

MINUTES
FOR THE MEETING OF THE
COMMISSION ON WATER RESOURCE MANAGEMENT

DATE: September 24, 2009
TIME: 9:00 a.m.
PLACE: Kalanimoku Building
Board Room 132

Chair Laura Thielen called the meeting of the Commission on Water Resource Management to order at 9:05 a.m.

The following were in attendance and/or excused:

MEMBERS: Ms. Laura Thielen, Dr. Lawrence Miike, Mr. Sumner Erdman, Mr. William Balfour, Jr.

STAFF: Ken Kawahara, Ed Sakoda, Roy Hardy, Lenore Ohye, Robert Chong, Dean Uyeno, Chui Cheng, Diane England, Neal Fujii

EXCUSED: Dr. Chiyome Fukino, Mr. Neal Fujiwara, Ms. Donna Kiyosaki

COUNSEL: Linda Chow, Esq.

OTHERS: Bryan Sarasin (Maui); John Varel (Maui); Glenn Oyama (Board of Water Supply); Dan Lum (Water Resource Associates); Christine Yamasaki (Dept. of Transportation); Ron Rickman (U.S. Geological Survey); Koa Kaulukukui (EarthJustice); John Harrisson (MEDB); Alan Arakawa (Maui); Jim Hayes (PB America), Paul Achitoff (EarthJustice)

A. APPROVAL OF MINUTES

1. July 15, 2009

MOTION: (Miike/Erdman)
TO APPROVE THE MINUTES.
UNANIMOUSLY APPROVED.

B. ANNOUNCEMENTS

Deputy Director Ken Kawahara introduced incoming Commissioner Bill Balfour.

Vacancies and Budget: Deputy Kawahara mentioned that there is a vacant stream geologist position in the Stream Protection and Management Branch and a hydrologist position in the Ground Water Regulation Branch. At our July Commission meeting, he mentioned that due to the budget shortfall the State looked at a three day a month furlough for the current and next fiscal year. This would save the State approximately 13.8% in labor costs. The implementation of the furloughs was successfully challenged in court. In addition, the State was considering layoffs if necessary, to meet the budget shortfall. On August 27, the Council of Revenues lowered their projections on tax revenues.

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Specifically, how does this impact the CWRM? Deputy Kawahara explained that CWRM is getting their operating budget in quarterly allotments (which have been reduced by 13.8%). Deputy Kawahara distributed a copy of the CWRM organizational chart. He mentioned that there are ongoing furloughs for him and four staff members who are considered exempt excluded and pointed out the vacant positions. On the potential layoff list was the elimination of the Survey Branch, a total of four positions.

Drought: The Hawaii Drought Council was briefed on current and forecasted drought conditions and El Nino. There was also a status update on county drought committee activities and ongoing drought mitigation projects.

Copies of the U.S. Drought Monitor were distributed. Deputy Kawahara referred to the copies and reported that drought conditions exist in Maui County and the Big Island, ranging from D0 (abnormally dry) to D3 (drought-extreme) and that Oahu and Kauai have some abnormally dry areas. The National Weather Service Climate Prediction Center issued an El Nino advisory with the following synopsis: El Nino is expected to strengthen and last through the Northern Hemisphere Winter 2009-2010. Typically, El Nino is associated with below-normal rainfall in the winter and spring during the year following the El Nino. Yesterday at the Hawaii Drought Council meeting it was indicated that the southern part of the Big Island has worsened and it will be raised to probably D3 (drought extreme).

Staff was formally notified that the Bureau of Reclamation (BOR) did not approve Hawaii's emergency drought assistance requests. BOR also provided drought project prioritization criteria to staff for guidance on how project proposals are ranked and selected.

The DLNR's Engineering Division has initiated a partial update of the State Water Projects Plan (SWPP), which is one of the five components of the Hawaii Water Plan. The objective of the SWPP is to provide a framework for the planning and implementation of water development programs to meet projected water demands for state projects over a 20-year planning horizon. This information will be incorporated into the counties' water use and development plans which are intended to insure that the future of water needs of the county are met. Due to limited funding, this SWPP update will focus primarily on Department of Hawaiian Home Lands' water needs.

The Honolulu, Maui, and Hawaii counties are in the process of updating their Water Use and Development Plans. Honolulu and Maui are doing regional updates, while Hawaii county has done an island-wide update. Pre-final drafts are posted on the Board of Water Supply and the Department of Water Supply websites. By statute, the Water Use and Development Plans must be adopted by county ordinance and must also be approved and adopted by the Water Commission. The draft plans are currently going through the county adoption process.

East Maui Streams Update: Staff accompanied U.S. Geological Survey (USGS) on July 20 and 21 to survey the Interim Instream Flow Standards (IIFS) sites. On the first day, USGS staff installed reference points at the sites on Wailuanui and Palauhulu streams. They also successfully installed a staff gage at Honopou Site A and worked with Commission staff on how to conduct a stream survey. On the second day, USGS installed staff gages at the Wailuanui Site and Honopou Site B. Commission staff with the help of USGS conducted a

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stream survey at Honopou. On September 23rd, Commission staff accompanied USGS to survey and install a staff gage at Hanehoi Site C. Commissioner Balfour also joined in on the field visit.

Na Wai Eha Surface Management Areas Update: Staff conducted a site visit on July 13 and 14, 2009. On the first day, staff met with Wailuku Water Company and Hawaiian Commercial and Sugar Company staff and visited the main features of the ditch system including most of the intakes along all four streams and various other points of interest. On the second day, staff met with Earthjustice and Office of Hawaiian Affairs staff (working on GPS mapping of the *auwai* system) and visited many of the applicants and *auwai* systems related to applications for the existing uses for the Surface Water Use Permits.

Deputy Kawahara added that objections have been filed for those Existing Use Applications. The Code requires that a hearing on the objections be held by a person with proper standing and that a hearing be held when there is an objection to an existing use application. Because objections have been filed, the time period for the Commission to act on the application has been extended from 90 days to 180 days. The first Existing Use Applications were accepted on April 16, 2009, so the 180 days period is October 6, 2009. The Commission may hear the objections or refer the matter to a hearings officer.

Na Wai Eha Contested Case: The Hearings Officer's Proposed Findings of Fact, Conclusions of Law, and Decision and Order have been distributed to the commissioners. A briefing is schedule with the Deputy Attorney General and the Commission will hear oral arguments from the parties. A site visit and hearing of the oral arguments is scheduled for October 14 and 15 on Maui; details will be sent to the parties by minute order.

Outreach:

Staff is giving a joint presentation with the Department of Health on the National Hydrography Dataset (NHD) at the 2009 Hawaii Congress of Planning Officials/ Hawaii Geographic Information coordinating Council conference. Established by the USGS, the NHD is a comprehensive set of digital spatial data that contains information about surface water features such as lakes, ponds, streams, rivers, and springs. The Department of Health, Department of Land and Natural Resources, and the Office of Planning are partnering to update, enhance, and maintain the dataset for Hawaii.

Hawaii Well Construction and Pump Installation Standards: The public review draft will be moved to the end of October. Staff plans to hold statewide video teleconferencing meetings similar to the previous 2004 to gather public comments. Depending on the responses, staff hopes to bring the update to the Commission for decision later this year or early next year.

Chair asked if the Commission had any comments. Commissioner Erdman referred to the two vacancy positions and asked Deputy Kawahara if he's trying to fill those or if it's temporarily on hold. Deputy Kawahara said there was a statewide freeze but because of the Reduction in Force (RIF) process, everything continues to be frozen. Deputy Kawahara explained that a Geologist I in the Survey Branch may bump into the Stream Protection Management Branch and of the four in the survey branch, some of them have the opportunity to bump into other

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positions within the department or statewide, unfortunately for one, that person does not have the minimum amount of retention points to be able to bump outside of the department.

Commissioner Miike asked if these are the subject to the furloughs or in addition to furloughs. Deputy Kawahara stated that it is in addition to furloughs. Chair Thielen explained that the Governor announced at this point that because there are no labor savings in the fiscal year up until now, it's not anticipated that any settlement at HGEA would fill the gap even with the furloughs. Because the budget gap is still growing, the Governor announced that the RIFs will be going through. Regardless of what happens, Deputy Kawahara said that the Commission staff is dedicated, know there's a job to do and will do their best to get the work done.

C. GROUND WATER

1. Maui Economic Opportunity, Inc., Application for a Water Use Permit, Applications for Well Construction and Pump Installation Permits, MEO BEST Ke Kahua Farm Well (Well No. 5429-03), TMK (2) 3-3-001:016, WUP No. 877, New Agricultural Use for 0.023 mgd, Iao Ground Water Management Area, Caprock Aquifer, Maui

Presentation by: Roy Hardy

Roy Hardy distributed a copy of the letter from Alan M. Arakawa dated September 22, 2009 and received on September 23rd.

RECOMMENDATIONS:

Staff recommends that the Commission:

A. Approve the issuance of water use permit no. 877 to Maui Economic Opportunity, Inc. for the reasonable and beneficial use of 0.023 million gallons per day of non-potable water for agriculture from the MEO BEST Ke Kahua Farm Well (Well No. 5429-03), subject to the standard water use permit conditions listed in Attachment B and the following special conditions:

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. In the event that the tax map key at the location of the water use is changed, the permittee shall notify the Commission in writing of the tax map key change within thirty (30) days after the permittee receives notice of the tax map key change.
3. Standard Condition 16 for a water shortage plan requirement is waived, as this is a caprock aquifer.

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B. Approve the well construction and pump installation permits for the MEO BEST Ke Kahua Well (Well No. 5429-03), subject to all the standard conditions and Special Conditions in A. above.

Commissioner Miike wanted to add that he along with Commissioner Frazier were at the public hearing on Maui and clarified how the Iao Aquifer was designated as ground water management area. The management area was separated into the three separate distinct resources; the caprock, the basal and the high-level dike confined areas. The caprock existing uses were dealt with. The basal was a combination of existing and new uses. Kehalani Mauka was mixed thing [existing and new uses], they were claiming that they had the right to the water from the source they owned [Shaft 33 - and operated by Maui Department of Water Supply] and a contested hearing dealt with that. The high-level dike is related directly with the streams and that's part of the Na Wai Eha contested case going on. So in terms of this particular application the existing uses of the caprock have already been taken care of. The other ones which relate to the high-level dike and the surface water permits, that's a separate issue all together. And those were dealt with and later on we'll be hearing more about that. Commissioner Miike addressed Mr. Sarasin and Mr. Arakawa this in no way affecting their potential rights on their surface water applications.

Commissioner Erdman asked for clarification that Mr. Hardy reported that there were six wells within the mile and he counted seven. Mr. Hardy said the six are the ones actually active.

Chair Thielen referred to Exhibit 3 and asked what the bend in the section meant the three green vertical lines. Mr. Hardy said the profile AA is not a straight line so it looks like it has three bends.

PUBLIC TESTIMONY:

Dan Lum, a consultant for Maui Economic Opportunity, wanted to correct for the record the parcel number should be:106 and not :016. Roy Hardy said the application stated :016 and the letter refers to :016. Chair Thielen said it should be amended and corrected in the submittal if there is a board vote.

Brian Sarasin said he finds it disturbing that we're talking about the caprock as it being sole separate aquifer. It is his understanding that there still is infiltration from the basal lens into the caprock system. One of the concerns is the springs that are already mentioned that for some reason when the well is drilled, there is a possibility if that spring is on the same stream, and there could be that the spring could have a problem. Mr. Sarasin said they were not given their total allocation and the County of Maui was not given their total allocation. Mr. Sarasin said his and John Varel's wells are at the tail end of the Iao aquifer. If they were given their total requested allocation, approximately 20% of the water would stay on the plants and evaporate as a high number and that 80% would be going back into the Iao aquifer for the recharge when they irrigate. A lot of the water is taken out of Iao aquifer and distributed to other areas of Maui and there is no way that it would be recharged back into that aquifer for the county of Maui.

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Chair Thielen interrupted and explained to Mr. Sarasin that he's talking about an issue that is not on the agenda between the competing multiple applications for water from a different aquifer; which the Commission is not able to address this matter under the Sunshine Law but that the item of the spring would come back.

Commissioner Miike said the permit would address that because the permit can be modified. It's stated that if there's an existing use that gets affected, then they can modify the permit; make them change where the well is, subject to all standard conditions.

Mr. Sarasin asked if the well gets drilled and gets potable water then the caprock explanation is still real or no longer comes into play because it missed and is no longer a caprock well. Mr. Let's assume that the well gets drilled in the caprock well, gets pumped and tested, and the water that comes out of the well is potable, then the question arise, is it indeed a caprock well or a basal well asked Roy Hardy. If it's a basal well it would need to be counted in the Iao aquifer allocation. Mr. Hardy explained that it depends in the geology if its mythology, if it's caprock formation geology rather than getting into the basalt, we would still count it as caprock that happens to be a really good caprock well which it not unusual; there are instances like that in the Ewa caprock. It happens that in some locations where majority of the wells are brackish but it happens to be in this one spot that's in the caprock, for whatever reason, higher percentage of leakage in that area, the wells are better. When we're saying potable we're talking about chlorides. Chair Thielen asked Mr. Hardy, that what you're looking at is the rock not the water and he said that was correct.

Brian Sarasin asked for clarification if there was any correlation between the caprock water and the basal water. Commissioner Miike said that they can't resolve this issue at this meeting, that he's asking the Commission to change our aquifer designation and separation of the substance of the aquifer. When someone drills into the caprock, they are not allowed to go all the way down through the caprock and into the basal aquifer.

Commissioner Erdman thought that Mr. Sarasin's question was as an isotope of the two water systems has an isotope of those two water been taken. Mr. Hardy said not yet, until the well is drilled but should it be very good chloride wise, but the mythology is still the rock, it is still caprock. For the Commission's information, Mr. Hardy added that this well is proposedly date 140 feet, three to four times deeper to where we think that basalt will be encountered.

Commissioner Balfour stated that the caprock lens is lens that sits on top of the basal lens and is separate and speaks from experience because they drew from the caprock lens in the Ewa plains when he ran Oahu Sugar Company. It's a separate lens of brackish water that sits on top of the aquifer. One could conceivably go on through the aquifer but once you hit water in the caprock lens, you should be satisfied and satisfy your amounts of water. A certified well driller knows what he's doing so you wouldn't have that problem.

Brian Sarasin's other concern is that if it permeates down through and get into the basal lens. Commissioner Balfour said it's the well driller's expertise. Mr. Sarasin commented that he is not against MEO's project. He totally supports it except for these other issues.

John Varel said that Brian Sarasin addressed all his issues.

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For the clarification of the record, Roy Hardy said the TMK application and map show parcel 16 so he asked if there was a change to the parcel. Dan Lum said this was a recent change and comes from the project manager. Mr. Lum did not know how recently the TMK number was changed. Chair Thielen referred to the staff recommendation that if there is a change, the permittee should notify the Commission in writing and directed Mr. Lum to go back and verify what actually happened. If the TMK has changed, they are to notify the Commission in writing.

MOTION: (Miike/Erdman)
TO APPROVE THE SUBMITTAL.
UNANIMOUSLY APPROVED.

D. STREAM PROTECTION AND MANAGEMENT

1. Application for a Stream Channel Alteration Permit (SCAP.2175.3), Amelia Street Sewer Relief Project, Kalihi Stream, Kalihi, Oahu, TMKs: (1) 1-3-015:035 and 072

Presentation by: Robert Chong

RECOMMENDATIONS:

That the Commission approve a Stream Channel Alteration Permit (SCAP.2175.3) for the City and County of Honolulu, Department of Design and Construction's Amelia Street Sewer Relief Project in Kalihi Stream in Kalihi, Oahu at TMKs: (1) 1-3-015:035 and 072 subject to the standard conditions in Exhibit 7.

Commissioner Erdman mentioned that the stream is going to be narrowed quite a bit when the channeling is put in and that there are potential storms during the month of December.

MOTION: (Erdman/Miike)
TO APPROVE THE SUBMITTAL.
UNANIMOUSLY APPROVED.

2. Application for a Stream Channel Alteration Permit (SCAP.2410.2), Kaumualii Highway Widening and Installation of a New Drainage Culvert Tributary to Puali Stream, Lihue, Kauai, TMKs: (4) 3-3-002, 003 and 007:999; 3-4-005, 007:999; and 3-8-005, 016:999

Presentation by: Robert Chong

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RECOMMENDATIONS:

That the Commission approve a Stream Channel Alteration Permit (SCAP.2410.2) for the State Department of Transportation's (DOT) Kaunualii Highway widening and installation of a new drainage culvert, tributary to Puali Stream, in Lihue, Kauai at TMKs: (4) 3-3-002, 003 and 007:999; 3-4-005, 007:999; and 3-8-005, 016:999 subject to the standard conditions in Exhibit 6.

MOTION: (Miike/Erdman)
TO APPROVE THE SUBMITTAL.
UNANIMOUSLY APPROVED.

3. Delegation of Authority to the Chairperson to Appoint a Hearings Officer for the Hearing on Objections to Surface Water Use Permit Applications for Existing Uses in the Na Wai Eha Surface Water Management Areas, Maui

Presentation by: Ed Sakoda

RECOMMENDATIONS:

That the Commission delegate authority to the Chairperson to appoint a Hearings Officer for the Hearing on Objections to Surface Water Use Permit Applications for existing uses in Na Wai Eha Surface Water Management Areas, Maui.

The Hearing on Objections will be held on Maui at a date, time, and place to be announced.

Since there are newer commissioners, Chair Thielen explained that if the Commission was to do the hearing itself, a quorum of all the members will need to be present to do the public hearing. A hearings officer can be appointed to hold the meeting, consolidate the comments and report them back to the Commission but these are public meetings and commissioners can attend personally if they wanted to hear the comments directly. Appointing a hearings officer can also include a staff acting as a hearings officer. Deputy AG Linda Chow said it's the Commission that has to hold the hearing then the Commission can delegate to a hearings officer under the rules. It doesn't prohibit you from using a staff member as a hearing officer.

For clarification, Ed Sakoda mentioned that in the past for ground water management areas, it was in the minutes that the chairperson appointed some of the branch chiefs to do this but because of the new surface water management, we felt that the Commission can authorize the Chairperson to appoint whoever they choose.

MOTION: (Erdman/Balfour)
TO APPROVE THE SUBMITTAL.
UNANIMOUSLY APPROVED.

4. Extension of 180-day Deadline to Act on Surface Water Use Permit Applications for Existing Uses in the Na Wai Eha Surface Water Management Areas, Maui

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Presentation by: Robert Chong

RECOMMENDATION:

That the Commission on Water Resource Management extend the deadline to act on all the Surface Water Use Permit Applications for existing uses in the Na Wai Eha Surface Water Management Areas, to the earliest meeting that can be scheduled on Maui after the Hearing on Objections is held.

MOTION: (Balfour/Erdman)
TO APPROVE THE SUBMITTAL.
UNANIMOUSLY APPROVED.

5. Approval to Conduct a Limited Meeting to View Users of East Maui Stream Water In Connection with the Petitions to Amend East Maui Interim Instream Flow Standards Relating to the Surface Water Hydrologic Units of Waikamoi, Puohokmoa, Haipuaena, Punalau, Honomanu, Nuaailua, Ohia, West Wailuaiki, East Wailuaiki, Kopiliula, Waiohue, Paakea, Waiaaka, Kapaula, Hanawi, and Makapipi, Maui

Presentation by: Dean Uyeno

RECOMMENDATIONS:

The staff recommends that the Commission find it necessary for the Commission to conduct a site visit of various locations in Central/Upcountry Maui that could be affected by the decisions of the Commission related to pending petitions to amend interim IFS for 19 streams in East Maui. The site visit is needed in order for the Commission to better understand the needs and infrastructure of the water users receiving water from east Maui streams that are the subject of the petitions. Further, in doing so, the Commission:

1. Determines that within the proposed areas of the site visit are locations at which public attendance would not be practicable. Those portions of the meeting indicated in Exhibit 1 as “Limited” will be limited for purposes of the public's attendance. All other portions of the meeting will be open for public participation;
2. Declares that it will not make any decisions at the meetings during the site visit in accordance with HRS §92-3.1(b)(3); and
3. Directs the Commission on Water Resource Management Deputy Director to:
 - a. Seek the concurrence of the Director of the Office on Information Practices in accordance with HRS §92-3.1(a);
 - b. Notice said meeting in accordance with HRS §92-7;

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- c. Provide minutes of said meetings in accordance with HRS §92-9; and
- d. Make arrangements to have the meeting videotaped.

Commissioner Miike said he assumed that the petitioners will be attending this as well as the people who are conducting the site visit. Deputy Kawahara said that it depends on the availability of the commissioners. The site visits are intended for the Commissioners as well as staff so after finding out how many can attend staff and people hosting us on their private property will determine how many spaces are available. Chair Thielen said that the last limited meeting there were a couple of people from the petitioner who came and also video taped the inspection. Commissioner Miike felt that since the Native Legal Hawaiian Corporation did file the petition that it seems that they should be present. Deputy Kawahara added that part of the process is to work with the Office of Information Practices (OIP) and that Deputy AG Chow spoke to OIP in the past and they had concerns about allowing certain members of the public, verses all or a limited amount. Deputy AG Linda Chow confirmed that it was correct what Deputy Kawahara was saying and that they indicated that if this is going to be a Limited Meeting then it should be limited only to the necessary board members and you can't distinguish between some of the public or all the public.

Chair Thielen said the recommendation asked to defer to OIP. Commissioner Miike said since the people that are conducting the site visits are interested parties it doesn't seem very fair that we exclude one.

MOTION: (Miike/Erdman)
TO APPROVE THE SUBMITTAL.
UNANIMOUSLY APPROVED.

E. SURVEY

- 1. Request to Enter into a Cooperative Agreement with U.S. Geological Survey For Statewide Hydrologic Data Collection and Water Resource Monitoring For the First Quarter of the Federal Fiscal Year (FFY) 2010 and to Delegate to the Chairperson the Authority to Approve Quarterly Extensions of the Agreement up to September 30, 2010**

Presentation by: Diane England

RECOMMENDATIONS:

1. Staff recommends that the Commission authorize the Chairperson to enter into a cooperative agreement with the U.S. Geological Survey in FFY 2010 to undertake the specified monitoring activities covering the period of October 1, 2009 to December 31, 2009 with possible continuation of the hydrological data collection program after December 31, 2009, subject to the availability of funds, but not to exceed \$101,375 per three-month period of monitoring.

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2. The staff also recommends that the Commission delegate to the Chairperson the authority to extend this agreement and approve future monitoring activities, but not to extend beyond September 30, 2010.

The terms of this agreement will be subject to the approval of the Department's Deputy Attorney General. Contract execution will be done in accordance with Chapter 103D, HRS, and Chapter 3-122, Hawaii Administrative Rules.

REVISED RECOMMENDATIONS:

RECOMMENDATION 1: Staff recommends that the Commission authorize the Chairperson to enter into a cooperative agreement with the U.S. Geological Survey in FFY2010 AS REVISED to undertake the specified monitoring activities covering the period of October 1, 2009 to December 31, 2009 with possible continuation of the hydrological data collection program after December 31, 2009, subject to the availability of funds, but not to exceed \$101,375 per three-month period of monitoring.

RECOMMENDATION 2: As is

USGS REVISIONS

1. Deletion of the second sentence in Item# 2: "Time is of the essence in this agreement."
2. Insertion of the underlined portion in the second sentence of Item #7 to read as follows: "The maps, data, and reports will normally be hosted and published by USGS and may be used by USGS in related work."
3. Change of the USGS representative in the agreement from Gordon Tribble, Center Director, to Michael V. Shulters, Regional Executive, Pacific Southwest Area
4. Additional paragraph to Item #1 in the Compensation and Payment as follows:

Schedule Payment of bills is due within 60 days after the billing date. If not paid by the due date, interest will be charged at the current Treasury rate for each 30 day period, or portion thereof, that the payment is delayed beyond the due date (31 USC 3717).

MOTION: (Miike/Balfour)
TO APPROVE THE SUBMITTAL AS REVISED.
UNANIMOUSLY APPROVED.

F. NON ACTION ITEM

1. Briefing on the Pearl Harbor Water Shortage Plan Response Actions

Presentation by: Lenore Ohye

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Copies of power point presentation were distributed.

Lenore Ohye presented background information on the water shortage planning provisions under the Water Code. These include a requirement for a water shortage plan in designated water management areas, the establishment of a permit classification system, and the ability of the Commission to impose restrictions on one or more classes of permits. The rules added that all permittees unless exempted by the Commission shall submit a water shortage plan outlining how it will reduce its own water use in case of a shortage and that every water plan is subject to approval or modification by the Commission. Staff believes that this provision is really the permittees opportunity to tell the Commission what they feel they can endure without hardship in times of shortage. Permittees are given 30 days after issuance of their permits to submit a water shortage plan.

Ms. Ohye then went on to discuss the proposed water shortage plan for the Pearl Harbor Ground Water Management Area. The Pearl Harbor area is comprised of four separate aquifer systems. The water shortage plan envisioned would be applicable to the Ewa-Kunia, Waipahu-Waiawa, and Waimalu systems. The Makaiwa system has also been designated, although a sustainable yield has not been established, there area no wells in it, does not have permitted uses and is thought to be mostly brackish water resource that no one is using right now.

Ms. Ohye said that they are looking at the ability to declare water shortages in each of the three aquifer systems that comprise the aquifer sector or for the whole sector as well. Pearl Harbor is being prioritized because, not only is it the major source of drinking water for the island of Oahu, but development of a water shortage plan is a requirement under the milestone management approach adopted by the Commission in March 2000 when the Commission revisited the sustainable yields for the Waipahu-Waiawa and the Ewa-Kunia aquifer systems. Because of the closure of sugar cane operations over those lands, there was a resultant loss of return irrigation recharge, so the Commission realized that the sustainable yield had to be reduced. There was uncertainty regarding sustainable yields so the Commission adopted a milestone approach. It's an adaptive management approach that requires continued monitoring. Another milestone requirement is the establishment of the Pearl Harbor Ground Water Monitoring Working Group whose core members include the U.S. Geological Survey, the Water Commission staff and the Honolulu Board of Water Supply, as all three agencies have monitoring programs in place and an interest in the water resources of the area.

The Limtiaco Consulting Group was hired to develop the Pearl Harbor Water Shortage Plan. Due to many legal provisions in the code there were some legal issues that arose with the proposed plan and the staff is working with our Deputy Attorney General to resolve the issues and anticipates bringing it to the Commission soon for adoption.

Ms. Ohye said the Pearl Harbor Plan is largely based on the consultant's recommendations and staff will be proposing to adopt the permit classification based on the types of water use. The proposed plan also recommends that in times of water shortage there be phased water use restrictions based on the permit classification system. All the individual response plan will be compiled into a regional response plan for each of the aquifer systems within the Pearl Harbor Aquifer Sector Area.

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Under the proposed plan there will be two priority levels. The first priority level will include the Department of Hawaiian Homelands (DHHL) use because they have such high priority under the Water Code the State Constitution. Also included in the priority one class would be “shortage domestic” use. This is different from the definition of domestic use in the Water Code in that “shortage domestic” is only that amount of water needed for the individual personal use of each household for purposes such as drinking, bathing, heating, cooking, substance gardening and sanitation; so only the amount of water that’s needed to protect public health, sanitation and welfare. It will specifically exclude outdoor uses such as lawn watering, swimming pool filling, water fountains, vehicle washing and other wash down uses that might occur as part of residential use.

The second priority level includes all other types of uses in Pearl Harbor: municipal, military, agricultural, industrial, golf course and habitat maintenance. Within the municipal and military categories are residential uses and that portion of municipal and military use that is comprised of “shortage domestic” use will be included in priority level one. We would be leaving it up to the purveyors of the municipal and military systems to determine and implement the classification system and adjust the pumpage accordingly such that the domestic portion that is not priority level one would be curtailed in the event of a water shortage.

The proposed use restrictions will include three phases. In Phase I, voluntary cutbacks will be based on the percent reduction stated on each permittees individual water shortage plan or a minimum of 5% whatever is greater. If conditions continue to deteriorate, Phase II restrictions would be implemented and that would be mandatory cutbacks in water use based on the individual water shortage plans or a minimum of 5% or whatever is greater. Phase III is when the permit classification system kicks in. Under Phase III and worsening conditions, priority one cutbacks will continue as in Phase II; however, second tier in priority level two type uses will be required to cutback water use based on the percent reduction stated in the individual water shortage plan or by a minimum of 10%, whichever is greater.

Water use reductions will apply to actual water use based on the last reported 12 month-moving average before the notice of declaration is given, rather than allocations because water use varies depending on the season, and many permittees are not using up to their allocated amounts,.

Staff would also be proposing that the Commission adopt some general policies that will be applied to all designated ground water management areas. Similar to what we’re proposing for Pearl Harbor, all permittees would be subject to a minimum of 5% reduction. With the assumption that permitted uses have been found to be efficient as a condition of obtaining a permit, everyone should be able to cutback some amount in a shortage situation and 5% is reasonable. For those permittees that have proposed less than a 5% restriction, we would recommend that the Chair be allowed to impose a minimum 5% restriction. Another general policy for ground water is that the restriction would be based on actual water use rather than permitted allocation. A third policy is that free flowing and salt water sources are exempted from the water shortage plan. Finally, staff would recommend that a living document approach be taken to keep this plan updated because every time the Commission issues a new permit or a permit is transferred to a new landowner then the staff would need to bring back a new

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individual shortage plan to the Commission and the Commission would have to update the regional plan. The approach that is being proposed is that the Commission adopt some general policies to guide water shortage planning in Pearl Harbor and that once these policies are established, to streamline the process and to make sure the plan is always updated, the Chair would be delegated the authority to keep the plan updated consistent with the policies adopted by the Commission.

Ms. Ohye explained that staff is currently in the process of establishing hydrologic criteria for declaring a water shortage. The rules do include criteria, however they are qualitative and staff is working with USGS and the Board of Water Supply to try to come up with quantitative triggers for declaring a shortage and that would allow us to move from Phase I to Phase II to Phase III without needing to come back to the Commission for action.

Commissioner Erdman inquired about the fourth criterion under the rules for declaring a shortage, and Ms. Ohye clarified that if there's excessive water waste; the Commission can declare a shortage.

Ms. Ohye said they are basically looking at water level triggers as well as rate of change in chloride, looking at observation wells, our own deep monitoring well network, trying to correlate past shortage periods and what was happening in those wells to determine what water level or chloride would be a trigger for declaring a shortage and for moving to higher phases of restrictions. This is very similar to what Honolulu Board of Water Supply has in their rules and regulations for their low ground water condition declarations.

After hydrologic criteria are determined, staff will discuss them with the Pearl Harbor Monitoring Working Group and then submit it to the Commission for adoption.

Commissioner Erdman commented that there should be some flexibility in the plan and recommended that staff work with the monitoring group on this. For example, a farmer using overhead sprinklers at twelve noon would have a different effect from a farmer using drip irrigation at 10 at night, so it would not be very equitable to hit both with a 10% reduction. Also, there needs to be a good definition of sustainable gardening under the domestic shortage category. Ms. Ohye explained that the proposal is to allow backyard gardening where people are growing vegetables to supplement their home consumption, but that wouldn't include ornamental landscape or turf or lawn watering. Commissioner Erdman clarified that sustainability could be interpreted to include growing and selling crops to sustain your income. Therefore, it should be clearly stated that it is for growing for personal use.

Ms. Ohye also mentioned that staff will be proposing that a water conservation checklist be part of the individual water shortage plan. The checklist will consist of water conservation measure that would be applicable to different types of sectors. This could be used to determine relative efficiencies as well as to educate users on conservation measures applicable to their particular sector. In addition, the plan will include a provision for people to request a hearing before the Commission if they do not agree with the use restriction being placed upon them.

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Chair Thielen added that the point is that you probably don't want a 5% restriction across the board, you'll probably want something built into the process where people can get some type of credit or recognition for water conservation efforts.

Commissioner Erdman asked if staff could provide information on how much sustainable yields were reduced when sugar cane went out, that kind of information would be helpful to the commissioners.

Commissioner Miike inquired about how the domestic shortage category will work for permittees that are not within municipal systems. Ms. Ohye said that staff will be proposing that the people who have their own individual domestic systems are part of the shortage domestic, which will also include residential users on the municipal and military systems. Commissioner Miike asked how you would affect that since they are not permittees, they are on the military system and the municipal water system. Secondly, individual wells are not subject to a water use permit according to codes so how can they be restricted? Ms. Ohye said it is correct, that individual domestic users, those that have one house to one well, are exempt from the permitting process. However, there are some domestic wells that supply multiple end users and those are subject to permits and would be included in the priority level one. Chair Thielen said for municipal systems, you would be restricting the permittee which is the municipal purveyor which would then have to pass the restrictions along to their direct customers.

Chair Thielen said there are two categories and the second category may be a little broad. She recommended that staff another look at the second category and perhaps further prioritize levels of use within each of those categories. Should there be a second step within those categories or certain categories that were listed in priority two that may take precedence and so we may need to have a category three.

Chair Thielen said it would be good to review the categories and run it through the working group. As proposed, if there is a shortage we're going to protect this domestic shortage use across the board but what if it's not quite that draconian but you need to cut back, how would you?

Commissioner Miike asked about the difference in permitted uses and actual uses because it seems to him that in the Pearl Harbor aquifer for example, the Board of Water Supply the permitted use is way above actual withdrawals. Commissioner Miike said he's raising that issue because he wants to know what the real possibility of hitting a water shortage if our sustainable yield numbers are correct and permitted numbers are below that yet the actual use is significantly below that. Ms. Ohye said the staff submittal will include graphs showing the actual uses and the allocations in relationship to sustainable yield. One of the reasons why the milestone approach was adopted is because of the uncertainty in the actual sustainable yield so we are using a monitoring approach to keep track of that in case the estimate is not correct. Commissioner Miike said the revised sustainable yield just made some assumptions of what sugar cane was contributing in terms of recharge. Ms. Ohye said the scenario that was modeled was based on the assumption that there would be no return irrigation recharge.

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2. ADC Report to the Commission regarding Waiahole Ditch Loss Reduction Timelines per the Commission's May 20, 2009 Meeting Request

Presentation by: Roy Hardy

Copies of the Alternative Waiahole Water System Plan prepared by the Agribusiness Development Corporation were distributed.

The report talks about four different alternatives, 1) the need for the reservoirs not to be as large as originally thought, 2) dealing with some vegetation issues that contribute to the system loss because the vegetation around these reservoir is taking the through transference and the use of water that way, 3) also the discovery of a pipeline that does have water leaking talking about installing a valve on that to control that, and 4) some additional ditch piping similar to what the Commission acted upon back in May to reduce the system losses. All of this is approximately \$300,000 to \$400,000 of additional cost which will be funded solely through ADC.

Alfredo Lee mentioned that Sharon Ishikawa of the Corp of Engineers is in charge of this project and will explain the timeline. Mr. Lee said he asked for board's approval for this alternative plan and when they have enough funding if not restricted by Governor's policy spending execution policy; we should be able to implement some this as long as we have money in our funds. And I think we can because the projection is based on projected maintenance expenses and we'll draw from that and that's the reason why we are not able to say we can do everything in one year because as money coming in we set aside certain portion of it to do maintenance and we will like to implement these projects. Alfredo Lee said he was asked how much water can you save if he did project #1, and he said it would be very difficult. But collectively, they did three or four things, it will make a little bit of impact to system loss. Mr. Lee reported that ADC took over the system in 1999, operated the system for over 10 years, and reviewed the work indicated in the alternative plan report. Alfredo Lee said they spent over \$2M fixing up things and most of the items are not what the Commission asked them to do but what was the right thing to do. On page 6 indicates system loss updates. In 2007 there were issues with our gate and weather problems so there was a big spike on system loss but is turning down in the last year and a half, the loss has been around 2 MGB moving average.

Mr. Lee said one of the positive changes that Del Monte had put in a new reservoir and when Monsanto bought some of the land, they also put in several reservoirs so the capacity increased and now they are looking whether they need 14 million gallons reservoir 155 and also in reservoir 255. If they can determine if they can live with 8 million gallons, it would give them a little bit of room to work on the dam side. The restriction they have is that the slope is too steep and to flatten it out, they will need more area to work with and will get more expensive having to acquire more land. Mr. Lee said they will be working with the Corps of Engineers once they have the results from the study. Chair Thielen stated that she recalls when they came before the Commission that they had the funding to line the two reservoirs but the cost had gone up and one of the things that you were going back to look at was whether it made sense to take the funds and use it to line one reservoir because it may not cover both and we had hoped to have staged both jobs at one time and therefore having construction be less overall and so at

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the beginning of this you were talking about subject to available funding, what happened to the funding that was available for the lining and could that go towards these projects. Mr. Lee said the funding is still there and did check with the Corps of Engineers and could split the projects into two. Chair Thielen asked if what he's saying is to go back and take a look at the capacity issues and whether you would want one or both, but what I'm asking is you could use the funding for these things instead. Mr. Lee said the funding will be coming for their operating funds and will have the money to do this. The Corps of Engineers still needs to do the slope analysis but they do have the funding to match.

Mr. Lee reviewed page 8, Reservoir 225 Vegetation Control; page 9, Valve Installation; and lastly page 10, Ditch Segment Piping of ADC's Alternative Plan.

Chair Thielen asked about his comment about 'they would do these only if the lining doesn't move forward'. Alfredo Lee explained that they don't want to just do it if the alternative plan will only do it when we don't move forward with the plan, with piping. We want to pursue this. Chair Thielen re-asked if they are still going to move forward with lining one of the reservoirs. Mr. Lee said sure, or both. Chair Thielen asked if this will be in addition to, not an alternative plan, this will be an additional plan to lining. Mr. Lee disagreed, what he mentioned here they will carry forward. He does not want to call it an alternative plan so that only when the reservoir lining project doesn't move forward, he will not do this. Mr. Lee said they will still do this. Chair Thielen asked what the time table is to lining one of the reservoirs.

Sharon Ishikawa distributed the Waiahole Reservoir Lining Project for Reservoir 225 or 155 timeline and said the timeline was based purely on lining the interior and over time the Dam Safety laws changed and they have the results of the Phase I analysis for Reservoir 155. There are a lot of deficiencies noted in the structure of 155 that we feel are also similarly replicated in 225 which is overly steep slopes, vegetation, questionable intake and outflow structures, so the lining project will need to be redesigned for both reservoirs to address the other slope stability concerns and could involve quite a bit of construction where it could be advantageous to build a completely new structure rather than try and retrofit. That's why they will be using information from Alfredo's water needs assessment to determine how much water do they really need to store to meet their water needs and based on that can redesign a new structure or retrofit. The timeline envisions that we would be designing a dam reservoir from scratch with no reconstruction of one of the structures and design and construct a new structure based on today's dam design criteria. So we have to take the information from the water needs assessment and develop a scope so we can award a design contract. As part of the Corps of Engineers process they need to document it in a decision document. Chair Thielen stated that she is confused as to what ADC is presenting right now and asked if ADC is saying that you are going to move forward with building an entirely new reservoirs, or moving forward with lining one of the reservoirs or at this point are you coming back and saying that you want to start from scratch and go back and do an evaluation of what to do, if it's building a new reservoir we're looking at a timetable of what's in front of us today. What exactly is the board proposing? Alfredo Lee said they are looking at the water capacity evaluation if we need all the water in the reservoir then we don't have a choice, we won't do any new structure and we will cut down the dam and do what is needed to make it the same size as the way it is. If the water study says it could be a smaller reservoir but then it gives us the flexibility to build a new structure inside the current dam and make the capacity smaller but we've been sharing ideas

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that maybe a new structure could be faster and easier to build, I mean a dam in the same footprint. So they give us design flexibility.

Chair Thielen asked, don't you know what your water needs are now? Why would you need to go do a study to determine your water needs and whether you have to build a new reservoir, whether you can do a reservoir that's smaller or line the existing reservoir? Alfredo Lee said he has not done the study on the water needs. We have suspicions that we could, we have not done it, that's why we want to do it. Chair Thielen asked if they are purveying water to people now, don't you know what the end use is? Mr. Lee said they know the daily usage however what they want to do it also to look at what, there are a lot of changes right now because Del Monte has gone out of business and we have new companies coming in and the water needs may be different and a lot of times it's the daily draw and what's the maximum draw that is important. These are not storage reservoirs so if he's a day reservoir so you really need to match what the farmers are using, what their pumping capacity in and what not and whether we have enough supply in the ditch to supply them overnight so tomorrow they can start watering again, so we have not done that.

Chair Thielen asked if the timeline is if an entirely new reservoir system is being built inside the footprint of one of the existing reservoirs. Alfredo Lee said he didn't think it makes a lot of difference whether they build an entirely different structure or it might take even longer if they are to modify the dam. Ms. Ishikawa said it's probably a similar timeline. Chair Thielen asked what is being done with the funds that were appropriated for the lining of the two reservoirs. Mr. Lee said it's still there. Chair Thielen asked if he is committing in this report today that it's going to be dedicated to these purposes. Mr. Lee answered yes, it's CIP funding and it is dedicated to this project.

Chair Thielen mentioned that she sees that there are a lot of qualifications on whether they get funding and see on the timeline whether you get funding. Mr. Lee explained that the report on the left is totally separate, nothing to do with the current project. Different funding, different project. And it's not because if I did the alternative plan, I won't do this, it's not that. It's something additional what I'm doing. Chair Thielen asked if they will use the CIP funding that's been dedicated for the reservoir lining for these first steps of activities; the water need assessment, the design? Mr. Lee said no, the 155 and 225 need assessment will be done and there is funding for that. Chair Thielen asked if then the CIP funding for the design. Mr. Lee said yes, from then on it will be all CIP funding and they do have that \$1.2 million right now; State funding to match the Corps funding for the design.

Ms. Ishikawa said the lining project would still need to be redesigned to make the rest of the structure still validated that its safety slope stability. Other than that investigation we still need to go forward and result in some sort of altering modification to the design we have. The design we have right now took the original structure and just regarded the interior to a different slope and put a liner. It didn't look at the other type of things such as the stability of the outside slopes and when we look at the structure, it was building in the same time frame as the depth reservoir of 155 which has overly steep embankments. We feel there is still analysis that needs to be done that will result in a redesign of even for 225.

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Commissioner Miike said he would like to see some movement rather than waiting for both of them to be done. It seems that the need assessment is less critical for 225 than 155. Right now you're averaging about 2.03 which is basically what your permit is now but the permit is subject to dropping it to 1.45 by 2008. The valve installation can be done at the same time when you reconfigure 225. Mr. Lee said provided they get their funding that only have so much for maintenance. Chair Thielen asked what the timetable would be if they were to move forward with 225 without doing the needs assessment. Ms. Ishikawa said they could cut off the first two quarters and shift everything over. The first activity was the needs assessment so that part would be cut out if the Commission tells them to design to the same capacity. She added that designing to the same capacity with today's standards probably means enlarging the footprint of the structure because you'll need flatter slopes. So that could then entail real estate acquisition. On the other hand if he doesn't need the assessment and can live with a smaller structure it's possible to size the new structure to fit within the existing easement and not require real estate acquisition. Chair Thielen said as a reality check, if you're going to do a reduce loss; theoretically you could have a smaller capacity because you're not dealing with the loss issue. But if you're going to be talking about having to do land acquisitions you could throw this timetable out the window and you're talking 2020 or never, so capacity and needs assessment are always going to change because this is a fluid business that you're serving. Who would have predication three years that the seed companies are coming in at the rate they're coming in now so at some point you'll either have to make the move to do some infrastructure changes to reduce the water loss and if you got the funding to do that with one of the reservoirs, it make sense to move forward with that rather than continuing to fund these studies and land acquisitions with everything else that may or may not happen. Alfredo Lee said yes, they could do that, 225.

Commissioner Miike said if he remembered correctly the biggest losses were soon to be out of the two reservoirs. If 225 is basically being used for early morning watering. Alfredo Lee said that both of the reservoirs are used for daily watering. Commissioner Miike said if they could live within the footprint and don't have to buy more lands, as long as you can meet the morning needs of the farmers. Or you say one our restrictions is to stay within the current footprint of the dam, what kind of dam can we build within that according to current specifications and is that going to be enough? Alfred Lee stated that I still thinks at 155 is still critical for the downstream. Commissioner Miike said they could move faster on 225 and 155 is a different issue all together. Chair Thielen said that trimming the trees could be part of the CIP project, since it's bringing the dam up to standards.

Chair Thielen asked if they were to take that approach, would he have to go back to the ADC Board. Mr. Lee said no, he will share with them what they plan on doing. Chair Thielen asked if the timetable for lining one of the dams would be completed in 2014. Ms. Ishikawa said they were timing the award of the opening contract for March timeframe. They are trying to set up an open end contract for design and will take about six months to set something up. Commissioner Miike said some of the other things about analyses and design could be shortened. Ms. Ishikawa said they still need to the borings because they need to know what kind of soil is out there that they're placing it on. Chair Thielen said they could also take out the acquisition of real estate. Chair Thielen also mentioned that it talks about the State fund of construction and asked if it would cover the funds for the lining. Alfredo Lee said they have some construction funds. Ms. Ishikawa said they cannot request the state monies for

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construction from them yet until they sign the cooperation agreement. There could possibly two quarters to one year savings.

Paul Achitoff shared his frustration of the pace of the project and pointed out the work should have been completed in June 2008, not started. Mr. Achitoff asked what's to prevent ADC from coming back here five years from now, a billion gallons more wasted above the permitted amount.

11:05 a.m. Recessed

11:12 a.m. Back in session.

3. Update on the Implementation of East Maui Interim Instream Flow Standards

Presentation by: Dean Uyeno

Dean Uyeno reported that this is their fourth quarterly update on the implementation of the East Maui Interim Instream Flow Standards (IFS) that were adopted by the Commission last September 2008. Mr. Uyeno outlined the timeline, the process, the amendments to the staff recommendations and some of the adaptive management strategies and lastly to update on the five hydrologic units.

Shortly after the Water Code was adopted, the initial status quo interim IFS were set for East Maui and basically what was flowing in the stream at that time was what the status quo IFS was going to be. Native Hawaiian Legal Corporation (NHLC) in May 2001 filed 21 petitions to amend the interim IFS in July after some consultation with them; they agreed to focus on the eight petitions which break down to five hydrologic units. On March 2002 the Commission approved the USGS to undertake water resource investigations on all the streams that were part of the petition. On June 2005, USGS completed the first of two studies on the stream flow characteristic and January of 2006, USGS completed the second study on habitat availability for native species. In December 2006, staff presented to the Commission interim IFS process that would allow for more public review. On April 10, 2008, staff held a public fact gathering meeting for the first five hydrologic units in Haiku, Maui, to take comments on the first five instream flow standard assessment reports (IFSARS). On September 2, there was a staff site visit for the Commission on the EMI system and some properties of taro farmers out in Wailuanui, Keanae, and Honopou and visited Hanehoi as well.

On September 24-25, 2008, the Commission approved the amended interim IFS for the first five units.

Please refer to the Commission on Water Resource Management website at

http://hawaii.gov/dlnr/cwrn/newsevents_commissionmtg.htm

to review a copy of the September 24-25, 2008 minutes.

A copy of the power point is made a part of this record.

4. Presentation of Draft Instream Flow Standard Assessment Reports for 16 Surface Water Hydrologic Units in East Maui

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Presentation by: Chui Cheng

Please refer to the Commission on Water Resource Management website at http://hawaii.gov/dlnr/cwrn/newsevents_commissionmtg.htm to review a copy of the September 24-25, 2008 minutes. A copy of the power point is made a part of this record.

F. NEXT COMMISSION MEETINGS (TENTATIVE)

1. October 21, 2009
2. November 18, 2009

Meeting was adjourned at 12:30 p.m.

Respectfully submitted,

KATHLEEN OSHIRO
Secretary

APPROVED AS SUBMITTED:

KEN C. KAWAHARA
Deputy Director