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GOVERNOR OF HAWAII



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DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
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STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

May 24, 2006
Honolulu, Oahu

Sandwich Isles Communications
APPLICATION FOR A WATER USE PERMIT
SIC-01 Well (Well No. 2801-03), TMK 9-5-002:003, WUP No. 765
New (Agriculture and Landscape Irrigation) Use for 0.576 mgd
Wahiawa Ground Water Management Area, Oahu

APPLICANT:

Sandwich Isles Communications
1001 Bishop St.
Pauahi Tower, 27th Floor
Honolulu, HI 96813

LANDOWNER:

Same

SUMMARY OF REQUEST:

The applicant requests that the Commission approve a water use permit for an allocation of 0.576 million gallons per day (mgd) of non-potable basal ground water from a new well (Well No. 2801-03) to supply agriculture and landscape irrigation water for 154.25 acres of land surrounding its proposed Network Operations Center in Wahiawa, Oahu.

LOCATION MAP: See Exhibit 1

BACKGROUND:

On May 14, 2004, Sandwich Isles Communications initially submitted this water use permit application.

On June 21, 2004, the Supreme Court issued an opinion in the Waiahole Ditch combined contested case hearing (Case No. CCH-OA95-1) clarifying that, in addition to the seven criteria outlined in §174C-49(a) Hawaii Revised Statutes (HRS), the public trust doctrine imbedded in the reasonable-beneficial use criterion requires that water use permit applicants must also provide an analysis of alternatives and adequate justification for the requested duties.

Based on the Supreme Court's opinion, on July 23, 2004, staff requested that SIC provide: 1) an analysis of alternatives and 2) justification for irrigation demands.

On August 18, 2004, staff submitted the application to the Commission to address the 90-day requirement for action. The Commission approved staff's recommendation to defer action for sixty days to allow additional time for the applicant to submit its alternatives analysis and demand justification. If the applicant did not provide the additional requested information within the sixty-day deferral period, the Commission ruled that the application would be deemed automatically denied without prejudice due to the failure of the applicant to meet its burden of proof.

On October 22, 2004, staff notified the applicant that their application was denied without prejudice as of October 17, 2004.

On February 17, 2006, SIC resubmitted its water use permit application, supported by an analysis of alternatives and justification for the requested quantities. The proposed end uses are identified in Exhibit 2 and described in Exhibit 3.

Additional information regarding the source, use, notification, objections, and field investigation(s) is provided in Attachment A.

ANALYSIS/ISSUES:

Section 174C-49(a) of the State Water Code establishes seven (7) criteria that must be met to obtain a water use permit. An analysis of the proposed permit in relation to these criteria follows:

(1) Water availability

Through the Hawaii Water Plan, the Commission has adopted 23 mgd as the sustainable yield for the Wahiawa Aquifer System Area. Individual existing water use permits in this aquifer system are shown in Exhibit 4. A summary of the current ground water conditions in the aquifer is provided in Table 1:

Table 1. Wahiawa Aquifer System Area

ITEM	Wahiawa Aquifer System Area (mgd)
Sustainable Yield	23
Less: Other Existing Water Use Permits (shown in Exhibit 4)	20.386
Reservation to DHHL	0
Subtotal (Current Available Allocation)	2.614
Less: Other Completed Applications	0
Less: This Application	0.576
Subtotal (Potential Available Allocation)	2.038

Table 1 shows that there is presently 2.614 mgd available for allocation from the Wahiawa Aquifer System Area. If the Commission were to grant the applicant’s full request, there would still be 2.038 mgd of ground water available for future reasonable and beneficial uses. Therefore, water is available to accommodate this request.

(2) Reasonable-beneficial

Section 174C-3 HRS defines "reasonable-beneficial use" is

"...the use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and the public interest".

I. Purpose of Use

The applicant is requesting the use of non-potable ground water for its proposed agriculture and landscape irrigation uses surrounding its Network Operations Center in Wahiawa, Oahu. Exhibits 2 and 3 provide a breakdown and description of the proposed end uses. Based on information obtained from the exploratory well construction, the well water is very fresh (20 ppm of chloride) and may be of potable quality, although testing for other water quality parameters has not been done.

The Declaration of Policy section, §174C-2(c) HRS, states that the Water Code shall be liberally interpreted to obtain maximum beneficial use of the waters of the State for various purposes including irrigation and other agricultural uses. The applicant is a cooperator with the West Oahu Soil and Water Conservation District and is currently working on a conservation plan for the parcel.

II. Quantity Justification

The applicant is requesting a total of 576,375 gpd for its irrigation and agricultural needs. To support the requested quantities, the applicant has provided three letters from farmers/agricultural specialists (Exhibits 5 to 7).

Prior to the Supreme Court's ruling in the Waiahole Ditch contested case hearing, staff relied on guidelines in the County Water System Standards (2004) or Table 4-4 in the Oahu Water Management Plan (1992 Draft) to determine reasonable irrigation use quantities. Based on the Supreme Court's decision, such guidelines were deemed to be insufficient because climate, crop rotation, irrigation system type, and other factors that influence irrigation make-up water were not considered.

Ultimately, staff's longer-term approach to analyzing reasonable irrigation quantities is the development of an irrigation model, such as the Irrigation Water Requirement Estimation Decision Support System (IWREDSS), which is described in a separate item on this agenda. Pending the development of the model, Dr. Ali Fares, Associate Professor at the University of Hawaii's College of Tropical Agriculture and Human Resources, has agreed to review water use permit applications for irrigation uses. Dr. Fares' report is attached as Exhibit 8.

On April 28, 2006, staff met with Dr. Fares to go over the report. Dr. Fares stated that the crop coefficients and equivalent crop types used in his analysis need to be revisited for some of the proposed irrigation uses. In addition, the applicant needs to provide information on the tree orchard row spacing and irrigation system type to further refine the analysis.

OHA and BWS have also raised concerns regarding the quantities of water requested (Exhibits 9 and 10).

Pending a response from the applicant to address these quantity issues, staff finds that the applicant has not met its burden to establish that the proposed use is reasonable-beneficial.

III. Efficiency of Use

The applicant has not identified any measures that will be implemented to ensure efficient water use. Therefore, the applicant has not met its burden to establish that the proposed efficiency of use is reasonable-beneficial.

IV. Analysis of Practical Alternatives

The applicant has identified seven alternatives to the proposed use of water from Well No. 2801-03 (Exhibit 11). The applicant's analysis of each alternative is followed by staff's analysis:

1. Surface Water – There are no streams, ponds, or lakes in the vicinity of the parcel.
Staff Analysis: The USGS 7.5-Minute Series topographic map shows Waikakalaua Stream is a perennial stream that runs along the lower boundary of the property. This surface water source should be further analyzed.

2. Waiahole Ditch – The ditch is at a lower elevation, so a large pump would be needed to bring water to the top of the property. A lease or easement would be needed from a private property owner in order to house the pump and for electrical connection. A pipeline would need to be constructed from the ditch to the property, a distance of approximately 3.5 miles, conservatively estimated to cost \$295,000 per mile of pipeline. Agribusiness Development Corporation, which owns and runs the ditch system would impose a cost for the water. The property is bounded by Kamehameha Highway and H-2 Freeway. The applicant has provided a letter from Department of Transportation (DOT) stating that DOT does not allow private lines running laterally within DOT's Right-of-Way (Exhibit 11).
Staff Analysis: This does not appear to be a practical alternative. The cost of the pipeline alone is estimated to be \$1,032,500. The inability to place a pipeline in DOT Right-of Way may or may not be an issue because the pipeline could be placed within the property, instead of within the DOT Right-of-Way. However, the pipeline would have to cross Meheula Parkway, a large 4-lane thoroughfare, and a large gulch to reach the property.

3. Lake Wilson – Wheeler Air Force Base lies between Lake Wilson and the SIC property. The U.S. Air Force will not allow a pipeline to go through the base. If the pipeline were to go around the base, a very large pump would be needed to move the water. Permission from Dole Food Company would be needed to divert the water. The water in Lake Wilson would need to be treated prior to irrigation application. Similar to the Waiahole Ditch alternative, the property is bounded by Kamehameha Highway and H-2 Freeway, so there is no way to get the water to the property.
Staff Analysis: According to the Department of Health's Guidelines for the Treatment and Use of Recycled Water (2002), R-2 water applied via subsurface irrigation may be used for landscape, orchards, pastures, and food crops that are above ground and not contacted by recycled water. The Guidelines also allow R-2 water applied by any form of irrigation to be used on landscape vegetation and non-edible plants provided access is controlled so the irrigated area cannot be used as if it were a part of a park, school yard or athletic field. However, the inability to place a pipeline in the DOT Right-of Way and the fact that the pipeline would most likely need to go around Wheeler Air Force Base renders this an impractical alternative.

4. Other Nearby Wells – There are two existing wells in the vicinity of the property. One well is located on Schofield Barracks and is an Army monitoring well. This well is not available for use. The other well is a capped well to the south located in a gulch. There are intervening landowners and the water would need to be pumped up from the gulch. Further, the well is located in the Pearl Harbor Ground Water Management Area, which is fully allocated.

Staff Analysis: Because DOT will not allow any private lines within its Right-of-Way, all alternatives, except those located below the property, are impractical. The only existing wells that are within the Kamehameha Highway and H-2 Freeway Right-of-Ways are the Schofield Battery (Well Nos. 2901-01 to 07, 10), a public water system used by the military, and Well No. 2801-01. Our database shows Well No. 2801-01 has been sealed and no longer exists. The Pearl Harbor Aquifer System Area is not “fully allocated” and has over 20 mgd available for allocation, however, other existing wells do not appear to be a practical alternative.

5. Water Re-Use – The BWS has conceptual plans to provide R-1 water to Central Oahu Regional Park, but no funds have been set aside in the current budget for the engineering of the project. SIC would consider use of R-1 water if and when it becomes available, but does not desire to leave its land unused until that time.

Staff Analysis: BWS’ review comments indicate that recycled water is not available at this time, but recommends that the Commission require conversion to this alternative when it becomes available as a condition of the water use permit. Therefore, recycled water does not appear to be a practical alternative at this time.

6. Potable Sources – The property has no commitment from BWS to supply the necessary amount of water needed. To obtain a water commitment, SIC would have to provide money or another source of water and pay the municipal agricultural rate.

Staff Analysis: Staff finds that the use of potable water from the municipal system, which may have been treated to meet Department of Health standards for potability, is an inferior alternative to the use of water from Well No. 2801-03, which has neither been tested nor treated for potability.

7. Rainfall – Rainfall is not consistent enough to sustain the proposed agriculture and landscape uses. The applicant has provided a statement from Dole, the previous owner of the property, stating that the property was not considered ideal for agriculture because of its lack of a reliable water source and that rainfall was the only source of water (Exhibit 12).

Staff Analysis: Even though Dr. Fares’ analysis must still be refined, it is evident that rainfall alone is insufficient to support the proposed agriculture and landscape water demands.

Therefore, reasonable-beneficial use overall has not been established by the applicant.

(3) Interference with other existing legal uses

There are 15 other wells currently in use within 1 mile of this source (Exhibit 13). The military uses 8 of the wells for its water supply. Three of the wells are used by BWS for municipal water supply. One of the wells is abandoned, one of the wells is unused, and the other two are observation wells used by the Army. Pump test data for this well shows that the well can be pumped at 700 gpm (1.008 mgd) with no significant adverse impacts to ground and surface water resources or other well owners.

(4) Public interest

Public interest is defined under §174C-2 - Declaration of policy, as follows:

“(c) The state water code shall be liberally interpreted to obtain maximum beneficial use of the waters of the State for purposes such as domestic uses, aquaculture uses, irrigation and other agricultural uses, power development, and commercial and industrial uses. However, adequate provision shall be made for the protection of traditional and customary Hawaiian rights, the protection and procreation of fish and wildlife, the maintenance of proper ecological balance and scenic beauty, and the preservation and enhancement of waters of the State for municipal uses, public recreation, public water supply, agriculture, and navigation. Such objectives are declared to be in the public interest.”

The well water will be used for agriculture and landscape irrigation, which are listed as beneficial uses in the above Declaration of Policy.

OHA questions whether this is really an agricultural use of water (Exhibit 9). The application was sent to both the City Department of Planning and Permitting and the State Land Use Commission, which are the agencies in charge of land use designations and consistency. Both agencies reviewed the application and have accepted the proposed agricultural use. No issues were raised regarding conflict with the other objectives declared to be in the public interest.

Therefore, with respect to the above Declaration of Policy, this application is consistent with the public interest.

(5) State & county general plans and land use designations

The proposed uses are in the State Agricultural District, and the county zoning is AG-1. The City Department of Planning and Permitting (DPP) and the State Land Use Commission have reviewed this application and have confirmed that the proposed use is consistent with these land use designations. Therefore, these proposed uses are consistent with the state and county general plans and land use designations.

Normal agency review also includes:

- 1) the State's Department of Land and Natural Resources (State Parks, Aquatic Resources, Historic Preservation, and Land Divisions); Department of Health (Clean Water, Safe Drinking Water, and Wastewater Branches); Department of Hawaiian Home Lands; Land Use Commission; the Office of Hawaiian Affairs;
- 2) the Mayor's Office and the City's Department of Planning and Permitting and Board of Water Supply.

No objections from these agencies were raised through this review.

(6) County land use plans and policies

The Mayor's Office, the Department of Planning and Permitting, and the Board of Water Supply have reviewed this application. No objections were raised. DPP stated that the proposed use is consistent with the Central Oahu Sustainable Communities Plan. Therefore, these proposed uses are consistent with the county land use plans and policies.

(7) Interference with Hawaiian home lands rights

All permits are subject to the prior rights of Hawaiian home lands. The Department of Hawaiian Home Lands stated that they have no comments or objections. Further, standard water use permit conditions 3.g., 6., and 9.f. notify all water use permittees that their permits are subject to and cannot interfere with Hawaiian home land rights. Therefore, this application will not interfere with Hawaiian home lands rights.

RECOMMENDATION:

Staff recommends that the Commission defer action on this application for a period not to exceed sixty days. If the applicant does not provide the following information to establish consistency with the legal criteria for obtaining a water use permit, then this application will be deemed automatically denied without prejudice due to the failure of the applicant to meet its burden of proof:

1. address relevant issues raised by the Office of Hawaiian Affairs;
2. provide irrigation system type for each of the fourteen proposed end uses;
3. provide row spacing (in feet) for the proposed orchard;
4. identify measures that will be implemented to ensure efficient water use; and

- 5. provide an analysis of the use of Waikakalaua Stream as an alternative to the use of Well No. 2801-03.

Respectfully submitted,

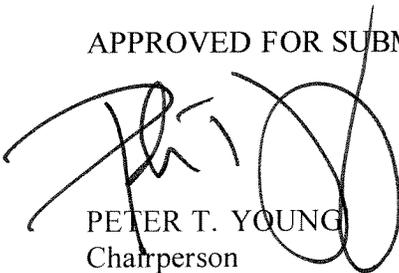


DEAN A. NAKANO
Acting Deputy Director

Attachment(s): A (Water Use Permit Detailed Information)

- Exhibit(s):
- 1 (Location Map)
 - 2 (Proposed End Uses)
 - 3 (Description of Proposed End Uses)
 - 4 (Current Water Use Permits)
 - 5 (9-29-06 Letter from Paul Reppun to Mr. William Lum)
 - 6 (9-14-04 Email from Mark S. Thorne to Halina M. Zaleski; Willie Lum)
 - 7 (9-1-04 Letter from Alan Gottlieb to William Lum)
 - 8 (Dr. Ali Fares Report)
 - 9 (4-13-06 Review Comments from Office of Hawaiian Affairs)
 - 10 (4-20-06 Review Comments from Board of Water Supply)
 - 11 (Alternatives Analysis)
 - 12 (8-19-04 Facsimile from Carleton Ching to Mr. Will Lum)
 - 13 (Other Nearby Wells)
 - 14 (Graph of Pumpage, Wahiawa Aquifer System Area)

APPROVED FOR SUBMITTAL:



PETER T. YOUNG
Chairperson