

THE MAYOR'S COMMUNITY MEETINGS ON RECYCLING

Thursday, May 10, 2007

7:00 PM – 8:30 PM

Windward Community College

GROUP MEMORY

AGENDA

- Welcome
- Meeting Overview
- Presentation
- Questions and Answers / Comments
- Closing Remarks

Welcome and Introductions

Mayor Mufi Hannemann welcomed and thanked everyone for attending the fifth of seven community meetings in April and May sponsored by the City and County of Honolulu. The purpose of the meeting is to gather residents' input and ideas for developing a sustainable recycling system. The meetings will also serve as a venue for the City and County to explain what it is doing regarding recycling and the updating of its Integrated Solid Waste Management Plan. New data from comprehensive studies that analyze Honolulu's solid waste stream and its programs will be presented by Consultant Karen Luken from R.W. Beck.

Mayor Hannemann introduced Senior Cabinet and Environmental Services Department members who were present at the meeting: Managing Director Wayne Hashiro; Customer Service Department Director Jeff Coelho; Fire Chief Kenneth Silva; Deputy Fire Chief Alvin Tomita; Parks and Recreation Department Director Lester Chang; Board of Water Supply Chief Clif Lum; Office of the Mayor Chrystn Eades, Alenka Remic, Randall Sumida, and Cindy Alef; Environmental Services Department Director Eric Takamura; Environmental Services Department Deputy Director Ken Shimizu; Refuse Division Chief Frank Doyle; Refuse Division Assistant Chief Wilma Namumnart; Recycling Coordinator Suzanne Jones; Environmental Services Communication Officer Ken Kawahara; Martin Okabe. Others attending the meeting included Aides representing Council Members Donovan Dela Cruz and Barbara Marshall, Neighborhood Board Commission Joan Manke; and Senator Jill Tokuda.

Mayor Hannemann noted that the City has engaged R.W. Beck, an experienced consultant known locally and nationally for their work, to present a brief history of the City's challenges, initiatives, and the proposed curbside recycling project that the city is about to embark on. Meeting participants were encouraged to share their thoughts, suggestions, and comments. Mayor Hannemann emphasized that the City is facing an essential issue, how the City deals with it today will impact the future, and that hopefully we leave this place better than we found it.

Mayor Hannemann also encouraged meeting participants to attend or let others know about the remaining meetings that are scheduled for Saturday, May 12th from 10:00 a.m.

to 12:00 noon at Iolani School for youth (grades 9-12), or Monday, May 21st from 7:00 p.m. to 8:30 p.m. at Kapolei Hale.

Meeting Overview

The facilitator was introduced who then explained a lot of information would be provided and that her role was to give everyone an opportunity to ask questions and provide comments, and to ensure that the discussion stays focused on the topic. The facilitator provided an overview of the meeting including a powerpoint presentation by the City's Consultant and asked that questions be held until after the presentation when time would be provided for questions, answers, and comments. The facilitator introduced the recorder and noted that comments made at these meetings will be recorded by the reporter via newsprint at the front of the meeting room. She asked that the persons making comments ensure their comments were recorded accurately. The facilitator noted that input from meeting participants, including questions and answers, will be recorded along with the group memory from each meeting and posted on the City and County's website within two weeks of each meeting. A consolidated summary will also be posted. For questions not answered this evening the City would post answers within 30 days. Also, resources, including the Consultant's studies, are posted on the website, (www.opala.org).

Handouts provided included an overview of the powerpoint presentation on the Integrated Solid Waste Management Plan which included space for notes and a comment sheet on the last page which could either be turned in at the end of the meeting or mailed to the address provided on the form (City and County of Honolulu's Department of Environmental Services' Refuse Division – Recycling, 1000 Uluohia Street, Suite 212, Kapolei, Hawaii 96707). The facilitator announced that questions and answers would be fielded after the Consultant provided her powerpoint presentation. She also announced that Mayor Hanneman and his Senior Cabinet members would be staying for a half hour beyond the end of the meeting to answer questions or discuss other matters of importance to meeting participants that were not on the agenda this evening.

In addition to the first meeting held on Tuesday, April 9 at Mililani Mauka Elementary School, second meeting held on Tuesday, April 24 at Kaiser High School, third meeting held April 25 at Kahuku Intermediate and High School, fourth meeting held at the Mission Memorial Auditorium, fifth meeting held tonight at Windward Community College, the Mayor will be convening two other community meetings on:

- Saturday, May 12 (Youth meeting) – 10:00AM-12:00 noon at Iolani School.
- Monday, May 21, 7:00 PM to 8:30 PM at Kapolei Hale

The facilitator introduced the Consultant Team which included Karen Luken and Ann Hajnosz from R.W. Beck. An overview of the meeting agenda was posted and reviewed by the facilitator and included a presentation by Consultant Karen Luken followed by questions and discussion. The facilitator reminded meeting participants to complete a survey handed to them from Q-mark Research as they entered and pass surveys to the aisles for collection.

The following Meeting Guidelines were presented by the facilitator and accepted by the group:

- Be courteous to each other.
- Listen as an ally.
- Share the O₂. Give everyone a chance to talk.
- It's okay to disagree.

Presentation

Consultant Karen Luken has twenty years solid waste management experience throughout the United States. She recently completed the County of Kauai's Integrated Solid Waste Management Plan. The Consultant explained the meeting agenda was aimed at gathering input, providing information and answers to questions relating to the City's Integrated Solid Waste Management Plan. The Consultant noted the presentation would include where the City is at, where it is going, and how it will get to the goal of developing a five-year Integrated Solid Waste Management Plan which includes the City's landfill diversion goal and current strategies to achieve the landfill diversion such as energy and material recycling. She noted that additional strategies to increase landfill diversion would also be discussed, including ways to optimize performance of existing programs, instituting residential curbside recycling programs and expanding waste-to-energy capacity. The impact of additional strategies on landfill diversion would be analyzed and comparative benefits of energy and material recycling would be discussed.

The Goal: Landfill Diversion

The Consultant explained that material and energy recycling both aim to divert garbage from the landfill by recycling into materials or serving as feedstock to be converted to energy. Statistics were provided on where the City is right now and the impact of energy and material recycling on landfill diversion. The total waste generated in 2005 on Oahu was 1.76 million tons, of which 1.00 million tons were recycled into energy/materials and kept out of the landfill. The combined landfill diversion from this recycling initiative is 57%, which is above the national average of 44-46%. Of the total 1.76 million tons of waste generated, a total of 400,000 tons was converted into energy, with a diversion rate of 22%, which exceeds the national average of 14%.

Energy Recycling

The Consultant explained that H-POWER (Honolulu Program of Waste Energy) is a waste-to-energy facility which keeps waste out of the landfill. Waste taken to H-POWER is converted into energy. Annually, H-POWER receives 600,000 tons of garbage of which 400,000 tons are converted to energy and 200,000 tons of non-combustibles and ash (by-products of waste-to-energy process) are disposed of in the landfill. H-POWER recycles virtually 100% of the ferrous/non-ferrous metals by using metal magnets and extraction.

There are several benefits of energy recycling to Oahu. Energy recycling produces enough energy for 40,000 homes. It also generates \$30 million in annual revenues from the sale of electricity along with another \$1.5 million from the sale of ferrous metals. It reduces the reliance on fossil fuel by replacing 600,000 barrels or 7% of oil per year.

Material Recycling

The Consultant presented statistics on the impact of material recycling on landfill diversion. Of the total Oahu 1.76 million tons of waste generated in 2005, 612,000 tons were recycled into new products, with a diversion rate of 35%, which is higher than the national average of 27-32%. Since the late 1980's the percent of tonnage generated has increased six-fold by focusing on a wide variety of materials along with residential, commercial, and public/private partnerships. In 2005, materials recycled included paper, metals, glass, plastic, green waste, tires, auto batteries, electronic scrap, wood waste/pallets, construction and demolition debris, food waste, sewage sludge, and materials being reused. In 2005, 612,000 tons of materials were recycled, and as a result, these materials were kept out of the landfill, H-POWER, and transfer stations.

The City has focused on residential and commercial recycling of a variety of materials. For residential recycling, drop-off programs and bottle redemption programs have significantly reduced container littering. Started in the early 90's, the number of drop-off sites throughout Oahu that accept paper and mixed containers (glass, plastic, and aluminum) has increased from 20 bins to about 75 drop-off bins. Other residential material recycling includes appliance recycling and the conversion of green waste to compost through curbside pickups and convenience centers. The City has also addressed battery and tire recycling by banning these items from landfill disposal and requiring their drop-off at convenience centers.

The City has also focused on material recycling by commercial businesses since 1990 by mandating all City offices recycle their office paper. By 1996, paper recycling was expanded to all commercial office buildings. Hotels and restaurants must recycle their beverage containers. Commercial businesses must also recycle other types of paper materials (i.e., cardboard, newspaper, office paper, low grade paper) and are limited in the amount of green waste they are allowed to put out for collection. The City has also encouraged recycling food waste for compost or pig feed and implemented the conversion of cooking oil to bio-diesel fuel.

The Consultant explained that the City has developed public-private partnerships with recycling businesses who are seeking to divert waste materials from the landfill. For example, the City has partnered with Schnitzer Steel to use magnets at the landfill for the extraction of ferrous metals. The City has contracted with Synagro to convert sewage sludge to compost or fertilizer pellets.

Strategies to Further Increase Landfill Diversion

The Consultant explained that the City wants to increase recycling further. It is now faced with developing strategies to increase landfill diversion by increasing the performance of existing programs (i.e., organic composting, drop bins and HI-5, and office paper and cardboard recycling), instituting curbside recycling for residential mixed recyclables, and increasing energy recycling. The City is seeking methods to get the public to recycle more and participate in the various programs that are offered.

The City is looking at ways of recycling more green waste into compost. Organics composting can be increased by optimizing the performance of existing Curbside Green

Waste Collection. The curbside recycling program is the City's attempt to keep the green waste separated from other waste. By collecting, composting, and reusing green waste, it is being kept out of the waste stream that goes to the landfill and being converted to a recyclable product that can be used by residents i.e. mulch. Other organics include food waste that is recycled through different methods. For example, low-technology recycling of food waste goes to pig farmers; medium technology recycling of food wastes can go to composting facilities; and high-technology recycling of cooking oils to bio-diesel fuel for use by city vehicles and buses. Sludge can be composted and doesn't go to the landfill.

The City is also increasing multi-material residential recycling programs by expanding drop-off community recycling bins (i.e., multi-material bins, site rotating HI-5 fundraiser bins) locations. Many schools have multi-material recycling bins situated on their campuses as a means for fundraising. The City wants to get this program out to more schools, which will generate more monies to schools, not the City.

Proposed Curbside Recycling Program

Currently, refuse is collected two times a week and green waste is collected every other week. The proposed curbside recycling program includes once/week refuse collection and once/week recycling collection. Recycling collection consists of alternating weekly pick-ups of green waste and mixed recyclables. A second day garbage collection will be made available by request (if needed) for \$10/month. Residents will have weekly refuse collection via a 96-gallon receptacle (grey bin), alternating weekly green waste or mixed recyclables collection via a 96-gallon receptacle (green bin) for green waste (i.e., grass, tree and hedge trimmings) and a 64-gallon receptacle (blue bin) for mixed recyclables (i.e., newspaper, corrugated cardboard, aluminum, glass, plastic (#1 and #2)). The Consultant explained how collection service would change, including an additional green bin for high volume green waste households and an additional grey bin for high volume refuse households, collected once per week at no charge.

The Consultant cited a waste characterization study that was conducted by R.W. Beck to analyze the waste stream. The results of this study are posted at www.opala.org.

It is anticipated the proposed program will decrease the need for second day refuse collection. The average 96-gallon bin holds 72 pounds of garbage. The average Oahu household sets out 40 pounds on the first day of collection and 25 pounds on the second day. Participating in recycling programs will decrease total refuse set out by 15 pounds per week.

The proposed program will increase overall collection service costs if residents elect to maintain twice per week refuse collection in addition to new curbside recycling collection. The Consultant explained that it all comes down to the number of times collection service is provided. Currently, a City collection vehicle drives by your home 10 times a month – 8 times for refuse and 2 times for green waste. The proposed curbside recycling program would require 2 more collections per month (i.e., 3 pickups per week – refuse, recycling, and second-day refuse) thereby requiring collection vehicles to drive by your home 12 times per month, assuming everyone maintains twice per week refuse collection. The question is who should pay for the extra collection? Should it be those who recycle or those who are large garbage producers who put out their garbage 2 times per week.

The proposal of the additional fee of \$10 for a second refuse pick up assumes that the large garbage producers or those that do not want to participate fully in the City's recycling programs would bear the additional cost of having a second refuse pick-up. If a resident recycles, and requires only one refuse collection per week, they won't pay an additional fee. However, if a resident is using more services, i.e. second refuse collection, they will pay \$10/month.

Comparison with Other Islands

Solid waste services on the other islands vary. For example, Maui County has once a week pickup for \$12 per month that may be increased to \$16 per month (if approved by the Maui County Council this month). An additional fee of \$17 per month is charged for curbside recycling and there is no curbside bulky item pickup. Kauai County has a once a week free curbside refuse collection with all other services paid for by the consumer. It has no bulky item pickup. Hawaii County provides no collection services. All collection services must be contracted with private companies or residents self-haul their trash to transfer stations. The City and County of Honolulu currently has curbside refuse pickup two times a week, island-wide bulky waste pickup, and curbside green waste pickup twice a month.

Proposed Program Increases Participation

To be successful, the proposed curbside recycling program seeks to increase participation, with the 3R's (reduce, reuse, recycle) there must be the 3C's (commitment, convenience, cost). For example, people will recycle if they are committed to recycling, are willing to recycle if convenient, or will recycle if there is an economic incentive.

The proposed program is not unique to Honolulu. The Consultant shared examples of other locations where recycling efforts have been successful. For example, San Francisco, California uses three carts: blue cart for glass, plastic, cans, foil, paper, and cardboard (recyclables); green cart for yard trimmings, food scraps, and soiled paper (green waste); and a black cart for non-recyclable, non-compostable refuse. Residents pay a \$19 monthly refuse fee and are provided 32-gallon carts as opposed to our 96-gallon cart. Another example is Tacoma, Washington where the cost increases (i.e., \$16.69/month for 20-gallon container to \$41.85/month for 90-gallon container) as the size of the garbage container increases. There is no additional charge for green waste and mixed recyclables, which are collected on alternating weeks.

Potential Effectiveness of Proposed Programs on Material Recycling

How will these programs impact the waste stream? Where will this take us in the future? The Consultant explained the current recycling rate of 35% can potentially be increased to 46% by doing what we do better. Optimizing the performance of existing programs (+6%), instituting the Mayor's proposed curbside mixed recyclables collection (+2%), and additional green waste collection (+3%) will increase the potential effectiveness of material recycling programs. However, increasing recycling will not eliminate the need for more waste-to-energy capacity. Additional waste-to-energy capacity is needed. Without additional capacity, the overage must be sent to the landfill. H-POWER was built in 1989 and has continued to perform beyond contract capacity (562,000 tons annually). Capacity limitations have required H-POWER to divert approximately 150,000 tons to the landfill in 2005. As population and

commercial growth continue there is a need for additional waste disposal capacity on Oahu. The City and County has issued a RFP for future increased waste-to-energy processing capacity of approximately 200,000 to 400,000 tons per year.

The Consultant noted the potential effectiveness of the proposed expansion of energy recycling will be an additional 200,000 tons of waste converted to energy. The additional energy recycling rate of 11% would increase the current 22% energy recycling rate to 33% total energy recycling rate. The combined effectiveness of energy and material recycling will increase to 79% being diverted from the landfill.

Combined effectiveness of Energy and Material Recycling

The Consultant explained Oahu can achieve a 79% diversion rate. Of this total amount, 35% made up of garbage that is converted to new products (i.e., current material recycling); 22% from garbage that is converted to energy via H-POWER; 11% from additional energy derived from waste to energy; 6% from new products that optimize performance; 3% from curbside green waste that is converted to compost; and 2% from curbside mixed recyclables that are kept from the landfill. The City needs to determine what to do with waste that cannot be converted to new products.

Comparative Benefits of Energy and Material Recycling

What this all means is that both converting waste-to-energy and waste to other products has benefits. Reducing dependence on fossil fuels can lead to reducing greenhouse gas emissions. This reduced reliance and decreased dependence on foreign markets can help to create jobs and keep waste out of the landfill. Globally, fossil fuels are saved and greenhouse gases aren't produced when waste is converted to energy. Natural resources are saved and the need to ship recyclables elsewhere to manufacture new products is reduced.

Sustainability, or material to energy recycling, both yield environmental benefits by reducing greenhouse gas emissions, creating energy benefits, providing landfill diversion, and economic benefits related to jobs. Both create jobs (i.e., more jobs and more higher paying jobs). Waste-to-energy provides greater benefit when considering on-island impacts. Material recycling offers greater benefit when considering off-island impacts.

The facilitator announced that Q-Mark would be distributing a post-meeting survey at this time to be returned prior to the end of the meeting.

Questions / Discussion

Note: Answers in bold denote answers that were supplied by the City after the meeting – those questions still unanswered will be answered within a month of the meeting date

C: The City needs to educate the public what kinds of materials can be recycled.

Q: Will we have to recycle more with the proposed recycling plan?

A. The materials collected will remain the same since this is driven by markets. Hopefully, recovery tonnage will increase.

- Q: Because H-POWER cannot convert all waste to energy, what will happen to the excess refuse?
- A: The City has issued a Request for Proposals (RFP) and will be looking at all proposals to determine the best alternatives (i.e., technology, cost, etc.)
- Q: The curbside recycling proposal fails to include all kinds of cans, boxes, cardboards – Why are they being excluded?
- A: Materials collected are dependent on available markets. Materials collected in other places may be economically feasible for that location due to proximity to markets. In the City's situation, in addition to market availability, the cost of shipping the materials has to be factored into the economics.
- C: Paper: Question comes down to available markets for these materials and cost benefits.
- C: I believe that rotating refuse is a good idea and that the public won't need as many pick-ups because of the recycling program.
- C: Need to enact legislation relating to plastics (i.e., plastic bags) that restricts their use if they can not be recycled (i.e. plastics #3 thru #7)
- Q: Is there a chipper available for polystyrene products?
- A: There are challenges to living on an island our local markets are not big enough to support this type of reuse. On the mainland, trucks "backhaul" materials to manufacturers for reuse.
- C: Legislation needs to happen on a state level; the challenge is the trade lobbyists.
- C: There is some private sector "backhauling" occurring in Hawaii (i.e., used printer cartridges, recycled bags).
- Q: How is the H-POWER plant powered?
- A: Materials have high BTU content. Once the fire is started, it keeps burning and energy is then converted to electricity.
- Q: Are there any negative environmental impacts from H-POWER?
- A: There is a waste stream, including off-gases that need filtering and solids (ash) that are taken to the landfill. Materials are handled properly and strictly regulated.
- Q: Does the \$10 fee cover all of the costs to run the program? What will the costs include? Will enough monies be collected?
- A: \$10 fee will cover the costs for second refuse pickup.

C: Two times a week pickup is part of the Oahu culture which needs to be overcome for the program to succeed.

Q: Is there a market for recycling different materials?

A: Tires are taken to UNITEK and also converted to tire derived fuel sent to power plant. Paper is shipped to Asia. Glass is shipped to the West Coast and also some stays here for conversion to aggregate materials. Plastic is shipped to Asia. Ferrous materials are sent to Korea while non-ferrous materials are sent to the mainland. Whatever the best deal is for the materials determines where the materials are recycled.

Q: Does the City and County of Honolulu make money off of recycling materials off-island?

A. **No.**

Q: Is there a Phase 2 of the proposed curbside recycling plan to help build local processing businesses or make them more profitable?

A: The market is very volatile. The City is not competing – it picks up and disposes the materials.

C: The green waste recycling program is a closed loop system. Green waste produced here is recycled into compost for use here.

C: Everything is driven by the market.

Q: Why aren't we recycling construction debris?

A: The City is recycling concrete, asphalt, and wood. The problem is with wood that has been treated with chemicals – these cannot be converted by burning or using as compost.

C: Suggest that the City workers that are doing this work should be surveyed to see if there are better ways to recycle or other suggestions they can offer.

Q: What is the status of methane production?

A. We believe this question is with respect to Waimanalo Gulch Sanitary Landfill. The gas extraction system was installed in 2005. At the present time, the amount of methane extracted is insufficient to generate energy.

C: There needs to be an incentive or penalty program for heavy consumption. Need to mandate materials recycling.

C: The Kailua project (Lanikai) was a single stream model that was more cost-effective. It was replaced by community drop-off recycling bins.

Q: What is the projected timeframe for this proposal?

- A: Community meetings in April and May followed by buy-in from the City Council. Need to let your City Council Members know that you support this project. Looking at fall implementation (September 2007) in one of three communities: Hawaii Kai, Kailua, and Mililani.
- Q: The community drop-off bins are not marked well for what material goes where.
- A: A new contract is forthcoming which includes improved signage for the community recycling drop-off bins.
- Q: Has any thought been given to whether the City can expand H-POWER by 50%, given the greenhouse gas emission cap passed this year by the legislature?
- A. The City is reviewing its alternatives.
- Q: Is burning oil a better fuel?
- A. When burning waste less greenhouse gas emissions are generated than when burning oil.
- C: The City wants to divert waste from the landfill by using waste-to-energy to do this.
- Q: Is there any advantage for burning waste versus burning fossil fuel?
- A. Yes. There is considerable reduction in imported oil and burning wastes reduces greenhouse gas emissions.
- C: There are two options with 22% of the mixed recyclables – burning waste to energy (H-POWER) or processing recyclables for markets.
- C: The Charter amendment that was adopted by the public’s vote during the last election favored the mixed recyclable program.
- C: The City will issue an RFP for the handling of mixed recyclables.
- Q: The current City budget for twice weekly pickup of mixed recyclables – where does the money go?
- A: An estimated \$50-\$60 per ton is budgeted for the processing of recyclables.
- Q: Why is an 11% increase in H-POWER proposed?
- A: It is based on 150,000 tons being turned away at H-POWER. The RFP asks for two alternatives: (1) 300,000 tons and (2) 600,000 tons.