

**Department of Environmental Management  
Maui Wastewater Community Working Group  
Thursday, October 29, 2009  
1:30 p.m.**

**Meeting Summary**

1. Welcome and Introductions

Mayor Tavares opened the meeting and welcomed everyone attending.

Facilitator Leland Chang welcomed the Community Working Group (CWG) and asked members to introduce themselves with: a) organizational affiliation; b) wastewater and related expertise; c) reason for serving on CWG; and d) one thing they cherish about Maui.

Jeff Pearson: Cherish diversity -- weather, land, and people; issues that are among us; water is life. Maui Land and Pine does not deal with reclaimed water.

Scott Meidel: Cherishes and embraces everything that Honolulu is not; emphasis on agriculture; work in conservation and sustainability is related to availability and accessibility of water. Haleakala Ranch has an interest in reclaimed water as it operates near the Kihei Wastewater Treatment facility; and its future plans are dependent on this resource.

Sharon Suzuki: Enjoys openness of Maui; diversity within the county. The County is one of MECO's largest customers; and is on the committee to support and provide input into the County's effort.

Russell Sparks: Grew up on Maui, spent time around the ocean; desired coming back to take care of resources (with Division of Aquatic Resources, DLNR); 20 years of coral data shows substantial declines around injection wells and land based impacts. Cherishes resources here on Maui.

Irene Bowie: Cherishes Maui's natural resources; concerned about challenges faced with growing resources; Maui Tomorrow is member of DIRE coalition formed to encourage use of wastewater.

Bob Pickering: Kihei Community Association is concerned with what to do to improve living, recreational areas, wastewater and increasing use of drinking water availability, especially in South Maui. Cherishes resources that encouraged moving to Maui.

Leslie Wilkins: MEDB is invested in preserving water resources; facilitated 40 sessions for Focus Maui Nui. Cherishes multi-culturalism.

Jeff Schwartz: DIRE member; many things drew him to Maui; cherishes Hawaiian wisdom; awareness of land and water; malama aina cultural values.

Pam Doast: Ma`alaea Community Association; volunteer marine naturalist; doing research on what's happening in the ocean.

Dan Clegg: Monsanto's existing operation uses reclaimed water for 100% of needs; involved from the beginning. Intimate relationship of operational needs and how good recycled wastewater is a resource for meeting those needs. Knows what use of reclaimed water looks like; it's good to see it expanded. Cherishes what everyone has all ready said; what's out in front of us.

Robin Knox: UH (Botany); worked in Gulf of Mexico (followed nitrogen); permit writer for water quality based discharges; working with UH on reef studies and connection to injection wells; as a planner also looks at non-point; system analysis and looking at the whole; invited to come to Maui by residents -- environmental laws were not being implemented effectively. Cherishes community, diversity, talent, spirit of cooperation.

Alex de Roode: Sustainable Living Institute of Maui; interfacing with credit and non-credit programs; provides information about curricula and development of new programs around sustainability; community outreach around sustainability issues. Identify best practices, lessons learned from other communities that may benefit the County which he hopes to bring to CWG. Cherishes natural resources; preserving what we have.

Roland Asakura: Clean Water Branch (DOH); field person collecting water samples; decided to do this because Maui is a nice place. Cherishes: resources and preserving what there is for his daughter and future generations.

Written biographical statements were read for absent members Filamon Sadang and Warren Watanabe.

Leland reviewed the agenda for the meeting.

## 2. Background, History and Context (Cheryl K. Okuma)

Where is Maui now? How does a process like this fit in to the overall mandate of the DEM and to meet the challenges of the future? Give context of nationwide laws and how they affect County of Maui. Strategies have gotten a lot more complex, affects our decisions.

Resource constraints -- limited by what we can access. Our mission is to protect our environment. The County faces increased capital costs; operational costs go up. Clean Water Act (CWA) enacted in 1972, but resources were not available to comply

with the law. Federal construction grant program was made available by the CWA, but was phased out. It was intended that counties pay for the cost of building and operating these facilities through sewer fees. The law required local government like the County pay for operations, maintenance and repair through sewer fees. This applied nationwide, including the County.

Facilities were viewed as being able to last for a long time -- 30, 40, 50 years. Low-lying, gravity-fed systems into treatment plants. CWA required cities, including the County to comply with secondary treatment. Secondary treatment was established as a technology standard, not a water quality standard. Responsibility shifted from federal level to the city level to figure out how pay for the cost of building, maintaining, improving and running facilities.

County of Maui has been leader in reclaimed water. First to go out with a reuse ordinance and guidelines. Maui has 15 injection wells. Average sewer rates increased by 76% since fiscal year 2000.

Why was the CWG pulled together? To engage in community discussion and development of ideas that will end up in a document to be submitted to DEM for consideration in future decisions and plans.

### 3. Orientation to the Community Working Group Process (Leland Chang)

A major feature of the process is the sharing between the CWG and the project team on the community's vision and values as well as technical planning issues. There should be a permeable membrane between the group and the team through which information flows in both directions so that all can arrive at a common base of knowledge and understanding. From this common base will flow CWG ideas and proposals for future wastewater management.

The CWG will move through a series of stages, starting with formation of the CWG. Mayor's Office representative Kuhea Paracuelles explained the thinking behind selection of CWG members. A year ago, the County began discussing the need to bring stakeholders together; and brainstormed who had an interest in R1 water use and related environmental concerns. The selection process occurred over the course of several months after the Department made a decision to form a group to actively work on wastewater concerns. The seats were highly sought after. Everyone wants this, but making it happen is another matter. People on the CWG are considered to be people who can contribute to "making it happen".

Leland then described the other stages of the process, including: development of guiding principles; the ongoing sharing of knowledge; identifying alternative concepts and approaches; developing evaluation criteria; and providing draft and final recommendations to DEM.

Project team members introduced themselves.

CWG Guidelines & Groundrules:

- CWG is advisory to DEM
- Collaborative approach -- search for solutions that meet needs and interests of the community as a whole
- Consensus based -- the question will be, “can you live with this recommendation; or is there anyone who cannot live with this?”
- Facilitator is neutral and will not express bias or opinion
- Group memories will be produced for each meeting and will be available to the community (DEM website)
- The hope is that members will attend every meeting. Members can designate an alternate from the same organization; and are responsible for briefing their alternates
- Information sharing: the team will get the same information out to all CWG members at the same time
- Sessions are open to the public; comments at end of each meeting
- There will be homework; ongoing assignment is to serve as a conduit to the community
- Meetings will start and end on time
- A CWG roster will be issued with name and affiliation; contact information is at each member’s discretion. A project team roster will be distributed. Email account will be set up so the public can email comments to CWG
- Normal facilitation groundrules -- candor is welcome; it’s OK to disagree but mutual respect is expected; and CWG members are to allow the facilitator to recognize them before speaking.

Leland concluded by saying that the hopes for the process include: an informed and knowledgeable CWG; maximum opportunity for consensus; a process for addressing and resolving differences; and recommendations that enjoy broad community support.

4. Orientation to Wastewater Planning (Dave Taylor)

Beginning of WW 101 -- utility wastewater management

Global Performance Measures: How does the public judge WWRD? What does the public want? Reliability means that we are not spilling into the ocean. People on cesspools want sewer service; want increased reclaimed water; how clean is the water disposed; decrease odors. WWRD has been focused on reliability primarily. Presentation will explain why WWRD focuses on reliability.

Where does my sewage go slide explained. 210 miles of pipes, 42 pump stations, 24 miles of force main, 5 treatment plants, 22% reuse.

Explain County of Maui sewer areas and treatment plants.

Central Maui WW system explained: Kahului TP pond is a holding pond.

Lahaina WW system explained.

South Maui WW system explained. Maui Meadows is the biggest unsewered area.

West Maui Reuse System explained: current areas of reuse shown in pink areas of the slide. Other areas are potential reuse if there are plant improvements, pipelines etc.

South Maui Reuse System explained: purple areas currently reuse. Other areas of potential reuse.

Ma`alaea and Pukalani are serviced by private facilities.

Slides showing major Maui treatment plants. \$300 - \$400M for replacement costs. Treatment plants, pump stations and lines including reclamation system replacement would cost \$1 - \$2B. Picture slides of pump stations.

Funding history slide: Maui gravity flow of raw sewage to the ocean. Enormous federal funds went to fund construction; then ended. Now County needs to bear the financial burden. WWRD became 100% fully funded by sewer fees only in the 1990's. Utility operation is funded by sewer fees and are seeing real replacement cost. Sulfuric acid degrades the wastewater system -- replacement is important.

Thousands of pieces of equipment and vehicles are monitored -- example slide.

20 year CIP slide: major projects are listed with year of replacement and cost; critical and non-critical wastewater and reclamation projects shown. Critical projects can't be pushed forward. Rest of projects are not necessary for operations, and can be pushed forward. CIP Priority Spending slide: \$30M needs to be spent to keep things operating as is; 20 year construction plan. Also have operations cost for salaries, chemicals, power, on which sewer rates are based.

CIP priority spending vs. rates slide: decision making graph looked at with Mayor and Council. Raise money through sewer fees and pay for debt service for CIP.

Wastewater Reclamation Division slide: CIP is 42% of WWRD budget of nearly \$70M. Operations is 8%, Debt Service is 18%.

Purple lines on graph represent a potential of about 40% reuse.

Global Performance Measures slide: have to do reliability first. In utilities maintenance gets deferred first for the public. The problem is the lines degrade and

there are problems. Maui had sewage spills because maintenance got deferred. Engineering management looks at the next 20 years and focuses on the reliability issue -- serving the public over the long term. Public doesn't understand degradation of the system until it happens. The Department would like to do more; but there is the question of how to achieve this.

CWG Question: Are their benchmarks; or accreditation standard for reliability?

Answer: the Clean Water Act sets the standard of zero spill. WWRD has 99.99% threshold based on how much used to spill, reliability now, and what public is happy with.

CWG Question: Debt Service? Answer: Borrow through General Obligation bonds and State Revolving Fund. Paying off the mortgage, but borrowing money increases debt.

CWG Question: Use of R-1 water, putting 78% into injection wells. Purple line illustrates raising reuse to 40%. What if the potential reuse areas is included, what would that raise sewer rates to? This will be addressed in a future meeting.

CWG Question: Do we have capability of consuming all the R-1? Answer: yes, but it's a question of infrastructure and money.

CWG Question: Procedural question; there was exaggeration about CWA as a standard because there is an upset defense. Were you properly operating that system when the spill occurred. Answer: acknowledge that for 99% of the time, the county experience is to receive a fine.

CWG Question: Are we looking at stimulus funds? Didn't see anything in the presentation. Answer: Yes, WWRD is getting \$7M of the stimulus funds. Always looking for other funding sources; and work with developers to see if they can finance construction.

## 5. Initial Discussion of Guiding Principles

Facilitator: Looking at guiding principles; what are the community values and what is important. As part of this process going forward what are the principles? What do you want wastewater managers to keep in mind.

- There's only one hydrologic cycle, and all is cannot connected and cannot leave out a part. Like the ocean, groundwater, streams...
- Need agreement on the ultimate goal or vision (what success looks like); and hope it's the Mayor's goal of 100% reuse and ending injection well discharge. CWG needs to agree on goal of the work, then can figure out how to get there.
- Improve the health of the island environment.
- Push for greater water conservation efforts by focusing on 100% reuse.

- Takes into account what the community really wants and is willing to pay for.
- Reuse equates to protecting the reefs which in turn means enhancing economic viability (tourism, food from ocean).
- Wastewater affects all of us and we all need to pull together on this.
- Void in community literacy; need to increase education of community and policy makers and improve the community's wastewater IQ.
- Need to identify ways to achieve 100 % reuse in a financially viable way in an acceptable time frame.
- Clarify -- is our focus only County injection wells or also private systems? Ma`alaea is concerned about its reef; what can be done there can help other reefs affected by private systems.
- 100% reuse would be ideal but if we can get 50% or some change/improvement, this would also be a form of success.
- Outcomes need to reflect commitment to terrestrial-based values (open space, agriculture). Open ranching is important in the community and shouldn't get lost as it takes a lot of resources to maintain these industries. Many may take for granted that open space will always be there -- it takes a lot of resources and may not be as profitable as other uses.
- Two parallel paths: environmental factor and water factor. Going back to community; need to demystify science around the environmental impacts. There's enough talk about environmental impacts of injection wells -- people hear this but doesn't really understand what's happening. Be careful about identifying "the enemy". Let's look for additional opportunities for use of this resource.
- Expand wastewater literacy to encompass environmental literacy.

6. Next Steps

- Prepare Guiding Principles
- Prepare CWG Meeting I summary
- Prepare CWG and project team rosters
- Survey to assess CWG's informational needs
- Find a different location with better parking

7. Next Meeting:

December 3 @ 1:30 p.m.; location to be determined  
Regularly scheduled meetings on the first Thursday of each month

8. Comments from the public:

Maury King:

Question: Materials on available on the web? Yes

Question: Maui Meadows pay sewer fee? No.

Charles Villaron:

This is a resource -- generate up, generate down. Use methane to generate power, solar; resources are available to move the water which is key. Kihei WTP is sitting there. Enough specialists to clean the water; the question is cost advantage of moving the water.

Will there be a presentation on the volume of water that goes into the injection wells and what goes into the ocean?

John Dooley:

Community input with only two local people. Need to get local people because people from the outside are making decisions for the local people. No one mentioned replacement of surface water with R-1. If have money then problem can be addressed; it's finding the money. Water is a hot issue; more reclaimed water use would be better for the aquifer and everything else.

Look at whole system of water and the cultural aspects of water. There's no guiding principle that addresses culture. The working nature of water is rooted in culture. Suggest CWG include the guiding principle to include culture.

Rob Parsons:

The CWG has great perspectives. The sooner we can stop calling it "wastewater", the better. County changed name, split the divisions and still have Wastewater and Solid Waste divisions. Maybe change the terminology. Reuse for here on Maui (food as imports are up to 90%); strict criteria for what reuse can be used for; what are the criteria and cost to WRD to upgrade facilities to be able to grow food. If using biosolids and end product is acceptable to EKO compost why not do this for wastewater? For Lahaina: feels administration took a wrong turn on algae-to-biofuels because it is a closed system and used as growing medium. From industry, 10 years or more to be scaleable on algae-to-fuels -- can refer experts on this to the CWG. Conservation -- can indicate amount of liquid needed to work, but keep looking to add more storage tanks; wisdom in looking at less. Can use low flush toilets, low flow shower heads distributed. Suggest someone from Water Department to be involved in advisory capacity. Have a Water Marshal: to set criteria, enforcement and see if people are using water wisely.

CWG comment: Water Department is a key department and should be more involved in this process.

CWG comment: Conservation of water reduces water, but doesn't reduce load to the reef.