



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 24, 2006
Honolulu, Hawaii

Mr. Taiwan Gu
After-the-Fact Applications for
Stream Channel Alteration and Stream Diversion Works Permits, and
Petition to Amend the Interim Instream Flow Standard (SCAP-HA-387)
Stream Diversion for Agricultural Use
Alia Stream, Pepekeo, Hawaii (TMK: 2-8-009:045)

APPLICANT:

Taiwan Gu
P. O. Box 838
Pepeekeo, Hawaii 96783

LANDOWNER:

Taiwan Gu

SUMMARY OF REQUEST:

The applicant is requesting approval of after-the-fact Stream Channel Alteration and Stream Diversion Works Permits, and a Petition to Amend the Interim Instream Flow Standard for Alia Stream, at Pepekeo, Island of Hawaii, to use water for agricultural use.

BACKGROUND:

In March 2005, staff received an inquiry regarding plastic pipes in Alia Stream adjacent to Mr. Gu's property.

On March 16, 2005, a letter was sent to Mr. Gu asking that he contact our office to discuss the matter.

On March 18, 2005, Mr. Gu telephoned staff confirming that he had a diversion on Alia Stream and that he was not aware that he needed approval from the Commission.

On March 23, 2005, a letter was sent to Mr. Gu notifying him of the permits and approvals required by the Commission.

On April 28, 2005, staff conducted a site visit to Mr. Gu's property and discussed the application process with him. We also recommended he contact other agencies, especially the Department of Health, about his produce-washing and return-water practices.

On May 4, 2005, staff received an incomplete set of the required applications. The applications were returned to Mr. Gu to complete.

In June 2005, staff requested the Division of Aquatic Resources' assistance in conducting an aquatic survey of Alia Stream to determine the existing condition of the stream to help the Commission weigh the merits of the application with the instream values.

On August 29, 2005, staff received the completed application from Mr. Gu.

On November 30, 2005, staff received a letter from the original complainant stating that an additional pump was installed to divert more water.

On December 6, 2005, a letter was sent to Mr. Gu requesting a response to questions about whether an additional pump was installed.

On December 7, 2005, staff sent a letter to the complainant with a copy of Mr. Gu's applications and requested written comments.

On December 20, 2005, staff received a letter from Mr. Gu stating he did not add any new pump and was not taking more water from Alia Stream.

On December 22, 2005, staff received a second letter from the complainant stating: 1) although the County of Hawaii does not provide water service to the area, water is available from the Pepekeo Community Association, and that all residents and farmers are encouraged to use the Association's water; and 2) since the staff's field visit, Mr. Gu has dug a second surface impoundment which had not been completed or used up to the date of the letter.

LOCATION:

Exhibit 1.

DESCRIPTION:

Mr. Gu's diversion consists of a 1.5-inch diameter pvc intake located at approximately the 660-foot elevation in Alia Stream (Exhibit 2). The diversion pipeline extends approximately 60 feet from the stream to his pump. The water is pumped to a 20,000-gallon reservoir (Exhibit 3). Rainwater catchment from an adjacent building is also piped to the reservoir, but is not sufficient for the needs of the applicant.

The applicant indicates water from the reservoir is used to wash produce (Exhibit 3), such as sweet potatoes, ginger, and taro. A separate pump system is used to pump the water from the reservoir to the washing area. The applicant also indicates that most of the wastewater will be used for irrigation of crops like taro.

The applicant states he pumps water about 4 hours "each time" at the rate of about 0.7 gallons per second, or about 40 gallons per minute, to fill the 20,000-gallon reservoir. After use, the water is discharged on the farm parcel and no effluent is discharged into the stream.

ANALYSIS:

The applicant owns property adjacent to Alia Stream and is diverting and using water from the stream. The intake in Alia Stream is also on his property. Therefore the applicant has the riparian right to use water from Alia Stream for any reasonable-beneficial use.

The complainant has stated he hopes “that Mr. Gu will pursue the water available in the area, and cease the diversion that I feel is having a negative effect on both the stream itself and the ocean area that it flows into.”

The Department of the Army (DA) reviewed the permit application and stated that “it appears the activity did not involve the discharge of dredged or fill material into waters of the United States, including adjacent wetlands; therefore, a DA permit is not required.”

The Department of Health (DOH), Clean Water Branch (CWB) reviewed the application and advised the applicant of the following: 1) “Discharge (either directly or indirectly) of produce washing effluent into State waters, including the Alia Stream, may require a National Pollutant Discharge Elimination System (NPDES) permit issued by the DOH under the authorization of CWA, Section 402; HRS, Chapter 342D; and HAR, Chapters 11-54 and 11-55” and 2) “Any discharges related to the facility operation activities, with or without an NPDES permit coverage, shall comply with the applicable State Water Quality Standards as specified in HAR, Chapter 11-54.”

The Department of Hawaiian Home Lands did not have any objections to the project and the Office of Hawaiian Affairs had no comments.

The Division of Aquatic Resources (DAR) conducted an aquatic resources survey of Alia Stream in early 2005 at the request of staff. DAR found that Alia Stream has a full complement of native stream gobies, characteristic of streams with terminal waterfalls. DAR also stated that they do not condone after-the-fact permits.

The County of Hawaii, Planning Department, reviewed the application and determined that the project is not in the Special Management Area.

In formulating recommendations on the disposition of these applications and petition, staff considered the information in the Commission’s database, the Hawaii Stream Assessment, DAR aquatic surveys, the size (volume) of the stream, and the above comments from the reviewers.

The Commission’s Registration of Stream Diversion Works and Declaration of Water Use database indicates there is one diversion on Alia Stream registered by Hilo Coast Processing Company in May 1989. The diversion, called Powder House Dam, was part of the Pepeekeo Factory Water System, at elevation 360 ft. The “divertible capacity” is listed as 7 mgd. Although the diversion is not gaged, water use is estimated at between 1100 to 1400 million gallons per year, or between 3 to 3.8 mgd.

The Hawaii Stream Assessment identifies Alia Stream as a perennial stream. DAR aquatic surveys indicate the stream is a habitat for native fishes. There is no active stream gage on Alia Stream to determine the size of the stream. However, U.S. Geological Survey (USGS) staff has provided a flow-duration plot (Exhibit 4) for Alia Stream based on eleven years of data (1962 to 1972) from a USGS gage on Alia Stream at Mamalahoa Highway. Based on the data, the average (Q50) flow of Alia Stream is about 11.6 CFS (7.5 MGD) and the flow that is exceeded 95% of the time (Q95) is about 4.2 CFS (2.7 MGD).

Staff considers this stream to be important from a biological standpoint and normally might require more information about the stream and the impact of a proposed diversion on the stream before considering recommending approval. However, in this case, staff is recommending approval of the applicant's permits and petition based on the following:

1. The applicant has the riparian right to use the water for a reasonable-beneficial use.
2. There have been no agency objections to this diversion.
3. DAR has recently conducted a survey of Alia Stream and found that it has a full complement of native stream gobies, characteristic of streams with terminal waterfalls. We have at least one DAR survey on which to base future determinations on the health of the stream ecosystem.
4. The amount of water to be diverted (pumping rate = 40 gallons per minute = 0.09 CFS = 0.06 MGD) is very small compared to the overall stream flow. At the Q95 flow of 4.2 CFS, the rate of water withdrawal would be about 2% ($0.09/4.2 = 0.02$) of the flow. At the Q50 flow of 11.6 CFS, the rate of water withdrawal would be about 0.8% ($0.09/11.6 = 0.0078$).

Since this stream is biologically important, staff believes the applicant should only be allowed to divert at the present pump capacity of 40 gallons per minute up to 20,000 gallons per day, and the applicant should be required to install a totalizing flow meter, record diverted amounts and submit monthly reports to the Commission on the amount of water diverted.

PENALTY POLICY:

The policy used in this submittal was adopted in 2001 (Exhibit 5).

Basic Component: Hawaii Revised Statutes (HRS) Section 174C-15, as amended, provides for fines up to \$5,000 per day per violation. The minimum fine established by the Commission's penalty policy is \$250 per violation, set when the maximum fine was \$1,000.

Gravity Components: Six elements are outlined in the Commission's Penalty Policy: a) damage to resource; b) risk to resource; c) refusal to correct; d) violator should have known; e) number of violations of standard conditions; f) failure to meet deadlines. The gravity component can add an additional \$250-\$1000 per violation, and initiate daily fines.

Mitigation Components: Six elements are outlined in the Commission's Penalty Policy: a) attempt to remedy without notice of violation; b) good faith effort to remedy after notice; c) diligence once notified; d) speedy compliance once notified; e) emergency considerations; f) insignificant risk to resource.

Duration Calculation: The duration component is determined according to the circumstances surrounding each type of violation. When compliance is speedy, the policy is to limit the duration exposure to fine to a single day minimum.

RECOMMENDED FINES:

1. Basic Component. In this case there are three separate violations: a) the stream channel alteration permit, b) the stream diversion works permit, and c) the petition to amend the

interim instream flow standard. Staff recommends the minimum basic fine of \$250 for each violation, for a total of \$750.

2. Gravity Component. Staff does not recommend any additional fines for the Gravity Component.
3. Mitigation Component. The applicant took prompt action after being notified of the violation, has cooperated with the Commission staff by filing the applications, and stated that he will take the time to appear before the Commission. Staff recommends a mitigation component to reduce the total fine by \$250.
4. Duration calculation. Because compliance was speedy, staff recommends the duration calculation be limited to a single day minimum fine for each violation (same as 1 above).

The sum of the recommended fines is \$500 (\$750 minus \$250 mitigation component = \$500).

Staff also recommends that the Commission advise the applicant that future violations of the State Water Code or any permit conditions by the applicant may be subject to suspension or revocation of these permits and petition, and fines imposed by the Commission.

RECOMMENDATION:

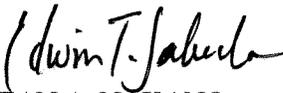
That the Commission:

1. Find the applicant in violation of:
 - a. Hawaii Revised Statutes §174C-71 for not obtaining a stream channel alteration permit for the present diversion system.
 - b. Hawaii Revised Statutes §174C-93 for not obtaining a stream diversion works permit for the present diversion system.
 - c. Hawaii Administrative Rules §169-46 for installing a new diversion system without amending the interim instream flow standard.
2. Impose a fine of \$500 on the permittee, payable in 30 days.
3. Suspend any current, pending or future applications by the applicant until the fine is paid and the applicant completes the permit process for this diversion.
4. Advise the applicant that future violations of the State Water Code or any permit conditions by the applicant may be subject to suspension or revocation of these permits and petition, and fines imposed by the Commission.
5. Approve after-the-fact stream channel alteration and stream diversion works permits for a stream diversion at Alia Stream at TMK: 2-8-009:045. The stream channel alteration permit is subject to the standard conditions for stream channel alterations in Exhibit 6.
6. Approve an after-the-fact petition to amend the interim instream flow standard for a stream diversion at Alia Stream at TMK: 2-8-009:045. The Interim Instream Flow Standard for all streams on Hawaii, as adopted by the Commission on June 15, 1988, is

amended to include for Alia Stream, at TMK: 2-8-009:045, that the applicant may divert up to 20,000 gallons per day, at the pumping rate of rate of 40 gallons per minute, for washing harvested produce. The amendment to the interim instream flow standard shall be subject to the conditions for interim instream flow standard amendments in Exhibit 7.

5. A totalizing flow meter, approved by the Chairperson, shall be installed on the diversion works system to measure the amount of water diverted from Alia Stream.

Respectfully submitted,


for: DEAN A. NAKANO
Acting Deputy Director

- Exhibit(s):
- 1 Location on Island of Hawaii
 - 2 Photos of Alia Stream and Intake
 - 3 Photos of Reservoir and Produce Washing Operation
 - 4 Flow Duration Plot for Alia Stream (1962 to 1972)
 - 5 Administrative and Civil Penalty Guideline (G01-01)
 - 6 Conditions for After-the-Fact Stream Channel Alteration Permits
 - 7 Conditions for Interim Instream Flow Standard Amendments

APPROVED FOR SUBMITTAL:


PETER T. YOUNG
Chairperson