

Public Process

Documentation of Public Participation and Partial History of Community Water Committees on Lanai

- 03/03/89** Petition from concerned citizens on Lana`i to the State Commission on Water Resource Management (CWRM) to designate the aquifer as a groundwater management area.
- 08/29/89** Public hearing held on Lana`i. CWRM staff recommended not to designate.
- 03/29/90** CWRM decided not to designate any of the aquifer systems on Lana`i as groundwater management areas. However, in lieu of designation, the Commission required data monitoring, submittal of a water shortage plan, and annual October information status hearings. CWRM also retained the authority to re-institute designation proceedings if specified conditions were met.
- 10/23/90** First annual public informational meeting held on Lana`i.
- 01/17/91** Lana`i Company Water Shortage Plan approved. *(by whom? staff has not seen it.)*
- 02/17/93** Council Chair requests stop-work at Manele golf course pursuant to violation of condition of county code §19.70.085 prohibiting the use of water from the high level aquifer for Manele golf course.
- 05/7/93** Council Resolution 93-42 defers enforcement of county code §19.70.085 given certain conditions. Allows use of 750,000 gpd for the interim, with restrictions. Establishes Lana`i Water Subcommittee until 12/31/93 "to monitor the use of water from Lana`i's high level aquifer. Subcommittee has 9 members:



- 1 from CWRM
- 1 from Lanai Planning Commission
- 1 Lanai Council Member
- 3 Lanai Company
- 3 Lanaians for Sensible Growth

- 06/17/94** Proposed bill amending §19.70.085 to allow withdrawal of 650,000 gpd considered by Planning Commission.
- 09/22/94** Planning Director recommends a total allowance of 650,000 gpd MAN of 13-28 day monitoring periods, to be monitored by council standing committee. Recommends that subcommittee be impaneled as subcommittee of Human Service, Water & AG committee. Proposed subcommittee composition:
- 3 Lanai Company
 - 3 Lanaians for Sensible Growth
 - 1 Lanai Council Member
 - 1 Lanai Planning Commission Director
 - Public Works Director
 - BWS Director
 - CWRM Representative
- 09/28/94** Referred to council. Hearing deferred until 4/17/95
- 10/07/94** State Commission on Water Resource Management (CWRM) receives request from Lanaians for Sensible Growth to “reconsider its initial refusal to designate Lanai as a water management area in view of the serious disputes that have arisen over the future use of the islands’s very limited water resource.”
- 01/25/95** CWRM defers action on the petition to designate Lanai until it can meet on Lanai in October. Requests quarterly status updates on community plan and Water Use & Development Plan.
- 05/15/95** Council Subcommittee Established (Bill #13, 1995, Committee Rpt 95-79)
Membership:
- 2 LSG
 - 2 Lanai Co

1 Lanai Council Member
1 Lanai Planning Commission Chair
Planning Director
Public Works Director
1 LEGS - Non Voting
BWS Director - Non Voting

- 9/13/95** *A Numerical Groundwater Model for the Island of Lana`i, Hawaii* approved by CWRM.
- 10/24/95** On both these dates, CWRM defers action on petition to designate to allow
01/10/96 more time for public and peer review of the document *A Numerical Groundwater Model for the Island of Lana`i Hawaii*.
- 04/96** CWRM Establishes Lanai Water Working Group as successor of Subcommittee. CWRM adopts final draft of *A Numerical Groundwater Model for the Island of Lana`i, Hawaii* CWRM defers action on the petition to designate until October 1996.
- 06/27/96** Water Subcommittee Meeting. Concluded that the housing projection of 1,019 additional units by 2010 was unrealistic. Discussion of per-unit allocations at Manele and Koele. Recommended 1,600 gpd per unit - with 600 potable and 1,000 non-potable. 600 gpd for hotel. Higher than generally used per-unit standards and should be reviewed further. For Koele, 1000 gpd / unit was questioned. As per 1992 Draft WUDP, dual system under construction for Manele. Committee elected to add "Agricultural Reserve" as a line item and to discuss further with Dept. of Ag. Discussion of Working Group Report / Draft WUDP policy document - using 1995 data as base year. Mechanism for home rule and to forge consensus on resource issues.
- 08/01/96** Water Subcommittee Meeting. Discussion of diversified agriculture on Lanai. Introduction of James Nakatani, Chair of the Board of Agriculture. Background: Working Group Report in progress based on last approved community plan from 1983. With community plan overdue, other plans are out of sequence. 1983 Community Plan recommended that pineapple continue to be primary economic activity and tourism secondary. Not consistent with what's happening now. Draft 1995 Community Plan recommends promotion of diversified agriculture, establishing a reserve for agriculture, and ensuring the long-term availability of low cost water for

agriculture. 14,000 acres available for diversified agriculture per document from Steve Snow, who was in charge of diversified agriculture for the company in November 1994. At that time planned acreages were: 12,000 ac pasture, 2,000 ac dryland forage, 5.5 acres banana, 20 acres papaya, 50 acres pineapple and herbs, with an estimate of 200,000 gpd at 96 cents per 1000 gallons. 1990 WUDP proposed 1.8 MGD for ag. The end of pineapple was announced in 1991. The 1992 Draft WUDP proposed 1.5 MGD for diversified ag. At that time, the Dept of Ag had proposed the creation of a 100 acre agricultural park to use 500,000 gpd. The water task force at the time recommended increasing that set-aside to 1.5 MGD, although the company was initially in disagreement, recommending an Ag reserve of 1.0 MGD. Issue still under discussion for Working Group Report. DOA has as yet received no proposals for Ag park. Will develop only if there is community interest. Suggests focus on high-value niche crops. Waiahole consumptive use about 3,500 gp acre. More discussion on development proposals, criteria, projections and analysis, 1995 demand data and plans for Working Group Report. Lana'i Co. suggested 2% per year growth projection as more realistic than Community Plan. Committee to consider. Roy Hardy summary: 9 MGD recharge, 6 MGD sustainable yield, 4.3 MGD 13-MAV limit for designation proceedings, 3.6 13-MAV trigger for deepening wells, declining water levels to 50% also trigger for CWRM action. Company reports working on watershed plan as recommended previously. Conservation - largest potential savings in Manele PD area. Hotel water features, landscaping, leak detection, improved monitoring, promotion of conservation. Committee to discuss timelines for demand.

- 08/29/06** Water Subcommittee Meeting. Discussed alternate projections of water demand for residential, agricultural and other sectors. Discussion on alternative strategies, supply and demand side management, public participation, etc.
- 9/26/96** Water Subcommittee Meeting. Reviewed allocations proposal for Working Group Report. More discussion on alternative strategies, demand-side and supply-side management, conservation, watershed protection, governance and public participation.
- 10/18/96** CWRM Public Informational Meeting on Lana'i. Commission votes to proceed with designation process based upon the prospect of serious disputes. Instructs Lana'i Water Company and Working Group to prepare

Documentation of Public Participation and Partial History of Community Water Commit-

a Working Group Final Report, prepare a schedule and procedure for adoption, and identify any differences between the consensus report and the company's findings in their Water Resources Management Plan, and to attend the public hearing in February.

- 10/31/96** Letter from Lanai Subcommittee Chair, requesting to extend subcommittee to 02/97
- 11/29/96** First Draft Subcommittee / Working Group Report - Working Draft and Policy Core of WUDP Update.
- 12/17/96** Water Subcommittee / Working Group Meeting. Discussion - Nov 96 Draft Report was submitted to CWRM in lieu of a final report. Discussion centered on comments and review of draft. Also discussed Ordinance 2408, Bill 13 1995 - the ordinance allowing withdrawal of 650,000 gpd from high level aquifer and Council Resolution 93-42 clarification of high level water and conditions for withdrawal of high level water for Manele Golf Course, dated May 7, 1993.
- 12/31/96** Council Subcommittee dissolved - continued under CWRM as Lanai Working Group until 02/97
- 01/21/97** BWS moves that Lanai Water Use & Development Plan is part of County Water Use & Development Plan, and properly handled by Board. At the request of the Water Working Group, BWS moves to continue working with the Lanai Committee/Working Group until completion of the Water Use and Development Plan.
- 01/28/97** Board communicates its decision to the Lanai Working Group in a letter from the Director, that the Lanai Working Group shall continue as an advisory committee to the Board for the Development of the Lanai Water Use and Development Plan, that the working group will not sunset until the entire Water Use and Development Plan is finalized and approved, (even though that would be substantially later than completion of the Lanai chapter), that the Board may also be willing to continue to staff an on-going group, but wanted further clarification from the committee as to the purpose, function and role of this group.

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- 02/10/97** Lanai Water Working Group Meeting - Final Report of the Lana`i Water Working Group, also known as the 1997 Draft Water Use & Development Plan, is completed and adopted by the Lana`i Water Working Group. Although this was the last meeting of the LWG under the auspices of the State Commission on Water Resources Management, the Department of Water Supply continued to work with this group until the Lana`i Water Advisory Committee could be established. At this point, LWG begins being referred to as LWG/LWAC. Discussion at the meeting also focused on distribution, implementation and next steps. Notes that at this point the update to the Community Plan is still awaiting review and adoption by the County Council.
- 02/18/97** CWRM hearing on designation of Lana`i. Elects not to designate subject primarily to continuing efforts to systematize community involvement, continuing efforts to protect the watershed, remaining within the previously established triggers : pumpage less than 4.3 MGD, water level declines not exceeding 50% and wells within approved operational guidelines, continued efforts to conserve.
- 04/15/97** Board approves Director's report 97-21, resolves again to continue to work with community advisory committees for the completion of the Water Use and Development Plan, and adds to this a resolution to develop and propose to Council an ordinance to County Code §2.88A pertaining to the Water Use and Development Plan, to be submitted upon completion of the WUDP update, and including provision for ongoing community participation in water use and development planning. Board also approves contract with M&E for update of Water Use & Development Plan. Committee now referred to as LWG/LWAC.
- 04/30/97** LWG/LWAC Meeting. Discussion of Board decision, and proposed Lana`i Company Stewardship Plan. Decides to hold skybridge conference to obtain expert advice on management and protection of the watershed. Committee also agrees that additional capital proposals are needed prior to finalization of the WUDP.
- 05/20/97** Board received an ordinance proposal, after some discussion, it seemed that Board was more inclined to establish committee by rule than by ordinance. Instructed staff to discuss this idea with committee, and to

draft rule, but deferred further discussion and action to August Tech&Planning Committee meeting. Director's Report 97-36.

- 06/03/97** Pursuant to committee request, Deputy Director of DOFAW Mike Buck assigns Bob Hobdy to represent the DOFAW as resource person for the Lana'i Water Advisory Committee.
- 06/09/97** LWG/LWAC continues discussion of establishment of Lana'i Water Advisory Committee. Also discusses company's proposed operational guidelines. Agrees to approve them, and recommends that these be placed in the WUDP and function as mandatory limits. Additional items desired by the committee in the WUDP update as discussed include a capital plan for source development, updated implementation matrix, updated community plan analysis and better system schematics and information.
- 08/26/97 &
09/16/97** Rule drafted but not placed on Board agenda.
- 10/21/97** Board discussed proposal for a rule and determined that a resolution was a more appropriate vehicle for establishing on-going committee. Instructed staff to discuss resolution with committee and draft resolution.
- 11/18/97 &
12/9/97** Resolution drafted but not placed on Board agenda. However, testimony received from members of Lanai Water Advisory Committee that establishment of on-going committee is very important to community members and that before deciding on whether to use a rule or a resolution, committee members would appreciate written guidance from corporation council as to what the legal implications would be for such a group were it established by resolution vs. rule.
- 12/15/97** Letter from Corporation Counsel regarding differences in establishing Lanai Water Advisory Committee by rule vs. by resolution. Paraphrasing: "A Board resolution may be adopted or changed by the Board at any time with proper notice, is non-binding and does not have the force & effect of law.....A Board rule, on the other hand, can only be adopted and changed by going through the rule making process as set forth in HRS Chapter 91. When adopted it is legally binding and has the force and effect of law....."

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- 12/17/97** LWG/LWAC Meeting. Committee reviews letter from Corporation Counsel. Staff reports Board instructions to sound committee out on whether a resolution would be acceptable rather than a rule, and relayed information from Board that if necessary a skybridge meeting would be considered. Committee voted for skybridge and more discussion with Board. Resolution wording also discussed. Status of Lana`i Co. stewardship plan proposal - not funded.
- 02/17/98** Staff requests permission to schedule skybridge meeting for Board to discuss issues with Lanai Committee re: rule vs. resolution. Board moves that "Lanai Committee to submit a letter to the Board stating exactly what they want to discuss with them. Matter will be placed back on the agenda once the letter is received."
- 02/25/98** LWG/LWAC Meeting. Decision of Board discussed with Lanai Working Group/Future Lana`i Water Advisory Committee. Group votes that preference is still to be established by rule over resolution. Rather than press for skybridge meeting, decides to reiterate preference for rule and send request to be established by rule.
- 03/10/98** Letter from Lanai Water Working Group confirming request to have a rule established by BWS pertaining to the establishment of A Lanai Water Advisory Committee. Committee's preference is to be established by rule, because (paraphrasing): resolution can be changed at any time and does not have force and effect of law, whereas rule has force and effect of law and can only be undone through the rule making process.
- 05/09/98** Skybridge meeting held to discuss protection of Lanaihale watershed. Most important item according to all experts was to construct fence and eliminate feral ungulates in key recharge areas. Hunting to be maintained outside the fence.
- 06/29/98** LWG/LWAC Meeting. Committee reviews minutes of skybridge and suggestions for watershed. Begins discussion of possible fence alignment proposals. Determines that broader community involvement is needed in fencing decisions.

- 08/07/98** LWG/LWAC meeting. Attendance list but no minutes. Given date, discussion topics were probably establishment of water advisory committee and fence options.
- 10/29/98** LWG/LWAC Meeting. Discussed Planning Department projections and other community plan items as they related to the WUDP update. Planning Dept. estimated that 1,019 new housing units would be needed to accommodate a projected population of 4,968 over the next 20 years. Committee members agreed that this seemed a bit high, and did not recommend growing at this pace. (Although per-unit analysis is about 600,000 gallon increase - total build-out would reflect more), and recommended lower values. Also discussed objectives noted in the plan.
- Objective: Ensure long term availability of low cost water for agricultural purposes
- Objective: Establish and reserve a minimum water allocation for diversified agriculture consistent with the WUDP
- LWG/LWAC elected to combine set-asides for DHHL and Ag to one large reserve of 1.5 MGD
- LWG/LWAC noted the need to re-visit needs for Ag Park, Community Gardens, HHL, Horse Paddock and other potential agricultural efforts.
- Objective: Protect, preserve, restore and enhance Lana`i's existing potential recharge areas.
- Objective: Forest Management
- LWG/LWAC re-confirmed its decision to include a watershed protection chapter in the WUDP update.
- Objective: Prohibit the use of the high level aquifer water for golf course irrigation, consistent with the WUDP
- Objective: Use recycled and brackish water for irrigation
- LWG/LWAC determined that there was a need for improved inventory of irrigated acreage and that sources and destinations of irrigation water should be better delineated for the WUDP. Company to provide improved information.
- LWG/LWAC made the caveat that the CP should be clarified on prohibiting the use of brackish water and limiting the use of reclaimed water over fresh potable aquifers. Brackish and reclaimed water best considered for Manele Harbor, Kamalapau, other down-gradient

areas where possible.

Objective: Comprehensive planning and management of water resources consistent with the WUDP.

LWG/LWAC elected to re-visit allocations for agricultural park, HHL, lands designated for affordable housing, community gardens & Lana'i Horse Owner Associations Paddock to insure that these needs are met.

Objective: Develop alternate sources, xeriscape landscaping, and strict conservation enforcement, especially for Manele Project District area.

LWG/LWAC suggested that alternate sources be considered in the WUDP update, and that the company include these in its capital proposals.

Objective: Develop and utilize a hydrologic model
LWG/LWAC suggested that data for this model might need updating, especially relating to fog drip.

- 12/04/98** LWG/LWAC discussed LWAC membership and preparations for presentation of fence discussion to community.
- 12/21/98** Lana'i Community Plan update adopted.
- 01/21/99** First public presentation and informational meeting regarding fence proposal held at Public Library.
- 03/16/99** Lana'i Water Advisory Committee Established - from here on committee is referred to as LWAC.
- 11/19/99** LWAC meets - discusses committee objectives and priorities for WUDP, voting, rules of conduct, agendas, handling of disagreements, rotating chair, etc. Also discussed biodiversity committee and possible formation of partnership to work together for watershed protection, lobbying for fence and other protective funding etc.
- 01/28/00** LWAC meeting. No minutes. "Rehearsal" / review by LWAC of draft presentation for "fence summit", large, jointly-sponsored public meeting to be held on fence options.

Documentation of Public Participation and Partial History of Community Water Commit-

- 02/00** State Commission on Water Resource Management approves *Framework for Updating the Hawaii Water Plan* - guidelines on WUDP update.
- 03/??/00** LWAC discussed watershed management, pumpage report and monitoring & reporting. Certain areas in the reports need clarification. Committee members also discussed regularity of reports.
- 04/11/00** LWAC Meeting / "Fence Summit" - jointly sponsored meeting (LWAC, biodiversity committee, & company) and company-catered event / meeting to discuss options for fencing the Hale. Afternoon and evening meetings. In afternoon, Manele Spa permit was main topic of discussion. Also discussed Miki Basin, watershed status and periodic water reports. Evening meeting included dinner and presentation on fence proposals to more than 50 community members.
- 05/26/00** LWAC Meeting. Company presentation on Terraces at Manele project. Maximum allocation for Manele Project overall remains 1.03, regardless of changes to sub-components of that project. . Difficult to separate actual PD use in water reports. Company proposes planning and allocation deduction estimates of 400 GPD potable and 400 GPD non-potable for irrigation, based on irrigation calculations of company consultant. Committee concerns whether estimated estimates are consistent with empirical data for the area. Asked DWS staff to obtain empirical data for similar elevation and climate regions on Maui. Committee also wanted requirement that brackish or reclaimed water be used for irrigation and other non-potable uses, and asked that company provide better documentation of reasons for potable and non-potable estimates. Committee also noted that prohibition on pools should have been included in CC&Rs for the luxury homes. More discussion on pumpage reports, watershed status, possible funding sources. More in-depth introduction of biodiversity committee and LWAC - discussions of jointly sponsored "fence summit meeting", common goals and of possible formation of "Forest and Watershed Partnership". Draft of watershed chapter handed out to committee members. Also handed out State adopted - Framework for Updating the Hawaii Water Plan, which was approved by the State Commission on Water Resource Management in February, 2000.

09/22/2000 LWAC Meeting. Review of draft response on Manele Terraces based on previous meeting. Presentation on overall Manele Project District status by company. Company consultants explained water use and irrigation calculations. Proposal was still 400 GPD potable and 400 GPD non-potable for MF units. Nothing in CC&Rs of units sold to date indicates any restrictions on water use. Each unit will have two potable hose bibbs. Committee recommended that approval re-iterate 1.03 total limit on Manele PD, set allocation of 400 GPD potable and 400 GPD non-potable water, include these quantities in the CC&Rs for the project - specifically wording the covenant to indicate that potable water use not exceed 400 gpd, the applicant should be required to utilize reclaimed and or brackish water for irrigation to the fullest extent possible, and the applicant should implement conservation measures including limits to turf and use of appropriate plants, rain-shutoff devices, regular maintenance, low flow fixtures, etc. DWS staff handed out table on PD densities, units and other conditions of the PD, as well as the empirical data on similar areas in Maui requested at prior meeting. Discussion of re-grassing/re-seeding of Koele GC - result was to recommend filing of the application since rainfall had increased and the question could always be re-opened when necessary. Discussion on grant funding applications for watershed. Pumpage report discussed. Committee member Hokama requested that bulkhead pressure readings at Shaft 3 be included in the reports again. Committee member McOmber requestee an independent non-company entity monitor water levels, chlorides and pumpage. Discussion on status of aquifers and on impacts if water levels should fall. Consultant Dr. Kumagai noted that existing infrastructure not appropriate to deliver 6 MGD and that it should not exceed 3.52 MGD with the current configuration of withdrawals. Also that hydrologists in the past had estimated practical yields more conservatively in past (3.5 Anderson; 4.3 Takasaki).

01/18/2001 Joint CWRM Public Informational Meeting with LWAC meeting. Aquifer status report from CWRM & discussion served as annual Public Informational meeting. Also discussed WUDP - Committee wants to include conditions of approvals section. Staff asked for more data on system infrastructure and conservation measures from company. Committee discussed additional monitoring and reporting requested:

Monitoring

- drive exposed pipelines monthly
- leak detection on old pipes at least once per year
- meter testing sizing and replacement

Reporting

- tank and reservoir levels and pumpage from large storage
- source to use reporting of water - especially better break down of irrigation water use
- status of system - liners, leaks, broken/repared pumps, etc.

Committee discussed difficulty of including financial plan without company data - but that need to consider realistic factors in capital or other proposals. Need to consider do-ability. DWS staff requested PUC submittal from company. Later received two pages from company staff. Had someone copy additional info at PUC.

Discussion of brackish wells in high level aquifer that could freshen, and company's inability to use those if that occurred.

Discussion of new source development vs. demand. Committee set policy that additional distribution of withdrawals be required by 3.2 MGD total pumpage.

Discussion of possible conservation measures -

- Cover large storage such as 10 MG Koele and 15 MG Manele holding ponds?
- Landscape retrofit at projects to save more water.
- Upgrade irrigation systems to include rain-shutoffs, soil-moisture sensors, etc.
- Need for systematic, reportable maintenance program discussed.

Implementation matrix needs rework w/ tracking items for each measure.

Future Mtg.

05/31/01

LWAC Meeting. Company gave powerpoint presentation on re-seeding and re-grassing of fairways at Koele GC. Requested LWAC support for requests to use high level aquifer for this project and amendment to ordinance to allow it. Customers dissatisfied with status of GC. Committee did not vote. Staff distributed data, referred to in minutes of subsequent meeting. Update that Stewardship plan as revised had been approved for funding.

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- 07/26/01** LWAC Meeting. Discussed proposed ordinance amendment regarding irrigation of Koele and re-seeding re-grassing efforts. Flouridation also discussed. Questions on periodic water report. Committee still not happy with monitoring and reporting.
- 09/25/01** LWAC Meeting. Presentations by Lana`i Company hydrologists on use of water from the high level aquifer for Koele Golf Course. Reviewed updated implementation matrix. More discussion on pumpage report.
- 10/10/01** Meeting of LWAC, Biodiversity committee, and other future Lana`i Forest & Watershed Partnership members to prepare for MOU signing.
- 10/11/01** Formal signing of the Lana`i Forest and Watershed Partnership Memorandum of Understanding. Celebration.
- 10/26/01** LWAC Meeting / CWRM Annual Public Informational update. Handouts were provided but chair did not call on CWRM staff to speak. DWS staff passed out to committee members for review, ahupuaa map, community plan map, wellhead protection area maps, draft map of Lana`i systems - needs further input and information from company, graph of 50 years pumpage on Lana`i, minutes of 01/18/01 meeting, proposed implementation matrix edits, draft community plan consistency section, chronology of water, biodiversity and land use on Lana`i, reclaimed water production graphs and tables, draft section on conditions of approvals, minutes of May meeting. Committee discussed findings of TDEM studies by Blackhawk GeoSciences. No additional water identified. Committee discussed "borrowing" from potable allocation until additional reclaimed water is available. Opted against it on the theory that it would be hard to actually replace the water once used - that once allowed, it would probably continue until there were other new potable uses proposed for the same water...thereby hastening the pace of the use. Corp counsel indicated that e-mail is acceptable method of notification for LWAC meetings. However, committee wished to continue to have agendas posted. Committee noted that meeting needs to be scheduled to discuss systematic changes to periodic reporting. Discussed WUDP status and data needs. Some of the items passed out for discussion today had been passed out previously (in May), and still needed committee review,

discussion & input. Also needed is better data on company systems and consumption by class and area, GIS layer from Planning for community plan still not finalized, and capital proposals/costs of operations still not provided by company.

- 12/07/01** Presentations by Dr. Aly El Kadi and Robert Whittier on research for wellhead protection section. Modeling, model parameters and purpose discussed. Discussion of request to utilize high level aquifer for Koele Golf Course irrigation. Committee not yet ready to vote. Discussion again re-iterating need for group review of certain draft elements as well as for additional data under the guidelines. Demand and capital planning data not adequate.
- 02/20/02** Discussion on proposal to use high level water to irrigate the Koele golf course and proposed amendment to Koele PD to enable that. DWS staff passed out Allocation references, implementation matrix and community plan consistency section passed out for discussion, list of all wells, tunnels and shafts on Lana`i, and conservation materials prepared in Tagalog language. Company passed out proposed revisions to allocation table and SMART plan for Koele GC management. Issues raised included condition of aquifer, effects of drought, relation of forest condition, existing ordinance, agreements and past representations, maintenance issues and island economics. Conditions of approval if the request were granted were discussed. LWAC was unable to reach consensus. A summary of the discussion and both sides to be presented to the Planning Commission. Committee reviewed implementation matrix section of WUDP.
- 08/01/02** Scheduled workshop between LWAC and Lana`i Planning Commission on Koele PD, status of aquifers, WUDP, etc. - cancelled?
- 09/27/02** LWAC Meeting. DWS staff passed out updated project-based demand analysis tables, and updated population projections based on SMS data for review. Also updated demand regressions, well pumpage, chlorides and water levels and reclaimed water use graphs. Committee agreed not to make any further changes to allocations other than those agreed upon in previous meetings. Suggested 5 year incremental demand projections required under Framework for Updating the Hawaii Water Plan be done proportionally. Did not review project build-out analysis passed out. Also did not comment on

draft pump facilities inventory provided by company. Discussed problems with periodic water reports. Agreed to put 3.5 as the trigger for distribution of withdrawal projects. Not clear whether group realized they had previously set 3.2. at 01/18/01 meeting. In any case - discussed that design for distribution of withdrawal projects to commence at 3 MGD, to be sure it is accomplished in timely fashion.

- 10/??/02** Rescheduled Workshop between LWAC and Lana'i Planning Commission on Koele PD, status of aquifers, WUDP, etc (need to verify which date this actually occurred).
- 02/27/03** Passed out draft wellhead protection ordinance for committee review. Discussion on pumpage report design and on wells 1, 9 and 14.
- 08/01/03** Ground rules reviewed. Committee to meet independently. Agreed to rotating facilitation with Chair to handle agendas. Minutes to rotate as well. DWS staff not present. C&CR presented system status handout and indicated that three new master meters would be installed at Manele, one for residential and two for golf course use. Indicated that once well 14 was up, they planned to pull and repair well 1. Noted that new plans were in progress for storage upgrade at Koele, and that bids had been obtained for floating covers for the 10 & 15 MG reservoirs. Discussed using two rather than four holding ponds at the auxilliary wastewater treatment plant, and converting the other two to storage.
- 09/05/03** ?
- 12/ /03** ? Minutes of Jan meeting include review of Dec minutes, but missing.
- 01/09/04** LWAC Meeting. Low attendance. Discussed primarily system issues and periodic water report. Reservoirs full, Wells 9 & 14 awaiting repairs. RM Towill consultants to work on periodic water report. Fence material for hale fences beginning to arrive.
- 02/13/04** LWAC Meeting. RM Towill working on supply and demand data. not yet finalized. Collins Lam recently assigned to run water company. Anticipates well 14 pump to be re-installed the following week.

Determined that tying together the lakes at the Experience at Koele would not be cost effective. Discussion 20 MG storage pond for overflow and drainage. SCADA budget allocation increased. Will work on standardizing and calibrating to improve data. In the development arena, Manele spa and keiki center to be set aside in favor of a "well being" center.

- 03/05/04** Reviewed procedures of committee. Committee wants work to date submitted to CWRM as working document to be continually under updated. Staff points out missing elements, including certain requested demand data from company, better capital plan enunciation, certain policy questions. Discussion on revised long term build-out demand proposal from company, still in draft. Discussed system status and ongoing projects. DWS staff repeated request for assistance with completion of meter map that DWS had started for company. Discussed how this map was put together, and gaps in data.
- 4/2/2004**
- 05/07/04** No minutes
- 07/14/04** LWAC Meeting. Discussed revised demand criteria and project analysis proposals from Castle & Cooke Resorts. DWS staff reviewed changes in assumptions reflected in these proposals. 1997 WGR allocation tables as amended by subsequent minutes to be included in WUDP as well as regressions and other projections, including revised demand proposals. Framework for Updating the Hawaii Water Plan, as well as earlier contracts stipulate that multiple demand forecasts be considered. LWAC will ultimately need to select allocations as policy matter, and may consider any or all of the demand forecasts.
- 08/04** LWAC Meeting. First Draft handed out to committee
- 09/20/04** LWAC Meeting. Review first draft. Various suggestions for content, format and clarification.
- 02/25/05** LWAC Meeting. Discussed public notification and minutes. Need protocol. Lanai Water Company working on verifying and calibrating its meters. All accurate so far except for the one on Well 4. Plan to change meter. Also working on some safety improvements for Well 2 / Shaft 3. Well 14 having

some startup problems. Residential meter between the 15 MG reservoir and Manele Project District installed and operational. Golf Course meter installation pending. Periodic water report discussed. new meters and SCADA should improve some previous inaccuracies. Collins Lam to leave Lanai Water Co. after April 05. Committee disappointed as he seemed to work well with them. Phase I of fence complete. Phase II pending, will be more expensive and slower due to steeper terrain. LWAC made request to Corporation Counsel after January Meeting to clarify ordinance 2408. Awaiting word.

- 07/28/05** LWAC Meeting. Discussed system status leaks and water loss. Breaker tanks project to start soon. Request for proposal for 2 MG tank has been issued. Initial SCADA field work complete. Constructin 11 buildings with 48 units on 10th and Lanai Ave. Contract issued for water hyacinth removal.
- 10/25/05** LWAC Meeting. Low attendance. Discussed need for Fog Drip study, establishing ordinance, and how to use the WUDP. Should be reference for applicatons, determine if application conforms to the plan, if not discuss revisions either to plan or project prior to approvals. Amendments to WUDP to be reviewed by LWAC.
- 11/22/05** LWAC Meeting. More discussion on how to use WUDP, revisited goals of plan, discussion on various tables within draft.
- 1/26/06** LWAC Meeting. Discussed the use of R-1 water on the Golf Course at Koele, Draft ordinance to establish LWAC by ordinance, periodic water resport, letter from C&CR attorney on WUDP and allocations. C&CR proposed to use potable water on the golf course. DWS staff agreed that potable water over a wellhead protection area would be a nice idea, and suggested trade-off of equivalent amount of potable water to non-potable water elsewhere in same system area but outside wellhead protection area. C&CR proposes trading off for more reclaimed water use in Manele. Committee members do not agree. DWS staff would agree if trade-off were in area with same mix of potable sources, such as irrigated area immediately makai of Lanai City and surrounds. LSG points out that company has made agreement not to use potable water on Koele GC. Committee concludes that this should not be proposed to council without further discussion within committee. Company opposes ordinance to establish LWAC. Other committee members recall that C&CR initially expressed support for the idea and voted for it. C&CR does not want to

be held to that, nor does it want this included in the WUDP. Discussion on periodic report. Committee members have questions on the discrepancies between pumpage at wells 1, 9 and 14 vs. use from the potable reservoir. C&CR says this is natural evaporative loss. Committee expresses concern that it is too much. Discussion on C&CR letter opposing plan. C&CR wrote long letter with many items, including opposition to elements of plan, various policies and statements within plan, and some corrections. Committee points out that C&CR representatives were present for and voted in concurrence on all elements of plan, including ordinance proposal. C&CR wants to know if entire plan becomes ordinance, or what becomes ordinance. Committee points to implementation matrix and policy section. Segways into primary concern of C&CR which all agree is allocation table. Committee agrees unanimously to work together to re-visit allocation table. Discussion on allocation - need agreement on unit factors, C&CR updated proposal not based on system standards, but has some empirical basis. Needs further review. Need better breakdown of existing and proposed uses. Need to specify allocation to project and to system area. Need explicit allocation for ag park. Need individual information per project district.

02/06/06 LWAC Meeting. Discussed agricultural allocation. Brackish water for residential landscape irrigation at MPD, Project analysis tables in Chapter 4, per unit consumption, consumption classes. Also posting for new at-large member.

4/06/06 LWAC Meeting. Discussed public notice, project build out proposal from C&CR and analysis, allocation table and C&CR attorney correspondence. Also discussed data still missing to enable assignment of location and subdistrict for each meter. Value of disaggregated data in system analysis, conservation planning, etc. Corp Counsel memo indicates that sunshine law notification not required, but does recommend good public notification. DWS points out that since it is no longer creating agendas or schedule it would be better to have someone else do the posting. However, agrees that public notice is important. Chair will post notice at post office and committee member volunteers to inform Lana'i councilmember's office. DWS to prepare ad for Lana'i Times to recruit new at-large member. Allocation table - proposals should be broken down to indicate 5, 10, 15, 20, 25, 30 year anticipated build-out levels. Committee wants triggers defined for when "alternate water source" is required - so that it can be clear with glance at final allocation table. Discussion of "alternative" water sources, increased wastewater use, desalination, run-off, conservation. DWS points out that table 6-2 weighs the cost benefits of some demand and supply side options, while desalt is found in 6-1. Increased wastewater use option not costed as "source" -

existing plants large enough to accommodate additional flow , but it may still be good to add. Discussion of C&CR attorney letter - Committee members express that it goes against the spirit of working with the group to vote one way in a meeting, and then have subsequent representation for the same entity raise these concerns outside the group to a higher body. Lack of continuity in C&CR representation and views is a problem. CWRM reports that fog drip study should begin in late summer of 06.

5/05/06 LWAC Meeting. Reviewed updated demand chapter and policy chapter allocation table. C&CR requests provision to be able to maneuver within a project district allocation, provided that the total remains same. Committee concurs in principle with hte caveat that such allocations be discussed at an LWAC meeting before being finalized. Vote will come when table and associated text are finalized. Discussed 650,000 gallon limit on the use of wells 1, 9 and 14. LSG still interprets this as applying to all use of high level water for Manele. C&CR interprets it as applying only to the Golf Course. Discussed results on the Well 6 oil sheen. C&CR reports that water is safe. Regarding ag reserve, given low sustainable yield, should some additional reserve be set aside to protect aquifer in event of uncertainty ? Committee members note that chlorides in well 1 seem to be decreasing. If this goes fresh, will impact irrigation source for Manele PD. Water levels dropping. Trees on Hale dying. C&CR doesn't think additional reserve is needed. Gradual development, slow development, ag reserve & gradually increasing conservation are adequate. In future de-salt may prove cost effective.

7/ /06 LWAC Meeting. Discussed ordinance establishing LWAC, demand analysis tables and company plans. Company now opposing ordinance. Other committee members want review vis a vis WUDP prior to Planning Commission decisions. Want to be sure Planning Commission receives their comments on water issues. C&CR does not want another layer of bureaucracy or added review time. C&CR confirmed that it had not yet given DWS staff its final table 4-21 (company's proposal), so staff therefore could not complete analysis and comparison. C&CR is revisiting its MF and SF plans for Manele. Considering Increasing MF and decreasing SF.

8/11/06

9/08/06

10/20/06

11/16/06

LWAC Meeting. DWS staff has C&CR final proposal. To make "straw man" revised allocation table using 10, 15, 20, 15, 30 year and build-out.

1/18/07

LWAC Meeting. Two "straw man" allocation tables presented. One based on project build-outs proposed by C&CR with some adjustments based on committee discussions, the other based on econometric forecast numbers - for comparison. Discussed. Some areas in table need clarification.

2/15/07

LWAC Meeting. DWS staff out. Discussed tables, Chair presented alternate format. No votes taken.

4/19/07

LWAC Meeting. Discussed C&CR objection to moving WUDP meetings forward pending results of LUC proceeding. Committee members reiterated that it went against spirit of collaboration to present legal challenges rather than raising and discussing concerns in the group. Given disparate positions, difficult to progress. Nevertheless, discussed allocation table. DWS staff wanted some changes to revised allocation table format, to facilitate internal data review - consistent breakdowns by system and region. More work needed to resolve discrepancies between the three tables. DWS noted that assumption for straw-man tables was that build-out would be beyond 2030, but C&CR stated that it intended to build-out by 2027, although this would not be consistent with forecasts.

5/17/07

LWAC Meeting. Discussed membership. Voted to appoint a fourth "alternate" at-large member, to be invited to all meetings and to vote in the even that one of the other at-large members are absent. Discussed Challenge at Manele. Discussed fog-drip study. Dr. Juvick collecting data at eight stations on the Hale. At 6 months of a 2 years study. Progress report scheduled at 12 months. Committee requested C&CR to bring map of Hale showing fog drip stations. Discussed Groundwater study. Tom Nance will formulate parameters for updated model, scope to be reviewed by CWRM and implemented by Howard Endo. Time table of fog drip study may be such that updated data won't get into model update. Model itself won't change sustainable yield estimates, but may provide info on when additional measures might be needed to accommodate various pumping scenarios. Discussed Periodic Water Report. Committee members would like effluent / influent to auxilliary plant included in report. Committee would like monthly vs. 28 day reporting. Need to check with corp counsel re: reporting period under 19.70.085. Discussed period of inconsistent measurement in PWR. Discussed Water

Use & Development Plan. CWRM staff noted that capital plan should be further fleshed out for WUDP. Committee suggested consideration of lining reservoirs. County staff discussed exchange in which reclaimed water would be used for irrigation rather than potable water somewhere outside high level aquifer, enough to enable use of potable water on Koele GC where potable water underlies. Discussed table 5-1. Went from 9 to 13 categories on table and discussed adding subtotals by system area, type of water and pumped vs. other. Discussed controversy over ordinance 2408. CWRM staff asked for Unit Quantity Analysis of assumptions used to determine allocations in C&CR proposal, others. Discussed buildout analysis of C&CR proposal. Discrepancy between proposal and existing project entitlement in that proposal lists fewer units. Either PD should be amended to allow fewer units, or analysis should include all units. First Cut Pace of Resource Use policy proposed by committee member. 2010 3.5, 2015 4.0, 2020 4.5, 2025 5.0 , 2030 5.25 Buildout 5.5. Trigger for new source development 3 and 3.52 reiterated. System status discussed. Committee supports replacement of well #3.

07/12/2007

LWAC Meeting. Discussed Corp Counsel response re: reporting period. Reporting methodology could probably be changed without ordinance, but by a resolution of council. Resolution drafted and presented, as per previous meeting discussion. However, company said it does not support shift from 28-day to monthly cycle. Regarding other changes, company willing but wants clearly delineated list of all changes desired, vs. piecemeal. Discussed Unaccounted-for water. Some committee members concerned re: system losses, particularly from 15 MG reservoir. Some committee members also want more accounting of where water comes from and goes to. Company indicated that systematic leak detection program may be more efficient than revisions to PWR for identifying problems. DWS staff agreed. Started discussion of Unit Quantity Analysis requested at May meeting. C&CR proposal differs from Statewide Standards and existing entitlements in several areas: some items are requested that are not in existing PDs or proposals currently under review, build-out for some items represents less than all entitled units, in some cases consumption estimates are not explained but merely listed as lump sum. These tend to be small, but since there are 13 out of 40 line items in this category, they add up. Finally, some items are adjusted from standards based on empirical data for the area. In some cases these changes are reasonable or allow for more flexibility or even more realistic assessment of demands, but in others they allow for the potential of padding - room for additional approvals not listed. Also, if

entitled projects are not traded or un-entitled in exchange for new proposals, then build-out is likely to be higher than proposal indicates. Minutes include more details of discussion of first page of 5 page unit quantity analysis table.

- 1/25/2008** (have notes, still have to type up) LWAC Meeting. Presentation from Gordon Tribble of USGS pertaining to the uncertainties of high level dike confined water. (more, need to find).
- 2/28/2008** LWAC Meeting. Discussed lack of data for forecast. Staff handed out letter from consultant stating that data provided was inadequate to prepare good forecast. Discussed well construction and pump installation permits for New Lana'i Well 3 - 4954-03, and for Lana'i Well 11 - 4753-01. No vote was taken but committee expressed support for the replacement of well 3 in particular. and slightly more guarded support for distribution of withdrawals with well 11. The concern was expressed that well 11 not be used to further increase pumping of brackish water from the high level aquifer. Discussed the need for resource reserve.
- 4/25/2008** LWAC Meeting. Discussed 8 different scenarios for buildout and pace of resource use policy. Discussed line-item allocations for conservation and "alternate source". Discussed pros and cons of resource reserve. Discussed triggers for additional distribution of withdrawal. 3.0 to start 3.52 to be completed. Discussed status of water levels in wells 1,9 & 14 as well as in wells 6 & 8. All declining. Also status of pumps 2 and 3 - both down. Permits for well 3 replacement and for distribution of non-potable withdrawals well 11 have been submitted to CWRM and are being reviewed. were passed out to group at 2/28/08 meeting.
- 5/30/08** LWAC Meeting. Presentations by Bob Hobdy and Jay Penniman regarding history and status of watershed, concerns re: Increment III alignment, and description of work to preserve Hawaiian petrels. Had been thought extinct or nearly extinct until about 2001. Now it is believed that several thousand birds remain. The biggest threats to the birds right now are invasive plants that over-run natural habitat and form impenetrable thickets where the birds can not nest. Examples of such problem plants are waiowi (strawberry guava), manuka and tibouchina. Other threats include predation, and flying into the deer fence and meteorological towers. Suggested that white fiberglass electric fence tape be woven into the top of the fence wire to enable the birds to see and go over the fence. Also described was a three acre habitat restoration project around the fog drip station. This restoration will make a corridor to Maunalei breeding grounds. . CCR is providing funding as

part of its Habitat Conservation Plan for its potential wind farm. There was strong support for watershed protection by some of the LWAC members. CCR staff agreed to consider the fence line proposed by Hobdy. Discussion of the Implementation Matrix.

- 06/27/08** Discussion of fence increments. All phases surveyed. However as it may be a while before Increment III is actually constructed, additional survey may be done. CCR outlined the expected timeline for completion of the fencing project; they are currently 2-3 years behind schedule. The costs of materials have almost doubled over the last 4 years. CCR emphasized that it will get completed. Initial results from the 2-year study by Jim Juvik are showing that fog drip is significant on Lanaihale. The new alignment will incorporate suggestions made by Robert Hobdy at the last meeting and in discussions with Conservation personnel. Discussed capital projects of CCR. Lana'i City 2 MG tank done. Improvements made to Well 2/Shaft 3 main from Hi'i to the bottom of the slope. Other plans include replacement of Well 3 and drilling of Well 15. Anticipated yield on Well 7 was small. Discussion of allocation table.
- 07/25/08** LWAC Meeting. The pace-of-resource proposal was reviewed. Some billing data is still missing. Also discussed were problems / inconsistencies in the Periodic Water Report. A tiered pricing proposal has been filed with the PUC. Some LWAC members requested that the justification prepared by DWS for the proposed Allocation be included in the WUDP, possibly as part of the Policy chapter as an explanation. The LWAC discussed the status of wells. CCR explained its plans for industrial use development at Miki Basin. Concerns were expressed that the line is very leaky and suggestions to condition approval for the project on fixing the line. CCR said it would be too expensive to put in new line. LWAC members requested continued updates on plans. The group continued discussion on the Implementation Matrix, including tiered rate structure, low flow devices, use of water audits, and importance of education. LWAC members requested that someone from the Fire Department attend the next meeting to address the threat fire poses to the Watershed.
- 08/22/08** Discussion of whether or not to shut down water source on the west end. Fire Department representative came to discuss concerns. Concerns and possible solutions discussed. Miles of old 10" pipe sitting. Pipe is old, with frequent breaks. Area is fire prone, and water source is needed to be able to fight brush fire. Helicopters alone not enough. Lana'i has two fire

engines, one tanker and 6 firefighters. It takes about an hour to get additional manpower. Water is also needed for the Kanepuu project. Discussed cost of Lanaihale fence. No funding yet Discussed breaks in Palawai Grid. Discussed allocation table. Some thought too generous. Raised precautionary principle. One suggested alternate, more stringent proposal. Others thought not generous enough, that LWAC had been close to agreement on CCR proposal. Still others said that regardless of final numbers, setting allocation amounts would not be enough in itself, triggers and actions needed to ensure adequate distribution of withdrawals. Discussed triggers in proposal. Also some discussion of per unit consumption. The group discussed the issues of identifying alternate sources, including a resource reserve, including triggers for future action, applying the precautionary principle.

- 10/24/08** LWAC Meeting. The group discussed whether the meetings could or should be recorded (video-taped). CCR said it was a public meeting. Others expressed concern about that recording the meeting might limit participants' willingness to speak freely. The group agreed to allow video-taping by CCR, but only if two free copies were made available for the group. CCR has a proposal for an additional swimming pool at Manele. The group agreed to inform the Planning Commission that there was not an opportunity to have a presentation from the Company on the proposal, so request Commission defer action on it. LWAC reviewed what conditions trigger review by the LWAC of major development projects. Also the Planning Commission can request LWAC input on a proposal. The group continued discussion on Table 5-1 (Pace of Resource Use) and the overall timeline for WUDP.
- 1/30/2009** LWAC meeting. Discussed status of wells, fire protection issues, periodic water report. Discussed allocation table. Discussion included need for a precautionary approach and the need to avoid "paper water". Additional monitors put in wells 3, 5 and 7. Discussed breaks in Palawai Grid.
- 2/27/09** LWAC Meeting. Those present discussed possible approaches for when there is no CCR representative at the meeting and suggested sending a letter requesting their regular participation. Agreed to move forward with or without CCR, given need to make progress. The group discussed whether LWAC should take a position on CCR Miki Basin heavy industrial permit application. This involves infrastructure only, not an increase in use; concerns relate to maintenance and fire protection (when draining the lines). LWAC agreed that it wants issues relevant Table 5-1 to come before it. The group discussed CCR's PUC rate case and whether LWAC should take a position. It was

agreed that given the timing and the inability to discuss with CCR, that no formal letter would be written; individuals could testify on their own about concerns discussed (e.g. lack of conformity with existing covenants). The group discussed the issue of whether the existing water system and rates is fiscally viable. Current rates are estimated to be ¼ of the actual cost. The group also discussed inconsistency of water use with existing covenants and the possibility of a "conservation rate." CCR informed the group that reporting of water use is up to date now and will be current in the future. CCR reported on the status of repairs to the Palawai Basin system

3/27/09 LWAC Meeting. The group reviewed Chapter 2 (Regulatory Framework) and Chapter 3 (Resources) and made some general organizational suggestions. It was noted that Lanai is not currently meeting System Standards in terms of needed resources, but this should reflect more of a Call to Action vs. a panic. CCR said it has plans to move toward meeting those standards. Some wells are closer than others to action levels. LWAC agreed it should watch trends and if approaching action level, do a test. One request was for clear criteria for action level and CWRM designation. Regarding Water Reports and use, CCR presented revised format for reporting. On the PUC rate case for brackish water, there were concerns about how it was costed and whether there was adequate consideration of operating and maintenance costs.

7/31/09 LWAC Meeting. The group was informed that the WUDP needs to be approved by the Board of Water Supply before it is sent to County Council, which then has only 45 days to approve it or reject it. However, Council was looking at amendments to the County Code to change that schedule. DWS reviewed the status of the chapters, with an in-depth review of Chapter 4. The previous calculations were updated with information from 2008. It was suggested that information about Miki Basin should be included in Table 4-23 (4-21), but that it did not equal an "imprimatur" for planning approval. The group also reviewed and discussed the allocation table. A number of LWAC members stated a desire to take a more conservative approach, given the current economy and actual building activity. LWAC also discussed the issue of reporting water use on a 13-period basis and that it would be preferable to have it on a monthly basis.

**12/11/09
&
12/21/09** LWAC Meetings. Reviewed 10/19/2009 Review Draft of WUDP for Lana'i. Presentation and discussion of review draft.

Documentation of Public Participation and Partial History of Community Water Commit-

