

Approved by Commission on
Water Resource Management
at the meeting held on
4.29.15

MINUTES
FOR THE MEETING OF THE
COMMISSION ON WATER RESOURCE MANAGEMENT

DATE: February 18, 2015
TIME: 9:30 am
PLACE: DLNR Board Room
Kalanimoku Bldg.
1151 Punchbowl St., Room 132
Honolulu, Hawaii 96813

Acting Chairperson Jonathan Starr called the meeting of the Commission on Water Resource Management to order at 9:36 am.

The following were in attendance:

MEMBERS: Mr. Jonathan Starr, Mr. Michael Buck, Mr. Kamana Beamer, Ms. Denise Antolini, Mr. Milton Pavao, Ms. Virginia Pressler, M.D.

ABSENT: Mr. Carty S. Chang

STAFF: Roy Hardy, Dean Uyeno, Rebecca Alakai, Malie Beach-Smith, Lenore Ohye, Patrick Casey, Jeremy Kimura, Robert Chenet, Ayrton Strauch, Neal Fujii, Robert Chenet

COUNSEL: Julie China, Esq.

OTHERS: Kaleo Manuel (DHHL), Keith Okamoto (HDWS), Kurt Inaba (HDWS), Lance Fukumoto (Fukunaga & Associates), Jon Nishimura (Fukunaga & Associates), Lynn Malinger (Fukunaga & Associates), Ellen Yamamoto (Watanabe Ing), Yvonne Izu (Moriwaka Lau & Fong), David Penn (RCUH/PCSU/DLNR-DOFAW), Myra Kaichi (AG), Bianca Isari (NPS), David Henkin (Earthjustice), Isaac Moriwake (Earthjustice), John K. Aana (Po'ai Wai Ola), Steve Spengler (Element Environmental), Doug Codiga (KAA), Landis Ignacio (KAA), Stacy Ellamar (Pacific Resource Partnership), Dennis Chen, Mele Kalama-Kingma (UH), Aimee Sato (UH), Evelyn Braum (UH)

A. APPROVAL OF MINUTES

January 28, 2015

MOTION: (Buck / Beamer)
To approve the minutes.
UNANIMOUSLY APPROVED.

B. ANNOUNCEMENTS**1. Aloha and mahalo William M. Tam**

Acting Chair Jonathan Starr introduced the commissioners and extended his thanks to former Deputy Director, William Tam who served with excellence, brilliance and inspiration.

Commissioner Beamer said he learned a lot from former Deputy Tam and his work will continue into the future. He reflected on his commitment to the job, sometimes working through the entire night.

Commissioner Buck said he would miss former Deputy Tam. The Water Code is amazing and has given Hawaii the most innovative framework for water. He noted former Deputy's Tam role in the creation of the Water Code and said his legacy will live on.

Commissioner Antolini said former Deputy Tam will always be part of the 'ohana that cares deeply about Hawaii's water.

Former Deputy Tam reflected on his involvement with water issues in Hawaii for the past 39 years. The community's interest in water issues has grown. It has been inspiring to see people come to learn about protecting resources and protecting water. This group of people has the constitutional duty, responsibility, and opportunity to protect what we have. People need to work together to overcome the challenges. He encouraged the commissioners to continue their passion and thanked everyone for their support.

2. Water Resource Protection Plan Workshops

Jeremy Kimura (Hydrologist, Planning Branch, Commission on Water Resource Management) notified the commissioners about statewide water workshops to be held in March 2015 as part of the update to the Water Resource Protection Plan ("WRPP"). The workshops are intended to educate members of the community about water issues and find out what issues are important to them. The WRPP will be formally adopted by the Commission after a public hearing process. Workshop dates are posted to the website. Sections of the updated WRPP are also available online. Members of the public are welcome to comment.

Commissioner Buck said the workshops seem very open-ended. He encouraged staff to develop a framework for the workshops to foster more effective public discourse.

Commissioner Antolini said she was delighted to see Townscape working with staff on the plan update. She asked if meeting minutes would be posted so those who cannot attend can follow along.

Mr. Kimura said staff is still deciding how to handle meeting minutes. Notes will be taken and recorded. Posting these online is one option.

Commissioner Antolini said it would be very beneficial to see the comments posted online.

Commissioner Beamer said he would like to attend a few of the meetings. He asked about the format of the meeting.

Mr. Kimura said the meetings will give a short presentation about the plan, an overview of water resources, how the plan will be used, and next steps. Breakout sessions and small group discussions will also be part of the meeting format.

Commissioner Beamer commented that many people do not understand the role of the Commission and the constitutional mandate under the Water Code.

Mr. Kimura acknowledged that more education and outreach is needed. The meetings will discuss the constitutional mandates, requirements, and the purview of the Commission.

Commissioner Pavao asked if the update would be done at one time.

Mr. Kimura replied yes, the update includes the entire state.

Commissioner Pavao asked about the intent of the meetings.

Mr. Kimura said the intent of the workshops is to get community input on the larger issues and assess the adequacy of existing management tools. Additional tools and management ideas may be incorporated into the update based on community feedback.

Commissioner Pavao asked if the input from these meetings will have an impact on the final plan.

Mr. Kimura said "we expect them to."

Commissioner Antolini asked if commissioners should attend the workshops and if funding was available.

Katie Ersbak (Private Secretary to the Deputy) said travel requests will have to be approved by the Chair, but can be arranged.

Acting Chair Starr stressed the importance of the workshops and the process of planning future protection measures. He said media outreach and newspaper stories are important to get the word out about these meetings.

Commissioner Pavao asked if the protection plan for different sources is consistent on each island.

Mr. Kimura noted the hydrologic differences on each island. In certain cases, additional pressures may exist. Management and protection plans will have to be tailored for each place.

Commissioner Pavao questioned why commissioners would need to attend multiple meetings if the protection plan for basal wells, streams, etc. is the same on all islands.

Mr. Kimura said commissioner attendance is not required at every meeting.

Commissioner Beamer said attendance at different meetings may give the commissioners new perspectives about the issues raised on each island.

Commissioner Pressler agreed that it is extremely important to go hear the concerns of each community.

Mr. Kimura commented that smaller communities tend to appreciate the state's efforts to encourage participation in the process.

Commissioner Pavao asked if separate meetings are arranged with the different water purveyors.

Mr. Kimura said staff has met with stakeholders and agencies. Staff has not met with the smaller water system users, but hopes they attend the workshops.

Commissioner Pavao said small purveyors with one or two wells are also impacted by the protection plan. Big Island purveyors that serve 50-60 homes with one well is an expensive proposition. He said the purveyors are the ones who have to abide by the protection plan.

Mr. Kimura agreed.

Commissioner Buck asked about the integration of the Water Quality Plan ("WQP") with the WRPP. Without numbers and data, the plan will sit on a shelf. The integration of both plans will provide a blueprint for how to preserve water quality and quantity.

Commissioner Antolini asked if at least one commissioner could attend each meeting.

Deputy Attorney General ("AG") Julie China said the maximum number of commissioners is two per meeting.

Acting Chair Starr echoed Commissioner Buck's thoughts about the WQP. It is important and useful to hear what people have to say in each community. If the community sees the commissioners participating in the workshops they will know how important the issue is.

Dan Purcell stressed the importance of video conferencing as a form of public outreach and participation from neighbor island residents. He pointed out the lack of seating for people attending the Commission meeting and encouraged the Commission to enable videoconferencing of their meetings.

Acting Chair Starr agreed and said he hoped the issue can be resolved.

Commissioner Antolini asked if more chairs could be brought in to accommodate the people waiting outside.

C. ITEMS

- 1. Approval of the Project Description for the Hawaii County Water Use and Development Plan Update for the Keauhou and Waimea Aquifer System Areas**

Lenore Ohye (Planning Program Manager, Commission on Water Resource Management) stated Item C1 is a request to grant conditional approval of the project description for the County of Hawaii Water Use and Development Plan (“WUDP”) Update for the Keauhou and Waimea Aquifer System Areas. The project description as submitted by the County is shown in Exhibit 1. The staff submittal begins with some background on the Hawaii Water Plan, its components, purpose and the need for periodic updates. The next section in the staff submittal is the Statewide Framework (adopted in 2000) which outlines additional guidance and statutory requirements for development and updating of the components of the Hawaii Water Plan so that the plans contains the necessary information and facilitates integration to form a comprehensive protection plan. Under the framework, integration occurs at the county level through the WUDP. The framework also recognizes the need for flexibility in the WUDP due to institutional or funding constraints and to accommodate unique county-specific concerns. Flexibility also allows for innovation in the WUDP.

In 2010 the County of Hawaii updated its WUDP. It was the first update of any WUDP since 1990. The 2010 WUDP update used an island-wide approach and uniform methodology to evaluate the sustainability of the County’s General Plan, land use pattern allocation guideline, and zoning to see how sustainable the land use plans were in relation to the natural resources. This type of analysis filled a key objective of the WUDP - to assess the long-term sustainability of the county land use plans. Early assessment of water demand projections relative to availability can inform subsequent land use policies and decisions. It can provide the opportunity to attach appropriate conditions to new development approvals, and provide the county with time to adjust its land use vision, develop alternative water sources, storage and transmission, implement water conservation to help meet future demands within the sustainable yield limits established by the Commission. The WUDP is a means to integrate land and water planning to protect public trust resources and uses. While the 20-year growth and demand protections were provided in the WUDP, the County of Hawaii also chose to incorporate build-out scenarios. These were designed to identify sensitive areas in order to prioritize future assessments. Accordingly, the 2010 WUDP Update identified the Keauhou and Waimea Aquifer System Areas as areas in need of more detailed planning. Focusing on smaller geographic areas will allow for more detailed planning and identification of region-specific issues and strategies.

On December 10, 2014, the Commission held a public meeting in Kona to review the Preliminary Findings of Fact (“FOF”) and hear public testimony on the National Park Service (“NPS”) petition to designate the Keauhou Aquifer as a Ground Water Management Area. Following that meeting, the Commission issued a preliminary order (HA-WMA 2013-1) requesting that the County of Hawaii submit a revised project description and scope of work by January 15, 2015 for the proposed revision to the County’s WUDP. The preliminary order also required the Commission staff to provide comments back to the County on its revised project description by February 1, 2015. A draft of the revised WUDP is to be submitted by the County to the Commission by May 30, 2015. Hawaii County Department of Water Supply (“HDWS”) submitted a copy of the revised project description and scope of work on January 14, 2015 (Exhibit 1). A hard copy was received on January 20, 2015. Commission staff reviewed the revised project description and sent comments to HDWS on January 30, 2015. Staff comments are shown in Exhibit 4.

Commission staff sat down with the County and its consultants to discuss questions about the project description. An agreement was made for the update to proceed in two phases. The first phase will be an update of the WUDP demand projections as well as a calculation of Authorized Planned Use (“APU”). The second phase will involve the development of source strategies and infrastructure improvements. In order to fulfill the intent of the WUDP, the County needs to look at both demand as well as strategies to meet the needs. Questions regarding source have been raised by the Commission. Therefore it is appropriate to address source strategies in the WUDP. The second update phase will include source strategies and scenarios to meet non-potable demands (including agriculture), potential impacts on cultural uses and traditional and customary Hawaiian rights, and the implementation plan for source and infrastructure improvements. Staff believes the two phase process is the best way forward to accommodate time constraints and deadlines, while addressing the issues raised by the Commission regarding source. The County has agreed to fund the second phase. On May 30, 2015 the County will present a scope of work and methodology for proceeding with phase two. This will be reviewed by staff and submitted to the Commission for adoption.

WUDP demand projections and APU are two different calculations, each with a different timeframe and purpose. WUDP demand projections specify a 20-year time horizon under the Water Code rules. APU has no timeframe. These calculations take place at different times during the land use planning and approvals process. In general, the land use approvals process begins with a state land use designation (conservation, urban, rural, agriculture). Next, the county General Plan provides population projections and growth scenarios. Next, Development Plans (“DP”) or Community Development Plans (“CDP”) refine the vision and allocate growth within the county. Following that is zoning, culminating in building permits. Under the Water Code, APU means “the use or projected use of water by a development that has received the proper state land use designation and county development plan/community plan approvals.” Under the Water Code, WUDP demand projections need to include everything mentioned in the APU definition with the addition of zoning.

The only reference to APU in the Water Code appears in Part IV Regulation of Water Use and is one of eight criteria for designating a ground water management area. Therefore, calculation of APU is exclusively tied to ground water management designation. APU is not mentioned in Part III of the Water Code (Hawaii Water Plan) which provides guidance on the county WUDPs. Assessment of APU is solely to see whether criterion one for ground water designation is met. On the other hand, WUDP projections are used as a mechanism to integrate the implications of the county’s current land use vision, with a strategy and a plan to meet associated water needs within the limits of available supply. The WUDP is also used by the Commission as a guide for water use permitting. It makes sense that APU occur earlier in the land use approvals process before zoning entitlements are made. WUDP projections are tied to zoning since zoning is a requirement for a water use permit.

Based on discussions with the County about their project description, staff clarified the approach for demand calculations in phase one. For the WUDP projections the County is proposing to update the zoning information in the 2010 plan to reflect

current zoning on each parcel. The unit rates for undeveloped parcels will be refined based on observed and metered data. The County will replace planned unit rates for developed parcels with actual use on those parcels. The analysis will be much more focused with the smaller areas versus the entire island. Water use for private wells that are not reporting water use will be estimated based on the pump capacity and assuming 16 hours a day of pumping. Per the framework, a range of forecasts will be provided. Potable and non-potable use will be broken down so that appropriate source strategies to meet demands can be established in the second phase. DHHL water use in the WUDP will be based on preliminary data from the ongoing State Water Projects Plan Update. For APU, the County will include the 3.398 mgd requested for reservation by DHHL. Identifying needs for state water projects will be based on the 2003 State Water Projects Plan. The plan information will be updated with new information based on state water needs that are known or near term.

The County wants to include APU in their WUDP. As mentioned earlier, APU is not a required component of the WUDP. The County's 2010 WUDP did not include a calculation of APU. However, the projections in the 2010 WUDP were used as a basis for the petition to designate the Keauhou Aquifer System Area ("ASA"), and so the County would now like to include an APU calculation in its WUDP update. The County can add additional information it feels will be beneficial in their updated WUDP so long as the minimum requirements for the WUDP are met. Under the legal definition APU calculations must include current uses, as well as the projected use of water by developments that have received proper land use designations as well as the county community plan/development plan approvals. The County's methodology for their APU calculation for Keauhou ASA is to first calculate current water use. Where is a lack of reporting, the County plans to estimate water use based on the pump capacity assuming 16 hours a day of pumping. The County will also include water entitlements such as vacant service laterals, building permits, developer agreements with approved zoning, and potential future uses of existing private wells. The County will also include community development plan information, specifically the domestic consumption guidelines, which give planning type unit rates for estimating water demand. This requires information about densities, i.e., number of planned units, and commercial/industrial acreages. The Kona Community Development Plan ("CDP") does not include densities. However, in 2011 the County produced a financing plan for the Kona CDP to evaluate the financial feasibility of the new developments proposed in the CDP. This provides a build-out scenario with an estimated number of dwelling units and commercial and industrial areas. Those densities will be used with the domestic consumption guidelines to come up with future water demand.

For the Waimea Aquifer System Area ("ASA"), the County will use information from existing CDPs and water master plans to refine APU. For both the Keauhou and Waimea ASAs, DHHL needs will be incorporated. DHHL recently filed with the Commission to reserve 3.98 million gallons per day ("mgd") for their lands in the Keauhou ASA. The County has agreed to include the full 3.98 mgd in their calculation of APU. State water project needs will also be incorporated.

Staff researched the how the definition of APU has been used in the past. In 1987, the year the Water Code was promulgated, the Ewa development plan was being amended by the City & County of Honolulu (Exhibit 6). It included specifics about location, number of dwelling units, commercial and industrial acreages, and more.

At this time, CDPs were very specific and could be translated into water demand. In 1992 the voters adopted amendments to the City Charter that changed the definition of CDPs from relatively detailed plans to more conceptual schemes because of concerns that the existing CDPs were overly detailed and created a process that duplicated the zoning process. This change resulted in developments no longer being approved in development plans and a change to the level of detail that did not give specific density information. Of note, the County of Hawaii did not have any CDPs until 2008.

Commission staff also reviewed how APU was analyzed in previous designation proceedings. On Lanai (1990) APU was based on development-related reports using the most conservative estimate of demand. The Commission found that none of the criteria was met and Lanai was not designated. In 1992, calculations of APU for Windward Oahu were based on the upper limit of the general plan's population growth limits and the C&C of Honolulu's WUDP for a 20-year projection period based on demands for the entire island. Windward Oahu was designated in 1992. The next designation occurred eight days later for the island of Molokai. In the case of Molokai, APU was based on the 20-year population projections and agricultural needs. On Maui, Iao and Waihee aquifers calculation of APU included current uses, water commitments (both pending and approved), and all approved building permits. In lieu of designation at that time, triggers were set for automatic designation. In 2003, current pumpage in Iao exceeded sustainable yield resulting in the designation of the Iao aquifer.

Ms. Ohye handed out staff's proposed amendment to the original recommendation.

AMENDED RECOMMENDATION:

Staff recommends that the Commission grant conditional approval of the County of Hawaii's project description for updating the water use and development plans for the Keauhou and Waimea Aquifer System Areas:

1. The updates shall proceed in two phases:
 - i. The first phase shall refine demand projections and calculate authorized planned use in accordance with the project description and based on the project description clarifications discussed in this submittal. The new project description for the Phase 1 update which incorporates the project description clarifications discussed in this submittal shall be submitted to the Commission by March 4, 2015. A draft of the Phase 1 update shall be submitted to the Commission by May 15, 2015.
 - ii. The second phase will involve the development of source development strategies and scenarios. The County shall submit additional information on the project description approach and schedule for this second phase by May 30, 2105. This additional information will be considered an addendum to the project and will be submitted to the Commission for approval.
2. Direct Commission staff to work with the Office of the Attorney General to review the legal definition of authorized planned use and determine whether additional clarification in the law is warranted.

(DISCUSSION)

Acting Chair Starr noted the error to the date in the second paragraph.

Ms. Ohye clarified that the date should read "2015."

Commissioner Pavao asked if the County agrees with the project description and amended recommendation. The County representatives stated they were in agreement.

Commissioner Beamer thanked Ms. Ohye for her analysis and agreed that APU is the crux of the petition. He asked if there is a timeline for the financing plan.

Ms. Ohye said it is for a built-out scenario that includes number of dwelling units and acreage.

Commissioner Buck thanked the County and Commission staff for the quick turn-around. He asked if the development of potential high level source wells above the National Park would be addressed in phase two.

Ms. Ohye said "yes." Source strategies will be addressed in phase two.

Commissioner Buck said the location of wells is an important issue that weighs on the Commission's decision. He hoped that the County and NPS could discuss the issue during their good faith negotiations. He requested that Commission staff come up with their own definition of APU and how it should be applied prior to submitting to the AG for comment. APU is not just a legal definition. There are different scenarios for different islands.

Commissioner Antolini asked about the timing for consideration of traditional and customary ("T&C") rights and ecological uses.

Ms. Ohye said impacts to T&C and the environment would most likely result from source development and so it would be a part of phase two. On May 30, 2015 the County will submit a timeframe and schedule for phase two including a methodology for determining preferred and alternative source development strategies.

Commissioner Antolini said the issues are very important and recommended that they be considered at the beginning. She asked if the County has funding to complete phase two and agreed with the definition of APU in the submittal. She thanked the County and Commission staff for their hard work.

Ms. Ohye said the County agrees with the submittal.

Commissioner Beamer said the timeframe to complete the scope for the second phase appears short.

Ms. Ohye said the scope will include both the methodology as well as a schedule.

Commissioner Pavao commented that during his time at HDWS, there was always a wrench associated with APU. Although it is provided for, APU does not always occur

100 percent of the time. On the Big Island, huge developments never happened for 20-25 years. He acknowledged that it is a problem, but said he did not know how to solve it.

Ms. Ohye agreed and said many times developments do not proceed as expected. However, APU does give the County a lot of information about the water implications related to potential development approvals and zoning entitlements. It also reassures the Commission that the County will not exceed the limits of the natural supply. APU provides an advanced timeframe for planning if the County needs to implement aggressive water conservation or develop alternative sources.

Commission Pavao said there is a financial burden if the County starts to develop additional sources that may not be necessary for the next 10 to 15 years. It is a hard balance to strike.

Acting Chair Starr said front loading the issue will benefit everyone. He hoped that a timeline and methodology will come sooner rather than later. In the near future the Commission could have a meeting with all the counties, planning staff, and consultants to discuss the different approaches each of the counties have taken with regard to their WUDP updates. He asked if the Commission's request to the County is consistent with other places like Oahu.

Ms. Ohye said the project description has been vetted to make sure it meets the minimum requirements for a WUDP as well as addressing the guidelines in the statewide framework. At a minimum, all WUDP must do that. Some counties have taken different approaches. Innovation is something the framework encourages. Commission staff can work with the counties to prepare an overview of WUDPs for a future Commission meeting.

Acting Chair Starr said the Commission is looking for excellence. He asked who from the County was available to comment.

Keith Okamoto (Deputy, HDWS) thanked the Commission staff for their accurate summary. A lot of work has gone into developing the scope of work. The concerns of the Commission have been addressed. He answered questions from the commissioners. As far as funding for phase two, the County is committed to provide the Commission with appropriate information to help with decision making. Funding is not guaranteed and will need to be approved by the HDWS Water Board. Deputy Okamoto said he is optimistic that the funding will be secured depending on the level of detail in the scope of work. HDWS is trying to get together with the NPS to discuss the location of wells and new sources. Traditional and customary practices are a major component of the discussion. HDWS hopes to identify strategies to address future challenges with groundwater and numbers. HDWS will continue to talk and collaborate with staff. Deputy Okamoto said HDWS is committed to maintaining the resource for future generations.

Jon Nishimura (Consultant, Fukunaga & Associates) said the issue of traditional and customary practices needs to be addressed by all the parties involved in the Hawaii Water Plan update. Everything is connected. The WRPP and the WQP need to look at the interface between stream flow and the coast, between ground water flow and coastal resources, and inland ground water and surface water interaction. He noted that T&C practices tend to come up when a development is proposed. A cultural and

environmental survey of the whole island is probably not feasible. However, the challenge of addressing T&C and water resource numbers is everyone's kuleana. He acknowledged that more work needs to be done. The WUDP will include a "what if" strategy for development.

Commissioner Antolini acknowledged the challenge of identifying T&C and ecological uses. She said it might be helpful to look at old Environmental Assessments ("EA") and Environmental Impact Statements ("EIS") for ecological information and cultural impact assessments.

Commissioner Beamer said the overall process has been positive. He mentioned the work done on Molokai to quantify the amount of ground water for T&C rights. The Commission has a constitutional mandate to look at these issues.

Commissioner Pavao asked if the Commission could go to the Legislature for funding to help complete the counties WUDPs. The burden should not be placed on the counties to fund such an expensive venture. He asked if the Commission had ever asked the Legislature for money to finance the WUDPs or the WRPP.

Ms. Ohye said the Commission received funding for the WRPP. When the Water Code was adopted, it provided funding and a deadline for the initial development of all the components of the Hawaii Water Plan including the WUDPs. There was also a disincentive for not completing the WUDPs in that CIP money would be withheld. Since 1990, the state has not asked the Legislature for funding since the county WUDPs are a home rule concession in the Water Code and Commission funding would suggest that the WUDPs are a state plan rather than a county plan.

Commissioner Pavao asked if the WUDP updates are mandated by the state.

Ms. Ohye said the Water Code provides for periodic updates but does not say when. It makes sense to update the WUDPs in conjunction with updates to the county land use and CDPs. The Commission's guidance framework recommends updates every 5 years.

Commissioner Pavao said if it is mandated in the guidance framework then funding should be provided.

Commissioner Beamer said he was willing to help find resources for determining T&C rights. He said it is critical for the County and NPS to talk about the issue.

Acting Chair Starr said the WUDPs have a lot of moving parts. He said he was impressed by the Honolulu Board of Water Supply's ("HBWS") integration of cultural and social issues with the data. Living models are starting to change the way we view the interrelated nature of place and the resource. A living document should assure us of the impacts, the needs, and how those needs will be met over the next generation without impacting the resource.

Alan Murakami (Native Hawaiian Legal Corporation) reflected on his involvement with past water decisions. He said he is encouraged by the current approach to front load the issue of T&C rights. Until recently, concerns about T&C have largely been ignored. For example, NHLC's opposition to a well permit proposed for Molokai was intended to demonstrate the potential harm to T&C along the shoreline. Many people asked what

T&C has to do with a well permit. The inter-relationship between ground water and surface water often intermix. Subterranean mixing can impact the growth and gathering of limu along the shoreline. This issue was brought up late in the process during the contested case. This kind of information should have been included upfront in the application. It would have saved a lot of time (years), energy and heartache. Problems can be avoided if the process is followed according to the Constitution and Statute. He recommended that the Keauhou designation proceedings learn from the past and incorporate these lessons learned.

Commissioner Antolini asked if the NPS could comment on the letter they handed out at the meeting.

Malia Lane-Kamahele (Manager, Pacific Islands Office, NPS) said the NPS supports the updates and the County's plan to identify cultural and Native Hawaiian uses of water. She noted that neither the county plan nor the state-determined sustainable yield explicitly considered non-consumptive public trust uses of water.

Commissioner Buck asked if the NPS was working to quantify the amount of water needed for T&C practices.

Ms. Lane-Kamahele said she believes that process is currently undertaken by the NPS's Water Resources Branch. She said she would get back with an update.

**MOTION: (Pavao / Antolini)
To approve staff's amended recommendation.**

Katie Ersbak (Assistant to the Deputy Director) reread the amended staff recommendation.

Commissioner Beamer asked if the issue of T&C rights could be front loaded and incorporated into the amended recommendation.

Acting Chair Starr asked for a two minute recess to discuss the amended recommendation with Commission staff.

Acting Chair Starr reiterated the motion on the floor to approve staff's amended recommendation and the additional amendment offered by Commissioner Beamer.

Ms. Ohye read aloud Commissioner Beamer's additional amendment. It states, "the county shall begin assessing cultural and environmental issues using available published information, such as Environmental Assessments and Environmental Impact Statements, and report back to the Commission on preliminary findings by May 30, 2015."

Ms. Ersbak (Assistant to the Deputy Director) read the final amended recommendation aloud.

FINAL AMENDED RECOMMENDATION:

Staff recommends that the Commission grant conditional approval of the County of Hawaii's project description for updating the water use and development plans for the Keauhou and Waimea Aquifer System Areas:

1. The updates shall proceed in two phases:

- i. The first phase shall refine demand projections and calculate authorized planned use in accordance with the project description and based on the project description clarifications discussed in this submittal. A new project description for the Phase 1 update which incorporates the project description clarifications discussed in this submittal shall be submitted to the Commission by March 4, 2015. A draft of the Phase 1 update shall be submitted to the Commission by May 15, 2015. The county shall begin assessing cultural and environmental issues using available published information, such as Environmental Assessments and Environmental Impact Statements, and report back to the Commission on preliminary findings by May 30, 2015.
 - ii. The second phase will involve the development of source development strategies and scenarios. The County shall submit additional information on the project description approach and schedule for this second phase by May 30, 2015. This additional information will be considered an addendum to the project description and will be submitted to the Commission for approval.
2. Direct Commission staff to work with the Office of the Attorney General to review the legal definition of authorized planned use and determine whether additional clarification in the law is warranted.

Before taking a final vote, Commissioner Pavao asked if the County agreed with the amended recommendation.

Deputy Okamoto said he agreed with the amended recommendation, but said the timeframe and deadlines may be challenging. He respectfully asked for additional time.

Acting Chair Starr asked if the County would be willing to accept the amended recommendation as written and if there is a problem later Commission staff will work with the County to resolve.

Deputy Okamoto replied "sure." The County will do whatever it can to accommodate the requests. If there is a problem, the County will discuss with Commission staff.

Commissioner Antolini clarified that the amended language says "the county shall begin assessing cultural and environmental issues..." She acknowledged that the completion date for this phase may not be met by May 30, 2015.

Deputy Okamoto said he was reassured by that.

**MOTION: (Beamer / Antolini)
To approve staff's final amended recommendation.
UNANIMOUSLY APPROVED.**

3. Measurement of Ditch Flow Diversion and Water Loss/Distribution in Kekaha and Kokee Systems – presentation by Steve Spengler, Element Environmental

Steve Spengler (Consultant, Element Environmental LLC) said he was hired by the Commission to assess the base line flow conditions for the Kokee and Kekaha Ditch Systems on Kauai. Mr. Spengler said a movie with photos and video showing flow along

various segments of the Kokee and Kekaha Ditch Systems is available on YouTube at <https://www.youtube.com/watch?v=y2lxMYaZyNg>.

The Kekaha System was built in 1907 and lengthened in 1923. It is 27 miles long with a ditch capacity of 55 million gallons per day ("mgd"). Historic flow during the plantation era was 35 mgd. The Kokee System was built in 1923 and is 19 miles long. It has a capacity of 55 mgd, with a historic level of 14 mgd. Site visits were conducted in November and December 2014 and included a condition inventory of both systems, identifying the location and quantity of leakage from the ditch systems observed during the inventory surveys, monitoring stage levels with transducers to understand the flow dynamics within the watershed, taking ditch flow measurements along the entire length of both systems, and synoptic (simultaneous) ditch flow measurements. The location of diversions and areas with leakage are identified. Both systems have been monitored for years and have historical records. On December 2, 2014 the flow coming into the Kekaha System was about 50 cubic feet per second ("cfs"). The historical average used to be much higher. The same is true of the Kokee system, which measured 4 cfs on December 2, 2014 versus the historical average of 30 to 35 cfs. Pressure transducer data indicates the relative stage height of the water in different locations. It takes 18 hours for rainfall near the top of the Alakai Swamp to make its way downstream to the first stream crossing along the Waimea River.

The Kokee System was designed with a series of dams and diversions to capture the water exiting the Alakai Swamp. The Kekaha System captures flow from two streams entering the Waimea River. There is a huge amount of interest in generating electricity from hydropower. There are two hydropower plants along the Kekaha System. Mr. Spengler played the video for the commissioners and described the flow of the water through the ditches and various diversions. There is some leakage within the Kokee System. Most of the water is diverted and captured by the ditch. However, 70 to 80 percent of the water in the Kokee ditch is diverted back into the stream, which feeds Waipo'o Falls. Without this flow, the waterfall would be dry. The height of the sluice gate along Kokee Stream controls how much water is allowed to remain in the ditch. Water in the ditch enters a series of tunnels before crossing the road. According to Landis Ignacio (Kekaha Agriculture Association), some amount of leakage is needed to prevent sediment build-up, which could clog the system. Due to the sluice gate at Kokee Stream the height of Pu'u Lua Reservoir is limited to 60 feet. Dam safety regulations are part of the reason why less water has been diverted into the Kokee System. The Puu Moi Ditch Divide splits the ditch so water flows to DHHL lands and the Kitano Reservoir. The majority of water flows toward Kitano Reservoir. However, flow into the reservoir has stopped due to vandalism. The little water that remains in the system is discharged into fallow sugar cane fields, which eventually flow downhill into the Kekaha System below.

The water from Waipo'o Falls enters into the Waimea River. The Kekaha System gets some of its water from an intake along Koaie Stream. The water is then discharged into the ditch intake along the Waimea River. The upper system includes a series of tunnels that eventually flow into the first hydropower plant. The water is diverted back into the Waimea River after it runs through the hydropower plant. Recent upgrades to the ditch have been made by the Kekaha Agriculture Association ("KAA"). Water eventually runs through the Black Siphon Pipe. The left-hand diversion feeds the taro patches below. The vast majority continues to be diverted downstream. Some water flows into reservoirs used for wastewater treatment. Water continues to flow along the ditch into various

reservoirs along the Mana Plain that are used for agriculture. Leakage in the lower reaches of the system is high due to the poor condition of the ditch. A series of flow measurements were taken in the Waimea River to evaluate the condition of the river due to the diversions upstream. The upper diversions take about 1 mgd. Koaie Stream contributes approximately 4 mgd. 10 to 15 mgd is returned to Waimea River below the hydropower plant. Sediment build-up is evident in the lower reaches of the Waimea River.

Initial findings have not been vetted, but indicate that flow in the Kokee ditch is lower than historic averages, largely due to Puu Lua Reservoir being a non-compliant dam with a limited height of 60 feet. As a result, water diverted in the upper portions of the Kokee System is returned to Kokee Stream. Water eventually finds its way into the Kekaha System. The Kokee System has three large reservoirs that could be used for future hydro-electric and pump storage projects. The ditch flow in the Kekaha System seems to be controlled to optimize electricity at the two hydro plants (the Mauka and Waiawa Hydro Plants). The optimal ditch flow to power the Mauka Hydro Plant is 34 mgd. The Waiawa Hydro Plant requires 21 mgd. Water may be dumped back in the Waimea River after the Mauka hydro plant because less water is needed to run the Waiawa hydro plant. A significant amount of the upper system ditch flow is currently diverted back into the Waimea River below the Mauka Hydro Plant. With the exception of the terminus of the Kekaha System, both ditch systems are in very good shape. There is leakage but maintenance is ongoing.

Dean Uyeno (Program Manager, Stream Protection and Management, Commission on Water Resource Management) said the investigation was initiated by a complaint and petition from Po'ai Wai Ola and the West Kauai Watershed Alliance through Earthjustice. Very little was known about the Kekaha and Kokee Systems. Mr. Spengler was asked to assess the current flows, investigate the complaints of waste and leakage, and assess the overall condition of the system and infrastructure. The land and reservoirs are managed by various agencies. The agricultural lands are state-owned and managed by the Agribusiness Development Corporation ("ADC"). ADC leases the land to KAA and sub-leases to various entities. The investigation will assess the systems during the wet and dry seasons. KAA will be asked to present information on the planned infrastructure improvements at a later date.

Acting Chair Starr said he understands this is just the beginning. He requested a future site visit for commissioners.

Commissioner Pavao asked if the consultant was asked to provide baseline data for the Commission.

Mr. Uyeno replied "correct." Eventually staff will work with the parties to address the waste complaint and Instream Flow Standards ("IFS").

Commissioner Beamer thanked Mr. Spengler for his presentation and visuals. He asked if the leakages were measured.

Mr. Spengler replied that the leakages tend to form rivulets and coalesce. The majority of leakage appears to be in the lower reaches of the Kekaha System.

Commissioner Buck asked about the nature of the complaint and the proposed remedy.

Mr. Uyeno said the complaint focused on the leakage and waste from the system. Specific sites were mentioned, including the accumulation of sediment in the Waimea River where people used to recreate. The petition and complaint includes both systems.

Commissioner Buck asked if the remedy sought to amend IFS.

Mr. Uyeno replied "yes." The complaint also seeks to resolve the issue of waste and leakage.

Commissioner Antolini asked if the presentation was on the Commission's website.

Mr. Uyeno said the link can be posted to the Commission's website.

Commissioner Antolini asked if the parties have met and reviewed the information.

Mr. Spengler said he spoke with Landis Ignacio from KAA before and after the site investigations.

Commissioner Antolini asked if others could watch the video and contact staff with questions.

Mr. Uyeno explained that a site visit with the parties was planned. However, after reviewing Mr. Spengler's documentation and photos, the parties agreed that a site visit was not necessary at this time.

Acting Chair Starr reminded staff that the original motion included a site visit for commissioners.

Mr. Uyeno said the first step was to arrange a site visit for the parties. A future site visit for commissioners will be planned.

Commissioner Antolini asked about the next step of the investigation.

Mr. Spengler said the parties met in January 2015 to discuss additional work under the contract. The work plan is still under review.

Mr. Uyeno said the investigation should wrap up by the end of 2015.

Mr. Spengler said the timeframe might be extended depending on what the parties decide in terms of monitoring.

David Henkin (Earthjustice) representing Po'ai Wai Ola said the petition was filed in July 2013 and the Commission subsequently passed a motion calling for the investigation in August 2013. The scope of the petition includes two components. First, the petition seeks to address the diversion of water through the Kokee System. The headwaters of three streams in Kokee are completely de-watered at their source before eventually being emptied into Kokee Stream. Mr. Henkin commented on the urgency with which staff and the Commission addressed the petition at the beginning. A year has passed and the parties are still waiting for the completion of the investigation. The Water Code is very clear about the beneficial use of water. In the case of the Kokee System, water continues

to be diverted at the headwaters by ancient structures that were built before the Water Code. The issue of "waste" needs to be addressed immediately. At a minimum the headwaters should have diversion structures in place so water can be returned to the stream. There is no reason to wait for the end of 2015 to start thinking about the infrastructure changes needed to avoid waste. The system was originally designed for agriculture and is now being used to help generate hydro-electricity. While this is not technically "waste," the question of IFS needs to be addressed. There are other options to help generate power that do not require the use of water. Mr. Henkin reiterated his desire to see the waste complaint addressed before the end of 2015. Basic information is needed to understand the amount of water used by the agricultural users on the Mana Plain. KAA has said that they do not know how much water is used, the acreage under cultivation, or the types of crops that are being grown. The water use is not metered. It is important know how much water is needed in order to determine the appropriate amount of water that should be left in the streams.

Acting Chair Starr assured Mr. Henkin that staff would work expeditiously.

Commissioner Beamer asked about the contractor hiring delays.

Mr. Uyeno said the contracting process is cumbersome. The access issues have been resolved.

Mr. Henkin said he did not want to blame anyone, but rather to recognize that there are opportunities for the Commission to take action now.

Commissioner Antolini asked if the parties would be able to provide supplemental information.

Mr. Henkin said letters could be provided.

John Aana (Po'ai Wai Ola) thanked the Commission and said the issue is important to the community. The community has seen the water levels decline. He said he has observed water going into the ocean at Kinikini while the Waimea River is dry. The water should stay in the river for the life of the river.

Commissioner Buck asked if ADC could present at a future meeting.

Acting Chair Starr agreed.

Yvonne Izu spoke on behalf of Kauai Island Utility Cooperative ("KIUC"). KIUC requested to be notified about meetings, but was never informed about meetings that took place in December 2014 and January 2015. The issue is important to KIUC. She requested that KIUC continue to be involved in the process.

Mr. Uyeno said he would look back at the letter.

Commissioner Beamer asked how KIUC would like to be notified.

Ms. Izu said emails and mailing addresses were provided.

Doug Codiga spoke on behalf of KAA and said Landis Ignacio has made himself available to the investigators and staff. Productive discussions with the interested entities have taken place, including the allegations of waste. KAA has a different view on many of the issues raised by Earthjustice.

2. State Water Projects Plan Update – presentation by DLNR Engineering

Roy Hardy (Acting Deputy Director) introduced Dennis Imada from the Engineering Division.

Mr. Imada gave an overview of the State Water Projects Plan (“SWPP”) Update. The SWPP is one of five components of the Hawaii Water Plan. The primary objective is to provide a framework for planning and implementation of water development programs to meet projected demands for State projects. An inventory of existing resources will help determine current water-related operations. An assessment of future water requirements will be performed upon completion of inventory of proposed State projects. Strategy options are preliminary in nature and depend on funding and other planning considerations. Mr. Imada went over the process for compiling all the available information related to existing wells and stream diversions owned and operated by the State. The state owns 226 existing wells and 54 stream diversions. The SWPP Update for the DHHL is currently being prepared and is scheduled to be complete by May 2015. Delay in the update was the result of missing or incomplete information.

Acting Chair Starr asked if DHHL’s inventory of demands over the next 20 years have been completed.

Mr. Imada replied “no.” It is scheduled to be completed. The SWPP Update for all State departments is currently being prepared and estimated to be complete by March 2017. The Kona portion of the update is being prepared under a separate contract due to the uniqueness of the geology and source development.

Acting Chair Starr said he was happy to see the update moving along.

Kaleo Manuel (Acting Planning Program Manager, DHHL) said DHHL has been actively participating in the SWPP Update. The goal is to use the DHHL island plans and land use designations to estimate demand figures statewide over the next 20 years.

Commissioner Beamer asked if the DHHL projections anticipate full build-out.

Mr. Manuel said the SWPP looks at low, medium and high demand scenarios. The medium projection is used as a way to quantify water demand. The scenarios are based on building lot density and do not include refined water master plans or projected units per year. The DHHL settlement funds may not remain constant and could impact development rates. One of the goals for DHHL is to ensure that other agencies plan for DHHL reservations upfront to avoid conflict in the future.

4. Recap of the AWWA/HWEA 2015 Pacific Water Conference

Commissioner Starr commented on his experience at the AWWA/HWEA Pacific Water Conference. There were a lot of great presentations including a talk by Josh Stanbro of Hawaii Community Foundation to assess stakeholder interest in creating dedicated

funding for water research and planning. The results show that a majority of the public are willing to contribute money per household as part of water bills and/or fees. Other presentations on isotope studies and waste water were particularly interesting.

Commissioner Buck asked about a June meeting in Kona.

Mr. Hardy said staff will look into it.

Commissioner Beamer asked about the implications of previous designation proceedings.

Mr. Hardy said staff prefers to have the presentations related to Kona on the Big Island.

Commissioner Buck said presentations do not necessarily need to take place on the Big Island.

Commissioner Beamer agreed that the briefing is intended for the commissioners.

Commissioner Pavao commented on the Oahu-centric mentality. He said certain issues should be heard on the island where the issue is taking place. He recommended that staff consider scheduling some meetings on the neighbor islands.

Commissioner Antolini voiced her concerns about meeting quorum during the summer months. She suggested that the Kona meetings be prepared well in advance.

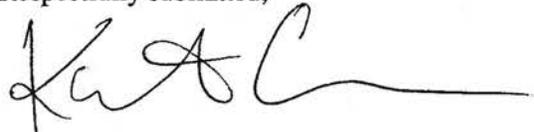
Acting Chair Starr agreed that certain meetings should be held on the neighbor islands.

Commissioner Buck thanked Mr. Hardy for taking on the role of Acting Deputy Director.

Commissioner Pavao thanked the staff for their hard work and apologized for the quick turn around and deadlines.

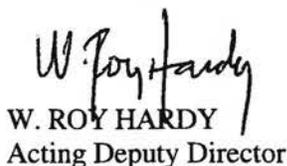
Acting Chair Starr adjourned the meeting at 1:15 pm.

Respectfully submitted,



KATIE ERSBAK
Private Secretary to the Deputy

APPROVED AS SUBMITTED:



W. ROY HARDY
Acting Deputy Director