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Water Resources Research Center

February 9, 2009

TO: Honorable Calvin Say, Chair of HB N. 834
State House of Representatives
State Capitol
Honolulu, HI 09813

FROM: Roger Fujioka, Ph.D.
Researcher, Water Resources Research Center
University of Hawaii

SUBJECT: House Bill 834 Relating to State Water Quality Standards

My name is Roger Fujioka. I am a researcher at Water Resources Research Center, University of Hawaii. My expertise is in water quality and public health microbiology. I have been analyzing the quality of recreational waters in Hawaii since 1972 and have been comparing the water quality data obtained by our monitoring data with the state and Federal recreational water quality standards. I support House Bill 834 because it will change the Hawaii State Department of Health (DOH) current recreational water quality standard set at 7 enterococci/100 ml to adopting the national EPA standard of 35 enterococci/100 ml.

In 1986 EPA directed all states to adopt their new marine recreational water quality standard set at 35 enterococci/100 ml (geometric mean). At that time DOH formed a Water Quality Standards Advisory Committee to provide recommendations to DOH. I served on that committee and recommended that DOH accept the EPA standard of 35 enterococci/100 ml because we had monitoring data to show that most beaches in Hawaii could meet this new EPA standard. However, DOH chose to adopt a more restrictive standard of 7/enterococci/100 ml based on an EPA table of predictable disease rate, which showed that 7/enterococci/100 ml would lead to an expected low disease rate of 10/1000 swimmers. However, EPA has not been able to verify their predicted disease rate associated with 7 enterococci/100 ml and no longer uses this data. As a result, the scientific basis for setting the Hawaii standard at the restrictive 7/enterococci/100 ml standard is not valid. In summary, DOH used faulty EPA data to set a state water quality standard, which is much more restrictive than the federal standard and more restrictive than any other state. There are serious consequences when a state sets unrealistic water quality standards. First, failing to meet state water quality standards is considered a water quality violation by EPA. Second, State and County Agencies of Hawaii can be fined for

Bill No. 834

Support Y N

Date 2/9

Time 3:52p

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Type 1 2 WI

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not meeting Hawaii's restrictive standard, even if that water meets federal water quality standards. Third, when water quality violations are compared annually for each state, the state of Hawaii's rate of water quality violation is based on not meeting the restrictive state standard of 7 enterococci/100 ml whereas for other states, the rate of water quality violation is based on not meeting the federal standard of 35 enterococci/100 ml. Thus, in some reports, Hawaii's water quality may appear to be poorer than other states because Hawaii's water quality must meet a more restrictive standard. These are the main reasons why I have testified on many occasions from 1986 to the present that DOH should change its marine water quality standard from 7 enterococci/100 ml to adopting the federal standard of 35 enterococci/100 ml.

Bill No. 834

Support Y N

Date 2/9/09

Time 4:20p

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OFFICE OF HAWAIIAN AFFAIRS

Legislative Testimony

HB 834, RELATING TO WATER QUALITY STANDARDS

House Committees on Energy and Environmental Protection;
and Water, Land, & Ocean Resources

February 10, 2009

9:30 a.m.

Room: 325

The Office of Hawaiian Affairs (OHA) **OPPOSES** SB1116, which seeks to amend state water quality standards for marine waters to make them conform to the less strict federal standards.

OHA understands that the state water quality standards for marine waters that are the subject of this bill are actually more stringent than the current U.S. Environmental Protection Agency (EPA) federal levels under the Clean Water Act. Our state marine waters are under threat from a variety of sources. Coral reefs around the state are disappearing. Many of our nearshore reef fish populations are severely depleted, and some species are so full of toxins that it is recommended to test them before we eat them. Therefore, OHA does not support a proposal to lower these water quality standards.

Furthermore, federal water quality standards may not be the best measure for Hawai'i's unique water quality. What works for the shoreline of the east coast of the mainland United States may not work or even be applicable here. For example, Hawai'i has tropical waters fed by our watershed system which affects the level of bacteria (enterococcus) found in our waters. In the continental U.S., the hydrology and biological inputs are very different.

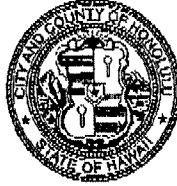
OHA urges the Legislature not to support the lowering of our water quality standards by making them uniform to that of the federal EPA. The Clean Water Act allows states to make their own water quality standards, as long as they are at least as stringent as the federal requirements. Hawai'i has some of the strictest clean water standards in the nation, we have done so for good reason, and we should maintain them.

Therefore, OHA urges the Committees to HOLD HB 834. Thank you for the opportunity to testify.

OFFICE OF THE MAYOR
CITY AND COUNTY OF HONOLULU

530 SOUTH KING STREET, ROOM 300 • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4141 • FAX: (808) 527-5552 • INTERNET: www.honolulu.gov

MUFI HANNEMANN
MAYOR



February 9, 2009

Bill No. 834

Support Y N

Date 2/9

Time 2214

Cat AF AS B C

Type 1 WI

The Honorable Hermina M. Morita, Chair
Committee on Energy & Environmental Protection
House of Representatives
State Capitol
Honolulu, Hawaii 96813

The Honorable Ken Ito, Chair
Committee on Water, Land & Ocean Resources
House of Representatives
State Capitol
Honolulu, Hawaii 96813

Re: House Bill 834
Relating to Water Quality Standards

Dear Chairs Morita, Ito, and Members of the Joint Committee:

The City and County of Honolulu strongly supports House Bill 834. This bill updates water quality standards that are central to two major issues facing the City: (1) a 2004 lawsuit brought against the City by the Sierra Club and other nongovernmental organizations, and (2) decisions by the Environmental Protection Agency denying variances from secondary treatment under Section 301(h) of the Clean Water Act for our City's two largest treatment plants at Sand Island and Honouliuli.

This bill updates three water quality standards, chlordane, dieldrin, and enterococcus, consistent with the recommendations of the EPA and the State Department of Health. It updates the water quality standards for chlordane and dieldrin to conform to current EPA national recommended criteria. It updates the water quality standards for enterococcus to adopt those proposed by the Department of Health in 2005, which have not yet been formally adopted.

These are not controversial amendments. The Department of Health has acknowledged that these water quality standards need to be updated. Indeed, the existing water quality standards for chlordane and dieldrin are based on outdated EPA criteria from nearly 30 years ago, and the Department of Health has agreed to update these standards to meet the EPA's current national recommended criteria. In addition,

The Honorable Ken Ito, Chair
Committee on Water, Land & Ocean Resources
The Honorable Hermina M. Morita, Chair
Committee on Energy & Environmental Protection
February 9, 2009
Page 2

the Department of Health itself studied and proposed the amendments to the enterococcus standards that are reflected in this bill. The only reason we're here, supporting legislative action in the form of HB 834, is because the Department of Health will not say when these standards will be updated, and the residents of this City literally cannot afford to wait any longer.

The potential economic impact of the Sierra Club litigation and the 301(h) decisions are tremendous, and are growing each day. Sierra Club is pressing the federal Court to impose violations and injunctive relief against the City based on permit limits that are derived from the current outdated water quality standards. To give you an idea of how much the City is facing in potential penalties, the Sierra Club has asked the Court to assess 5,726 violations for exceeding our Sand Island permit limits for chlordane on a daily basis from May 30, 1999 to March 31, 2007. Assuming Sierra Club will seek to assess violations on a daily basis for the two years since then, this would amount to an additional 1,460 violations. This amounts to approximately \$219 million in potential penalties up to the end of March 2009, all of which the City could argue should not be assessed if the DOH updates its chlordane water quality standards to the levels proposed in this bill. If the water quality standard for chlordane were updated as reflected in this bill, we would be in full compliance with property derived chlordane permit limits at Sand Island. Even by DOH's own testimony dated January 26, 2009, if this updated water quality standard for chlordane had been used, all of the 118 exceedences between December 1998 to September 2008 would be eliminated.

In addition, the EPA's final decisions that we must upgrade our Sand Island and Honouliuli wastewater treatment plants to full secondary treatment are based in large part on the finding that the discharges from our deep ocean outfalls, nearly two miles from shore and 200 feet deep, may not meet the existing water quality standards. These decisions will cost City ratepayers more than \$1.2 billion in construction costs alone.

We have vigorously argued to the Court and the EPA that the existing erroneous and outdated water quality standards should not be a basis for inferring any potential negative effects on human health, particularly when decades of testing, monitoring, and analysis shows that our deep ocean discharges are not harmful in any way. However, they have said that the City must be held to the water quality standards that have been promulgated by DOH. It is unfortunate that the EPA and Sierra Club would give such disproportionate weight to these water quality standards while ignoring volumes of real world evidence, but they will continue to do so as long as the existing water quality standards remain in place.

With financial impacts of this magnitude, in this time of such grave economic uncertainty, we cannot resign ourselves to this result. It is incumbent upon us, as public officials, to do everything we can to ensure that the decisions of the EPA and the Court are based not on acquiescence and inaction, but on the best available scientific information and most rigorous analysis. Toward that end, we are asking you to take this measured but important step of adopting these three water quality standards, which we

The Honorable Ken Ito, Chair
Committee on Water, Land & Ocean Resources
The Honorable Hermina M. Morita, Chair
Committee on Energy & Environmental Protection
February 9, 2009
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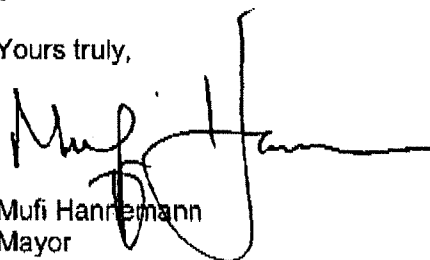
believe are the most appropriate water quality standards for these parameters for our State. By doing so, you will give us the opportunity to present to the Court and the EPA true water quality standards by which we should be evaluated. You will give us a fair shot at dispelling the undue speculation about the potential impact of our discharge that is based solely on the existing water quality standards. And you will give us the opportunity to reconcile the water quality standards with our decades of monitoring data to give a complete and accurate picture of the impacts of our discharges on the environment.

The Sierra Club litigation is ongoing and our supplemental briefs for our 301(h) appeals are due on March 11, 2009. We ask for your prompt action. Time has been lost over the past year while we tried to work with DOH, and as a result, these amendments are coming late in the litigation and 301(h) processes. I cannot guarantee that we will be able to change any results with the passage of this legislation, but if given the opportunity, I assure you we at the City are prepared to do everything we can to make sure it gets the utmost consideration by the EPA and the Court.

We have proposed an HD1 that will make non-substantive clarifying language to the purpose clause and the effective date, make corrections to the units of measurement, and clarify that the standards apply to all state waters.

Thank you for the opportunity to testify.

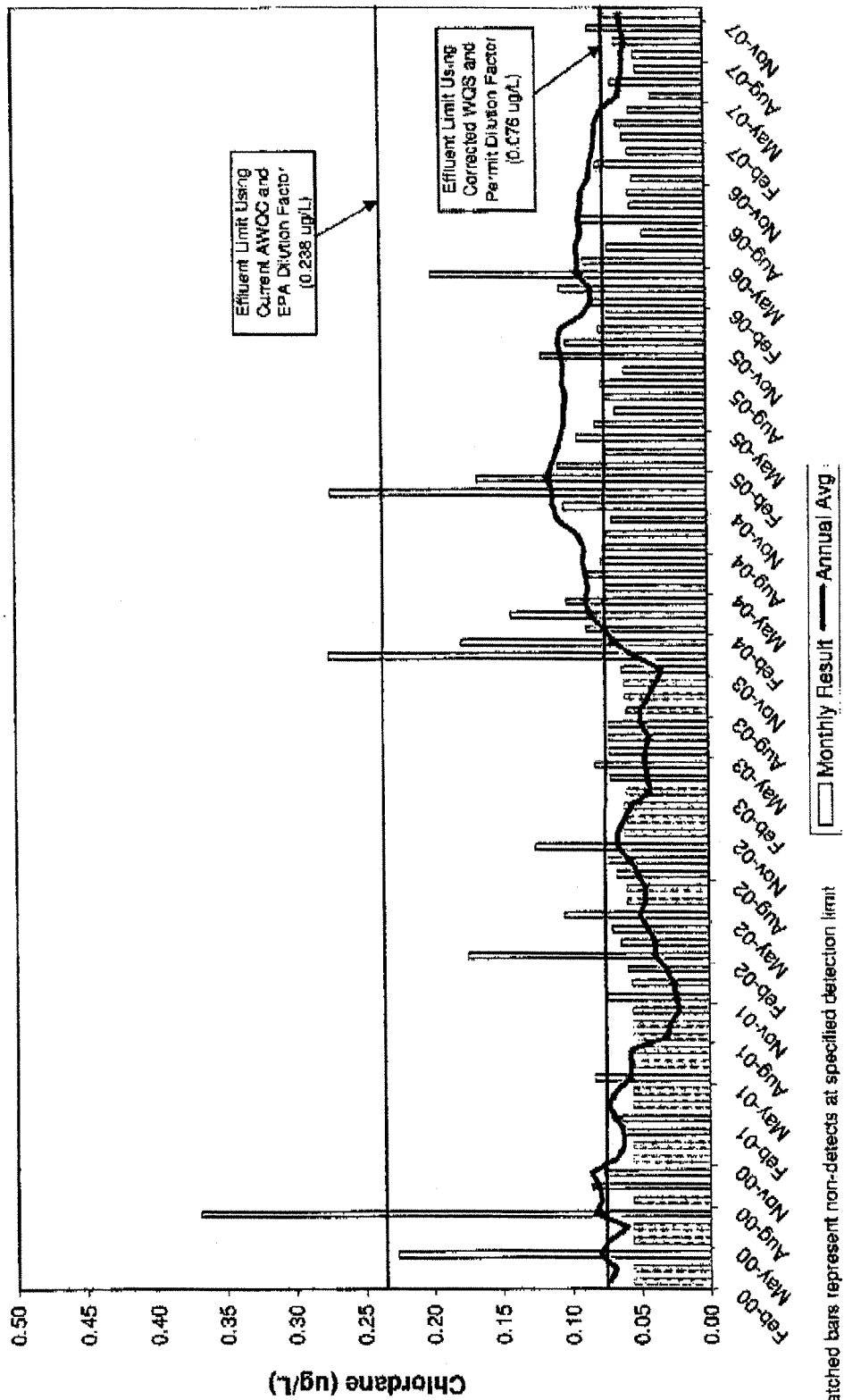
Yours truly,

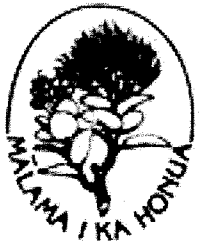
A handwritten signature in black ink, appearing to read "Mufi Hannemann", with a long horizontal flourish extending to the right.

Mufi Hannemann
Mayor

Attachment

Figure IIB-1 SIWWTP Effluent Chlordane - Monthly Result and Running Annual Average





Sierra Club Hawai'i Chapter

PO Box 2577, Honolulu, HI 96803
808.537.9019 hawaii.chapter@sierraclub.org

Bill No. 834

Support Y N

Date 2/9/09

Time 9:00p

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
HOUSE COMMITTEE ON WATER, LAND, & OCEAN RESOURCES ^{Cal AF AS AX} B C

February 10, 2009, 9:30 A.M.

Type 1 2 WI

(Testimony is 2 pages long)

TESTIMONY IN OPPOSITION OF HB 834

Chair Morita, Chair Ito, and members of the Committees:

The Sierra Club, Hawai'i Chapter, with 5500 dues paying members statewide, strongly opposes HB 834, which lowers the state water quality standards for marine waters to assist the City and County of Honolulu with the dumping of its effluent.

As an initial matter, it should be noted Hawai'i's water quality standards can not be revised for purposes of the federal Clean Water Act unless Hawai'i also obtains U.S. Environmental Protection Agency (EPA) approval for this revision pursuant to CWA section 303(c), 33 U.S.C. § 1313(c) and 40 C.F.R. part 131, subpart C. *See, e.g., Alaska Clean Water Alliance v. Clark*, No. C96-1762R, 1997 U.S. District LEXIS 11144 (W.D. Wash. July 8, 1997) (new or revised state water quality standards become effective only after EPA has completed its review process and approved the standards under the CWA); 40 C.F.R. § 131.20(c). Thus, this bill will have no benefit to the City of County of Honolulu during its appeal of the recent waiver denial. Moreover, it may involve this State in unnecessary litigation.

Further, the EPA will *not* accept the water quality standards specified in HB 834. The EPA's regulations mandate a quasi-adjudicative process that includes formal notice to the public and an opportunity for comment before a state amends its water quality standards. 40 C.F.R. § 131.10(e). These regulations further mandate the development of a specific factual record to support certain mandatory findings before water quality standards can be relaxed in the fashion that the bills propose. *See, e.g.,* 40 C.F.R. § 131.10(g), (h). The proposed bill does not produce a factual record to support specific findings, as is the case in an adjudication or agency rulemaking. For example, HB 834 effectively designates all "[c]oastal recreation waters between five hundred meters and three miles from shore as infrequent use coastal recreation waters . . ." without any factual basis. Thus, even if HB 834 were to be enacted, the EPA could not accept it

based on its own regulations. Quite simply, the legislative process is an improper vehicle for this type of process.

Moreover, we question the wisdom of the legislature even proceeding down this road. With all due respect, this body does not have the expertise or specialized knowledge necessary to essentially take over a specialized area of public health. For example, Hawai`i's administrative rules deliberately ensure greater protection than in the federal rules based on the greater use of the ocean resources by Hawai`i's residents. As noted in the attached Declaration of Laurence K. Lau, the Deputy Director of Health for the State of Hawai`i Department of Health, Hawai`i's Water Quality Standards for "fish consumption standards are 3.1 times more stringent than the EPA Criteria, because the average daily consumption of fish locally was estimated to be approximately 3.1 times higher than the average underlying the EPA Criteria."

Nor is there any evidence to support a finding that recreational use is "low" in waters beyond 500 meters. To the contrary, it would seem like an opposite finding is required?

There is one specific example of a mistaken calculation for chlordan (0.000016 micrograms per liter instead of 0.00016 micrograms per liter). This mistake has been acknowledged by the EPA and the Department of Health has publicly stated it will proceed with revising this number. The ramifications of this "mistake" are slight and do not necessitate the legislature making sweeping changes to our water quality standards.

Before we rush to amend the State's water quality standards, we should allow the administrative process to proceed. If it is not proceeding expeditiously enough, there are other methods to follow aside from putting our public health at risk.

Thank you for this opportunity to provide testimony.

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Attorneys for Defendant
CITY AND COUNTY OF
HONOLULU

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF HAWAI'I

SIERRA CLUB, HAWAI'I
CHAPTER; HAWAI'I'S
THOUSAND FRIENDS; and OUR
CHILDREN'S EARTH
FOUNDATION,

Plaintiffs,

v.

CITY AND COUNTY OF
HONOLULU,

Defendant.

) CIVIL NO. CV 04-00463 DAE-BMK
)
) **DECLARATION OF KATHLEEN**
) **A. KELLY IN SUPPORT OF**
) **DEFENDANT CITY AND**
) **COUNTY OF HONOLULU'S**
) **SUPPLEMENTAL**
) **MEMORANDUM IN**
) **OPPOSITION TO PLAINTIFFS'**
) **MOTION FOR PARTIAL**
) **SUMMARY JUDGMENT ON**
) **PLAINTIFFS' THIRD, FOURTH,**
) **AND EIGHTH CLAIMS**

) Heard: October 9, 2007
) 10:30 a.m.
) Hon. David E. Ezra

Bill No. 834

Support Y N

Date 2/9/09

Time 9:00p

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Type 1 (2) WI

DECLARATION OF LAURENCE K. LAU

I, Laurence K. Lau, declare as follows:

1. I am the Deputy Director of Health, for the State of Hawaii Department of Health. I have been informed of the following facts and believe them to be true, and would testify thereto if called as a witness.
2. Attached hereto as Exhibit "A" is a true and correct copy of the Rationale for the Proposed Revisions to the Department of Health Administrative Rules, Title 11, Chapter 54, Water Quality Standards (the "WQS Rationale"). As described in the WQS Rationale, the State of Hawaii Water Quality Standards for toxic pollutants, as set forth in Hawaii Administrative Rule §11-54-04 ("WQS"), were derived from the U.S. Environmental Protection Agency ("EPA") 1986 and 1987 Water Quality Criteria (the "EPA Criteria").
3. In particular, the WQS for fish consumption for chlordane were derived from the EPA Criteria based on one excess cancer case in a million people, also stated as carcinogenicity of 10^{-6} risk.
4. The WQS fish consumption standards were also approximately 3.1 times more stringent than the EPA Criteria, because the average daily consumption of fish locally was estimated to be approximately 3.1 times higher than the average underlying the EPA Criteria.

5. The EPA fish consumption criterion for chlordane, based on carcinogenicity of 10^{-6} risk was 0.48 ng/l (“nanogram/liter”). 1/3 of that value is 0.16 ng/l or 0.00016 ug/l (“microgram/liter”).

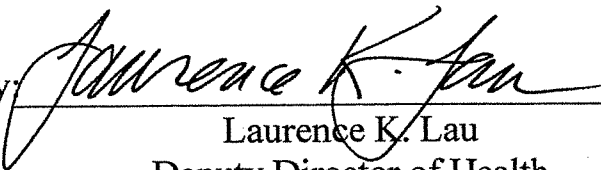
6. Correctly applying the methodology that was used to derive the WQS for all other pollutants, the WQS, § 11-54-04(b)(3), HAR for fish consumption for chlordane should be 0.00016 ug/l, rather than 0.000016 ug/l as listed in HAR §11-54-04(b)(3).

7. The WQS for chlordane set forth in HAR §11-54-04(b)(3), of 0.000016 micrograms per liter, is a typographical error. The correct standard should be 0.00016 micrograms per liter.

8. EPA staff who worked on the original Hawaii WQS has confirmed the error.

9. The Department of Health intends to rectify this error.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on October 15, 2007, in Honolulu, Hawaii.

By 

Laurence K. Lau
Deputy Director of Health
Department of Health, State of Hawaii

DECLARATION OF KATHLEEN A. KELLY

I, Kathleen A. Kelly, declare as follows:

1. I am Deputy Corporation Counsel for defendant City and County of Honolulu ("CCH"). I am admitted to practice before this Court.
2. Attached hereto is a true and correct copy of the Declaration of Laurence K. Lau, Deputy Director of Health for the State of Hawaii Department of Health ("DOH"), acknowledging that the fish consumption water quality standard for chlordane, as currently published in Hawaii Administrative Rule §11-54-4, is a typographical error, and the correct standard should be 0.00016 microgram/liter.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on October 16, 2007, in Honolulu, Hawaii.

By: /s/Kathleen A. Kelly
Kathleen A. Kelly



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Testimony on HB 834, February 10, 2009 at 9:30 am

Hans Krock [hans.krock@deeoceanhawaii.com]

Sent: Monday, February 09, 2009 9:36 PM
To: EEPtestimony
Cc: Tanimoto, Ross [rtanimoto@honolulu.gov]

FEBRUARY 10, 2009

Testimony on HB 834 regarding the need to update the Water Quality Standards of Hawaii.

Submitted by:
Hans Krock Ph.D.,P.E.
Emeritus Professor of Ocean and Resources Engineering
808 228 2233

I participated in the last significant revision of the State of Hawaii Water Quality Standards in 1977. I was responsible for most of the numerical values and the statistical form of those standards that had large natural variations. At the time of the 1977 revisions the available data base was not very extensive and the recommendation was that the standards should be periodically revised to keep them up to date, to correct any errors, and to reflect any new understanding of environmental processes. The frequency of such revisions was thought to be every three to ten years depending on need. In fact, the standards have had no significant revisions since 1977 even though (1) the data base has grown in size and accuracy, (2) several errors have been identified, and (3) our understanding of environmental processes has evolved to the point where blind application of the old standards will actually lead to significant environmental harm.

The EPA has recently promulgated water quality standards that are more up to date and that should be taken into account in revising the standards in Hawaii. This especially relates to the standards for the toxicants chlordane and dieldrin as well as to the standards for nutrients. It should also be noted that the Hawaiian Water Quality Standards do not cover the area of the ocean below the top of the thermocline. All these factors are relevant to the evaluation of the C&C of Honolulu deep discharges from the treatment plants at Sand Island and Honouliuli.

Thank you for this opportunity to testify.
The University of Hawaii is not responsible for anything I write or say.

Bill No. 834

Support Y N

Date 2/9/09

Time 9:30p

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Type 1 2 WI

- Mail
- Calendar
- Contacts
- Deleted Items (1)
- Drafts [3]
- Inbox (2)
- Junk E-mail [1]
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- 090205 Testimony
- 090210 testimony
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