

MINUTES

DEPARTMENT OF WATER SUPPLY COUNTY OF HAWAI'I WATER BOARD MEETING

March 24, 2009

Waimea Community Center, Kamuela

MEMBERS PRESENT: Mr. Riley Smith, Chairperson
Mr. George Harai
Ms. Millie Kim (9:47 a.m.)
Mr. Francis Kuailani
Mr. Bryan Lindsey
Mr. Robert Meierdiercks
Mr. Art Taniguchi
Mr. Milton Pavao, Manager, Department of Water Supply
(ex-officio member)

ABSENT: Mr. Dwayne Mukai, Vice-Chairperson
Mr. Bernard Konanui, Water Board Member
Ms. Bobby Jean Leithead-Todd, Planning Director, Planning Department
(ex-officio member)
Mr. Warren Lee, Director, Department of Public Works (ex-officio
member)

OTHERS PRESENT: Ms. Katherine Garson, Assistant Corporation Counsel

Department of Water Supply Staff

Mr. Quirino Antonio, Jr., Deputy Manager
Mr. Kurt Inaba, Engineering Division Head
Mr. Lawrence Beck, Engineering Division
Mr. Richard Sumada, Waterworks Controller
Mr. Daryl Ikeda, Chief of Operations
Ms. Kanani Aton, Public Information and Education Specialist
Ms. Julie Myhre, Energy Management Analyst, Operations Division
Mr. Keith Okamoto, Engineering Division
Mr. Terrance Nago, Engineering Division
Mr. William Yamamoto, Water Service District Supervisor II, So.
Kohala
Mr. Andrew Higa, Water Service District Supervisor I, So. Kohala
Mr. John Earles, Lead Water Treatment Plant Operator, So. Kohala
Ms. Carolyn Lucas, Reporter, West Hawai'i Today
Mr. Brad Ballesteros, Photographer, West Hawai'i Today

CALL TO ORDER - Chairperson Smith called the Meeting to order at 9:44 a.m.

STATEMENTS FROM THE PUBLIC:

None.

APPROVAL OF MINUTES:

ACTION: Chairperson Smith entertained a Motion to approve the Minutes of the February 24, 2009 Water Board Meeting. Mr. Meierdiercks so moved; seconded by Mr. Kuailani and carried unanimously by voice vote.

APPROVAL OF ADDENDUM AND/OR SUPPLEMENTAL AGENDA:

No Supplemental Agenda.

SOUTH HILO:

A. JOB NO. 2007-926, HAKALAU IKI SPRING REMEDIATION:

The Department of Health Safe Drinking Water Branch has directed the Department to conduct a minimum 28-day monitoring period of the raw water from the Hakalau Iki Spring prior to allowing start-up of this spring source. During this monitoring period, the Contractor, Ed Higa General Contracting, will be on stand-by while the Department uses the new water monitoring equipment. In addition to the 28-day monitoring period, the Contractor has requested a 29 calendar-day time extension. This request is due to delays beyond the control of the contractor and consists of 13 rain-out days (17 calendar days), and 12 calendar days to do additional work to install the water conductivity monitoring equipment needed for the raw water monitoring described above. The total time extension requested is therefore 57 calendar days.

Note: 1.) The cost needed for the Contractor to furnish and install the water conductivity monitoring equipment for the monitoring work is available from the project's contingency fund. 2.) The new soda ash feed equipment will not be needed during this monitoring period.

Staff has reviewed the request and finds that the 57 calendar days are justified. This is the second time extension request.

Request	Time Requested	From	To
First Time Extension	62 Calendar Days	January 27, 2009	March 30, 2009
Second Time Extension	57 Calendar Days	March 30, 2009	May 26, 2009

The Manager recommended that the Board approve a contract time extension of 57 calendar days for this project. The contract completion date will be revised from March 30, 2009 to May 26, 2009.

Mr. Inaba noted that the above-mentioned monitoring is aimed at satisfying the requirement to assure that the spring source is not under the direct influence of surface water, and that the spring source would be considered a ground water source.

Chairperson Smith noted that the request before the Board was only for a time extension. He asked whether the additional cost involved was covered in the contingency.

Mr. Nago confirmed that the contractor was requesting additional time because there were 13 rain-out days and also because of the time required to put in additional conductivity monitoring equipment which was a parameter involved in the 28-day monitoring period. Mr. Nago confirmed that the additional cost submitted by the contractor, of \$4,800, would be covered by the \$31,000 contingency fund. Mr. Nago noted that the original contract cost was \$518,000.

MOTION: Mr. Kuailani moved to approve the recommendation; seconded by Mr. Taniguchi.

Mr. Kuailani asked if the contractor had any stand-by fee.

Mr. Nago said there was no stand-by fee.

Chairperson Smith suggested that in the future, the Department should include in the Agenda the original contract amounts, along with any change orders, even if covered within the contingency. This would ensure that the Board knows the status of projects and would expedite discussions at Board Meetings, he said.

ACTION: Motion carried unanimously by voice vote.

B. STEVE SHROPSHIRE HAKALAU AGREEMENT:

The developer, Shropshire Group, LLC (Steve Shropshire) is proposing to enter into an agreement to allow DWS to acquire land for a tank and well site for the Hakalau Water System. The additional storage and well site will allow the Department to increase the water availability in the area and reduce the reliance on surface waters. In exchange, Mr. Shropshire will obtain 25 units of water, eight of which will be available upon execution of this agreement. The additional 17 units will be available only upon successful completion of a tank and a well by the Department.

Staff has reviewed this agreement, and finds it acceptable as well as in concurrence with our 20-year Water Master Plan.

The Manager recommended that the Water Board approve the Water Facilities Agreement and that either the Chairperson or the Vice-Chairperson be authorized to execute the Agreement subject to the review and approval by Corporation Counsel.

MOTION: Ms. Kim moved to approve the recommendation; seconded by Mr. Kuailani.

The Manager clarified that Mr. Shropshire has a piece of property that hydraulically suits the Department's needs. The Department has been in contact with Mr. Shropshire to acquire the property so that DWS can build a new reservoir with the same overflow elevation. This would mean that DWS would not need to change its pressure zones. Under the agreement, Mr. Shropshire would sell the property to DWS, with the condition that DWS allows Mr. Shropshire 25 units of water. Of these 25 units, Mr. Shropshire wants 8 units initially, and he is willing to wait for the remaining 17 units. Mr. Shropshire would do the ground investigation to make sure the site is suitable for a tank. The reason that the Department wants this soil investigation done is because the soil up there is very shaky. He noted that when DWS did a 20,000-gallon tank in Hakalau, the Department spent a lot of money to put in a geotextile membrane and eight feet of suitable fill because of the Jello-like nature of the soil.

Under the agreement, DWS will pay the appraised value, and in addition the Department will allow Mr. Shropshire 25 units of water. The Manager noted that there were some things in the agreement that were not clear, and that the Manager wished to clarify. The Manager wanted the Board to approve the agreement, based on the following conditions. Condition #1 is that Mr. Shropshire shall pay the prevailing facilities charges for the 25 units of water. Condition #2 is the initial eight units of water that Mr. Shropshire wants will not be given to him until the Hakalau Iki spring restoration is complete. Condition #3 is that DWS purchases the property at the appraised value. The Department would make the three conditions part of the agreement. If the Board can approve the agreement, subject to the three extra conditions, and Mr. Shropshire agrees, then there will be a deal. If not, there will be no deal.

Ms. Kim asked if the deal was also contingent on the soil quality.

The Manager confirmed that this was part of the agreement already, and that Mr. Shropshire will pay for the soil investigation.

Mr. Meierdiercks asked about the size of the property.

The Manager said that the parcel in question was **one acre** that was part of a larger piece of property. The Department would subdivide the property for its own purposes. He confirmed that the property matches the Department's overflow elevation, which means that DWS can incorporate the property into its system easily. The site is also a possible site for a well. DWS is having so many problems with the Hakalau Iki Spring that in the future it may be advisable to put a well in Hakalau. Therefore the site would be for a tank *and* a well.

Ms. Kim asked whether the unit measurement is the maximum water flow, and whether it was 1.5 times the average.

The Manager confirmed that an equivalent unit of water is 400 gallons a day, but normally the Department goes with the maximum, which is 1.5 times the average. He explained that when a customer pays a facilities charge, the customer is entitled to 600 gallons a day **maximum usage**. He noted that the *average* household use is 400 gallons a day. The average Hilo household uses about 350 gallons a day, which is close to the average, he noted.

Ms. Garson recommended that a Board member should introduce an amended motion to approve the agreement, subject to all of the three conditions that the Manager outlined; she recommended that the Board vote on it.

Chairperson Smith asked what the value of the one acre was likely to be.

Mr. Inaba said it was a little over \$100,000, which will be confirmed by the appraisal.

Chairperson Smith asked if an environmental assessment needs to be made, because the purchase would be through County funds.

Ms. Garson confirmed that an environmental assessment is specified in the agreement.

Chairperson Smith asked the value of 25 units of water.

The Manager offered the formula of 5,500 times 24 plus 1,190, which equals \$133,190.

Mr. Inaba confirmed that Mr. Shropshire would be paying the prevailing facilities charge for 25 units.

The Manager noted that Mr. Shropshire would be paying for the geophysical (soil) investigation and the environmental assessment. Therefore, this would be a good value for DWS, he said.

The Chairperson noted that the record should show that a geotechnical report was done, at \$20,000 or thereabouts, along with subdivision and legal fees of possibly another \$20,000. He said he just wanted to enter into the record all of the different components that the landowner would *otherwise* have to take care of if he were to provide DWS with a turned-over site. He said he believed the deal was in the ballpark; he just wanted the Board to know what the dollar amounts were when the Board approves something. He noted that the Department will have the right to reject the site. The Department is aware that the soil in the area is saturated, so DWS will need to go to extra lengths to design a tank and well site to accommodate the soil conditions.

The Manager noted that the site was at the very top right-hand side of Chin Chuck Road.

Chairperson Smith noted that by going through with this deal, the Department would be reducing its reliance on surface water, complying with EPA rules and regulations, and improving the quality of water for DWS customers.

The Manager said that it would make the system more reliable for the Department's customers, and possibly provide for additional usage.

Mr. Taniguchi asked what the advantages were to Mr. Shropshire.

The Manager said the advantage would be that Mr. Shropshire would obtain 25 units of water that he currently cannot get.

Mr. Taniguchi asked what would happen if Mr. Shropshire just sold DWS the property and the Department did everything else (including the environmental assessment, the soil investigation, etc.)

The Manager said that the key element was timing; it would probably take five years if the Department were to just buy the property and do everything else. By doing this agreement, Mr. Shropshire would also benefit timewise because he would obtain the eight initial units of water upon restoration of the spring. This would be to Mr. Shropshire's benefit because he would obtain water sooner.

Mr. Meierdiercks asked how much acreage Mr. Shropshire owns on Chin Chuck Road.

Mr. Inaba said Mr. Shropshire owns 588 acres up there.

Ms. Kim asked who determines whether an environmental assessment or an environmental impact statement must be done.

Ms. Garson said that an environmental assessment is necessary because the project is using County funds. She said that the environmental assessment will show *whether* an environmental impact statement (EIS) is necessary. An EIS would be done only if necessary, she added.

The Manager summarized his recommended changes to the agreement:

- That the existing agreement should reflect that:
 - Mr. Shropshire shall pay the prevailing facilities charge for the 25 units,
 - And that the initial eight units that he wants will not be available until the restoration of the Hakalau Iki spring is completed.
 - And the DWS shall purchase the property based on the appraised value.

The Manager noted that if the soil study shows that the site is not suitable for the Department, DWS has the right to terminate the agreement.

AMENDMENT TO MOTION: Mr. Meierdiercks moved to make an amendment, which would incorporate all of the Manager's recommended changes to the agreement. Ms. Kim seconded.

Mr. Inaba wanted to clarify that in speaking about the spring, it meant the *successful* completion of the spring. The Department of Health would have to approve the spring as a ground water source, he noted.

The Manager said that what it meant was the Department's ability to use the spring.

Chairperson Smith noted that there are many checks and balances along the way, and that this agreement is a **conceptual** one that does not provide the funding for the purchase of the property.

ACTION ON AMENDMENT: The amendment to the recommendation carried unanimously by voice vote.

ACTION ON MOTION, AS AMENDED: The recommendation *as amended* carried unanimously by voice vote.

SOUTH KOHALA:

A. **JOB NO. 2007-919, EARTHQUAKE DAMAGED TANK REPAIRS, GROUP #2 (N. KONA/S. KOHALA), COUNTY OF HAWAI'I, STATE OF HAWAI'I, FEMA-1664-DR-HI, FIPS NO. 001-UVKJ8-00:**

(This item was deferred from the 2/24/09 Water Board Meeting.)

Three bids for this project were received and opened on January 22, 2009, at 2:00 p.m.; and the following are the bid results:

<u>Bidder</u>	<u>Amount</u>
Isemoto Contracting Co., Ltd.	\$2,385,615.00
Bolton, Inc.	Non-Responsive
Abhe & Svoboda, Inc.	Non-Responsive

Project Scope: This project consists of the repair and seismic retrofit of six (6) reinforced concrete tanks in N. Kona (2 ea.) and S. Kohala (4 ea.) districts that were damaged in the October 15, 2006 Kiholo Bay Earthquake.

Project Cost:

1) Isemoto Contracting Co., Ltd.	\$2,385,615.00
2) Construction Contingency (10%)	<u>\$238,561.50</u>
Total Construction Cost:	\$2,624,176.50

Contractor Qualifications:

As part of the project plans and specifications, each bidder was required to show that they meet specific qualifications for repair work involving the retrofit of tanks for Seismic Zone 4. Of the three (3) bidding contractors, only Isemoto Contracting Co., Ltd. met the qualifications.

Funding for this project will initially be from DWS's CIP funds; however, DWS will be pursuing reimbursement from the Federal Emergency Management Agency (FEMA) for up to 75% of the actual construction costs.

The Manager recommended that the Board award the contract for JOB NO. 2007-919, EARTHQUAKE DAMAGED TANK REPAIRS, GROUP #2 (N. KONA/S. KOHALA), COUNTY OF HAWAII, STATE OF HAWAII, STATE OF HAWAII, FEMA-1664-DR-HI, FIPS NO. 001-UVKJ8-00, to Isemoto Contracting Co., Ltd., for their bid amount of \$2,385,615.00 plus \$238,561.50 for construction contingency for a total contract amount of \$2,624,176.50, subject to review as to form and legality of the contract by Corporation Counsel.

MOTION: Mr. Kuailani moved to approve the recommendation; seconded by Mr. Taniguchi.

The Manager noted that this project is to repair retrofit tanks damaged by the 2006 earthquake. There were three bidders, but two bidders were non-responsive. He recommended the award be made to the one bidder who responded. By "non-responsive," it means that the two bidders did not comply with the bidding documents. He noted that the total cost, including contingency, was pretty close to the Department's estimate. FEMA, which has already done their Damage Survey Reports, is likely to reimburse the Department. He noted that this was the second grouping of quake-damaged tanks to be fixed. The Board previously had approved another grouping of tanks that are currently undergoing repairs, he noted.

Mr. Harai asked if FEMA was okay with only one bidder.

The Manager said that as long as DWS complies with FEMA's requirements and the repair work cost is reasonably close to the initial estimate, then it should be okay.

Mr. Taniguchi asked about the protest which had led to this Item being deferred at last month's Board Meeting.

The Manager said that the protest was dropped.

Ms. Garson noted that the protesting bidder was given an opportunity to appeal the denial of their protest, but the bidder did not appeal. Meanwhile, the period for any further action on the bidder's part lapsed, so the matter is concluded.

The Chairperson confirmed that as long as DWS follows procedure when putting projects out to bid, it is valid even if only one contractor has an acceptable bid.

The Manager noted that the term "non-responsive" means that the bidder did not comply with the provisions set forth in the bidding documents. After opening the bid packets, the

Department found that the above-mentioned bidders did not meet the conditions in the bidding documents, and so therefore they were non-responsive.

ACTION: The Motion carried unanimously by voice vote.

B. ASSIGNMENT OF WATER ALLOCATION PURSUANT TO THE PARKER WELLS 3 AND 4 TRI-PARTY AGREEMENT

The Assignor, Mauna Lani Services, Inc., is intending to grant, assign, transfer and convey its rights to and allocation of water to Assignee, Tokyu Corporation, from the Lalamilo Wells A, B, C and D, and Parker Wells 1, 2, 3 and 4. This assignment shall exclude the portions of such allocation that have been assigned to other owners of property within MLS's Development Area prior to the date of this assignment. All other terms and conditions in the Parker Wells 3 and 4 Tri Party Agreement between the Assignor, Mauna Kea Properties, Inc., and the Water Board of the County of Hawai'i shall remain unchanged.

The Manager recommended that the Water Board approve this Assignment of Water Allocation and authorize either the Chairperson or Vice-Chairperson to execute the document subject to the review and approval of the Corporation Counsel.

Ms. Garson asked the Board to again defer this Item to the next Board Meeting. (*See below for Action on Items 6(B) and (C).*)

C. ASSIGNMENT OF USE AND OCCUPANCY AGREEMENT BETWEEN THE STATE OF HAWAI'I, DEPARTMENT OF TRANSPORTATION AND MAUNA LANI SERVICE, INC. TO THE WATER BOARD OF THE COUNTY OF HAWAI'I

Mauna Lani Service, Inc. (MLS) constructed a 24-inch waterline within the Queen Ka'ahumanu Highway pursuant to a portion of the improvements required to serve MLS's Development Area as described in the Parker Wells 3 and 4 Tri-Party Agreement. The Department of Transportation of the State of Hawai'i (DOT) is requiring that the developer, MLS, execute a Use and Occupancy Agreement (UOA) for this installation of the waterline and make payment to DOT based upon an appraisal by the DOT. DOT and MLS intend to execute the UOA shortly, but payment will be delayed once an appraisal is completed. As part of the dedication of the water system improvements for the Parker Wells 3 and 4 project, the DOT is also requiring that the UOA be assigned by MLS to the Water Board of the County of Hawai'i.

The Manager recommended that the Water Board accept the assignment of the UOA contingent on the execution of the UOA between MLS and the DOT. It is also recommended that the Water Board authorize either the Chairperson or the Vice-Chairperson to execute the Assignment of the Agreement subject to the review and approval of the Corporation Counsel.

Ms. Garson asked that the Board defer this Item to the next Board Meeting. She said that the project was not yet completed, and the other parties had issues with the documents that

Corporation Counsel had sent them to be signed. It was not clear what those issues were, she said.

Chairperson Smith asked Ms. Garson to make sure that the Department does not have any ongoing obligation to pay DOT for crossing their highway. He asked Ms. Garson to do a write-up on this project, so that it is made clear why there are so many different entities involved in granting easements, etc.

ACTION: Mr. Meierdiercks moved to defer Items 6(B) and (C); seconded by Mr. Harai, and carried unanimously by voice vote.

NORTH KONA:

A. RIGHT-OF-ENTRY FOR PLANNING & ENGINEERING STUDIES WITHIN DWS MOEAUOA TANK SITE TAX MAP KEY (3) 7-5-001:055 AND 117:

The State of Hawai'i, Department of Human Services, Housing and Community Development Corporation of Hawai'i has requested a right of entry into the Department's Moeauoa Tank Site for the purpose of conducting planning and engineering studies for an Environmental Assessment for the development of an exploratory well within the site. The Moeauoa Tank is no longer in use as part of the existing water system because the elevation does not match other reservoirs in the service area.

Engineering staff and Corporation Counsel have reviewed the request and have no objection.

The Manager recommended that the Board approve this Right-of-Entry for a period not to exceed 60 days from the effective date of the document and delegate authority to the Manager to sign the document, subject to review as to form and content by Corporation Counsel.

Mr. Beck used the overhead projector to show the location, which is along the Old Māmalahoa Highway, south of the Palani Road/Māmalahoa junction.

The Manager noted that it is near Keopu, and that the Department has several tanks nearby. The Moeauoa Tank does not match the other tanks in the area elevation-wise.

MOTION: Mr. Meierdiercks moved to approve the recommendation; seconded by Mr. Harai.

The Manager noted that this Item is just a right-of-entry to allow the State to do an environmental assessment, (or an environmental impact statement, if necessary.) The State is looking to put up a well to provide capacity for 240 affordable housing units in Kealakehe. The units need a water source, and this is the initial step to get the water source for the housing project.

Mr. Inaba noted that DWS holds the existing site by executive order from the State.

Final Inspection Date: *to be announced at the Meeting*
Water System Cost: \$175,200.00.

The Manager recommended that the Water Board accepts these documents subject to the approval of the Corporation Counsel and that either the Chairman or the Vice-Chairman be authorized to sign the documents.

Ms. Garson asked that Item 8(A) 1 and 2 be deferred to the next Board Meeting.

The Manager noted that sometimes in an effort to assist developers, the Department puts items on the Agenda with the understanding that the final inspection will be done by the next Board Meeting date. Sometimes that does not pan out, he said. He asked if the Board would prefer that the Department does not continue doing that. In hopes of assisting developers, the Department would like to continue this practice unless there are Board objections.

Mr. Inaba noted that in this case, the final inspection had been scheduled to be done before the Board Meeting, and therefore the Item was placed on the Agenda. The final inspection was actually scheduled for two weeks ago, but it was postponed to last week. Due to the rains, the contractor was unable to do the final inspection in time for the Board Meeting.

Chairperson Smith agreed with continuing the practice, saying that if a project is big, it should go on the Agenda. If it is not ready, it can be deferred to the next Meeting. He noted how everybody comments on how slow County government is, so DWS needs to be proactive to address the community's issues in the interest of benefiting all DWS customers.

ACTION: Mr. Kuailani moved to defer Item 8 (A) 1 and 2 to the next Board Meeting; seconded by Ms. Kim, and carried unanimously by voice vote.

B. ENERGY PERFORMANCE CONTRACTING:

Ms. Myhre made a presentation to the Water Board regarding the benefits, goals and process of Energy Performance Contracts. She said she would be reporting to the Board over the next several months on the project as it evolves. Today's report was an introduction, for which Ms. Myhre provided handouts and a slide presentation.

The bottom line for DWS is that avoided energy costs pay for new equipment, she said. For example, if the Department chooses to put in a new, *energy-efficient* pump motor, the new motor will use less energy and DWS will pay less money to HELCO. The savings mean money for the DWS to **pay for** the motor.

She explained about companies called Energy Service Companies (ESCOs) that are essentially design-build contractors, who can design and have a project done faster than if DWS had a lot of competing projects within the Department that compete for CIP money.

The State Procurement Office has six ESCO companies on their approved vendor list, and DWS has short-listed three of them that have experience with pumps, motors, pipelines, etc. that the Department deals with. The procurement process allows DWS to short-list.

Chairperson Smith said he was concerned that by short-listing vendors, DWS might open itself up to protests, which might delay projects.

The Manager said this could be alleviated in the Invitation for Proposals, whereby inserting language about specific experience would weed out vendors who do not qualify.

Ms. Myhre noted that one downside to this kind of contract is that the contracts can be as long-term as 20 years.

Once being selected, an ESCO company does an Energy Audit which examines where DWS can make energy savings. If the Department decides that it wants to implement the changes the ESCO company proposes, then a contract is negotiated. If not, then DWS must pay the ESCO's cost to do the Energy Audit. If DWS chooses to go ahead with the ESCO, the cost of the Energy Audit is rolled into the long-term contract.

Ms. Myhre explained that arranging for financing is negotiated at the same time as negotiating the contract. Financing may come from grants or CIP funding, she noted. The last step is signing the contract and going to work, she said.

When signing an Energy Saving Contract, the parties are sharing the risks and the benefits. For example, if DWS saves \$1 million, DWS would pay a percentage of that amount to the ESCO. For example, DWS pays the ESCO \$500,000 over the life of the contract, and the ESCO prepares a measurement and verification table that says the ESCO will verify that DWS is saving the amount of energy the ESCO said it would. If DWS does not save that amount, the ESCO writes DWS a check; they are on the hook for the Energy Savings that are not realized, and must pay DWS.

The Manager confirmed that if the DWS does not experience any energy savings, the ESCO does not get their percentage and must pay DWS. That is why the Energy Audit is so important to the ESCO. By doing the Energy Audit, the ESCO determines whether energy savings can be accomplished or not.

Chairperson Smith said that the Department must make sure that the ESCO has a performance bond to ensure that they can do everything they say they can do. There is a financial incentive for them to do what they say, and consequences if they do not. This arrangement would provide recourse for DWS if the ESCO does not deliver. He noted that it might be advantageous for the private contractor to apply for financing, because the private company may be eligible for energy tax credits and to take advantage of depreciation, which the County cannot.

Ms. Myhre said the beauty of energy performance contracts is that the contracts allow for lumping "low-hanging fruit" (things with a faster payback) with things that have a longer-term payback.

Chairperson Smith urged the Department to take time to carefully write the contracts. DWS needs good advice since this is the first time DWS is doing an energy performance contract. He urged the Department to hire a consultant if necessary to get the contract right, and to avoid protests during the vendor selection process.

The Manager agreed, saying that the most critical thing is the vendor selection criteria. The criteria have to be very tight and precise, otherwise DWS may be subject to appeals or discrimination suits.

Ms. Myhre noted that this initiative has three goals: modernizing aging equipment; reducing energy use (i.e., generating cash from the energy savings); and developing clear sustainability plans (water conservation, fuel reduction and Greenhouse Gas credits.) She provided a draft schedule for the next several months. In the next month, DWS plans to issue an Invitation for Proposals, and Ms. Myhre will do a status report at the next Board Meeting. In May or June, the selection of the ESCO is slated, and the Board will need to meet in Executive Session for the selection. In July or August, the Energy Audit will take place, and once completed the Department will decide whether to go with the proposals the ESCO makes, or pay the ESCO off. Assuming the ESCO stays on, the contract negotiations will take place in September-November. The Department will decide whether to sign the Energy Savings Contract with the ESCO, and if so, the ESCO will go to work.

Chairperson Smith expressed concern that there may be 9 or 10 projects at once, and not just one simple energy audit. Not everything would be done in five months' time, he said.

Ms. Myhre said that one benefit of an ESCO contract is that these are large contracts, which could include a wide range of items in one contract. A large contract involving many different pieces would be in the Department's interest, in order to share the risk. The minimum cost for an ESCO to bid on a contract is \$500,000, she noted. Ms. Myhre would provide the ESCO with the three most recent years of DWS data.

The Manager said that he wanted to learn more about the energy saving contracts, and shared the Chairperson's concerns about grouping similar items into one huge project. He would be meeting tomorrow (3/25/09) with Ms. Myhre and Mr. Young, who would provide him with more information on the benefits of doing energy savings contracts.

Chairperson Smith urged the Department to talk with the other counties or agencies on their experience with doing energy savings contracts.

Mr. Kuailani asked whether the energy savings can be credited to DWS customers.

The Manager said the initiative would be an effort to keep DWS expenses down, and thereby to keep customers' rates down. The aim is to operate less expensively, which would help keep rates down.

C. MONTHLY PROGRESS REPORT:

The Manager said that the Board is always welcome to contact Department personnel with questions on the status/progress of any project.

Mr. Taniguchi asked if the projects are listed on the Monthly Progress Report by districts or chronologically. He asked how he can find the grand total of projects.

Mr. Okamoto said that the total for the first five years listed, from 2001 through 2005, is on Page Three of the Monthly Progress Report. From Fiscal Year 2006 to the present, the totals are listed year by year, per the request of a previous Water Board, he noted.

The Manager welcomed the Board's suggestions on simplifying the Monthly Progress Report.

Mr. Taniguchi said he would look into making suggestions.

D. DEPARTMENT OF WATER SUPPLY PROPOSED OPERATING AND CAPITAL IMPROVEMENTS FOR FISCAL YEAR 2010:

A Public Hearing on the proposed Operating and Capital Improvements for Fiscal Year 2009-2010 was held earlier today. Public Hearing Notice was published in the Hawai'i Tribune-Herald and in the West Hawai'i Today on March 13 and 15, 2009.

The Manager recommended that the Water Board approve the proposed Fiscal Year 2009-2010 Operating and Capital Improvements.

Ms. Garson said the Budgets would be on next month's Agenda, and that this was the first hearing of the Budgets. She said that the Board could move to approve and then discuss the Budgets.

MOTION: Ms. Kim moved to approve the recommendation; seconded by Mr. Taniguchi.

Mr. Taniguchi asked Mr. Sumada about expenses, and asked if it was standard to look at the percentage of change based on the proposed and current budgeted amounts.

Mr. Sumada said the approach changes every year, depending on the Board's wishes. Some Boards instruct Mr. Sumada to base the change in expenses from *actual* to *proposed*, while other Boards want it to be the other way around. The approach goes back and forth, depending on what the Board wishes.

Mr. Taniguchi asked what assumption Mr. Sumada uses in the calculation of the power purchase. He noted that there was a **\$3 million decrease** projected for the power purchase.

Mr. Sumada said that Operations Division provided the estimate.

Mr. Taniguchi noted that the Department posted a huge increase this year; the power purchase went from \$18 million, while the projected amount is \$21 million. Now the Department is projecting that the power purchase will go back down to \$18 million. He asked how the Department came up with this figure. He noted that the assumption on water usage (the revenue from water sales) is projected to decrease. He asked if there was a formula used. The reason he was asking was because the power purchase was the biggest hit to the Budget. He noted that it shows an approximately 3.4% reduction over the actual cost from last year. Eight percent of that is because of the power reduction. He said if that is the true figure, it will throw everything off because it is a large dollar amount.

Ms. Myhre said that the energy cost fluctuated very high in June and July. The Department thought that the energy cost would be some \$20 million. Then the price of oil dropped below \$50 a barrel. The Department is looking at energy costs going back down for the year, below where energy costs were expected to be at the beginning of the year.

Mr. Taniguchi asked how the Department made its calculations, and if it used a formula. He noted that the energy cost increase was a large amount, and he was concerned because it was much larger than the other increases in the Budget. He expressed concern that if the energy cost increase does not happen or if the dollar amount of the increase stays about the same, it will throw the Budget way off.

Ms. Myhre explained that she calculates how much HELCO is expected to charge DWS, how much water consumption will be, and how much energy would be based on kilowatts per gallon.

Mr. Taniguchi said he averaged the energy cost for this year, but noted that Ms. Myhre said the energy cost rose in July.

Ms. Myhre confirmed that the energy cost rose **through** September, noting that DWS billing lags HELCO by a couple of months.

Mr. Taniguchi noted that last month's energy cost was \$1.3 million. However, the average for 8 months came to \$1.7 million, noting that the previous month's energy cost was around \$2 million.

Ms. Myhre said the energy cost is dropping, and continues to drop. The energy cost is expected to drop below \$1 million in the next couple of months. She noted that water consumption is dropping, while energy costs are dropping off or stabilizing. She expects energy costs will continue to decrease.

The Manager noted that the energy cost figures in the Budget are not necessarily based on the same number of days. He cited the example of a consumer's HELCO bill, which will vary widely if it is 61 or 59 days. That is a variation that needs to be considered, he noted.

Mr. Taniguchi said that he averages the energy cost by the total, by the months, coming to \$1.7 million. He noted that if the figure was to be accurate, it took into account February, which had 28 days.

The Manager said that total would be realistic. He noted that the Board ruled last December to allow the Department to adjust the power cost more frequently, through the power cost adjustment clause. The last time DWS raised the power cost by 68 cents. If the Department finds that the power cost is less than the power cost stated in the Budget, then DWS has the right to reduce the power cost adjustment to the customers to bring the balance sheet more in line. The power cost adjustment gives DWS flexibility. The Department can pass the power cost adjustment on to customers, or take it back (reduce it).

Chairperson Smith noted that before, the Department could only adjust their power cost adjustment charge **once** a year. However, the Board held a Public Hearing on the matter in December and decided to allow the Department to adjust the power cost adjustment **every two months**, thus enabling DWS to be more reactive to power cost changes.

The Manager noted that each water bill is basically comprised of three different figures:

- Standby
- Usage
- **Power cost adjustment**

The **power cost adjustment** is where DWS passes through the electrical cost to the customers, the Manager said.

Mr. Taniguchi asked if the entire \$18 million was passed through to customers.

The Manager confirmed this.

Mr. Taniguchi asked if the \$21 million that DWS anticipated to pay in energy cost this year was a true expense.

The Manager confirmed that it was an expense.

The Deputy Manager noted that at the beginning of the fiscal year which starts in July, the Department's power cost charge to customers was \$1.70, but when the price of oil increased, the Department changed the power cost charge to \$2.38 as a pass-through to customers. In the last month the Department looked at its power cost, it came down slightly, to \$2.19. He said that for the fiscal year, the Department is projecting the total power cost to be \$21 million. (Earlier, the Department estimated it at \$18 million.) In other words, the power cost was rising.

Mr. Taniguchi asked if the \$21 million is what the Department paid HELCO, and asked if the power cost that was passed through to customers comes in the revenue from water sales.

The Manager confirmed that was correct. He noted that the Department approached the Board regarding the frequency of the power cost adjustment because, in the first four months of the

year, DWS was losing \$2.1 million. Allowing the Department the flexibility to adjust the power cost adjustment every two months helped the Department to keep current. He confirmed that the \$21 million in the Budget is made up on the income portion by revenue.

Mr. Taniguchi asked about the amount the Department is collecting back from the customers.

The Deputy Manager said the amount that DWS is collecting back is the \$2.38 power cost, noting that the Department's revenues also come in collections for water usage.

Mr. Taniguchi said that if the Department increases the power cost adjustment charge again as a pass-through to the customer, that amount will be reflected in revenue.

The Deputy Manager confirmed that the Department will change the power cost adjustment only if the energy cost fluctuates.

Chairperson Smith confirmed that the idea is that the power cost adjustment will go up and down, reacting to the power cost charge from HELCO.

Mr. Taniguchi asked for an explanation of the safety expenses.

Mr. Sumada said that they include items like steel-toed shoes, first aid kits and safety belts. The largest safety expense last year, he noted, was for fall prevention equipment, and that many of the items are not purchased every year.

Chairperson Smith suggested that Mr. Taniguchi give an overview of his questions, and email specific questions to Mr. Sumada. In turn, Mr. Sumada can come back to the Board at the next Meeting with a consolidated response to all of Mr. Taniguchi's questions. He added that the budget deliberations were a multi-part process, and not everything needs to be resolved today.

Mr. Taniguchi asked if the \$1.22 million in interest on bonds was for the entire year.

Mr. Sumada said no, it was for half of the year for the \$50 million that the Department is seeking in General Obligation Bonds.

The Manager said that DWS has contacted the County regarding this bond issue.

Mr. Taniguchi asked what the \$163,000 for Materials and Supplies included, noting that this item posted a 13 percent increase.

Mr. Sumada said it included a wide range of items, from pencils to water meters to small equipment.

Mr. Taniguchi asked what kind of insurance the Department has policies for.

Mr. Sumada said DWS has a general liability policy, an auto liability policy and a property policy.

Mr. Taniguchi asked about the substantial increase in janitorial services.

Mr. Sumada said that personnel-wise, janitorial services should be decreasing due to the Department's cutback on contractual services when DWS hired its own janitors.

Mr. Taniguchi noted that the Department was in a hiring freeze, and noted that no monies were allotted for CIP in the proposed Budget. He suggested using the salaries and benefits which are subject to the freeze, towards CIP. In so doing, it would show that DWS is doing its part amid the economic downturn.

The Manager noted that Customer Service and Field Operations positions would continue to be filled because they are the Department's core functions. However, the rest of the positions will remain unfilled during the hiring freeze, following the County's lead. In the meantime, those monies can be used elsewhere. The Department does not want to remove those unfilled positions from the list, because DWS wants to be able to hire once the hiring freeze is lifted.

Mr. Taniguchi asked about projected revenue from rents, listed on the Budget as zero.

Mr. Sumada said he did not want to budget any rents because the Department does not yet have a tenant to replace the Judiciary, which was moving to its new building this weekend.

The Manager said the Department was actively pursuing new tenants for the entire downstairs being vacated by the Judiciary.

Mr. Taniguchi asked about bad debt, which was budgeted as zero in the proposed Budget.

Mr. Sumada said he took bad debt out of the Budget because it was a non-cash item that would complicate the Budget. He said that numbers like bad debt and depreciation are accounting entries that are not a result of cash disbursements. He wanted the Budget to be a reflection of actual cash coming in and out.

Mr. Kuailani asked about the bad debt expenses entry of \$5,000 (for the FY2009 Budget on Page 8 of the Budget Report.)

Mr. Sumada said the Department would still have bad debt expenses, but it was just not going to be shown in the Budget. Instead, it would be on the Department's Financial Statement. It is an accounting entry, but Mr. Sumada said he did not want it shown in the Budget like it has been.

Chairperson Smith reiterated that Mr. Taniguchi would email a summary of questions to Mr. Sumada, with a copy of the email to himself (Chairperson Smith). Mr. Sumada then can be prepared to respond to all of those questions at the next Board Meeting.

Ms. Garson said that any of the Board members are welcome to ask any questions that they would like the staff to prepare responses for.

Ms. Kim asked who does the calculations for depreciation.

Mr. Sumada said the outside auditors provide guidance on how depreciation is calculated annually.

Chairperson Smith asked if the County and DWS are self-insured.

Mr. Sumada said DWS had been self-insured for many years, up to about five or six years ago, when the Board requested that DWS obtain general liability insurance, auto liability insurance and property insurance.

Chairperson Smith noted that if DWS reduces its fleet of vehicles, the Department's insurance premiums will decrease.

Ms. Garson noted that there must be two readings of the Budget, and that this is the first reading of the Budget. The second reading is at next month's Meeting. She noted that there is a Motion on the floor to approve the Budget, and that today would be one of the Board's opportunities to amend the Budget. The current Motion is to approve the Budget, and the Board today would be basically sending the Budget forward as is. However, this is not the final Action on the Budget.

Chairperson Smith said that Ms. Garson had therefore just clarified it so the Board is basically approving the *clarified* Motion.

Ms. Garson confirmed that this was correct.

The Manager said that the Department will provide the answers to Mr. Taniguchi's questions at the next Board Meeting, and that hopefully the Board will approve the Budget at the second reading (at the next Board Meeting).

Ms. Garson noted that the public is invited to provide public statements on the Budget at the Public Hearing, as well as the two readings of the Budget.

Chairperson Smith said that based on the Department's responses to the questions posed by Mr. Taniguchi, if the Board chooses to amend the Budget, the Board would then be looking at an *amended* Budget at that time. If the Board chooses to propose the same Budget, then that is what the Board will be reviewing.

ACTION: Chairperson Smith called for a vote on the clarified Motion; carried unanimously by voice vote.

E. REVIEW OF MONTHLY FINANCIAL STATEMENTS:

No discussion.

F. WATER RATE STUDY:

Discussion took place on the new water rate study that the Department is planning to conduct, to address the shortage of funds being generated from water sales.

The Manager said that the Department intends to go through procurement procedures soon, and will provide updates to the Board.

G. MANAGER’S REPORT:

The Manager provided an update on the following:

1. Negotiations with Kamehameha Investment Corporation: The ball is in KIC’s court; KIC is working with their master developer.
2. Palani Road Transmission Project: DWS wants to advertise this project very soon. Ms. Garson noted that one last parcel needs to be condemned, and hopefully the motion to condemn will be filed in court by next month. This project will significantly boost DWS’s ability to transmit mauka water makai.
3. AWWA ACE 09 (National Conference): The Manager urged Board members to make their bookings soon because the hotels are getting booked up fast.
4. AWWA (Local Chapter) Conference: DWS Tap-Off Competition was held, with Hilo, Waimea and Kona teams competing earlier in the week. Waimea’s team won with an impressive time of 1.16 minutes. Runner-up was Kona, with a time of 1.37 minutes. Waimea now goes on to represent DWS on Oahu in May. If they win on Oahu, they will then represent Hawai’i at next year’s national AWWA Convention in Chicago. Waimea has represented Hawai’i twice already at the national tap-offs.

H. CHAIRPERSON’S REPORT:

Chairperson Smith proposed dates and locations for the remainder of 2009 Water Board Meetings for review and approval:

April 28	(already set for Hilo)
May 26	KONA
June 23	WAIMEA
July 28	HILO
August 25	KONA
September 22	WAIMEA
October 27	HILO
November 24	KONA
December 15	HILO

Chairperson Smith said it was important for the Board to watch what the County Council is scrutinizing, as a hint on what the Board should consider regarding matters like vehicle fleet reduction, personal cell phone use and gas usage/energy conservation. He believed that the Department should be proactive in considering such measures amid the current economic situation.

The Manager noted that Ms. Aton had emailed Vice-Chairperson Mukai a list of DWS vehicles which are taken home by staff. This list, requested by Mr. Mukai, will be provided at the next Board Meeting.

Chairperson Smith said he believed that the criteria for assigning take-home vehicles is critical. He said that when the Manager briefs the Board on the list, a justification or criteria of who gets a take-home vehicle needs to be entered into the record.

The Manager said the criterion that DWS uses is **first response to emergencies**.

Regarding the proposed meeting venues, Mr. Kuailani suggested that the Board hold its August Meeting in Ka'ū. He asked if there was any reason why no Meetings were listed for Ka'ū or Puna.

The Manager agreed that a Meeting in Hawaiian Ocean View Estates (Ka'ū) would be a good idea, and suggested timing the Meeting for when the design of the well is done and the second phase of construction is underway. As for Puna, the Department currently has no projects in Puna except for the Automated Meter Reading, but was sure that the residents would appreciate DWS holding a Meeting there.

Chairperson Smith suggested that the Department evaluate Ka'ū and Puna. If there is a reason for holding a Meeting there at a certain time of the year, the Board can decide at the next Meeting. He explained that his proposed Meeting schedule was in the interests of rotating Meetings around the island.

ANNOUNCEMENTS:

1. **Next Meeting:**

The next Meeting of the Water Board will be held on April 28, 2009, 10:00 a.m., at the Department of Water Supply, Operations Center Conference Room, 889 Leilani Street, Hilo.

2. **Following Meeting:**

The Board did not discuss whether to hold the May 26, 2009 Meeting in Kona as proposed by the Chairperson.

3. **Site visit today:**

Chairperson Smith noted that the Board has a site visit to Waimea Treatment Plant, (65-1190 Spencer Road, Kamuela, HI) to view and discuss Waimea Reservoir repairs.

Ms. Garson gave the ground rules for the site visit:

- The group must stay together because it is a Meeting;
- Everyone needs to hear the presentation;
- The site visit proceedings are being recorded; minutes are to be taken.

She suggested that at the site, it may be windy and therefore difficult to hear. She suggested that the presentation be done here at Waimea Community Center, prior to departure for the site visit. This would minimize discussion during the site visit.

Chairperson Smith agreed that having the presentation prior to departure for the site visit would help the Board understand what they are looking at. He suggested recessing to allow the Board to get their lunches and reconvene to hear the presentation.

Chairperson Smith called a **recess** at 11:36 a.m., and reconvened the Water Board Meeting at 11:45 a.m.

Mr. Nago, the project engineer, provided background on the damage and repairs of the reservoirs with a handout prior to the presentation.

Mr. Nago explained that Waikoloa Reservoir #2 was damaged during the 2006 earthquake. Water started leaking out of the reservoir and went through the embankment and down the other side. The Department had to completely drain the reservoir, and it remains drained until repairs are completed. The Department will be installing a liner on the inside of the reservoir and stabilizing the exterior slope of the reservoir. The project cost is \$1.9 million, and DWS will be reimbursed by FEMA for up to \$900,000.

Waikoloa Reservoir #2 is one of three 50 million-gallon reservoirs. It receives water from two different streams. From there, water is piped to Waimea Treatment Plant, where it is treated and stored in the Clear Water Reservoir for distribution.

Driving up to the Treatment Plant, the Board will see a 6 million-gallon reservoir. Going higher, the Board will see an 8.5 million-gallon pentagon-shaped reservoir. After that, the Board will pass the three 50 million-gallon reservoirs: Waikoloa Reservoir #3, then Reservoir #1 and finally at the topmost position, Reservoir #2. The numbering of the reservoirs is based on when the reservoirs were constructed.

The landowner where #1 and #3 are located is the state Department of Land and Natural Resources (DLNR), where DWS has an executive order. The landowner where #2 is located is the Department of Hawaiian Homelands (DHHL), and DWS has a permit to operate this reservoir. Both DLNR and DHHL are major stakeholders and have attended all meetings held on this project so far.

Mr. Nago noted that the cattle present near the site are not allowed access to the reservoir, which is fenced off. (Parker Ranch has a lease up there to graze cattle.)

Mr. Nago noted that the Waimea Treatment Plant is the only water treatment plant operated by DWS.

The Manager noted that this treatment plant has been improved dramatically over the years, to comply with various EPA rules and regulations. The Department of Health is the local agency which enforces EPA rules, he noted.

The Manager said that Ms. Myhre would give an overview of the hydro-generator which generates enough power to run the entire treatment plant, and send some energy back to the HELCO grid. The hydro-generator was installed more than 20 years ago, but was recently upgraded.

Mr. Nago outlined the repair project. The concrete panels lining the reservoir will be repaired, and then lined with two different types of geotextile. One layer will act as a protective cushion on top of the concrete itself. The other layer, a smooth material called Hypalon, will lie on top of the cushioning layer, and completely seal the reservoir. The outside of the reservoir will also be repaired. Some of this exterior work will stabilize the outside slope and also put in a drainage system so that any water present in the embankment will be drained away.

On the status of the project, Mr. Nago said it was in its very beginning stages. Goodfellow Brothers is the contractor, and is currently putting together its submittals for approval. Silt fences at the site are slated to be installed this week. The contractor has done some excavating to locate existing pipes underground and take some soil samples.

Mr. Kuailani asked how much water was being taken from the two streams mentioned earlier.

The Manager said that one stream has a dam that allows DWS to take a portion of the diverted water. He suggested that the first stop on the site visit be the Waimea Treatment Plant, then the hydro-generator, and finally to Waikoloa Reservoir #2 at the top.

Chairperson Smith called for a **recess** at 12:02 p.m. and reconvened the Meeting at Waimea Treatment Plant at 12:17 p.m. Six Board members were present, so there was a quorum. (Mr. Harai left the Meeting at the Waimea Community Center.)

Joining the Meeting were West Hawai'i Today reporter Carolyn Lucas and West Hawai'i Today photographer Brad Ballesteros.

SITE VISIT TO VIEW WAIMEA TREATMENT PLANT, 65-1190 SPENCER ROAD, KAMUELA

Ms. Myhre gave an overview of how the hydro-generator at the Waimea Treatment Plant works, explaining that all of the power it generates comes from the site's elevation, along with the water's pressure and volume. She explained that the water comes down from the reservoirs through pipelines to the hydro-generator. The water hits a Pelton wheel, which turns a motor which creates energy, she said. The power generated by the hydro-generator operates the Waimea Treatment Plant, and there is enough energy left over to sell back to HELCO. She noted that DWS gets approximately \$1,000 from HELCO for the excess power that the hydro-generator generates.

Mr. Okamoto noted that the raw water storage reservoirs are located up the hill from the treatment plant. He pointed out where the raw water comes down and enters the hydro-generator.

Mr. John Earles, Lead Water Treatment Plant Operator in Kohala, gave an overview of the Waimea Treatment Plant's operations. He noted that after the raw water leaves the hydro-generator, it enters the start of the treatment process. A coagulant is added to the water right where it enters the treatment plant. The water and coagulant are mixed, and then the water is allowed to settle out.

Mr. Okamoto explained that after going through the hydro-generator, the water has a coagulant added to it, which bundles the particles together in a rapid-mix tank. He pointed out the facility's "flock tanks," where the next step takes place. The bundles of particles are taken and made into bigger bundles, which settle down into settling tanks.

Mr. Earles noted that at this point the water has become clear, and one could see as far as eight or ten feet deep. A sludge scraper drags all the mud down to the end, where the mud is discharged.

Mr. Okamoto noted that from this step the water is sent to filter beds. When the water leaves the filter beds, the water goes through dual-media, or rapid-sand, filters. Whatever is left in the water goes through the filters and is removed. The water is then chlorinated and goes into the 4-million gallon Clear Well, from which it is sent downhill.

The Manager noted that the scrapers in the sludge tank constantly scrape the sludge into a trough, and the sludge is periodically discharged into the "sludge lagoon," the first reservoir that the group passed coming up today. The Manager noted the knobs that indicate only the top water that is allowed to go into the tank that holds the clearest water.

Mr. Okamoto pointed out the covered reservoir which is the Clear Well. Its water is the clean water that goes all the way down the hill to customers ranging from Kawaihae Road to Upper Pa'auilo. He noted that this is DWS's biggest service area on the island.

Chairperson Smith asked about the repairs done by divers after the 2006 earthquake.

Mr. Okamoto said that after the quake there was leakage on the downside of the Clear Water Reservoir. Divers who inspected the reservoir found water movement, and did some cleaning and repairs. One of the projects for which the Department requested funding from the Legislature was for **design work** for a new reservoir. (The overall construction cost is approximately \$6 million.)

The Manager noted that terrain-wise, the new reservoir cannot be located here.

Mr. Earles said that DWS may turn the Clear Water Tank into a "wet well" and put another tank up the hill a little bit and pump the water up there.

The Manager noted that the current elevation is critical because it sets the pressure zones for everything else. Therefore, whatever DWS does, the Department needs to maintain this same elevation, or a similar elevation because a higher elevation than this would cause problems for people at lower elevations.

Chairperson Smith recessed the Meeting at 12:30 p.m. and reconvened at 12:38 p.m. at Reservoir #2.

Mr. Nago noted that Reservoir #2 is empty. Before installing the lining for the circular 50-million gallon reservoir, the reservoir must be cleaned. He pointed out concrete panels that cracked during the earthquake, which will be repaired. Once those repairs are done, the lining will be placed on top, to cover the entire floor of the reservoir and go up two-thirds of the way up the side slope and above the highest water elevation.

The Manager noted that because it is raw water from a stream, there is silt on the bottom that settles out from the water as it sits in the reservoir. The silt can build up as high as two feet at the bottom of the reservoir. He noted that with the buildup of silt, the reservoir should periodically be drained and cleaned.

Chairperson Smith asked how much of the water is usable, amid the sludge and silt.

The Manager said that the Department only lets out the last three to five feet of water to the treatment plant, because the rest of the water has too much suspended solids.

Chairperson Smith noted the desirability of the reservoir's elevation for generating hydropower.

The Manager said that a minimum pressure was needed to spin the hydro-generator's wheels. He agreed that the elevation here was such that it was very feasible for DWS to generate hydropower.

ADJOURNMENT:

ACTION: Chairperson Smith called for the Meeting to be adjourned. Mr. Kuailani so moved; seconded by Mr. Meierdiercks, and carried unanimously by voice vote. Meeting adjourned at 12:47 p.m.

Senior Clerk-Stenographer

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