actions:**

**6.1.2-Action 1** Implement a comprehensive, curbside recycling program.

**6.1.2-Action 2** Develop regulations, programs, funding opportunities, and/or incentives to:

- (1) Increase recycling of used appliances/furniture/electrical/components/clothing/other household items and recyclable materials;
- (2) Increase the number of composting centers;
- (3) Reduce solid wastes generated by packaging, food service products, home construction waste, etc.;
- (4) Construct materials recovery facilities (MRFs) including a facility in Central Maui, in accordance with the ISWMP, and investigate a cost-recovery fee to meet funding needs; and
- (5) Discourage slow degradable materials, e.g., Styrofoam.

**6.1.2-Action 3** Develop public outreach/education/incentive programs to increase awareness to reduce, reuse, and recycle.

**6.1.2-Action 4** Prepare a study to assess the feasibility of a future waste to energy program.

**6.1.2-Action 5** Identify and develop a recycling/redemption facility at an appropriate location in West Maui.