

MINUTES
FOR THE MEETING OF THE
COMMISSION ON WATER RESOURCE MANAGEMENT

DATE: January 22, 2009
TIME: 9:00 a.m.
PLACE: Kalanimoku Building
Conference Room 132

Commissioner Lawrence Miike called the meeting of the Commission on Water Resource Management to order at 9:07 a.m.

The following were in attendance and/or excused:

MEMBERS: Dr. Lawrence Miike, Mr. James Frazier, Mr. Neal Fujiwara, Dr. Chiyome Fukino

STAFF: Ken Kawahara, Roy Hardy, Lenore Ohye, Denise Mills, Ronnie Torres

EXCUSED: Ms. Laura Thielen, Ms. Meredith Ching, Ms. Donna Kiyosaki

COUNSEL: Colin Lau, Esq.

OTHERS: Darin Izon (Brown and Caldwell), Brian Maja (Gentry Homes), Tom Nance (Consultant)

A. APPROVAL OF MINUTES

1. December 18, 2008

MOTION: (Fujiwara/Frazier)
To approve the minutes.
UNANIMOUSLY APPROVED

B. ANNOUNCEMENTS

Deputy Kawahara distributed summaries of the LNR 404 (Commission on Water Resource Management Division) budget for FY 2009 and proposed FY 2010-2011.

Vacancies and Budget: Deputy Kawahara said the geologist position for the instream use protection section was vacated in October 2008, and is proposed to be abolished due to the state-wide hiring freeze. Deputy Kawahara reviewed the items concerning LNR 404 in the handout.

Deputy Kawahara reported that staff identified 19 projects totaling over \$12 million for the Department of Land and Natural Resources (DLNR) Federal Environmental Stimulus Package and that these projects have been transmitted to our Congressional Delegation for federal funding consideration along with other DLNR's division projects. (List was distributed.)

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Stormwater Reclamation and Reuse: Deputy Kawahara said that staff has prioritized the opportunities that were identified in an appraisal study of stormwater reclamation and reuse opportunities in Hawaii and is seeking funding sources for those opportunities that were deemed high priority.

Drought conditions are being carefully monitored and although there were heavy rains in the month of December, Deputy Kawahara reported that there are still areas in the State that are suffering from drought. Staff continues to work with the different county's drought committees to be ready in case federal funding does become available.

Bureau of Reclamation (BOR) Emergency Drought Assistance: Staff is still awaiting BOR's response to the four proposals for emergency drought assistance that were submitted in November 2008.

East Maui IIFS Site Visit (Trip #5): Staff will conduct a site visit in February to various East Maui streams to measure pre-restoration flows and post restoration flows. The focus of the trip will be to visit and document water related activities in the Wailuanui peninsula, including the taro loi and the auwai that supply the peninsula with water.

Deputy Kawahara reported that staff attended a meeting requested by the Department of Agriculture (DOA) regarding interim instream flow standards (IIFS) for East Maui streams. There were questions and concerns on the IIFS process, the Commission's September 25, 2008, decision, and the information needs for the remaining 19 East Maui streams. Participating agencies included the DOA, County of Maui-Office of Economic Development, Mayor's Office, the Department of Water Supply-Maui County, a County Council member, the Hawaii Farm Bureau Federation, and the Maui Farm Bureau.

Outreach:

December 12, 2008: Staff gave a presentation at Windward Community College on the hydrologic setting of the region and the water distribution system.

December 10, 2008: The Honolulu Advertiser published staff's response to several editorial letters regarding the use of stormwater as an alternate supply source (11/25/08 & 11/30/08 Letters). Staff took the opportunity to inform readers of the Commission's efforts to explore the potential for implementing stormwater reclamation and reuse projects.

January 16, 2009: Staff met with the Iolani RoboRaiders Team to discuss the State's water resources, drought, and sea level rise. This was in preparation for their competition this past Sunday at the Lego League Annual Championship. Staff spoke with a team member's mother, who informed us that Logan's team won the State championship! They are now going to Ohio to compete in the nationals.

February 5, 2009: Staff will give a presentation on the Stormwater Reclamation and Reuse Appraisal Study at the Hawaii Water Environment Association Conference.

C. GROUND WATER REGULATION

- 1. Gentry Homes, Ltd. and Ewa by Gentry Community Association, APPLICATIONS FOR WATER USE PERMITS:
WUP No. 855, Future Irrigation Use, 66,085 gpd (Well No. 1901-08);
WUP No. 856, Modify Existing Irrigation Use to 194,768 gpd (Well No. 2001-05);
WUP No. 857, Modify Existing Irrigation Use to 224,615 gpd (Well No. 2001-12);
WUP No. 858, Modify Existing Irrigation Use to 36,975 gpd (Well No. 1901-05);
WUP No. 859, Future Irrigation Use, 255,108 gpd (Well Nos. 1900-24 and 2000-06);
Puuloa Ground Water Management Area, Oahu**

Presentation by: Denise Mills

RECOMMENDATION(S):

Staff recommends that the Commission approve issuance of five water use permits, as follows:

1. Water use permit no. 855 to Gentry Homes, Ltd., for the reasonable and beneficial use of 66,085 gallons per day of brackish water from the Ewa caprock aquifer (Well No. 1901-08, a proposed new well).
2. Water use permit no. 856 to the Ewa by Gentry Community Association for the reasonable and beneficial use of 194,768 gallons per day of brackish water from the Ewa caprock aquifer (Well No. 2001-05, an existing well). This modifies and supersedes water use permit no. 792.
3. Water use permit no. 857 to Gentry Homes, Ltd., for the reasonable and beneficial use of 224,615 gallons per day of brackish water from the Ewa caprock aquifer (Well No. 2001-12, an existing well). This modifies and supersedes water use permit no. 793.
4. Water use permit no. 858 to Gentry Homes, Ltd., for the reasonable and beneficial use of 36,975 gallons per day of brackish water from the Ewa caprock aquifer (Well No. 1901-05, an existing well). This modifies and supersedes water use permit no. 794.
5. Water use permit no. 859 to Gentry Homes, Ltd., for the reasonable and beneficial use of 255,108 gallons per day of brackish water from the Ewa caprock aquifer (Well Nos. 1900-24 and 2000-06, two proposed new wells).

Approval of these permits should be subject to (1) the standard water use permit conditions listed in Attachment B; (2) the following special conditions, and (3) the conservation conditions Ewa caprock water use permits listed in Attachment C.

1. Should an alternate permanent source of water be found for this use, then the Commission reserves the right to revoke this permit, after a hearing.
2. This permit is approved under the assumption that reclaimed wastewater will become available for reuse as an alternative supply source.
3. Pumping shall cease immediately if chloride measurements show that the brackish water drawn by the well exceeds 1,000 mg/l of chloride, unless a variance from the chloride limit has been granted. The authority to approve variance requests is delegated to the Chairperson.

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4. The permittee shall submit a contingency plan for water use in the event the chloride concentration in the permitted well(s) exceeds the 1,000 mg/l sustainable capacity limit established for Ewa caprock aquifer sources, the permittee shall seek an alternative source of supply. The contingency plan shall be submitted to the Commission within 30 days of the issuance of this permit.
5. In the event that the tax map key(s) at the location(s) of the water use is changed, the permittee shall notify the Commission in writing of the tax map key change(s) within thirty (30) days after the permittee receives notice of the change(s).
6. Standard Condition 16 is waived for brackish water wells.

Chair Miike asked about staff's recommendations to approve these permits; however, it will go slightly over what is the unofficial available quantity of 15 mgd for the Puuloa Aquifer System Area, but there are other wells in this aquifer system that are using maybe a quarter of what's allocated. Ms. Mills affirmed this. Chair Miike asked if Ms. Mills knew how long this has been going on because he's always disturbed when there is a permit for a huge amount of water and they never use it yet they want to hang on to it.

Denise Mills said staff is recommending that the Commission approve these permits even though it will bring the total allocated quantity of the aquifer system area above what's been recommended for the total allocation by the staff. Ms. Mills also commented that follow-up actions on the 20-year review of water use permits include realigning permitted quantities with actual use, and Gentry is designing its irrigation system and applied for these permits to align with their water needs. Staff has taken these adjustments under consideration in its recommendation to approve these permits. Another basis for staff's recommendation is that as more reclaimed water becomes available from the Honouliuli Wastewater Treatment Plant that may provide another water source option for this type of use. Ms. Mills said they do understand from the BWS that currently there is really limited water available for a project like the Ewa Gentry project and the infrastructure isn't there to supply it. Booster pumps will be required to deliver the amount of water that they need, at the pressures that are needed, for the irrigation systems that are planned. The project is designed around these caprock wells rather than piped reuse infrastructure system. Ms. Mills said one significant comment received from the BWS was a request to the Commission to require Gentry Homes to provide a contingency plan for the three new proposed wells in the event that chloride levels exceed 1,000 mg/l.

Commissioner Frazier commented that it seems that Gentry has been attentive to reporting; the over pumpage is noted and in some places chloride. He just wanted to make a point that we are wanting to make sure that there is compliance to the requirements of the uses.

Chair Miike asked if there was a recent increase within the past year. Ms. Mills said that they have seen a pattern of increase in some of the wells. Commissioner Fujiwara asked if it could have been because the past year has been really dry. Tom Nance said in reality, salinity in caprock except for in extreme events like in 1996 and this past December really don't track with the dry year-wet year. Mr. Nance said that they're really tracking the big pump and where they are in the aquifer so he wouldn't necessarily attribute to that and the other thing to increased uses. Mr. Nance stated that he doesn't know who's doing chloride analysis but mentioned that it could seriously be inaccurate depending on what kind of method is used.

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Commissioner Fujiwara asked if landscaping work is still going on. Darian Chun of Gentry confirmed that it is and said they've never been able to upgrade their system to catch up. They're looking upon this as an opportunity to balance the system and bring it back into compliance.

Commissioner Miike asked Mr. Nance what the issue is on the Honouliuli Wastewater Treatment Plant, if the distribution system is not reaching the Gentry development. Nance explained that primarily you need to have a pipe network to get the water to it. It's a very small amount of use and a whole bunch of land area to be covered, so it becomes impractical. They're all pressure pump systems, so you're not getting pressurized pump delivery from the pipeline system and the makeover costs would be incredible, tens of millions because you would have to rip up most of the pipeline.

Chair Miike asked if they had any idea why the caprock doesn't seem to be affected by weather, where the water is coming from, if it's the re-irrigation. Chair Miike commented that the caprock would have a fairly shallow source. Mr. Nance said the submittal states that the primary source is leakage from the basalt aquifer and, to be perfectly honest, he never has been able to document that. Primarily, infrequent surface runoff never reaches the ocean, the caprock is recharged by rainfall runoff but the water level goes all over the place because the ocean is going all over the place, and he was not referring to tidal variations not big storm events. Over the years, Mr. Nance continued, you could have the average ocean level move more than a foot and the ground water moves right with it. You cannot make mauka-makai generalizations about the caprock aquifer, the exception is the rule.

MOTION: (Fujiwara, Frazier)
To approve the submittal.
UNANIMOUSLY APPROVED.

2. Oasis Water Systems, Inc., REQUEST TO EXCEED MAXIMUM PERMITTED WELL DEPTH: Lanikai Condominium Irrigation Well, "Welly 1" (Well No. 0319-01), TMK (4) 4-3-002:003, Wailua, Kauai

Presentation by: Denise Mills

RECOMMENDATION(S):

That the Commission:

- A. Approve the request to drill Well No. 0319-01 to a depth of 250 ft. All other conditions of the well construction permit remain the same.
- B. Add a special condition that the permittee submit a contingency plan in the event the borehole does not produce acceptable water at depth. The plan should specify whether the well bore will be permanently sealed or left in place with a cap at the surface.

Chair Miike said somewhere under this basically pure saltwater is assumed to be a basal water. Denise Mills said it's not known if it's freshwater or less saline water. Chair Miike said that mauka

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of these wells are existing freshwater wells and his assumption is that there is some down below there, and asked how common is caprock with saltwater above it that's more than 150 feet. Ms. Mills replied that she doesn't know how deep the caprock has been estimated to be on Kauai but around Oahu, it could be 1,000 to 2,000 feet of coral and beach sand. Chair Miike asked how far down from the surface did they start hitting saltwater. Mr. Nance said relatively shallow, brackish water, only five to ten feet thick, and then the saltwater zone; it's not fresh water. Mr. Nance said it's probably 20 feet thick but chloride is probably 1,000 mg/l.

Chair Miike asked why drilling is taking place so close to the shore. Mr. Nance stated that there is that brackish layer up there but there's no yield in that portion of the area so you can't produce any water of any significance. And then you go through a very sharp transition zone to essentially seawater and somewhere in the bottom they're getting an indication of some water that's slightly fresher. But there's at least two different aquifers; something on the top that is brackish but has essentially no yield and at a known depth, another aquifer that is presumably fresher but we don't know how deep and we certainly don't know what the salinity would be until when we reach it, if we reach it. It's highly speculative. Chair Miike asked if there's an alternative if they don't find water under there. They would do what they are doing now which is irrigating with the drinking water, they're trying to convert to onsite brackish water.

Chair Miike asked how far down are they prepared to go. Barry Simmons said he thinks the owner is going to 'run out of patience and about 250 they're going to pull the plug on me'.

MOTION: (Frazier/Fujiwara)
To approve the submittal.
UNANIMOUSLY APPROVED.

E. NON-ACTION ITEMS

1. Report to the Twenty-Fifth Legislature, 2009 Regular Session: 20-Year Review of Water Use Permits

Presentation by: Roy Hardy

Roy Hardy said that this 20-year review is required as a report to the Legislature by the Code under Section 174C-56 and the period being looked at is basically from the inception of the Water Code back in 1987 to June 2007, and only at ground water use permits. This was written with the audience of the Legislator and with the Governor's approval, numerous copies have gone to the Legislature and sent to the Board of Water Supply on Maui and Honolulu.

Mr. Hardy said this report was produced by Brown and Caldwell and referred to page 6 of the report. The scope of work shown in Table 1 indicates the number of water use permits reviewed for each island. Oahu has the bulk of the permits, 300 out of 359 permits reviewed for the 20 year period. Mr. Hardy stated that about the first 150 permits were actually approved by the Board of Land and Natural Resources up to 1980, under the ground water and control act, and not the Water Commission.

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Mr. Hardy reviewed that of the 359 permits, about 35 or 10% was not able to investigate in the field and one of the reasons is that staff could not get in contact with these permittees. Of the 359 permits, only 56 or 16% were in full compliance, and Mr. Hardy commented that it's not very good. Commissioner Frazier asked why the contractors were not able to get permission to field investigate some permittees. Mr. Hardy said it was due to contact information that was outdated, or they were not able to schedule a field investigation. Mr. Hardy said the major reason for non-compliance is the lack of proper water use reporting and the reporting of water use is the responsibility of all the permittees. Mr. Hardy explained that staff doesn't have the capabilities of going out and reading all the meters; it's self-reporting. And even with that self-reporting, there's a number of levels in this lack of reporting. Mr. Hardy summarized Appendix E that some of the lack of reporting is due to lack of flowmeters, which are required, inconsistent reporting, etc. Other issues of non-compliance, 13% at some stage over pumped their permitted amount, much is due to subdivisions (older permit has a use and newer development subdivisions over the 20 years, TMK changed) 36% fell into this category. Water shortage plans is in all the permittees a way for the permittees to have their say in case the Commission declares there's a water shortage, however it's not requirement of the Code but the requirement of the Commission to come up with these water shortage plans for these areas, 16% complied with submitting water shortage plans.

Mr. Hardy continued with another issue that the section of the Code was asking for, but thought it would be instructive and valuable to highlight in this report as well, are those ground water management areas where allocations are actually over the sustainable yields. Part of this inherited problem is from day one when the Commission came into existence; reason 1) The Board of Land and Natural Resources, when there was ground water management, the three areas on Oahu were Honolulu, Pearl Harbor and then the North sections. When the Water Commission came along and we had the Water Resource Protection Plan, it carved up those areas into smaller areas and as a result of that carving, some of the areas ended up with over allocations situations basically because permitted amounts exceeded the new estimated sustainable yield amounts in those carved up areas; reason 2) The Nuuanu and Moanalua areas in Honolulu the sustainable yields actually went down based upon the new recharge estimates we had but the allocations remained in place. All these areas are on Oahu. They are the Moanalua, Mokuleia, Nuuanu-Palolo, Wailua and Waimalu areas. Another reason, reason 3) For the over allocation is that the Mokuleia and Wailua Sugar companies historically pumped quite a bit and they were permitted what they were using way back when, but we never revisited this partial non-use. It's been the policy of the Commission, in the past, that we would revoke permits when a new application comes in and there's not enough water to go around then we start looking within that aquifer system, for those who are not using allocations. Mr. Hardy stated that it's a reactive way about going about it rather than proactive. No one is asking for more water use in these areas; however, there is this problem of over allocation.

Mr. Hardy said the overall problem is how to stay on top of the permittees and explained there isn't an annual registration or recertification. Once you get a permit, it is left up to the permittees to do this self-reporting. If we follow up with the monthly water use reporting it would serve as an alternative to the annual certifications; however, we really haven't gone after as an enforcement, our database isn't what we'd like it to be and it's something that we're trying to do for all wells, it's not only in ground water management areas, but we do put them as a priority.

There are standard reporting forms for permittees to submit and numerous notices were sent out to them, however through the field investigations, the consultants mentioned that many of the permittees claimed that they weren't even aware that they had to do any of this reporting, even if it's

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stated on their permits. In the past, some of the older permits actually had to be signed so it's on file that they should have known. Nevertheless, it's been a bit difficult for them to assume this responsibility. One of the things we are doing to make it easier through the internet is providing the reporting capabilities online. If the database is up to snuff, these people could be notified on a more regular basis.

Mr. Hardy said that there are several items under improve reporting performance, which one would be to provide more technical support and outreach, specifically for the chloride reporting.

Lastly, Mr. Hardy shared that the Board of Land and Natural Resources just recently approved (in December 2008) the civil resource violation system which basically is the collector of findings for civil penalties outside of going through the Commission or the Board. This would make it easier to collect the fines and easier to enforce using this system.

Mr. Hardy referred to Appendix F; the Board of Water Supply's over-pumping, and pointed out that the Commission passed a declaratory ruling in 1997 to allow the pumpage to be moved around within the BWS allocations within a context of a single aquifer system. Staff is considering extending this ruling to allow transfer between aquifers.

Chair Miike asked why couldn't the BWS do that operationally; that the BWS has permitted amounts that they're not using, so why could they increase pumpage where needed if others pumping less. Mr. Hardy believed that the ability to transfer isn't quite there yet. Barry Usagawa said it's some infrastructure restraints. Chair Miike asked if the BWS is asking for more in a particular area, more in the permits. How would it help any more than saying it's an operational issue, you've got unused capacity here and overused capacity there, why can't you just use more of this? Chair Miike asked how changing that formally or giving staff the ability to do that help. Barry Usagawa explained that the plan is to move more Pearl Harbor water into town so that the BWS can cut back some of the sources in Honolulu. There are some infrastructure constraints so those infrastructure needs to be in place so that BWS can do that. Chair Miike asked again why do we need at the Commission level shift between aquifers. Barry Usagawa responded that it's just something they just talked about but if they drop [pumpage] in town, the demand just doesn't go away unless there's conservation so for us to apply for additional permitted use is we go through the process, we can do that. Chair Miike said they already have under used amounts of the allocations in some areas so you don't need to come to us for anything as long as you stay within the permit. Barry Usagawa agreed, saying that's true, the idea is to use what they have before they ask for more that's why they haven't come to ask for more. Dr. Miike said if you're talking about over allocated, you can't ask for more in those areas, all you can do is decrease it or we force you to decrease it. It seems like it's an operational issue, it's not a thing for the Commission or the staff to move water around on paper. Barry Usagawa said that when they go through the more detailed analysis he's sure those issues will come up.

Commissioner Fukino noticed that there are a lot of governmental agencies listed under the list of permits not field investigated. Roy Hardy said that the DLNR's consultants couldn't go out, some for example like Kahana Park, we've been out there several times for other issues for that particular source but the consultants didn't go out and verify that one, but some on the list have been investigated. Then again there are other state agencies, Department of Hawaiian Home Lands, Maui Parks and Recreation that have been traditionally a problem.

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Commissioner Fukino said some of the recommendations are good; and that the DOH is trying to get a lot of things online to make it easier for the public. Commissioner Fukino said, obviously it's going to take manpower, and asked if there was a cost estimate, and stated that the State's not going to be someplace where you can go get money right now.

Deputy Ken Kawahara added that it is on page 1 of 2 in the CWRM Environmental Program Economic Stimulus Package list handout, fifth box down, project titled Server and Web-based Applications Development for Water Use Reporting, estimated cost is \$350,000. Commissioner Fukino asked if it included a person because it seems that it will be a lot of work. Deputy Kawahara said that page 12 of the submittal, there was a Phase I of the contract to start it off before the Council of Revenue forecast so getting to Phase II will be very difficult, so it was added to the stimulus package. Right now we are in discussion with seeing what funding may be available for cost sharing through other federal agencies to help get to Phase II. Deputy Kawahara referred to the ORG chart under the ground water regulation branch, the enforcement section, there are no positions in that section and that's something that we'd like to get, in addition to the civil penalty system that would make it a lot easier and improve the compliance rate.

Chair Miike asked Roy Hardy to explain to the Commission later on the discussion with Barry Usagawa about the reallocation; it's a good idea to talk about it but I question whether we have to go through a formal process.

F. NEXT COMMISSION MEETINGS (TENTATIVE)

1. February 18, 2009
2. March 18, 2009

The meeting was adjourned.

Respectfully submitted,

KATHLEEN OSHIRO
Secretary

APPROVED AS SUBMITTED:

KEN C. KAWAHARA
Deputy Director