



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
**COMMISSION ON WATER RESOURCE MANAGEMENT**  
P.O. BOX 621  
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the  
COMMISSION ON WATER RESOURCE MANAGEMENT

May 20, 2009  
Honolulu, Oahu

Agribusiness Development Corporation  
APPLICATION TO MODIFY WATER USE PERMIT FOR SYSTEM LOSS  
Reduce System Loss Allocation to 2.000 mgd (WUP No. 862) and  
Request for Time Extension to Complete Reservoir Improvements to  
Further Reduce System Water Losses  
Waiahole Ditch Irrigation System, Oahu

APPLICANT:

State of Hawaii  
Agribusiness Development Corporation  
235 S Beretania Street, Room 205  
Honolulu, HI 96813

SOURCE LANDOWNER:

State of Hawaii  
Agribusiness Development Corporation  
235 S Beretania Street, Room 205  
Honolulu, HI 96813

-and-

State of Hawaii  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

SUMMARY OF REQUEST:

On February 27, 2009, the Commission on Water Resource Management (Commission) received a completed water use permit application from Agribusiness Development Corporation (ADC) with requests for the Commission to:

- (1) Modify the water use permit allocation for system losses from the Waiahole Ditch Irrigation System (WDIS) to 2.000 million gallons per day (mgd), to account for modifications made to 1,000 feet of the ditch system to reduce water loss by 0.030 mgd; and
- (2) Approve a time extension to Waiahole Decision and Order III ("Waiahole D&O III"), which mandated that the lining of reservoirs 155 and 225 be completed no later than June 2008 to reduce system losses to 1.45 mgd. In light of information received in February 2009, concerning the condition of Reservoir 155, the applicant requests a time extension to June 2014 to complete this work, along with other improvements and repairs to address recently identified dam safety, integrity, and operational adequacy concerns.

LOCATION: See Exhibits 1a and 1b.

BACKGROUND:

*Waiahole Ditch Irrigation System*

The WDIS was started by the Waiahole Water Company in 1913 to develop both surface water and high-level ground water sources in eastern (windward) Oahu to irrigate sugar cane fields on the western (leeward) side of the island. The WDIS consisted primarily of tunnels from windward water sources to central Oahu. Twenty-five tunnels connect the windward sources to the trans-Koolau Tunnel, followed by 13 transmission tunnels in central Oahu. From central Oahu, water was conveyed in concrete-lined ditches and across gulches by inverted siphons to Reservoir 155.

In 1970, the Waiahole Water Company changed its name to the Waiahole Ditch Irrigation Company, and later became a wholly-owned subsidiary of Amfac/JMB Hawaii, which also owned the Oahu Sugar Company. In 1994, Oahu Sugar Company, which used most of the WDIS water, closed its plantation operations. In 1999, the State of Hawaii purchased the WDIS and the Hawaii Department of Agriculture's (HDOA's) ADC now manages the system. ADC is a state agency governed by an appointed board. Since the state purchased the WDIS, ADC has made a number of improvements to increase the efficiency of water delivery and to reduce water loss from the system.

*Commission's July 13, 2006, Decision and Order III*

In the July 13, 2006, Findings of Fact, Conclusions of Law, and Decision and Order ("Waiahole D&O III") in the second remand proceedings "In the Matter of Water Use Permit Applications, Petitions for Interim Instream Flow Standard Amendments, and Petitions for Water Reservations for the Waiahole Ditch Combined Contested Case Hearing (CCH-OA95-1)," the Commission concluded that the water use permits met the seven conditions stipulated in HRS § 174C-49(a), and as determined by the Court in *Waiahole I* and *Waiahole II*. HRS § 174C-49(a) is stated as follows:

*To obtain a permit pursuant to this part, the applicant shall establish that the proposed use of water:*

- (1) Can be accommodated with the available water source;*
- (2) Is a reasonable-beneficial use as defined in section 174C-3;*
- (3) Will not interfere with any existing legal use of water;*
- (4) Is consistent with the public interest;*
- (5) Is consistent with state and county general plans and land use designations;*
- (6) Is consistent with county land use plans and policies; and*
- (7) Will not interfere with the rights of the department of Hawaiian home lands as provided in section 221 of the Hawaiian Homes Commission Act.*

ADC's Permit for System Losses

In Waiahole D&O III, the Commission found that ADC had taken practicable mitigation measures, including repairs to the ditch system after taking into consideration costs, existing technology, and logistics in light of the overall water planning process, and met the conditions for issuance of a water use permit for system losses pursuant to HRS § 174C-49(a).

In Waiahole D&O III, ADC received a variable water use permit for 2.030 mgd and an associated water use permit (WUP No. 851). The quantity estimates that form the basis for this permit are listed in Table 1. Waiahole D&O III also ordered ADC to complete the lining work in Reservoir 155 and Reservoir 225 no later than June 2008. This work, when completed, is expected to reduce the total quantity of water losses to 1.45 mgd. In addition, the installation of a pipeline in the remaining 1,000 feet of unlined ditch would result in an additional water savings of 0.03 mgd and result in a total loss quantity of 1.42 mgd.

The remaining 1.42 mgd applies when the windward adjustment gate is open and some windward tunnel waters are diverted to leeward Oahu for approved off-stream uses. When the adjustment gate is closed and all windward tunnel waters are diverted into windward streams, the water use permit will be for the Adit 8 reading (where the tunnel emerges into the ditch) minus the metered water use.

**Table 1 – Estimated Losses from the WDIS**

System Component	Quantity (mgd)
Reservoirs 155 and 225	0.58
1,000 feet of unlined ditch	0.03
Windward adjustment gate	1.42
Total estimated loss	2.03

1,000 Feet of Unlined Ditch

As stated above, when the Commission issued Waiahole D&O III, it was estimated that lining the 1,000-foot unlined portion of the WDIS would reduce losses by 0.03 mgd (see Table 1). The U.S. Army Corps of Engineers (USACE) recommended that a pipeline be installed in this portion of the ditch to eliminate leakage. At the Commission's May 21, 2008 meeting, in response to a question from Commissioner Fujiwara, Alfredo Lee explained that ADC staff found a way to bypass the unlined section of the WDIS by diverting water into a lined ditch that was previously used for settling solids before it was conveyed into the users' ponds. With this modification, Mr. Lee explained that the unlined section is no longer needed and there is no need to line it. (The staff submittal and minutes of the May 21, 2008, Commission meeting are included in Exhibits 2 and 3, and provide additional details of this discussion and related issues discussed at that meeting.)

Reservoirs 155 and 225 – Lining Project

Reservoir 155 is approximately 3.13 acres and hold approximately 15 million gallons. Reservoir 225 is approximately 2.54 acres and holds about 10 million gallons. Both reservoirs are unlined, earthen storage basins subject to seepage losses, and the holding capacity of each has been diminished by years of sediment accumulation. ADC has obtained ditch easements for both reservoirs.

When the Commission issued Waiahole D&O III and until recently, both reservoirs were known to need the following maintenance work and improvements.

- Removal of accumulated sediment and debris.
- Installation of high-density polyethylene (HDPE) lining material to eliminate seepage losses.
- Repairing and re-grouting of the damaged cut stones lining the embankments.
- Installation of debris screens and sediment traps at the inlets to prevent debris from entering and accumulating in the reservoirs.
- Construction of ramps for equipment access.

HDOA, acting as a local sponsor, initiated a project with the USACE to address seepage from the reservoirs; the USACE is the lead agency for the work. The USACE's 2002 report to ADC recommended lining both reservoirs and replacing the unlined portions of the ditch system with pipes. HDOA is providing administrative support to ADC related to the state's share of funds for the project and project planning.

On May 21, 2008, staff presented to the Commission a request from ADC for a time extension to June 2011 to complete the reservoir lining work (Exhibit 2). At that time, the following milestones had been achieved:

- Secured sufficient federal funding (65% federal cost share) to line the two reservoirs;
- Finished surveying both reservoirs;
- Completed the engineering design work; and
- Prepared preliminary cost estimates.

Additionally, staff reported that the USACE was:

- Working on a value engineering study, which is a formal process to reduce construction costs and was estimated to be completed in June 2008.
- Preparing a categorical exclusion memorandum that would exempt the project from a National Environmental Policy Act (NEPA) environmental impact statement or preparing an environmental assessment. This process was estimated to take 6 months to complete.
- Executing a project cooperative agreement with HDOA, that was expected to be signed by mid-2009.

Funding for the project requires a 65%-35% (federal-state) cost share through a cooperative agreement between the USACE and HDOA. Since the project was conceived in 2001, the cost estimates have risen from \$2 to \$3 million up to approximately \$6 million in 2008. The USACE has sufficient funding to cover the 65% federal share of this cost (approximately \$3.9 million). Although the HDOA had secured a portion of the funding needed for the state's share for the estimated \$2 million project cost (\$700,000), additional state funds are needed to cover the state's share of the increased project cost. Upon securing the entire 35% of the state share (\$2.1 million for the estimated \$6 million project) and before construction can begin, HDOA must remit the funds to the USACE and the cooperative agreement executed.

At the May 21, 2008 meeting, Mr. Lee explained that after the USACE completed the design, the cost estimate was finished late in 2007. By that time, HDOA and ADC realized they didn't have sufficient matching funds, and they had missed the deadline to request additional money in the state's capital improvement project (CIP) budget. (See Exhibit 3) Subsequently, the scope of work for the reservoir improvements has changed significantly (explained below) as a consequence of new information developed during 2008 and, to date, no additional state funds have been requested.

#### *New Findings on Reservoir 155, Phase I Investigation Report*

In February 2009, a report of an assessment (visual inspection) of the general physical condition of the structure and operation of Reservoir 155 with respect to safety was completed and delivered to ADC and the Department of Natural Resources', Engineering Division. This assessment was done by Gannett Fleming, Inc., under contract to the DLNR, with funding provided pursuant to *Act 118, Chapter 171-6 HRS & Emergency Proclamation*.

The dam that impounds water in Reservoir 155 consists of a 25-foot-high earth-filled embankment that is 900 feet long at the crest. The investigation findings, which are based on a visual inspection of the reservoir and dam and available records, classify the Reservoir 155 dam as "POOR." The classification scheme used in this analysis defines "poor condition" as follows:

*POOR – A potential dam safety deficiency is clearly recognized for normal loading conditions. Immediate actions to resolve the deficiency are recommended; reservoir restrictions may be necessary until problem resolution.*

The report also states that although the DLNR has classified Reservoir 155 as a low hazard dam, the Pacific Disaster Center is currently conducting a study for the DLNR and the preliminary findings of that study classify this dam as a high hazard dam. The hazard potential classifications, as used in the Phase I investigation report, are defined as follows:

- *Low Hazard Potential – "Low hazard" means a dam's or reservoir's failure will result in no probably loss of human life and low economic loss or environmental loss, or both. Economic losses are principally limited to the owner's property.*
- *Significant Hazard Potential – "Significant hazard" means a dam's or reservoir's failure will result in no probable loss of human life but can cause major economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns. ...*

- *High Hazard Potential* – “High hazard” means a dam’s or reservoir’s failure will result in probable loss of human life.

A major conclusion of the report is that failure of the “...Reservoir 155 dam has the potential to impact agricultural areas and other developed areas downstream of the dam.”<sup>1</sup> Based on the visual assessment of the dam and records review, the recommendations to address dam safety concerns and needed reservoir improvements are as follows:

#### Priority 1 Recommendations

1. Perform a Phase II geotechnical investigation (stability analysis) of the upstream and downstream slopes of the dam.
2. Rehabilitate and repair deteriorated concrete spillway structures.
3. Prepare and submit an operations and maintenance manual for the dam.
4. Repair deteriorated inflow works to provide contact between the headwall and pipes so water cannot flow under or around the pipes.
5. Prepare an emergency action plan if it is concluded that Reservoir 155 is a high hazard dam.

#### Priority 2 Recommendations

1. Remove remaining trees and woody debris from the embankment slopes to allow for adequate inspection, and maintain the dam embankment slopes in a condition that can be readily inspected for changed conditions, especially during flood events.
2. Provide upstream closure for the outlet works to eliminate the potential for high pressure differentials to develop in the reservoir that could lead to erosion of the surrounding earthfill or foundation soils, or potential dam failure. (The current configuration of the outlet conduit is generally discouraged, except in low hazard dams with minimal downstream consequences.<sup>2</sup>)
3. Repair the upstream embankment slope at significant erosion scarps that are beginning to encroach into the crest of the dam.
4. Regrade the dam crest.

The executive summary from this report is provided in Exhibit 4 and explains these recommendations further. The dam that impounds Reservoir 225 is less than 25 feet high and therefore not subject to the dam safety regulations as Reservoir 155.

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<sup>1</sup> Gannett Fleming, Inc., 2009. “Phase I Investigation, Oahu Reservoir 155 – NID No. HI00137.” Prepared for the State of Hawaii, Department of Land and Natural Resources by Gannett Fleming, Inc., Phoenix, AZ. February 2009. Page ES-1.

<sup>2</sup> Ibid, p. ES-3.

ANALYSIS/ISSUES:*Modify Water Use Permit to Reduce System Loss Allocation for Unlined Ditch Segment*

The water use permit application submitted by ADC is for a reduction in the system loss allocation for the WDIS to 2.000 mgd, to account for the bypass into the lined ditch segment next to the unlined section of the irrigation ditch. This request was first brought to the Commission for action on May 21, 2008 (Exhibit 2). At that meeting, staff recommended that the Commission approve a variable water use permit to account for the system loss reductions that would result from lining the unlined portion of the ditch and the two reservoirs, as well as variable flows from the windward gate (whether it is open or closed) and flow measurements at Adit 8. Several issues were raised during that meeting that precluded Commission action on that day. Two key issues discussed at that meeting are summarized below. (Refer to Exhibit 3 meeting minutes for a more detailed review.)

First, after some discussion about the 0.03 mgd estimated quantity of water seeping from the unlined portion of the irrigation ditch, Chair Thielen requested that the applicant should verify or calculate a better estimate of the water savings by rerouting the water into the lined ditch segment. The applicant was directed to return to the Commission in 3 months (August 2008), to explain how switching from the unlined ditch to the lined ditch reduces system loss and to quantify the estimated water savings that results from this modification. Following a motion by Commissioner Kiyosaki (seconded by Commissioner Ching) to amend staff's recommendation to approve the variable water use permit, the Commission approved the following amended recommendation:

- 3) *Provide some quantification of the water savings by eliminating the unlined ditch.*

Second, Paul Achitoff, an attorney with EarthJustice and representing the windward parties in the Waiahole contested case process, stated that he did not feel that it was appropriate procedurally for the [water use] permit to be modified in the way that it was being done by just putting it on the agenda. Mr. Achitoff felt that all the parties to the contested case have an interest in the matter and, that as part of the contested case proceeding, modification of the water use permit should have been brought to the Commission with more notice.

*Water Use Permit Application Required to Modify WUP No. 851*

After the Commissioner's May 21, 2008, meeting and before August 2008, state counsel advised staff that a water use permit application is required to request the modification of a water use permit, even if the application is for a reduced allocation specified in a decision and order. Hence, instead of appearing at the Commission meeting in August 2008, ADC submitted the application to reduce the system loss allocation for the WDIS. This application has been subject to the normal review process for water use permit applications, public notice requirements, and opportunity for filing objection(s) and a public hearing, if required.

*Public Notice of Application Published, WUP No. 862*

In accordance with HAR § 13-171-17, a public notice was published in *The Honolulu Star Bulletin* on March 20, 2009 and March 27, 2009 (Exhibit 5), and a copy of the notice sent to Mayor Mufi Hannemann's office. Copies of the completed application were sent to the City and County of

Honolulu Department of Planning and Permitting (DPP) and the Board of Water Supply; the state of Hawaii Department of Health, Department Hawaiian Home Lands, Office of Hawaiian Affairs, and various divisions within the DLNR; the state of Hawaii Land Use Commission (LUC); and other interested parties for review and comment. Written comments and objections on the application were to be submitted to the Commission by April 13, 2009.

Monsanto Hawaii and the Hawaii Agricultural Research Center each submitted comments in support of ADC's application, each stressed the need to minimize water losses. Comments were also submitted by the DPP, the LUC, and the DLNR's Division of State Parks. Of note, State Parks commented with respect to the Kahana Tunnel, located near the Ahupua'a 'O Kahana State Park and stated, "We have no concerns if there are no significant impacts to other users of this water." No other comments and no objections were submitted.

#### *Time Extension Request for Reservoir Improvements*

The Phase I investigation of Reservoir 155 identified some dam safety, integrity, and operational adequacy deficiencies that ADC as the operator of the WDIS needs to address. The reservoir is located on land that Monsanto acquired from the James Campbell Company in 2007. As the landowner, Monsanto is concerned about the safety and integrity of the impoundment and the potential liability if the dam were to fail. These issues were not known in 2001 when the reservoir lining project was conceived to reduce system losses, nor when Waiahole D&O III was issued on July 13, 2006 with the June 2008 deadline for ADC to complete the work.

The USACE, in consultation with HDOA, ADC, and DLNR's Engineering Division, is proceeding with plans to implement the Phase I investigation recommendations, in addition to the reservoir lining work. Although Reservoir 225 does not fall under the same dam safety regulations as Reservoir 155, the USACE has recommended to ADC that the same recommendations be applied to Reservoir 225.

The findings of the Phase I investigation of Reservoir 155 and the fact that the USACE is proceeding on a path that will implement the recommendations on both reservoirs, have resulted in a significant change in scope from the original project scope that involved only lining the reservoirs. Notably, this is a significant departure from the scope that was contemplated when Waiahole D&O III was issued.

The change in scope affects the terms of the cooperative funding agreement between the USACE and HDOA, the overall project cost and funding, and the implementation schedule. It also changes the scope of the categorical exclusion memorandum (for NEPA compliance) that the USACE was preparing for the reservoir lining project, and could require an environmental assessment or environmental impact statement for NEPA compliance. Thus, the scope of work required to comply with NEPA and before federal funds can be expended for the construction activities is as yet unknown or has not been disclosed to ADC.

The additional project cost to design and implement the recommendations of the Phase I investigation report for both reservoirs is estimated to be \$1.5 to \$2 million, which would increase the total estimated project cost (including the costs to line both reservoirs) up to between \$7.5 and \$8 million. The state's 35% share of the project cost would increase from approximately \$2.1 million to between \$2.63 and \$2.80 million.

The original timeline for the reservoir lining project projected that the USACE's design contract would be awarded and completed by the middle of 2005, and liner installation on both reservoirs would be completed by June 2008, as required by Waihole D&O III. As of the Commission's meeting on May 21, 2008, the USACE and HDOA estimated that bids for construction would be solicited in mid to late 2009, a construction contract awarded in 2010 and the reservoir lining work would be completed by June 2011.

Neither ADC nor HDOA has received a revised schedule from the USACE to implement the project with the expanded scope of work, including the associated studies needed to support the project design (e.g., the Phase II geotechnical investigation of embankment slopes). Considering the times normally needed to complete a project of this scope and to fulfill the federal requirements for the project (i.e., finalizing and executing a cooperative agreement for the cost-share, preparing the categorical exclusion memorandum and/or other NEPA compliance requirements, and solicitation of bids), it is estimated that the work can be completed by June 2014.

Because the USACE is the lead agency, the implementation schedule depends on how the USACE prioritizes and allocates its resources to the project. The actual schedule and progress will depend largely on the level of cooperation and coordination between the USACE and the state agencies, and with Monsanto, which has a vested interest in the successful completion of the project and therefore has also asked to review the project plans.

The comments submitted by HARC (Exhibit 6), express support for the time extension and state that, "Since ADC has no control over the timeline for this work, it has little recourse other than to request an extension." Monsanto has indicated to ADC that it is eager for the reservoir improvements and dam safety issues to be properly addressed.

Lastly, no water shortage plan is required because ADC is not a direct user of water from the WDIS and the concept of a water shortage plan cannot be readily applied to water losses due to seepage. The remaining water use permit holders on the WDIS, however, are required to prepare and submit a water shortage plan.

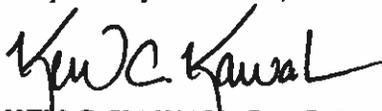
#### RECOMMENDATIONS:

That the Commission:

1. Approve issuance of variable water use permit (WUP No. 862) to Agribusiness Development Corporation for 2.000 million gallons per day for system losses, subject to the standard water use permit conditions listed in Attachment A and the following special conditions:
  - a. The system loss allocation under WUP No. 862 will be decreased to 1.42 mgd no later than June 30, 2014, or earlier if the reservoir lining and other improvements and repairs are completed before that date. ADC shall report on the progress of the project according to schedules and details to be determined by Commission staff.

- b. WUP No. 862, including subsequent modification to 1.42 mgd applies when the windward adjustment gate is open and some windward water is being diverted to leeward Oahu. When the adjustment gate is closed and all windward tunnel waters are being diverted into windward streams, the water use permit will be for the Adit 8 reading (where the tunnel emerges into the ditch) minus the metered water use.
  - c. WUP No. 862 is also subject to any other applicable terms and conditions set forth in Waiahole D&O III, issued by the Commission on July 13, 2006, and not directly addressed in this action.
  - d. Standard Condition No. 16 is waived.
2. Approve ADC's request for a time extension, with a requirement that the reservoir lining work must be completed no later than June 30, 2014. If this deadline cannot be met, ADC shall at least 180 days before this deadline, provide notice to the Commission that explains the reasons for delay and proposes an amended schedule to complete the work.

Respectfully submitted,



KEN C. KAWAHARA, P.E.  
Deputy Director

Attachment: A (Water Use Permit Standard Conditions)

- Exhibit(s):
- 1 (Location Map and Aerial Photograph, Exhibits 1a and 1b)
  - 2 (Staff Submittal for WUP No. 851, May 21, 2008 Commission Meeting)
  - 3 (Minutes re: WUP No. 851, May 21, 2008 Commission Meeting)
  - 4 (Executive Summary Phase I Investigation, Oahu Reservoir 155, February 2009)
  - 5 (Notice of Water Use Permit Application, WUPA No. 862, published on March 20 and March 27, 2009)
  - 6 (Comments Submitted on WUPA No. 862)

APPROVED FOR SUBMITTAL:



LAURA H. THIELEN  
Chairperson

**STANDARD WATER USE PERMIT CONDITIONS**

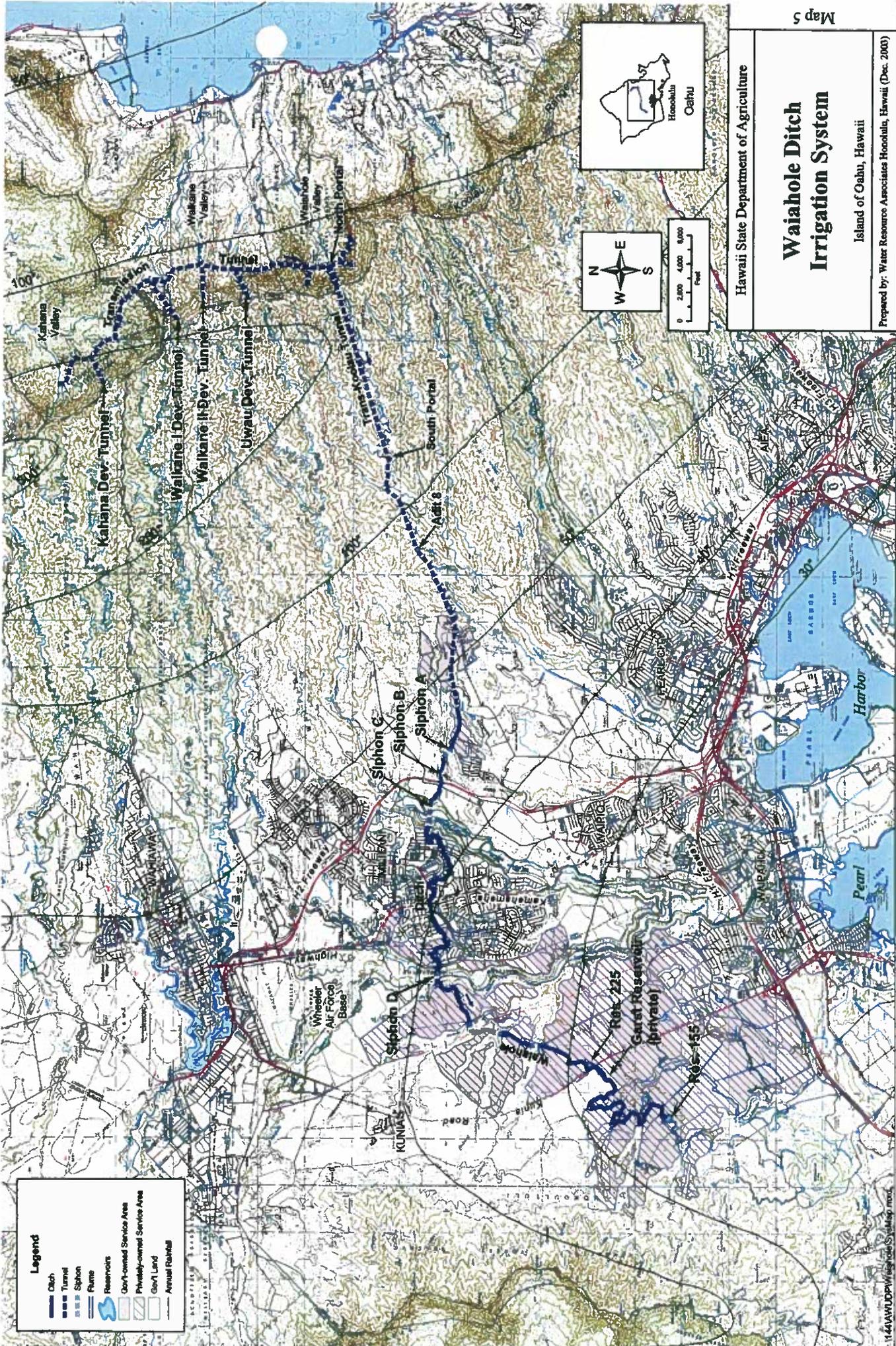
1. The water described in this water use permit may only be taken from the location described and used for the reasonable beneficial use described at the location described above. Reasonable beneficial uses means "the use of water in such a quantity as is necessary for economic and efficient utilization which is both reasonable and consistent with State and County land use plans and the public interest." (HRS § 174C-3)
2. The right to use ground water is a shared use right.
3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
  - a. Can be accommodated with the available water source;
  - b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
  - c. Will not interfere with any existing legal use of water;
  - d. Is consistent with the public interest;
  - e. Is consistent with State and County general plans and land use designations;
  - f. Is consistent with County land use plans and policies; and
  - g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).
4. The ground-water use here must not interfere with surface or other ground-water rights or reservations.
5. The ground-water use here must not interfere with interim or permanent instream flow standards. If it does, then:
  - a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
  - b. The interim or permanent instream flow standard, as applicable, must be amended.
6. The water use authorized here is subject to the requirements of the Hawaiian Homes Commission Act, as amended, if applicable.
7. The water use permit application and submittal, as amended, approved by the Commission at its May 20, 2009 meeting are incorporated into this permit by reference.
8. Any modification of the permit terms, conditions, or uses may only be made with the express written consent of the Commission.
9. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
  - a. protect the water sources (quantity or quality);
  - b. meet other legal obligations including other correlative rights;
  - c. insure adequate conservation measures;
  - d. require efficiency of water uses;
  - e. reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
  - f. meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
  - g. carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

Prior to any reduction, the Commission shall give notice of its proposed action to the permittee and provide the permittee an opportunity to be heard.

10. An approved flowmeter(s) must be installed to measure monthly withdrawals and a monthly record of withdrawals, salinity, temperature, and pumping times must be kept and reported to the Commission on Water Resource Management on forms provided by the Commission on a monthly basis (attached).
11. This permit shall be subject to the Commission's periodic review of the Waiahole Ditch Irrigation System Aquifer System's sustainable yield. The amount of water authorized by this permit may be reduced by the Commission if the sustainable yield of the Waiahole Ditch Irrigation System Aquifer System, or relevant modified aquifer(s), is reduced.
12. A permit may be transferred, in whole or in part, from the permittee to another, if:
  - a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
  - b. The Commission is informed of the transfer within ninety days.

Failure to inform the department of the transfer invalidates the transfer and constitutes a ground for revocation of the permit. A transfer which involves a change in any condition of the permit, including a change in use covered in HRS § 174C-57, is also invalid and constitutes a ground for revocation.

13. The use(s) authorized by law and by this permit do not constitute ownership rights.
14. The permittee shall request modification of the permit as necessary to comply with all applicable laws, rules, and ordinances which will affect the permittee's water use.
15. The permittee understands that under HRS § 174C-58(4), that partial or total nonuse, for reasons other than conservation, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period of forfeiture.
16. The permittee shall prepare and submit a water shortage plan within 30 days of the issuance of this permit as required by HAR § 13-171-42(c). The permittee's water shortage plan shall identify what the permittee is willing to do should the Commission declare a water shortage in the Waiahole Ditch Irrigation System Ground Water Management Area.
17. The water use permit shall be subject to the Commission's establishment of instream standards and policies relating to the Stream Protection and Management (SPAM) program, as well as legislative mandates to protect stream resources.
18. Special conditions in the attached cover transmittal letter are incorporated herein by reference.
19. The permittee understands that any willful violation of any of the above conditions or any provisions of HRS § 174C or HAR § 13-171 may result in the suspension or revocation of this permit.



**Legend**

- Ditch
- Tunnel
- Siphon
- Flume
- Reservoirs
- Don't-owned Service Area
- Privately-owned Service Area
- Gov't Land
- Annual Rainfall

North Arrow

Scale: 0 2,000 4,000 8,000 Feet



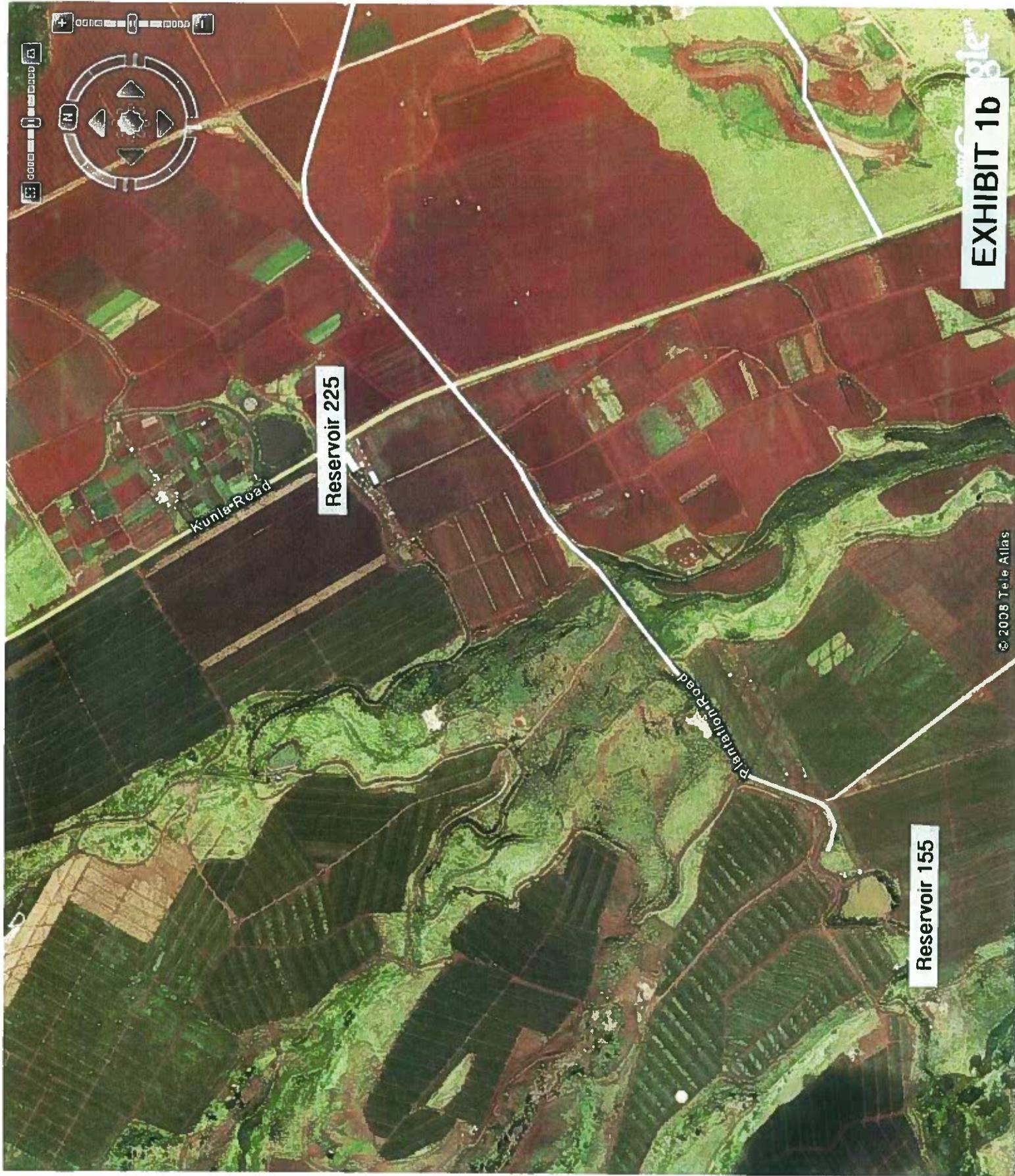
Hawaii State Department of Agriculture

## Waiahole Ditch Irrigation System

Island of Oahu, Hawaii

Prepared by: Water Resources Associates Honolulu, Hawaii (Dec. 2003)

144AWUDPW\agrcade\5\144awudp.mxd



Reservoir 225

Kunle Road

Planallon Road

Reservoir 155

EXHIBIT 1b

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LINDA LINGLE  
GOVERNOR OF HAWAII



LAURA H. THIELEN  
CHAIRPERSON  
MEREDITH J. CHING  
JAMES A. FRAZIER  
NEAL S. FUJIWARA  
CHIYOME L. FUKINO, M.D.  
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STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
P.O. BOX 621  
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the  
COMMISSION ON WATER RESOURCE MANAGEMENT

May 21, 2008  
Honolulu, Hawaii

Request for Time Extension for  
Variable Water Use Permit for System Loss (WUP No. 851)  
For Waiahole Ditch Irrigation System, Oahu,  
TMKs: (1) 9-2-001:001 and 9-4-003:001

APPLICANT:

Mr. Alfredo Lee, Executive Director  
Agribusiness Development Corporation  
235 South Beretania Street, Room 205  
Honolulu, Hawaii 96813

LANDOWNER:

Same

SUMMARY OF REQUEST:

The applicant is requesting a time extension to Waiahole Decision and Order III mandating the reduction of the system loss allocation from 2.03 million gallons per day (mgd) to 1.45 mgd from June 2008 to June 2011 for the Waiahole Ditch Irrigation System, Oahu. Additionally, modify ADC's current water use permit by reducing its current allocation by 0.03 mgd to account for improvements to the ditch to reduce system losses as specified in the Commission's July 13, 2006 Decision and Order III.

LOCATION: Exhibits 1a and 1b.

BACKGROUND:

*Waiahole Ditch Irrigation System*

The Waiahole Ditch Irrigation System (WDIS) was started by the Waiahole Water Company in 1913 to develop both surface water and high-level groundwater sources in eastern (windward) Oahu for sugarcane irrigation in the western (leeward) side of the island. The Waiahole Ditch

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

May 21, 2008 as amended

EXHIBIT 2

Irrigation System consisted primarily of tunnels from windward sources to central Oahu. Twenty-five tunnels connect the windward sources to the trans-Koolau Tunnel, followed by 13 transmission tunnels in central Oahu. From central Oahu, water was conveyed in concrete-lined ditches and across gulches by inverted siphons to Reservoir 155.

In 1970, the Waiahole Water Company changed its name to Waiahole Irrigation Company and later became a wholly-owned subsidiary of Amfac/JMB Hawaii, which also owned Oahu Sugar Company. In 1994, Oahu Sugar Company, which used the bulk of WDIS water, closed its plantation operations. In 1999, the State of Hawaii purchased WDIS, and the Hawaii Department of Agriculture's (HDOA) Agribusiness Development Corporation (ADC) now manages the Waiahole Water System. ADC is a State agency governed by an appointed board. Since ADC purchased the WDIS from Amfac in 1999, ADC has made a number of improvements to the ditch system to increase the efficiency of water delivery and to reduce system losses.

*Commission's July 13, 2006, Decision and Order III.*

In the July 13, 2006, Findings of Fact, Conclusions of Law, and Decision and Order (D&O III) in the second remand proceedings "In the Matter of Water Use Permit Applications, Petitions for Interim Instream Flow Standard Amendments, and Petitions for Water Reservations for the Waiahole Ditch Combined Contested Case Hearing (CCH-OA95-1)," the Commission concluded that the water use permits met the seven conditions under HRS 174C-49(a) and as determined by the Court in *Waiahole I* and *Waiahole II*. The seven conditions for a water use permit are:

1. Can be accommodated with the available water source.
2. Will not interfere with any existing legal use of water.
3. Is consistent with public interest.
4. Is consistent with state and county general plans and land use designations.
5. Is consistent with county land use plans and policies.
6. Will not interfere with the department of Hawaiian home lands as provided in section 221 of the Hawaiian Homes Commission Act.
7. Is a reasonable-beneficial use as defined in section 174C-3.

The Waiahole D&O III addressed the issues of system losses in the following summary:

*Commission's July 13, 2006, Decision and Order III.  
ADC's Permit for System Losses*

The Commission found that ADC had taken practicable mitigation measures, including repairs to the ditch system after taking into consideration costs, existing technology, and logistics in light of the overall water planning process and met the conditions for the issuance of a water use permit for system losses under HRS section 174C-49(a) of the State Water Code.

In Waiahole D&O III, ADC received a variable water use permit for 2.03 million gallons per day (mgd; WUP No. 851) in system loss that would be decreased to 1.45 mgd no later than June 2008, or earlier if the reservoir linings have been completed. In addition, when the remaining

1,000 feet of unlined ditch are enclosed in pipes, the permit for system loss will be further reduced by 0.03 mgd to 1.42 mgd. The 1.42 mgd applies when the windward adjustment gate is open and some windward tunnel waters are being diverted leeward. When the adjustment gate is closed and all windward tunnel waters are being diverted into the windward streams, the water use permit will be for the Adit 8 reading (where the tunnel emerges into the ditch) minus metered water use.

Summary of system loss:	
Reservoirs 155 and 225	0.58 mgd
1,000 feet of unlined ditch	0.03 mgd
Windward adjustment gate	<u>1.42</u> mgd
Total	2.03 mgd

### *Reservoirs 155 and 225*

Reservoir 155 is approximately 3.13 acres, holds about 15 million gallons. Reservoir 225 is approximately 2.54 acres, holds about 10 million gallons. ADC has obtained ditch easements for both reservoirs which are both old, unlined, earthen reservoirs subject to seepage losses and have diminished storage capacity from years of siltation.

Reservoirs 155 and 225 need the following maintenance and improvements:

- Removal of sediment and debris build up.
- High-density polyethylene (HDPE) lining material to eliminate seepage losses.
- Repair and re-grouting of the damaged cut stones lining the embankments of both reservoirs.
- Installation of debris screens and sediment traps at the reservoir inlets to prevent debris from entering and silting the reservoirs.
- Ramps for equipment access into the reservoirs.

HDOA, acting as a local sponsor, initiated a project with the U.S. Army Corps of Engineers (USACE) to address seepages in Reservoirs 155 and 225. The USACE's 2002 report to ADC recommended that ADC line Reservoirs 155 and 225 and replace the unlined portions of the ditch system with pipes. Lining the reservoirs with high-density polyethylene (HDPE), a durable, impermeable material, would be highly effective because it would seal off the wetted area with an impermeable barrier that would eliminate seepage.

The USACE and ADC have achieved the following milestones for the reservoir lining project:

- Secured sufficient federal funding to line two reservoirs.
- Finished surveying two reservoirs.
- Completed engineering design work.
- Conducted preliminary cost estimates.

The USACE is the lead agency for the project and is currently:

- Working on a value engineering study which is a formal process to reduce construction costs and will be completed in June 2008.
- Preparing a Categorical Exclusion memo that would exempt the project from an environmental impact statement, or preparing an environmental assessment. This process will take approximately six months.
- Executing a Project Cooperation Agreement with its local sponsor, HDOA, which is expected to be signed in mid-2009.

The reservoir lining project is a 65%-35% cost share project between the USACE and HDOA. Since the project was originally conceived in 2001, updated project cost estimates have escalated from \$2-3 million to about \$6 million. State matching funds have been reserved for the USACE lining project. However, HDOA must secure additional state Capital Improvement Project (CIP) funding for its share of the funding match by July 1, 2009, and remit the funds to the USACE before USACE can advertise for bids.

The original timeline for the reservoir lining project was that the USACE'S design contract would be awarded and completed by the middle of 2005, and the joint construction project would be completed sometime between December 2007 and June 2008. USACE and HDOA'S current timeline is to solicit bids in mid to late 2009, award the construction contract in 2010, and complete the reservoir lining project by June 2011.

#### *1,000 feet of unlined ditch*

ADC is no longer using an unlined ditch (approximately 1,000 feet long) and is using a lined ditch to supply water to the Garst pond thereby reducing system loss by 0.03 mgd.

#### ANALYSIS:

The USACE and ADC have achieved the following milestones for the reservoir lining project: secured sufficient federal funding to line two reservoirs, obtained ditch easements for both reservoirs, finished surveying both reservoirs, completed engineering design work, and prepared preliminary cost estimates. However, due to the increased project costs, the necessity for HDOA to secure additional state funds for its portion of the cost sharing, and the USACE'S contracting requirements, the USACE and ADC were unable to complete the reservoir lining project by the June 2008 deadline mandated by Waiahole D&O III.

ADC is no longer using an unlined ditch (approximately 1,000 feet long) and is using a lined ditch to supply water to the Garst pond thereby reducing system loss by 0.03 mgd. Therefore, staff is recommending that the Commission issue a new water use permit to recognize the reduction in system loss resulting from this repair.

Therefore, given the performance and good faith efforts by ADC to reduce system loss in accordance with the D&O III, staff believes that a time extension to complete the lining of reservoirs 155 and 225 is justified. As such, a modification of ADC'S current water use permit is necessary.

RECOMMENDATION:

That the Commission:

- 1) Cancel ADC's Water Use Permit No. 851 for 2.03 mgd for system loss, and
- 2) Approve the issuance of a variable water use permit (WUP No. 852) for 2.00 million gallons per day for system loss. WUP No. 852 will be modified and decreased to 1.42 mgd no later than June 2010, or earlier if the reservoir linings are completed. ADC will report on the progress of the reservoir lining projects according to schedules and details to be determined by the Commission staff.

WUP No. 852 and subsequent modification to 1.42 mgd applies when the windward adjustment gate is open and some windward water is being diverted leeward. When the adjustment gate is closed and all windward tunnel waters are being diverted into windward streams, the water use permit will be for the Adit 8 reading (where the tunnel emerges into the ditch) minus metered water use.

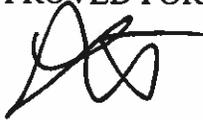
WUP No. 852 is also subject to the standard conditions of a water use permit and any other applicable terms and conditions in the Commission's July 13, 2006 Decision and Order not directly addressed in this action.

Respectfully submitted,

  
KEN C. KAWAHARA, P.E.  
Deputy Director

- Exhibits:
1. Location Maps 1a and 1b.
  2. Photos of Reservoir 155 and 225
  3. Standard Water Use Permit Conditions

APPROVED FOR SUBMITTAL

  
LAURA H. THIELEN  
Chairperson

## STANDARD WATER USE PERMIT CONDITIONS

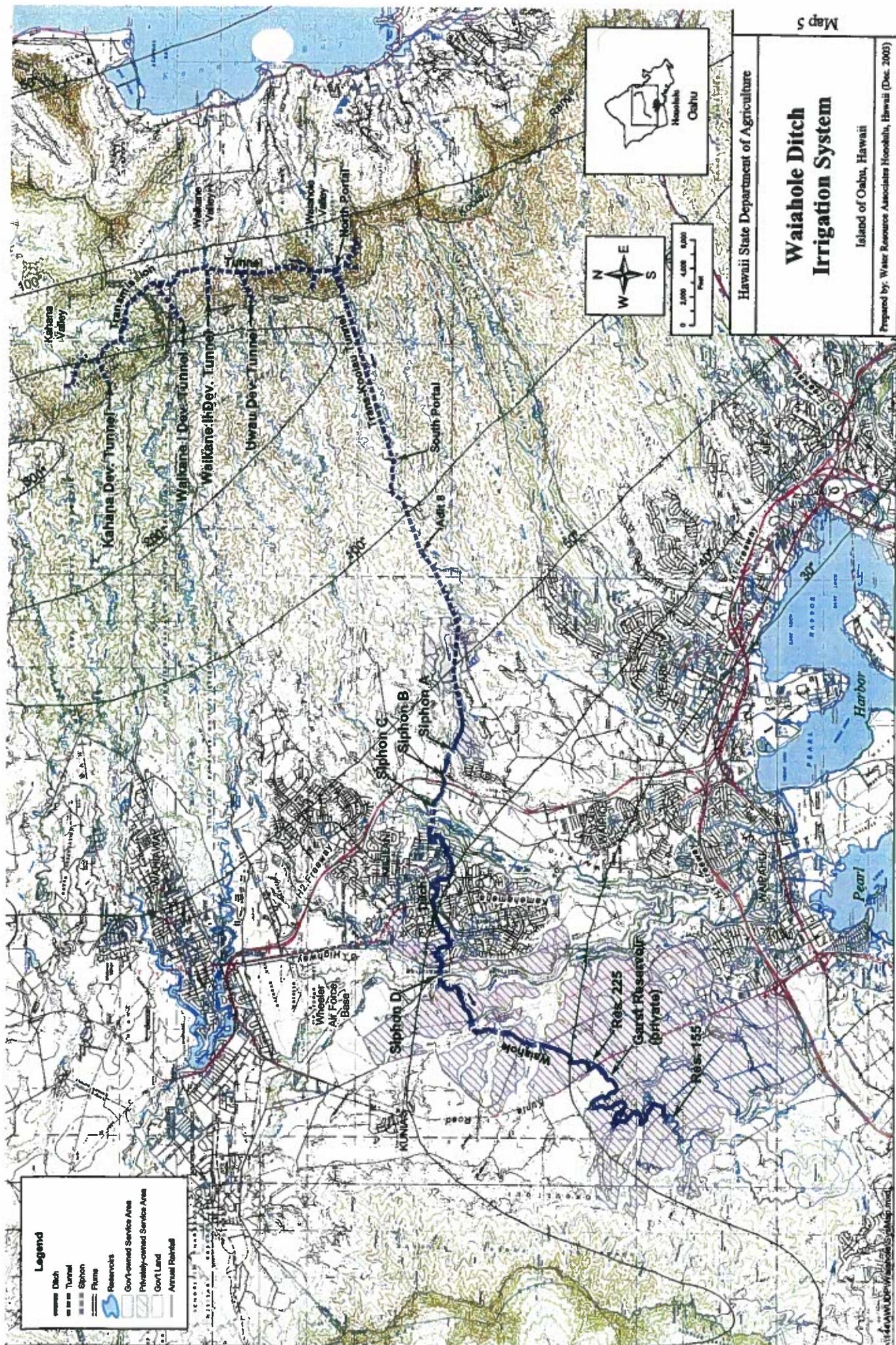
1. The water described in this water use permit may only be taken from the location described and used for the reasonable beneficial use described at the location described above. Reasonable beneficial uses means "the use of water in such a quantity as is necessary for economic and efficient utilization which is both reasonable and consistent with State and County land use plans and the public interest." (HRS § 174C-3)
2. The right to use ground water is a shared use right.
3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
  - a. Can be accommodated with the available water source;
  - b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
  - c. Will not interfere with any existing legal use of water;
  - d. Is consistent with the public interest;
  - e. Is consistent with State and County general plans and land use designations;
  - f. Is consistent with County land use plans and policies; and
  - g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).
4. The ground-water use here must not interfere with surface or other ground-water rights or reservations.
5. The ground-water use here must not interfere with interim or permanent instream flow standards. If it does, then:
  - a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
  - b. The interim or permanent instream flow standard, as applicable, must be amended.
6. The water use authorized here is subject to the requirements of the Hawaiian Homes Commission Act, as amended, if applicable.
7. The water use permit application and submittal, as amended, approved by the Commission at its May 21, 2008 meeting are incorporated into this permit by reference.
8. Any modification of the permit terms, conditions, or uses may only be made with the express written consent of the Commission.
9. This permit may be modified by the Commission and the amount of water initially granted to the permittee may be reduced if the Commission determines it is necessary to:
  - a. protect the water sources (quantity or quality);
  - b. meet other legal obligations including other correlative rights;
  - c. insure adequate conservation measures;
  - d. require efficiency of water uses;
  - e. reserve water for future uses, provided that all legal existing uses of water as of June, 1987 shall be protected;
  - f. meet legal obligations to the Department of Hawaiian Home Lands, if applicable; or
  - g. carry out such other necessary and proper exercise of the State's and the Commission's police powers under law as may be required.

Prior to any reduction, the Commission shall give notice of its proposed action to the permittee and provide the permittee an opportunity to be heard.

10. An approved flowmeter(s) must be installed to measure monthly withdrawals and a monthly record of withdrawals, salinity, temperature, and pumping times must be kept and reported to the Commission on Water Resource Management on forms provided by the Commission on a monthly basis (attached).
11. This permit shall be subject to the Commission's periodic review of the Waiahole Ditch Irrigation System Aquifer Systems' sustainable yield. The amount of water authorized by this permit may be reduced by the Commission if the sustainable yield of the Aquifer Systems in the Waiahole Ditch Irrigation System, or relevant modified aquifer(s), is reduced.
12. A permit may be transferred, in whole or in part, from the permittee to another, if:
  - a. The conditions of use of the permit, including, but not limited to, place, quantity, and purpose of the use, remain the same; and
  - b. The Commission is informed of the transfer within ninety days.

Failure to inform the department of the transfer invalidates the transfer and constitutes a ground for revocation of the permit. A transfer, which involves a change in any condition of the permit, including a change in use covered in HRS § 174C-57, is also invalid and constitutes a ground for revocation.

13. The use(s) authorized by law and by this permit do not constitute ownership rights.
14. The permittee shall request modification of the permit as necessary to comply with all applicable laws, rules, and ordinances that will affect the permittee's water use.
15. The permittee understands that under HRS § 174C-58(4), that partial or total nonuse, for reasons other than conservation, of the water allowed by this permit for a period of four (4) continuous years or more may result in a permanent revocation as to the amount of water not in use. The Commission and the permittee may enter into a written agreement that, for reasons satisfactory to the Commission, any period of nonuse may not apply towards the four-year period. Any period of nonuse which is caused by a declaration of water shortage pursuant to section HRS § 174C-62 shall not apply towards the four-year period of forfeiture.
16. The permittee shall prepare and submit a water shortage plan within 30 days of the issuance of this permit as required by HAR § 13-171-42(c). The permittee's water shortage plan shall identify what the permittee is willing to do should the Commission declare a water shortage in the Ground Water Management Areas of the Waiahole Ditch Irrigation System.
17. The water use permit shall be subject to the Commission's establishment of instream standards and policies relating to the Stream Protection and Management (SPAM) program, as well as legislative mandates to protect stream resources.
18. The permittee understands that any willful violation of any of the above conditions or any provisions of HRS § 174C or HAR § 13-171 may result in the suspension or revocation of this permit.
19. Special conditions in the attached cover transmittal letter are incorporated herein by reference.



**Legend**

- Ditch
- Tunnel
- Siphon
- Flume
- Reservoirs
- Gov't-owned Service Area
- Privately-owned Service Area
- Gov't Land
- Annual Rainfall

Scale: 0 2,000 4,000 6,000 Feet

North Arrow: N, E, S, W



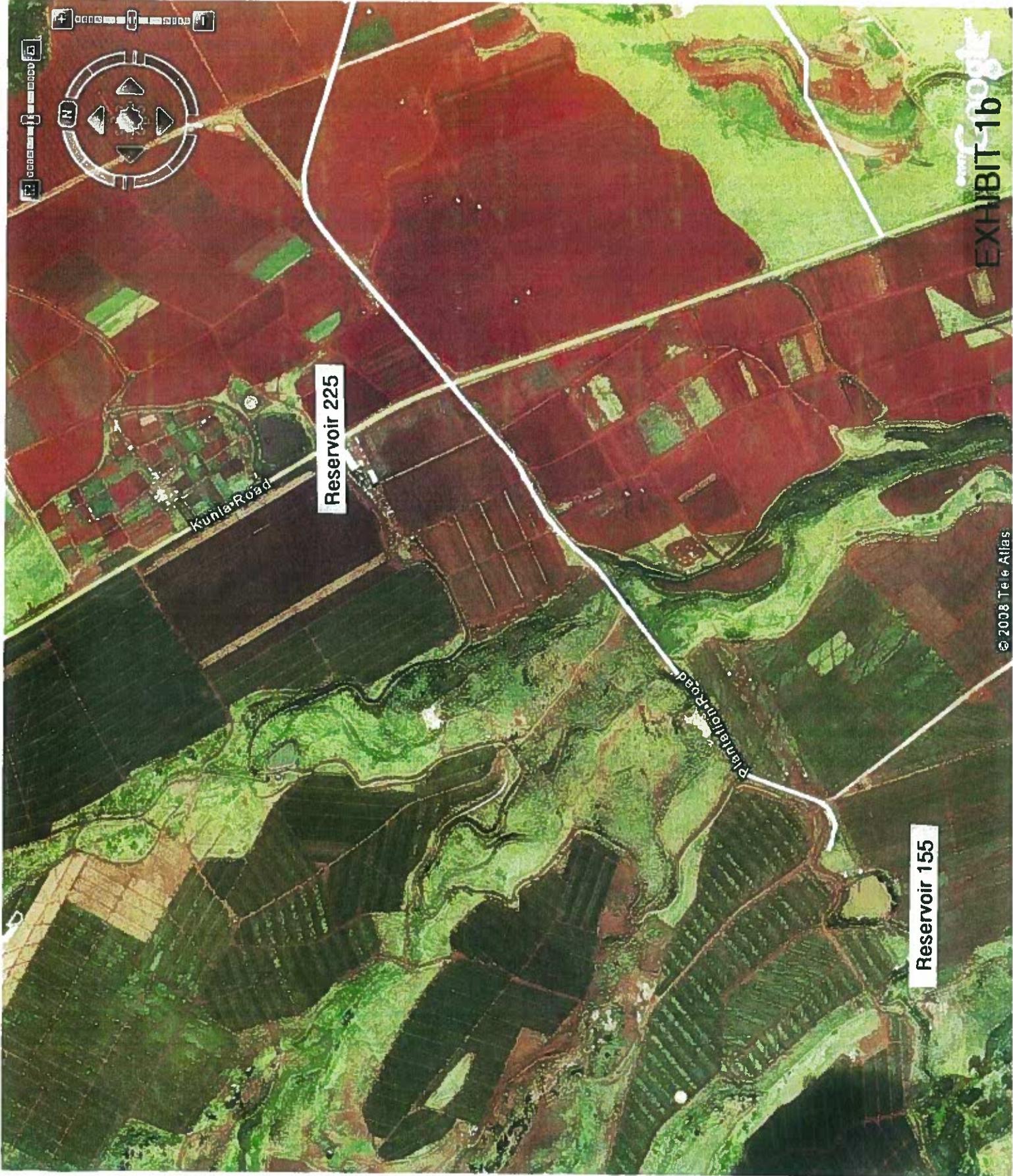
Map 5

Hawaii State Department of Agriculture

# Waiahole Ditch Irrigation System

Island of Oahu, Hawaii

Prepared by: Water Resources Associates Honolulu, Hawaii (Dec. 2003)

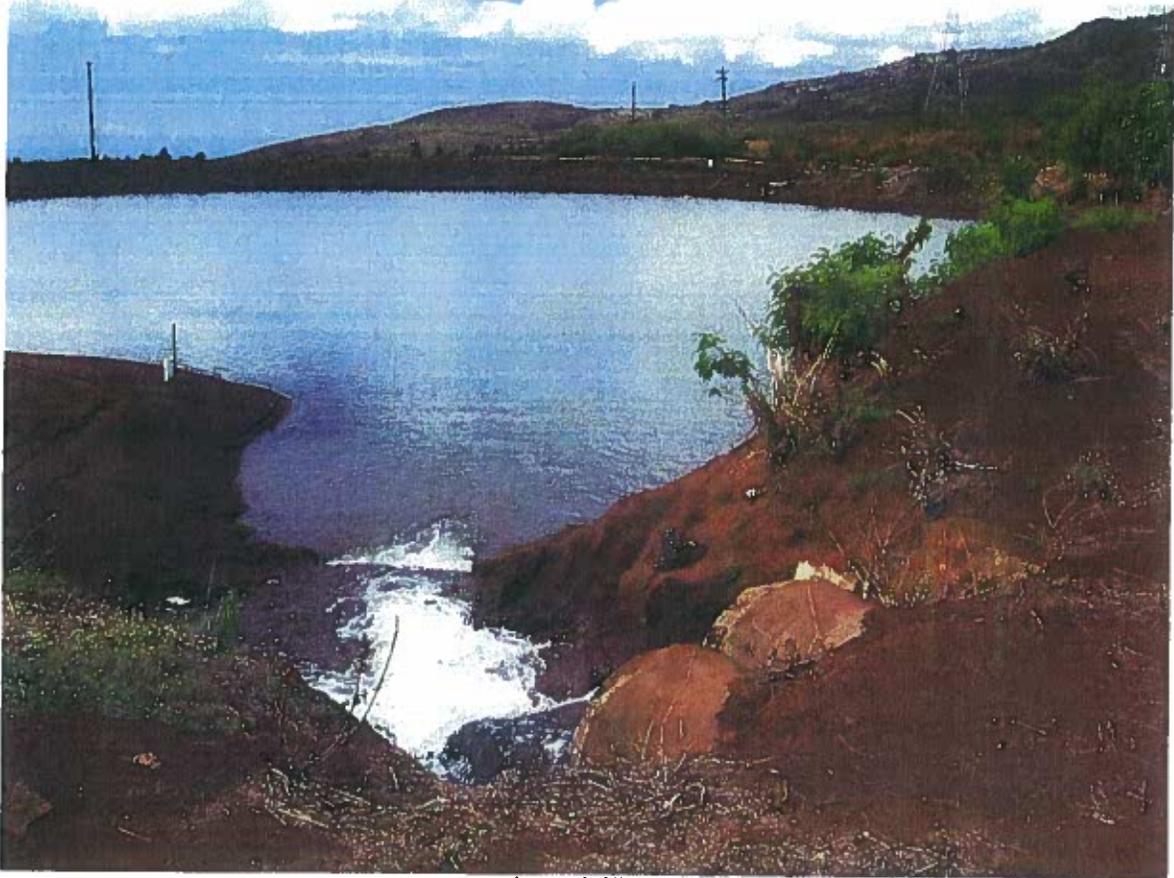


Reservoir 225

Reservoir 155

Kunla Road

Planala Road



picture485(1).JPG

Reservoir 155



Reservoir 225

**MINUTES  
FOR THE MEETING OF THE  
COMMISSION ON WATER RESOURCE MANAGEMENT**

DATE: May 21, 2008  
TIME: 9:00 a.m.  
PLACE: Kalanimoku Building  
Conference Room 132  
1151 Punchbowl Street  
Honolulu, Hawaii 96813

Commissioner James Frazier called the meeting of the Commission on Water Resource Management to order at 9:01 a.m. and announced that Chair Thielen would join them shortly.

**MEMBERS:** Ms. Laura H. Thielen, Mr. James Frazier, Ms. Meredith Ching, Mr. Neal Fujiwara, Ms. Donna Kiyosaki

**EXCUSED:** Dr. Lawrence Miike, Dr. Chiyome Fukino

**STAFF:** Deputy Director Ken Kawahara, Robert Chong, Ed Sakoda, Roy Hardy, Ronnie Torres, Dean Uyeno

**COUNSEL:** Linda Chow and Randy Ishikawa, Esq.

**OTHERS:** Joan Kawamoto and Vernon Pico, ADA/WWS; Charlene Unoki, DLNR-Land Division; Manabu Tagomori, Oceanit; David Schulmeister, Cades Schutte; Brian Kau, DOA-ARMD; Myra Kaichi, ATG for ADC; Glenn Okamoto, DOA-ARMD; Sharon Ishikawa, US Army Corp.; Alfredo Lee, ADC; Paul Achitoff, Earthjustice, Moses Haia, NHLC.

All written testimonies submitted at the meeting are filed in the Commission office and are available for review by interested parties.

**A. APPROVAL OF MINUTES**

1. April 16, 2008

MOTION: Fujiwara/Kiyosaki  
To approve the minutes.  
UNANIMOUSLY APPROVED.

**B. ANNOUNCEMENTS**

Deputy Director Ken Kawahara announced that an offer was made for the vacant Hydrologist VI position. Currently, the personnel office is reviewing the paperwork and tentatively is scheduled to start work on June 16, 2008.

Budget: there is no change in status and the next Council of revenue meeting is on May 29.

## C. STREAM PROTECTION AND MANAGEMENT

### 1. Request to Enter Into a Contract for Professional Services to Assess Method for Measuring Diverted Streamflow

Presentation by: Dean Uyeno

#### RECOMMENDATION:

Staff recommends that the Commission authorize the Chairperson to enter into a contract for professional services to inventory and assess various methods for measuring diverted streamflow. The terms of this contract will be subject to the approval of the Chairperson and the Department's Deputy Attorney General. Contract execution will be done in accordance with Chapter 103D, HRS, and Chapter 3-122, Hawaii Administrative Rules.

#### DISCUSSION:

Commissioner Kiyosaki questioned whether this methodology will be developed into a standard and the Commission would require all diverters to use and will this study be implemented for Na Wai Eha.

Mr. Uyeno stated that water users are required to report their water use in water management areas. There isn't 100% compliance for ground water and surface water could be a lot harder however we would like to be able to recommend different methodologies to the users for measuring. Because there are such a wide range of diversion types (from hand-built rock walls, unlined ditches, lined ditches, auwai, PVC pipes) setting a standard is difficult so we would like to get the best information possible.

MOTION: Ching/Fujiwara

To approve submittal.

UNANIMOUSLY APPROVED.

Randy Ishikawa – recused himself from the next item.

Linda Chow - sat in.

Chair Thielen arrived during C2 presentation .

### 2. Request for Time Extension for Variable Water Use Permit for System Loss (WUP No. 851), for Waiahole Ditch Irrigation System, Oahu, TMKs: (1) 9-2-001:001 and 9-4-003:001

Presentation by: Robert Chong

#### RECOMMENDATION:

That the Commission:

- 1) Cancel ADC's Water Use Permit No. 851 for 2.03 mgd for system loss, and
- 2) Approve the issuance of a variable water use permit (WUP No. 852) for 2.00 million gallons per day for system loss. WUP No. 852 will be modified and decreased to

1.42 mgd no later than June 2010, or earlier if the reservoir linings are completed. ADC will report on the progress of the reservoir lining projects according to schedules and details to be determined by the Commission staff.

WUP No. 852 and subsequent modification to 1.42 mgd applies when the windward adjustment gate is open and some windward water is being diverted leeward. When the adjustment gate is closed and all windward tunnel waters are being diverted into windward streams, the water use permit will be for the Adit 8 reading (where the tunnel emerges into the ditch) minus metered water use.

WUP No. 852 is also subject to the standard conditions of a water use permit and any other applicable terms and conditions in the Commission's July 13, 2006, Decision and Order not directly addressed in this action.

DISCUSSION:

Chair Thielen expressed concern about the lack of urgency between sister agencies to obtain the funding and whether there will be support from the State to provide the required funding to match to the federal portion of this project so it can move forward. Chair Thielen explained that the intent of the recommendation is to send a message to the applicant and to the funding agencies at the State level, that this is an important project from the Commission's perspective. The applicant can seek additional extensions, but at this point it's a matter of being able to secure the State's commitment to move this project forward.

Commissioner Kiyosaki added that it is to make them accountable to a deadline and asked why additional funding wasn't secured this year instead of waiting until 2009.

Mr. Alfredo Lee explained that after the Corps of Engineers completed the design, the cost estimate was finished late last year. By that time they realized that they didn't have the matching funds, and they had missed the deadline to request additional money in the CIP budget. Mr. Lee stated that DOA and ADC are working together to put the request in next year, that hopefully it will pass, and that the Governor will release the money. The earliest they could get the money is July or August 2009. Mr. Lee feels that 2010 is not realistic. If they get the money, it would be in the fall of 2009 and to advertise and finish the job in 2010 is not realistic.

Commissioner Fujiwara asked if Corps has the money encumbered. Mr. Lee said yes, they have the money. Sharon Ishikawa, project manager of the Corps of Engineers, explained that there are sufficient federal funds based on their current cost estimate to proceed with their cost sharing match for Waihole. The Corps is waiting for the State's match before they can advertise for construction.

Chair Thielen asked if this was a 65-35% cost sharing with the Army Corps being responsible for 65% of the cost and inquired whether the State had funds when it was estimated for the \$2 to \$3 million for the cost sharing. Mr. Lee said that when they started in 2001 he believed that the estimate was \$2 million.

Chair Thielen asked if Mr. Lee knew how much additional funding is needed from the State to meet this cost share.

Brian Kau said if the State share is somewhere north of \$2 million, it would be another \$1.2-\$1.4 million that will be needed.

Chair Thielen asked what would happen if funds were not appropriated. Mr. Lee said then they would ask again because this is a big chunk of CIP money, and they do not have this kind of funding.

Commissioner Fujiwara said he noticed that the ditch is now lined, and asked if this was the ditch that was unlined. The Corps had recommended using a pipe line to replace the unlined ditch. Mr. Lee explained said the ditch was a settling ditch, along side of the lined ditch. It was used previously to settle solids before it went to their ponds. Mr. Lee said his crew figured out a way to bypass the unlined ditch and supply the users' pond directly from the lined ditch and eliminated the unlined section. That section is no longer needed, so there is no need to line it.

Commissioner Frazier asked if there has been any monitoring in the leakage. Mr. Lee said they were unable to do that. Mr. Lee said their results were not accurate and consistent using the standard stream flow measurement technique.

Chair Thielen asked if they will be able to come back to discuss the alternatives for this project in the event that full funding is not released or not provided by the State. Mr. Lee said they had discussed whether they should do one reservoir instead of waiting for funding for two, but the right thing to do is to do both.

Chair Thielen asked whether the right thing would be to do nothing pending getting full funding, or to move forward with a portion of a project and seek funding to do the remainder. Mr. Lee said he's not sure if it would be much faster to do one. Mr. Lee stated that there could possibly be enough funding to advertise and maybe finish the project in 2010. But if they waited another year they could do both at the same time and get both lined. Chair Thielen agreed that it would be cost efficient, but added that there should be a contingency plan in the event the funding is not awarded next year. Mr. Lee said then they probably would go ahead and do one.

Commissioner Ching was not familiar with ADC sources of revenue and asked if DOA or ADC could shift around funding to get this work done instead of waiting for next legislative session. Mr. Lee explained that ADC is a state agency and gets special funds from lease rents, and recoups money by charging people for water use. Mr. Lee said that DOA handles the CIP projects for ADC.

Chair Thielen asked if full funding was available to go forward with both reservoirs, wouldn't it be staged sequentially because they will need to continue to hold the water. Ms. Ishikawa said these reservoirs are physically separated across the street and could have separate work areas.

Commissioner Frazier pointed out that the location of 225 is right off Kunia Road and inquired whether it should be fenced. Mr. Lee agreed that they might have to consider that. Ms. Ishikawa said it is not a part of the project now but it can be added.

PUBLIC TESTIMONY:

Paul Achitoff stated that he represents the windward parties in the Waihole ditch contested case process and that the issue of waste from the ditch is not a new issue. Mr. Achitoff asked why the

discussion regarding not being able to finish this project was taking place just two weeks before its completion date of June 2008.

Chair Thielen's concern was to grant an extension without impressing upon the applicant and the State funding agency the urgency of the project and the need to see some progress being made. There was no assurance to the Commission that by just waiting and going back to the legislature next year will result in the project moving forward.

Commissioner Kiyosaki was not comfortable that all options have been explored and would like the applicant to come back with information on whether doing one reservoir is possible. Chair Thielen asked Mr. Lee how long it would take to prepare alternative ways to proceed with the funding that they have now and the next legislative session. Mr. Lee consulted with Ms. Ishikawa and responded that he needed three months. Ms. Ishikawa must consult with their contracting people and attorneys to determine whether there is enough funding to complete one reservoir.

Commissioner Frazier was not comfortable in accepting the applicant's position that by shifting water from one ditch to another that water loss would be reduced without any monitoring to quantify the amount of water loss.

Chair Thielen summarized that first, rather than granting an extension, require the applicant to return in three months and provide details on their contingency plan which would allow them to move forward with some improvements with the funding in hand, and what they would do to seek additional funding for the full project and second, explain how they are quantifying savings in water system loss by switching from the unlined ditch to the lined ditch.

Linda Chow confirmed that the Commission could give the applicant extra time to come back with measurements for system loss and change the permit terms for water system loss from 2.03 mgd to 2.0 mgd.

Chair Thielen asked if the applicant could complete quantifying the amount of water that's been conserved by the August meeting. Mr. Lee explained that doing stream flow measurement is very difficult, and they have tried to do that. They were using AA meters on the ditch, a standard method taught to them by USGS, and had very different results. Mr. Lee felt that it was not accurate enough to measure minute changes. Mr. Lee said theoretically, based on square area and the assumption that the material in the lined ditch is similar to the reservoir; it would leak the same rate. Referring to the 1,000 feet of unlined ditch, Mr. Lee stated that the right thing to do if it's not needed is to eliminate it rather than piping it.

Chair Thielen said that the application indicated that the system loss would be reduced by 0.03 mgd by taking this action in the ditch, so someone had to come up with the quantification of the system loss to come up with the 0.03. Mr. Lee stated that it wasn't from him. Chair Thielen said that the figure would need to be verified or a better estimate of what the savings would be.

AMENDED RECOMMENDATION:

- 1) Extend the existing permit to the Commission's meeting in August and direct the applicant to return, and

- 2) Provide alternative plans to move forward with a reduction of the system loss with the funding in hand and plans to seek additional funding in the subsequent year, and
- 3) Provide some quantification of the water savings by eliminating the unlined ditch.

MOTION: Kiyosaki/Ching  
To approve submittal as amended.  
UNANIMOUSLY APPROVED

Mr. Achitoff stated that he did not feel that it was appropriate procedurally for the permit to be modified in the way that it was being done by just putting it on the agenda. Mr. Achitoff felt that all the parties to the contested case have an interest in this matter and that as part of the contested case proceeding, so it seemed that procedurally, it should have been brought to the Commission with more notice.

Chair Thielen said that Mr. Achitoff's comments will be taken under advisement, and that any action regarding the hearing that needs to be discussed with counsel for the contested case parties will be put on next month's agenda.

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**D. NON-ACTION ITEMS**

**1. Status on the Land Board Contested Case hearing on the East Maui Irrigation System**

Presentation by: Charlene Unoki in place of Morris Atta

Deputy Kawahara said the Land Division was asked to provide a briefing to provide information on what is being done on the Land Board side for the commissioners to understand what could ultimately be coming before the Commission for decision making.

Charlene Unoki gave a brief background on the water licenses.

In 1938, the government issued four water licenses to take government waters from East Maui watershed. Over the years this relationship continued until the water licenses started to expire in 1972, at which time the Department put them on 19 lot irrevocable permits which had to be renewed annually by the Land Board.

Linda Chow added that the initial petition was filed because A&B was in the process that a lease be issued for the four areas in the watershed that was previously been on the license. The idea was to let the RPs all end and it would be consolidated under one license. A contested case was held on this issue and went up on appeal. The judge told the Land Board that they could not issue a lease or license for water that are in excess that the stream requires under an IIFS, until you have an IIFS (you won't know what is excess). The petition for amending the IIFS was already pending before the Water Commission, the judge and board agreed that the Board would move forward on the long term dispositions once the amended IIFS were issued. This is where the Water Commission process in doing these amended IIFS comes into play in the Board's case. The long-term disposition is on hold until the Water Commission does its process.

**PHASE I INVESTIGATION**

**Oahu Reservoir 155  
Honouliuli, Oahu, Hawaii**

**National Inventory of Dams No. HI00137**

February 2009

Prepared for:

**State of Hawaii  
Department of Land and Natural Resources  
1151 Punchbowl, Room 221  
Honolulu, Hawaii 96813**

Prepared by:

 **Gannett Fleming**  
Suite 250, 4722 North 24<sup>th</sup> Street  
Phoenix, Arizona 85016-4852  
GF Job No. 48819

**EXHIBIT 4**

**Phase I Investigation  
 Oahu Reservoir 155 – NID No. HI00137  
 State of Hawaii Department of Land and Natural Resources**

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Phase I Investigation  
Oahu Reservoir 155 – NID No. HI00137  
State of Hawaii Department of Land and Natural Resources

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Exhibit 1 Vicinity Map

Exhibit 2 Drainage Area Map

Exhibit 3 Aerial Plan

Exhibit 4 Site Plan

Exhibit 5 Typical Dam Section

Exhibit 6 Waiahole Ditch Irrigation System

**APPENDICES**

APPENDIX A Photographic Record of Inspection

APPENDIX B Visual Inspection Checklist

**Phase I Investigation**  
**Oahu Reservoir 155 – NID No. HI00137**  
**State of Hawaii Department of Land and Natural Resources**

**EXECUTIVE SUMMARY**

The primary purpose of this Phase I Investigation (visual inspection) was to conduct an assessment of the general physical condition of the structure and its operations with respect to safety based on available data and visual inspection. This work included reviewing available pertinent engineering data relative to the design, construction, operation, and monitoring of the dam and appurtenant structures including previous inspection reports and owner short and long term plans. Based on the visual inspection and review of available information, a determination of the need for remedial actions and additional studies and investigations were determined along with a discussion of the structure's susceptibility to specific failure modes.

Oahu Reservoir 155 is located approximately 3.5 miles northeast of the town of Honouliuli, Hawaii, on the island of Oahu. Access to the dam is via a private road accessed from Kunia Road. A vicinity map showing the location of the dam is presented on Exhibit 1. The location of the dam is also shown on the drainage area map on Exhibit 2.

The Oahu Reservoir 155 Dam was designed by the Oahu Sugar Company, and documentation on the original design of the dam is not available. The dam was constructed in 1916 for storage of irrigation water for the Oahu Sugar Company sugarcane plantation. The dam forms an upland reservoir with no contributing drainage area beyond the surface of the reservoir. Flow into Oahu Reservoir 155 is via the Waiahole Ditch Irrigation System. The dam consists of a 25-foot high crescent-shaped earthen embankment with a 900-foot crest length. It is assumed because of the age of the structure that it was constructed with hydraulic earth fill material. The maximum pool provides a water supply storage capacity of 37 acre-feet with a surface area of 2.56 acres. Oahu Reservoir 155 is currently classified by the Hawaii DLNR as a low hazard dam. The Pacific Disaster Center is currently conducting a study for the DLNR and their preliminary findings classify this dam as a high hazard dam.

Based on visual inspection and available records, Oahu Reservoir 155 is considered to be in POOR condition. Failure of Oahu Reservoir 155 has the potential to impact agricultural areas and other developed areas downstream of the dam (see Exhibit 2). An Emergency Action Plan for the dam was not on file with the DLNR at the time of the inspection

**Recommendations**

The following Priority 1 recommendations should be addressed as soon as possible. Failure to act on these recommendations could lead to an emergency situation or jeopardize the safety of the structure and downstream residents.

- 1. Stability Analysis of Upstream and Downstream Slope.** The relatively steep 1H:1V slopes of the dam have not been analyzed. It is questionable whether the slope would be stable by current day standards (See Exhibit 5). A Phase II geotechnical investigation is recommended.

2. **Repair Deteriorated Concrete Spillway Structures.** The spillway is deteriorated and in need of repair and its capacity to pass the design storm (maximum inflow from the Waiahole Ditch Irrigation System is questionable. The spillway should be rehabilitated.
3. **Submit an O&M Manual.** An O&M manual is required for the dam (per State of Hawaii Administrative Rules) to establish operation and maintenance procedures. Owner is to provide a copy of this manual to be on file with the DLNR.
4. **Repair Deteriorated Inflow Works.** Headcutting is occurring at the inlet structure from the reservoir side, and water from the inflow ditch flows underneath the existing inflow works control structure along the outside of the inflow pipes and into the reservoir. It is understood the inflow work is controlled with flashboards. However, when the inflow is used and possibly when the flashboards are in place, water flowing around and outside of the pipes will continue to erode soil and can result in failure of the structure. Without control of the inflow the reservoir could fill uncontrolled and it is uncertain that the existing spillway has adequate capacity to prevent overtopping. It is recommended that the inflow works be rehabilitated to provide contact between the headwall and pipes so water cannot flow under or around the pipes.
5. **Prepare an Emergency Action Plan.** If it is concluded that Oahu Reservoir 155 is a High hazard dam, an emergency action plan will be required (per State of Hawaii Administrative Rules) to establish emergency response procedures, evacuation zones, and other emergency information needed in the event of an uncontrolled release of stored water.

The following Priority 2 recommendations are made to improve the integrity of the dam.

1. **Remove Remaining Trees and Woody Debris from Embankment Slopes.** Significant efforts have been made to remove trees and other woody vegetation from the upstream and downstream embankment slopes. The remaining debris and condition of the downstream slope prevents adequate inspection. Remaining trees brush, cut vegetation and tree stumps on the embankment slopes need to be removed. It is important that the dam embankment be maintained in a condition that can be readily inspected for changed conditions, especially during flood events when the reservoir fills. The current condition of the dam does not permit adequate inspection of the embankment slopes and significantly obscures early detection of a changed condition such as a slope failure or seepage. In addition, the tree root systems left in place after trees were cut down on the crest will eventually affect the integrity of the dam crest and embankment slopes. All tree and other woody vegetation stumps should be grubbed from all surfaces of the dam and at least 20 feet beyond the toe of the dam. This will require regrading and reseeding the embankment slopes, regrading and resurfacing the dam crest, and adopting an operation and maintenance program that will preclude the need for future removal of unwanted vegetation.

2. **Provide Upstream Closure for the Outlet Works.** Downstream control of the outlet conduit allows pressurized conditions to occur throughout the entire length of the conduit within the embankment and creates the potential for water to escape from the conduit under pressure, potentially eroding the surrounding earthfill or foundation soils. The existing outlet works configuration does not allow inspection of the conduit and emergency closure is not possible. If the conduit develops a defect upstream from the downstream gate, a high pressure differential will exist due to the internal hydrostatic pressure from the full reservoir head and the lack of external hydrostatic pressure and cause an embankment dam failure. This arrangement is generally discouraged unless the embankment dam is low hazard with minimal downstream consequences.
3. **Repair Upstream Embankment Slope at Erosion Scarps.** A significant erosion scarp between Stations 8+00 and 9+00 has developed on the upstream slope. A significant amount of embankment material has been eroded and the near vertical headcut is beginning to encroach into the dam crest. This area of the embankment needs to be repaired and armored to prevent future erosion.
4. **Regrade Dam Crest.** A significant low point and crest width irregularities exist along the dam crest near the spillway. The dam crest should be raised in this area to prevent potential breaching from overtopping. This work should be performed in conjunction with Priority 1 recommendation No. 2.

It should be realized that the reported condition of the dam is based on observations of field conditions at the time of inspection along with data available to the inspection team. It is also important to note that the condition of a dam depends on numerous and constantly changing internal and external conditions, and is evolutionary in nature. It would be incorrect to assume that the present condition of the dam will continue to represent the condition of the dam at some point in the future. Only through continued care and inspection can there be any chance that unsafe conditions be detected.

**PUBLIC NOTICE**

**Application for Water Use Permit  
Waiahole Ditch System Ground Water Management Area, Oahu**

The following application for a water use permit has been received by the Commission on Water Resource Management and is hereby made public in accordance with Section 13-171, Hawaii Administrative Rules, "Designation and Regulation of Water Management Areas."

**WUPA No. 862**

**Waiahole Ditch System, Oahu**

**Applicant:**

**State of Hawaii, Agribusiness Development Corporation  
235 S. Beretania Street  
Honolulu, HI 96813**

**Date Application Filed as Complete:**

**February 27, 2009**

**Quantity Requested:**

**2.000 million gallons per day**

**Existing/New Use:**

**Existing / System Loss**

**Application to modify and reduce existing permit for system losses from 2.030 to 2.000 and requesting an extension of the deadline to line two reservoirs on the ditch system to further reduce system losses.**

**Place of Water Use:**

**0.290 mgd – Reservoir 225 at TMK (1) 9-4-003:001  
0.290 mgd – Reservoir 155 at TMK (1) 9-2-001:001  
1.420 mgd – Windward adjustment gate at TMK (1) 4-8-013:001**

**Hydrologic Unit, Aquifer Area:**

**Waiahole Ditch System, Oahu**

**Water Sources & Locations:**

**Waiawa Dev Tunnel (Well No. 2657-05 at TMK 9-6-005:003)  
Waiahole Main (Well No. 2853-01 at TMK 4-8-013:001)  
Uwau Dev Tunnel (Well No. 2953-01 at TMK 4-8-014:003)  
Waikane Dev Tunnel #2 (Well No. 2953-02 at TMK 4-8-014:005)  
Uwau Tunnel Ext (Well No. 2953-03 at TMK 9-5-004:001)  
Waikane Dev Tunnel #1 (Well No. 3053-01 at TMK 4-8-014:005)  
Kahana Dev Tunnel (Well No. 3154-01 at TMK 5-2-001:001)**

**Source Landowners:**

**Waiawa Dev Tunnel (Well No. 2657-05), Uwau Dev Tunnel (Well No. 2953-01), Waikane Dev Tunnel #2 (Well No. 2953-02), Uwau Tunnel Extension (Well No. 2953-03), and Waikane Dev Tunnel #1 (Well No. 3053-01):**

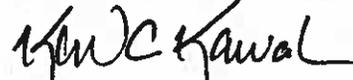
**State of Hawaii  
Agribusiness Development Corporation  
235 S. Beretania Street  
Honolulu, HI 96813**

**Waiahole Main (Well No. 2853-01) and Kahana Dev Tunnel (Well No. 3154-01):**

**State of Hawaii  
Department of Land and Natural Resources  
1150 Punchbowl Street, Rm. 130  
Honolulu, HI 96813**

Written objections or comments on the above application may be filed by any person who has property interest in any land within the hydrologic unit of the source of water supply, any person who will be directly and immediately affected by the proposed water use, or any other interested person. Written objections shall: (1) state the property or other interest in the matter (provide TMK information); (2) set forth questions of procedure, fact, law, or policy, to which objections are taken; and (3) state all grounds for objections to the proposed permits. Written objections must be received by April 13, 2009. Objections must be sent to: (1) the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809 and (2) the applicant(s) at the above address(es).

**COMMISSION ON WATER RESOURCE MANAGEMENT**



**KEN C. KAWAHARA, P.E., Deputy Director for  
LAURA H. THIELEN, Chairperson**

**Dated: March 13, 2009**

**Publish in: Honolulu Star Bulletin issues of March 20, 2009 and March 27, 2009**

**EXHIBIT 5**

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COMMISSION ON WATER  
RESOURCE MANAGEMENT

MONSANTO HAWAII  
2104 LAUWILIWILI STREET  
BLDG. K, SUITE 101K  
KAPOLEI, HAWAII 96707

April 10, 2009

Commission on Water Resource Management  
Kalanimoku Building  
1151 Punchbowl Street, Room 227  
Honolulu, Hawaii 96813

Re: WUPA No. 862  
Waiahole Ditch System, Oahu  
Applicant: State of Hawaii, Agribusiness Development Corporation

Dear Commission members:

On behalf of the Monsanto Company, we support the application by the Agribusiness Development Corporation (ADC) to reduce the system loss allowance from 2.030 to 2.000 million gallons per day and requesting an extension of the deadline to line two reservoirs on the ditch system to further reduce system losses. As a water user of the Waiahole Ditch System, we actively work with the Agribusiness Development Corporation to minimize losses.

It is our priority and interest to efficiently utilize water to minimize waste and maximize production. The ADC's ability to maintain this system is critical to the viability of our operation as well as many other agricultural users throughout the Kunia area. It is important that ADC has the necessary resources and funding to conduct and implement on-going repairs and maintenance as well as long term capital improvements to continue to efficiently utilize these waters and minimize or reduce system losses.

The Monsanto Company is an agricultural seed company and owns approximately 2,289 acres in Kunia. We conduct research and development on corn, soybean, and sunflower.

\* We strongly urge the Commission to approve ADC's application (WUPA No. 862).

If you have any questions, please feel free to call me at 808-690-8054 ext 3107.

Sincerely,

Frederick J. Perlak  
Vice President  
Research & Business Operations in Hawaii

EXHIBIT 6



**Hawaii Agriculture Research Center** RECEIVED

P.O. Box 100, Kunia, Hawaii 96759

Ph: 808-621-1350/Fax: 808-621-1350

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April 1, 2009

COMMISSION ON WATER  
RESOURCE MANAGEMENT

Commission on Water Resource Management  
P.O. Box 621  
Honolulu, HI 96809

Comments by: Hawaii Agriculture Research Center  
TMK: 9-2-001:011

Comments on:

Re: WUPA No. 862, Waiahole Ditch System, Oahu

Application for water permit by the State of Hawaii, Agribusiness Development Corporation

The Hawaii Agriculture Research Center (HARC) supports the application by the Agribusiness Development Corporation (ADC) to reduce the system loss allowance from 2.030 to 2.000 million gallons per day. As a member of the user cooperative, the Kunia Water Cooperative, we actively work with the Waiahole Irrigation System operator to minimize manageable losses. It needs to be pointed out here that this ditch system is without meaningful storage and has a 6 hour lag time from point of release to delivery on the Central Plains of Oahu. This obviously requires considerable communication and cooperation amongst the many users of the system.

With respect to the lining situation, HARC supports the extension to accomplish this directive considering the multiple agencies involved in accomplishing this and their respective priorities. Because ADC did not have the funding for this project, they requested the help of the U.S. Army Corps of Engineers (Corps). A cost share was agreed to between the Corps and the Hawaii Department of Agriculture and the parties were accumulating the funds to complete this project. However, during this period the Kaloko dam failure occurred. This failure resulted in a re-evaluation of the Department of Land and Natural Resources (DLNR) dam safety program. Because at least one of these reservoirs includes a dam and it needs work to improve its safety DLNR is now also involved in the process. Since ADC has no control over the timeline for this work, it has little recourse other than to request an extension.

It is also interesting to note that the Commission is investigating the management of storm water from Central Oahu in order to use it for recharge, while at the same time preventing recharge from these reservoirs by requiring their lining. There seems to be somewhat of an overall system's disconnect in these actions.

Sincerely,

Stephanie A. Whalen  
Executive Director

copy: Agribusiness Development Corporation

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 7<sup>TH</sup> FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 768-8000 • FAX: (808) 768-6041  
DEPT. WEB SITE: [www.honolulu.gov](http://www.honolulu.gov) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)

MUFI HANNEMANN  
MAYOR



DAVID K. TANOUE  
DIRECTOR

ROBERT M. SUMITOMO  
DEPUTY DIRECTOR

2009/ELOG-664 (NW)  
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RESOURCE MANAGEMENT  
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April 15, 2009

Ms. Laura H. Thielen, Chairperson  
Commission on Water Resource Management  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, Hawaii 96809

Dear Ms. Thielen:

Subject: Water Use Permit Application, WUPA No. 862  
Waiahole Ditch System Ground Water Management Area, Oahu

We have no comment on this application to modify existing Permit No. 851.

The request is to: 1) extend of the deadline for completing a water-loss-reduction project at two (2) reservoirs in the Waiahole Ditch System, and 2) recognize the closure of an unlined ditch along the system by proposing that the total allowed water system losses be reduced from 2.03 to 2.00 mgd. Also, we confirm that Reservoirs 155 and 225 are located in the AG-1 zoning district.

If you have any questions, please call Mike Watkins of our staff at 768-8044.

Very truly yours,

  
David K. Tanoue, Director  
Department of Planning and Permitting

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LINDA LINGLE  
Governor

JAMES R. AIONA, JR.  
Lieutenant Governor

THEODORE E. LIU  
Director

MARK K. ANDERSON  
Deputy Director



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LAND USE COMMISSION

Department of Business, Economic Development & Tourism  
State of Hawai'i

ORLANDO "DAN" DAVIDSON  
Executive Officer

BERT K. SARUWATARI  
Senior Planner

FRED A. TALON  
Drafting Technician

March 25, 2009

**TO:** Laura H. Thielen, Chairperson  
Commission on Water Resource Management  
Department of Land and Natural Resources

**FROM:** Orlando Davidson, Executive Officer 

**SUBJECT:** Water Use Permit Application  
Waiahole Ditch System Groundwater Management Area, Oahu

We have reviewed the subject application forwarded by your transmittal dated March 18, 2009. Based on the location of Reservoir 225 and Reservoir 155 on the accompanying maps, we confirm that they are located within the State Land Use Agricultural District. With respect to the other place of water use, the Windward adjustment gate, we are unable to determine the land use district designation as the gate does not appear to be represented on any of the maps provided.

With respect to your request as to whether the current designation is appropriate for the proposed use, please be advised that pursuant to sections 205-2(d) and 205-4.5(a)(1), Hawaii Revised Statutes, permitted activities within the Agricultural District include uses characterized by, among other things, the cultivation of crops. We understand that the two reservoirs hold irrigation water that is used for agricultural purposes in Central Oahu. To the extent that the applicant seeks, in part, to extend the deadline to line the reservoirs with non-permeable material to further reduce system losses, the proposed request would appear to be consistent with the aforementioned statutorily permitted uses, and is therefore an appropriate use within the Agricultural District.

Thank you for the opportunity to comment on the subject application. As requested, we are returning the cover memo for the subject application.

Please feel free to contact Bert Saruwatari of my office at 587-3822, should you require clarification or any further assistance.

Enclosure

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF STATE PARKS  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

LAURA H. THIELEN  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT  
RUSSELL Y. TSUJI  
FIRST DEPUTY  
KEN C. KAWAHARA  
DEPUTY DIRECTOR - WATER  
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SERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
WAOLOAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

March 20, 2009

MEMORANDUM

To: Ken C. Kawahara, P.E., Deputy Director  
Commission on Water Resource Management

From: Daniel S. Quinn, Administrator  
Division of State Parks 

Subject: Water Use Permit Applications for Agribusiness Development Corporation –  
Waiāhole Ditch System Ground Water Management Area, O’ahu

COMMISSION ON WATER  
RESOURCE MANAGEMENT  
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We reviewed the subject application and note that some of the water will be taken from a well located within Ahupua’a ‘O Kahana State Park. We have no concerns if there are no significant impacts to other users of this water.

WUPA 862