

MINUTES
FOR THE MEETING OF THE
COMMISSION ON WATER RESOURCE MANAGEMENT

DATE: February 15, 2012
TIME: 9:00 am
PLACE: DLNR Board Room
Kalanimoku Bldg.
1151 Punchbowl Street, Room 227
Honolulu, Hawaii 96813

Chairperson William Aila, Jr. called the meeting of the Commission on Water Resource Management to order at 9:12 a.m.

The following were in attendance:

MEMBERS: Mr. William Aila, Jr., Mr. Neal Fujiwara, Mr. Sumner Erdman, Dr. Lawrence Miike, Ms. Loretta Fuddy and Mr. William Balfour

ABSENT: None

STAFF: William Tam, Lenore Ohye, Neal Fujii, Roy Hardy, Ryan Imata, and Charley Ice

COUNSEL: Julie China, Esq.

OTHERS: Daniel X. Nellis (Dole Food), Joanna Seto (DOH), Gary M. Paracuelles (Dole Food), Barry Usugawa (BWS), Marc Chun (BWS), Jonathan Scheuer, Kaleo Manuel (DHHL), Yvonne Izu (Morihara Lau and Fong), Mark Takemoto (Pioneer Hi-Bred), Barbara Natale (Group 70 Int.), David Taogoshi (Poamoho Venture), Kaeo Duarte (Kamehameha Schools), Guy M. Gora, John Hoshibata (Bronster Hoshibata)

A. APPROVAL OF MINUTES

December 21, 2011

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

B. ANNOUNCEMENTS

The next Commission Meeting is tentatively rescheduled for March 28, 2012.

Agenda item B-1 was not discussed.

Chairperson Aila, Jr. requested a motion to move the meeting into Executive Session.

**MOTION: (Fuddy/Erdman)
To move into Executive Session
UNANIMOUSLY APPROVED.**

Meeting reconvened at 10:05 a.m.

C. GROUND WATER REGULATION

1. Review for complete and partial revocations in the Waialua Ground Water Management Area, Oahu

SUBMITTAL PRESENTATION by: Charley Ice

Charley Ice (Commission on Water Resource Management) informed the Commission that the need to review and take action on all the water use permits in the Waialua Groundwater Management Area (WGMA) was triggered in November 2008 by a request from the Honolulu Board of Water Supply (BWS) for additional water from the Waialua wells.

Mr. Ice showed a satellite image of the Waialua Aquifer, including a map of the wells. The next slide showed a comparison map from 1981. At that time, the Waialua Groundwater Control Area was twice the size of what it is today and had an estimated sustainable yield of approximately 60 million gallons per day (mgd). In 1987, the Water Commission initiated several studies including the preparation of a Water Resource Protection Plan which included sustainable yield estimates for all the aquifers across the state. Consequently, the sustainable yield estimates for the WGMA were decreased from 60 mgd to 40 mgd. At that time, the total allocations were around 42 mgd. In 1993, new applications required that the CWRM reduce the total number of allocations, which resulted in Waialua Sugar voluntarily cutting back. At this point, Waialua Sugar had the bulk of the allocations and was decreasing production. In 2008, the Water Resource Protection Plan resulted in the current sustainable yield estimate of 25 mgd. Table 1 illustrates nearly 6 million gallons of over-allocation mostly to Waialua Sugar. Waialua Sugar went out of operation in 1996 so there has been a long period of non-use. Total pumpage is currently about 6 mgd, well below the sustainable yield, but unused allocations must be revoked before new uses can be approved.

A chart depicting the current allocations showed Waialua Sugar with the most allocations. When Waialua Sugar ceased operations, they transferred some of their permits to Kamehameha Schools (KS), but most of them had not been transferred at all. The Water Commission (CWRM) understands that Dole Food Company (Dole), as the parent company of Waialua Sugar, assumed ownership of the wells previously used by Waialua Sugar, but the Commission was not notified and the water use permits have never been transferred.

Following the initial steps of the Commission's 20-year review of all water use permits in the State in 2008, staff felt it was appropriate to go beyond the simple steps of a few revocations to make room for known new applicants, for a more thorough review to reset the stage for the future. The management area-wide review therefore included all water use permits. This could address various gaps and discrepancies found in the consultant's early survey, which included field visits

to investigate the status of permits and the condition of the wells. One of the findings was that many of the wells in the WGMA are old and no longer meet the current conditions for well heads. The CWRM has done follow-up phone calls with users and in April 2010 sent a letter to Dole inquiring about the possibility of giving up some of their allocations to accommodate the BWS. The CWRM was not receiving any water use reporting. Later, as staff broadened the review to include all permittees, CWRM sent out letters in August 2011 asking them to provide an update on their use. There were several cases that required follow-up from the 20 year review and staff conducted field visits to a number of the smaller permit holders. Staff provided them with copies of the report.

In December 2011, the CWRM received incomplete applications from Dole that provided a year's worth of water use reporting. Staff sent out an email clarifying what was needed in the water use reports.

Today's submittal was sent to all the permit holders by certified letter and also by email. All were invited to attend to represent their intentions, and all retain the opportunity to request a contested case hearing. Many responded and some are attending. Two small users have given up their water use permits and feel it unnecessary to attend. A few users are seeking to modify their permits based on the actual use being reported. Some indicated uncertainty of their choice.

It was noted that some of the users have made substantial investments in moving forward into diversified agriculture. The transition from plantation agriculture to diversified agriculture can be problematic and quite involved. A picture was shown of a KS pump station (Pump 3) depicting extensive work and investments, along with a map showing the area it will be serving (in pink). KS also has access to the Wahiawa Reservoir Ditch, which then gets filtered, comingled with ground water, and is then distributed all the way across to Waimea Stream. Another example of a first-class facility is the station owned by Poamoho Venture (WUP 175), indicating substantial investments even though their use remains low. The Poamoho Venture subdivision map was shown on the map was cited as a Poamoho Venture project, adjacent to the UH Experimental Center, which all have access to the Wahiawa Reservoir Ditch. Poamoho Venture is planning to make their potable water available even to farmers outside the Poamoho Venture project area who may need it for growing certain edible crops, and they will request that other users use the ditch water. One of staff's recommendations is to get footprints of the actual areas being served so the CWRM can track how water is being used.

One well has been lost (e.g. Kunihiro WUP 44). Records indicate that the Kunihiro well was built in 1957 and goes down 100 feet. There is no valve and the water was flowing freely from artesian pressure. Staff recommends that the landowner have the well located and either valved or sealed. Another example of an artesian well is the Lopez WUP 353, overgrown and behind a fenced enclosure, which flows into a drainage ditch. In this case, the permit needs to be transferred before the use can continue.

Table 2 encapsulates the total allocations to Waialua Sugar. Total reported use over the course of a single year averages 1.67 mgd. Staff said they will assist with the forms for a new water use permit and propose that they maintain their current use (approximately 7% of the total). Staff recommends revoking the unused portion.

Mr. Ice proceeded to go through each of the recommendations starting with Dole Food Company. There were six permits issued to Waialua Sugar listed numerically by permit number in the submittal as items 1, 2, 3, 8, and 9 (two WUP), for wells that are owned by Dole. Dole has new applications in for three of the wells. The other three are not reporting use and are not included in their water use permits.

The recommended continuing use equals 9.308 mgd (30% of the total allocations) leading to a recommended revocation of 21.651 mgd (70% of the total allocations). Looking back at Table 1, the recommended total allocations would be 9.308 mgd, with 15.692 mgd available for new use, leaving plenty of room for expansion. Table 2 on page 9 of the submittal shows continuing use for irrigation in green text, continuing use for BWS in blue and the proposed revocations in red.

AMENDED RECOMMENDATION:

That the Commission:

1. Revoke portions of existing ground water use permits in the Waialua Ground Water Management Area as set forth above and in Table 2. Total revocations are 21.651 mgd (as shown in Table 2).
2. Special conditions and orders are recommended for ground water use permits (GWUPs) being partially or completely revoked, or allowed to continue under this revocation review as follows:

GWUP 035 (Well Nos. 3307-01 to -10, Pump 2). Revoke 4.180 mgd of the original 4.370 mgd. Continue use of 0.262 mgd for agricultural irrigation to be issued under GWUP 942. Require a current end use footprint map be submitted.

GWUP 036 (Well Nos. 3307-07 and -11 to 14, Pump 2A). Total revocation of 4.450 mgd. Submit plans within 6 months either for maintaining or sealing the wells.

GWUP 039 (Well No. 3404-01, Pump 17). Total revocation of 8.630 mgd; plans shall be submitted within 6 months either for maintaining or sealing the well.

GWUP 043 (Well No. 3406-03, Kawamata Well). 0.100 mgd is voluntarily cancelled by consent letter dated January 18, 2011.

GWUP 044 (Well Nos. 3406-06 and 3407-02, "Kunihiro Wells"). Total revocation of 0.200 mgd;

1. Lost well shall be located
2. If the well is to be retained for future use, the wellhead must be valved and kept capped and locked.
3. If the well is not to be retained, it shall be sealed six months from the date of this meeting.

GWUP 046 (Well Nos. 3407-04 to -06, -14 & -15; Pump 1). Revoke 1.283 mgd of the original 2.330 mgd, continuing use of 1 .047 rngd for agricultural irrigation to be issued under a GWUP 943 and requiring a current end use footprint map.

GWUP 048 (Well No. 3407-18 &19, Pump 7 D&E) Total revocation of 0.180 rngd; plans shall be submitted within 6 months either for maintaining or sealing the wells.

GWUP 136 (Well No. 3407-11 & 12, Pump 7 B&C). Revoke 2.569 mgd of original 2.930 mgd. Continue use of 0.361 mgd for agricultural irrigation to be issued under GWUP 944. Require a current end use footprint map.

GWUP 175 (Well No. 3205-02, Poamoho Well A). Continue 0.600 mgd for irrigation:

1. As use increases, reflected in periodic increases reported to the Commission, a new footprint of the end use area shall be filed for the record.
2. Use of Wahiawa Reservoir Ditch water shall be support by a periodically submitted end use footprint map.

GWUP 263 (Well No. 3407-02, Lopez Well 2). Revoke 0.056 mgd of original 0.200 mgd. Continue use of 0.144 rngd for agricultural irrigation to be issued under GWUP 950. Require a current end use footprint map. A flow meter must be installed and water use reported starting within 6 months. Following six months' reporting, the amount of use will be reviewed for possible modification of the water use permit.

GWUP 353 (Well No. 3406-16, Lopez Well 1). Continue 0.072 mgd for diversified agriculture irrigation, subject to revocation in 90-days, unless:

1. The well is cleared of overgrown vegetation and maintained.
2. A well construction permit to modify the well to control flow and install a flow meter is submitted.
3. A footprint map of the end use area for GWUP 353 is filed for the record.
4. Monthly flow from the well commences on an annual basis.

GWUP 455 (Well No. 3506-10, BG Farm Well). 0.003 mgd is voluntarily cancelled by consent letter dated January 20, 2012.

GWUP 643 (Well No. 3407-38, Paradise Production). Continue 0.576 rngd for agricultural irrigation. Application to modify existing well or construct new well and seal existing well to be completed in three months, subject to action on potential violation of water use permit conditions.

GWUP 732 (Well No. 3406-02, Pump 9). Continue 0.160 mgd for diversified irrigation.

GWUP 894 (Well Nos. 3505-01 to -20, Pump 3 Battery "Opaaula"). Continue 1.552 mgd for agricultural irrigation.

GWUP 895 (Well Nos. 3506-03 & 04, Pump 8A-B). Continue 1.660 mgd for agricultural irrigation.

GWUP 898 (Well No. 3406-08, Gora Well). Continue 0.144 mgd for agricultural irrigation. Reassign to the current owner of well and end use property (Aki) under a new GWUP number to be assigned administratively when the written transfer request is received from the new owner. If the written request for transfer is not received within 90 days, then GWUP 898 shall be revoked.

(DISCUSSION)

Daniel Nellis (Operations Director / General Manager) from Dole talked about the recommendations Dole would like to see implemented. Mr. Nellis gave a historic overview of Waialua Sugar stating that it has always been owned by Dole Food Company and there has been no change of ownership. He acknowledged that Dole did not follow-up in a timely manner and apologized for not transferring Waialua Sugar's water use permits to Dole. Dole plans to meet the obligations as they move forward. Mr. Nellis told the Commission that Dole would like to maintain some allocation for two of the wells that currently show no use. These wells are intended for use and there is a need for back-up in areas that currently have tenant farmers and are using the Wahiawa surface water system. If the Wahiawa system were to fail, these farmers could lose their high value crops. Therefore, there is a need for back-up.

Gary Paracuelles (Property Administrator, Land and Water) from Dole noted the proposed reduction in water use and told the Commission that Dole would like to keep at least 2.00 mgd from Pump 2A (WUP 036). Mr. Paracuelles said that Pump 2A has the potential to irrigate over 1,000 acres, which are currently being served by the Waialua Ditch. Pump 2A would be used as back-up should something happen.

Commissioner Miike asked if Pump 2 (WUP 035) and Pump 2A (WUP 036) served the same footprint.

Mr. Paracuelles responded "No." Pump 2A is mainly used for irrigation. He stated that Dole is also requesting to keep at least 2.00 mgd from Pump 2 (WUP 035) for domestic water to service the sugar mill camp houses and former Waialua yard mill area, which is now managed by Castle & Cooke. The water would also serve a small camp in Waialua that is not on the BWS system. Dole agrees to the 55% reduction for Pump 2A and is willing to take a 54% reduction from the approved allocation for Pump 2. Pump 17 (WUP 039) has the potential to irrigate over 400 acres and could serve more depending on the cost. The area it could serve is now being watered by the Waialua Ditch. Dole is requesting at least 2.00 mgd.

Chairperson Aila, Jr. asked if there was current use.

Mr. Paracuelles replied that there is no current use. Similar to Pump 2A, it would be used for redundancy.

Chairperson Aila, Jr. asked if the high value crops are currently using 2.00 mgd of surface water.

Mr. Nellis said they are using less than 2.00 mgd but there is potential to have more crops in the area.

Mr. Paracuelles said Dole currently provides 1.00 mgd.

Commissioner Fujiwara asked about getting water from the Wahiawa Ditch.

Mr. Paracuelles said Dole had to take down the reservoir that had previously serviced the area. Dole installed a smaller pipeline across the gulch that can handle 4.00 mgd from the Wahiawa Ditch line. There is potential for Dole to provide more water, but they are unsure about the farmer's ability to store the water. Dole is requesting 2.00 mgd to irrigate over 278 acres in the surrounding area, which is approximately a 14% reduction from the original approved allocation. For Pump 7, Dole is requesting 1.00 mgd (WUP 048 and WUP 136).

Commissioner Miike asked if that request applied to both Pump 7 D&E and B&C.

Mr. Paracuelles said the request is for the two pumps that are currently running (B&C). The other two pumps (D&E) are in place but are not running.

Commissioner Balfour asked Dole to clarify the requested amount for B&C.

Mr. Nellis said Dole is requesting 1.00 mgd for B&C and 0.00 mgd for D&E. He reiterated that the requested amounts are aimed at current irrigation for agriculture and possible expansion into the future for high water use crops.

Commissioner Miike asked if Dole had discussed these numbers with the CWRM staff.

Mr. Nellis said that Mr. Paracuelles has been working with the CWRM staff but that the applications are incomplete. Mr. Paracuelles has more numbers to submit to the staff.

Commissioner Miike asked if there were any discussions with the CWRM staff about what they would be recommending.

Mr. Paracuelles said that Dole received a letter dated February 10, 2012. He acknowledged that staff has not had time to review the new requests.

John Hoshibata, an attorney representing Pioneer Hi-Bred (Pioneer), pointed out that Dole and Pioneer have a water use agreement. Pioneer has the right to use water from Pump 2A and 7 and has many high value crops in the area that will require back-up. Pioneer did not receive notice of the proceedings and was informed the day before the meeting. Mr. Hoshibata asked the Commission not to take action on any of the revocations that affect the Dole properties without giving Pioneer sufficient time to work with the staff. Pioneer would like to become a party in the discussion and participate in the proceedings.

Chairperson Alia, Jr. asked if the CWRM staff was aware of the agreement, which they were not.

Mr. Hoshibata provided a copy of the agreement from 2008.

Commissioner Miike asked why Dole did not let Pioneer know about the proceedings.

Mr. Nellis said he let Pioneer know about the proceedings yesterday. He said that the agreement is to provide water to Pioneer from Pump 2A as needed to back-up the Wahiawa system.

Commissioner Miike asked if Pioneer uses the pump.

Mark Takemoto from Pioneer said that they run the pump periodically to ensure that it is still working. It was upgraded recently and a new motor was installed.

Commissioner Miike asked where Pioneer gets its water from.

Mr. Takemoto said they get their water from the Wahiawa Ditch.

Mr. Nellis clarified that the water is only used when there is a major interruption with the Wahiawa irrigation system.

Commissioner Miike asked Mr. Takemoto about Pioneer's daily use.

Mr. Takemoto said it varies across the area. It can be as high as 750,000 gallons per day but differs depending on the crop. Pioneer will provide Dole with more information about future acreage and plans for expanding the fields. Mr. Takemoto said he does not foresee needing to run the pump consistently unless there is a failure or if R-1 water is needed to service cattle ranchers and livestock. 300 acres are located near Pump 7 and 1,200 acres is actively being farmed near Pump 2A. Approximately 500 acres are located close to Pump 17, but there are other areas slotted for expansion. All of it is currently irrigated by surface water from the Wahiawa Ditch.

Commissioner Balfour asked if Mr. Takemoto agreed with the numbers presented by Dole.

Mr. Takemoto said "Yes." He said there are other users and small farmers who also use the pumps.

Mr. Nellis said Dole is using the Wahiawa Ditch water in cases where it is available. The concern is that the revocations will limit the future investment and expansion of agriculture in the Waialua area if there is no redundancy for well water. Most of the crops cannot use R-2 water. R-1 water from Lake Wilson is a possibility, but if that is not available there needs to be some other option.

Mr. Takemoto said water was critical to the decision to purchase the land and pointed out that without water he cannot farm. Therefore, a reliable back-up system is essential.

Mr. Ice (Commission on Water Resource Management) said he looks forward to working with Dole and Pioneer to ensure that agriculture can continue to grow in the area. He acknowledged that today is the first time the CWRM had heard about this particular agreement. Also, in terms of notifying Dole of possible revocations, reminded the Commission about the April 2010 first letter sent to Dole explaining the possibility of

revoking water use after four years for non-use and the August 2011 letter sent indicating the same thing.

Chairperson Aila, Jr. asked if all the letters had been sent to the same address.

Mr. Ice said "Yes."

Mr. Nellis said he was not contesting that Dole was not notified and acknowledged that Dole had failed in the past to respond in a timely fashion. He said he could provide the Commission with a copy of the agreement.

Chairperson Aila, Jr. asked if there was anyone else on the list that wished to respond to the proposed revocations.

Barry Usugawa (Board of Water Supply) said he agrees with the proposed revocations and thanked the Commission for freeing up some of the water use permits. Mr. Usugawa said the BWS is involved in the North Shore Watershed Plan. The combination of surface and ground water for the expansion of agriculture in this area will be an important issue going into the future. The BWS will work with the Commission staff and landowners to achieve a long-term view of water needs for the area. Mr. Usugawa pointed out that the State Water Use and Development Plan (2004) did not address private water systems, which could have provided better guidance when it came time to make revocations. In light of that, the BWS is committed to completing the North Shore Plan within the next year.

Commissioner Fujiwara asked if the Wahiawa System was a state water system or a private system.

Mr. Usugawa said it is a private system.

Mr. Ice reiterated the recommendation that water users provide a footprint map so the CWRM can track and plan for future water needs. The CWRM expects to work closely with the BWS on this issue into the future.

Deputy Director William Tam informed the Commission that the Governor recently released \$1 million to the Department of Agriculture (DOA) to update their plans.

David Taogoshi representing the Poamoho Well said he has a substantial investment in the well. He said he discussed with Mr. Ice about the lack of potable water sources in the vicinity and the increasing number of vegetable farmers. The University of Hawaii (UH) occupies a parcel that presently uses water from Schofield. The water runs down a steel line through his property. UH has spent a lot of money trying to repair the aging pipeline. UH submitted a written request to Mr. Taogoshi, requesting water from the Poamoho Well. However, Poamoho has a limited allocation. Mr. Taogoshi asked Mr. Ice if there were plans to make more water available and if perhaps Poamoho could provide water to lots in the vicinity. Mr. Taogoshi told UH that they would have to apply for their own allocation. Without the water, UH would likely have to close their operations. Should UH seek an allocation, Mr. Taogoshi said he is willing to provide water from the Poamoho Well.

Mr. Hoshibata said he would like to file a copy of the agreement between Dole and Pioneer. He said that Pioneer is requesting a contested case hearing, citing that it cannot afford the Commission to take action on revocations against Pioneer's interests without first making clear the relationship between Dole and Pioneer.

Commissioner Miike summarized the conversation and suggested that the Commission defer on the Dole contested case until the respective parties have had time to converse. He suggested that the Commission accept staff recommendations to all the WUP that are not being changed, including the BWS and Kamehameha Schools, accept the recommendation for the revocation of Pump 7 D&E, give the Theo Lopez Trust an opportunity for contested case, and let Dole continue discussions with staff.

Mr. Nellis (Dole) said he thought that was a good idea.

Commissioner Miike stated that the Commission is *not* taking action on the items that are *not* in red in Table 2 of the submittal. The Commission will defer on five of the Dole Food pumps pending further discussion with staff and accept the staff's recommendation on Pump 7 D&E (WUP 048). Furthermore, the Commission accepts the staff's recommendations to BG Farm Well (WUP 455), Kawamata (WUP 043), Gilman Trust (WUP 044, Well No. 3406-06), and offers a contested case to the Theo Lopez Trust, which can be withdrawn at any time.

Commissioner Erdman suggested that the Commission defer the decision on the Gora Well (WUP 898) until staff works out how to transfer the permit.

Mr. Ice reiterated that the WUP is attached to the well and the end use, which is retained by the other members of the family.

Commissioner Miike asked Mr. Ice if staff is recommending that the Commission maintain the status quo.

Mr. Ice said the permit would be reissued to the property owner.

Mr. Ice said that without revocations, there is not enough to act upon the BWS requested addition next month as hoped. Also, in his experience it is much easier to do a WUPA than a contested case. He suggested that if Dole is prepared to accept partial revocation, the specific amounts not in agreement could be discussed and the balance could be revoked now.

Commissioner Fuddy recommended that the Commission take the total revocations separate from the partial and asked for two separate motions.

Commissioner Miike said the Commission is not revoking the partial but giving them the option of a contested case. The only whole revocations are the Gilman Trust and one permit belonging to Dole.

MOTION: (Miike/Erdman)

To approve the recommendations excepting those involving Dole revocations subject to further discussion [WUP 035, 036,, 039, 046, & 136], and offering a contested case hearing to The Theo Lopez Trust [WUP 263].

UNANIMOUSLY APPROVED.

D. PLANNING

- 1. Request to authorize the Chairperson to enter into a contract agreement to develop a Non-potable Water Master Plan for Central Oahu, which would coordinate water resource planning for integrating non-potable water supplies with appropriate uses in order to preserve potable ground water for highest and best uses**

SUBMITTAL PRESENTATION by: Lenore Ohye and Neal Fujii

Item D-1 is a recommendation to authorize the Commission staff to enter into a contract agreement to develop a Non-potable Water Master Plan for Central Oahu and to allocate up to \$75,000 to develop the plan. Land use in Central Oahu is in transition due to the decline of sugar cane and pineapple plantations. There are plans for increased agricultural activity in the area, including the expansion of military housing at Schofield Barracks and proposals for new urban developments. A significant non-potable water demand is associated with each of these activities. Non-potable water sources could help protect and conserve high quality ground water for other uses. In addition to the planned demands, there are also existing uses in Central Oahu and down-gradient areas that are using potable water to meet non-potable demands. Currently over 25 mgd of ground water is allocated for non-potable demands in the Wahiawa Aquifer System and the Waipahu-Waiawa Aquifer System. Exhibit 1 shows the aquifer locations and Exhibit 2 lists the existing allocations.

Central Oahu has a number of non-potable water sources. Lake Wilson (Exhibit 3) is fed by the north and south forks of Kaukonahua Stream and receives R-1 water from the Schofield Army Wastewater Treatment Plant. The daily pass through for Lake Wilson is 35 – 36 mgd. End uses include the Wahiawa Irrigation System. Lake Wilson has a capacity of 2.5 billion gallons of water and there are opportunities for reuse.

Commissioner Erdman asked if Lake Wilson receives storm water runoff from the highways and if that means it would no longer be classified as R-1 water.

Ms. Ohye confirmed that the lake receives stormwater runoff and said the Wahiawa Treatment Plant also flows into Lake Wilson as R-2.

Commissioner Erdman stated that runoff water would discredit the R-1 classification.

Ms. Ohye agreed and said Lake Wilson is being fed by R-2 water.

(Commissioner Erdman excused himself from the meeting at 11:30 a.m.)

Another source of non-potable water in Central Oahu is the Schofield Wastewater Treatment Plant at Wheeler Army Air Force Base operated by Aqua Engineers. The plant is designed to be a 4.2 mgd facility. Current flows are 2.2 – 2.3 mgd. Due to base expansion, the Army predicts an increase of up to 3 mgd. Dole is paying to receive some of the R-1 water according to a 1994 agreement. The Army would like to reuse as much of the R-1 water as possible and recently received an appropriation to install a pipe to the Leilehua Golf Course.

Approximately 2 mgd of R-1 water would be available for other non-potable uses. The City & County of Honolulu's Wahiawa Wastewater Treatment Plant is producing R-2 water and would like to manage disposal through reuse. Wahiawa has a capacity of 2.49 mgd with current flows at 2 mgd, which makes it another potential source of non-potable water.

In 2008 the CWRM completed an appraisal-level study for large-scale storm water reclamation and reuse opportunities state-wide. The most promising opportunity to come out of that study was the potential opportunity to collect storm water runoff from the Wheeler Army Air Force Base airfield. With a slight extension of the line, users of the Waiahole Ditch System could be potential end users (Exhibit 6). There are concerns about using reclaimed water for crops, but there are certain uses that are not sensitive to water quality including non-edible food crops. The Waiahole Ditch corridor could be used as a right-of way for a parallel pipeline. If the pipeline were extended from the Waiahole Ditch, the water could be used to recharge the Ewa caprock. Waiahole Ditch transports water from the windward side to the Kunia area and is another source of non-potable water.

While there are a lot of current and future demands for non-potable water in Central Oahu, the CWRM is not sure what total demands will be because the area is in flux. Land use planning scenarios will give the CWRM some idea about what future demands could be. Other issues that support the development of a Non-potable Water Master Plan include the proposal of new urban developments and concerns about how to discharge domestic wastewater. Conventional thinking is to transport wastewater generated from urban development in Central Oahu down to Honouliuli, which also has a reclamation facility. However, the wastewater could be reclaimed in Central Oahu, thereby increasing the opportunities for reuse because no pumping would be necessary. This would also reduce energy costs.

Impervious surface areas will increase with an increase in development. In addition, as agriculture expands there will be more agriculture runoff, which could lead to surface water quality concerns due to sedimentation. This could also lead to the destruction of coral reefs. However, these environmental impacts could be mitigated by capturing storm water and reusing it.

The threat of climate change further complicates water resource planning. The impacts of climate change are apparent in rising air temperatures, decreased rainfall, and decreased stream flows. These effects will combine and lead to less ground water recharge in the future. Climate change underscores the need to pursue alternatives.

In light of these converging and competing factors, government agencies and stakeholders need to examine solutions that can address these concerns in a comprehensive fashion. Uncertainties in supply and the challenges in wastewater management, relate the need for new and coordinated integrated water resource planning in Central Oahu. Proceeding in a piecemeal fashion precludes opportunities to partner and leverage resources, and may result in higher capital and operating costs, as well as unfavorable outcomes. By taking a regional approach and involving multiple stakeholders there may be savings and avoided costs. For example, reusing wastewater in Central Oahu could reduce the size

and capital costs to expand and plan secondary treatment at Honouliuli, which would also reduce energy and pumping costs. Through a regional plan, there may be synergy among entities that would not otherwise work financially if one party were to act alone. There is a need to engage all stakeholders (landowners, farmers, developers, the military, wastewater treatment operators, the BWS, DOA, etc.) in a collaborative planning effort to look at the resources, the end uses for non-potable water, and identify the best mix of resources to supply non-potable demands. The Commission wants to ensure that water supply and wastewater planning in Central Oahu proceeds in a way that can address issues and concerns early on and mitigate any foreseeable conflicts. This planning effort can also ensure that potable ground water is conserved for drinking and domestic uses. The environmental benefits include decreased wastewater discharges and decreased degradation of surface water and near shore water quality.

The proposed Non-potable Water Master Plan is consistent with the Commission's policy to incorporate the appropriate use of reclaimed water and to preserve high quality water for the best uses.

Neal Fujii (Commission on Water Resource Management) continued the presentation by giving some more justification and background. According to the State Water Code, the Commission has the authority to undertake these types of planning studies and collaborative efforts. The CWRM believes it is a good idea to undertake collaborative planning and incorporate as many stakeholders as possible.

The Plan has five key objectives. 1) Establish a stakeholder or water advisory group to guide the development of the plan. 2) Inventory future sources of non-potable water. Mr. Fujii acknowledged that there may be sources that have been overlooked or limitations to the existing list. The CWRM would like to find potential sources and determine the water quality, services areas, and identify the challenges and constraints, storage and conveyance, and other factors critical to the plan. 3) Look at the current and future uses of non-potable water, including agriculture and needs associated with urban development and military housing, such as golf courses and parks. 4) Match use with demand and investigate options that increase efficiency. 5) Have the contractor look at preliminary costs (building and operating costs) and estimate the feasibility of some of the projects. Staff is asking the Commission to approve \$75,000 of CWRM funds. The CWRM is also looking into cost-sharing partners and there appears to be active interest from other stakeholders.

There are no actions which would have a significant impact on the environment. Therefore, staff believes the request is exempt from Chapter 343.

RECOMMENDATION:

That the Commission:

1. Authorize the Chairperson to enter into a contract agreement and to approve funding (not to exceed \$75,000) to develop a Non-potable Water Master Plan for Central Oahu.

2. Authorize the Chairperson to make such further amendments and/or modifications of the contract agreement as may be necessary to accomplish the goals described here, provided that any amendment or modification does not require additional Commission funding.

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

E. NEXT COMMISSION MEETINGS (TENTATIVE)

1. March 28, 2012 (rescheduled)
2. April 18, 2012

Deputy Director William Tam thanked the staff for their hard work.

Chairperson Aila, Jr. adjourned the meeting at 11:45 a.m.

Respectfully submitted,

KATIE ERSBAK

APPROVED AS SUBMITTED:

WILLIAM M. TAM
Deputy Director