

COUNCIL OF THE COUNTY OF MAUI
WATER RESOURCES COMMITTEE

November 3, 2006

**Committee
Report No.**

06-138

Honorable Chair and Members
of the County Council
County of Maui
Wailuku, Maui, Hawaii

Chair and Members:

Your Water Resources Committee, having met on February 16, 2005, March 9, 2006, June 7, 2006, September 13, 2006, and October 18, 2006, makes reference to County Communication No. 05-45, from Councilmember Michelle Anderson, relating to the matter of the Upcountry lead-control program implemented by the Department of Water Supply (DWS), and transmitting a document dated July 16, 2004, entitled "WORKPLAN 1: A REQUEST FOR FUNDING PROPOSAL RESPONDING TO UPCOUNTRY MAUI WATER QUALITY ISSUES", submitted by DWS and accepted by the United States Environmental Protection Agency (EPA).

Your Committee notes the following:

- A ban on lead-content plumbing materials was part of the 1986 amendments to the Federal Safe Drinking Water Act. The presence of lead in water ingested by children can lead to permanent damage including brain damage, kidney failure, hyperactivity, and aggression.
- Water in the Upcountry area of Maui has little mineral content and is, therefore, corrosive. This corrosiveness causes lead in plumbing to leach into the water system.
- In 2001, the Safe Drinking Water Branch, Environmental Management Division, of the State Department of Health (DOH) required the use of phosphate in Upcountry water to control lead in the water.
- DWS added Calgon C-9, which is comprised of zinc and phosphorous, to Upcountry water from June 2001 to April 2003. Reports of various adverse reactions including skin rashes from contact with Upcountry water began to occur in late 2002.

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- On April 4, 2003, the Council adopted Resolution No. 03-39, entitled “URGING THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND THE SAFE DRINKING WATER BRANCH OF THE DEPARTMENT OF HEALTH, STATE OF HAWAII, TO ALLOW THE MAUI COUNTY DEPARTMENT OF WATER SUPPLY TO WORK WITH THE MAUI UPCOUNTRY COMMUNITY TO ADOPT A PLAN TO REMOVE LEAD FROM CUSTOMERS' HOMES”.
- In April 2003, DWS stopped using Calgon C-9 and began using only phosphoric acid as an additive to Upcountry water. Reports of reactions to Upcountry water were subsequently decreased. By 2004, however, reports indicated that a chemical reaction to the phosphoric acid may have caused lead leaching. Thus, DWS abandoned the practice of using phosphoric acid as an additive to Upcountry water, instead utilizing soda ash beginning on June 28, 2004.

By correspondence dated February 7, 2005, the Chair of your Committee transmitted the following correspondence relating to the Upcountry lead-control program that had been received by the former Council’s Water Resources Committee:

- County Communication No. 03-68, from Councilmember Michael J. Molina, relating to the corrosion control program for the Upcountry water system.
- Documents relating to the Upcountry water systems’ compliance with the “EPA Lead & Copper Rule”, submitted by DWS to the former Council’s Water Resources Committee on October 15, 2003.
- Correspondence dated March 1, 2004, from the Director of Water Supply to Barry Pollock, Project Officer, Drinking Water Office, EPA, regarding development of a work plan to utilize EPA’s “\$500,000 Upcountry Maui Lead-Water Reduction Plan grant” (the EPA grant).
- Correspondence dated March 12, 2004, from John Kemmerer, Associate Director, Water Division, EPA, to the Director of Water Supply, clarifying that EPA “did not endorse stopping or decreasing the use of corrosion control additives prior to addressing the lead sources, as it would likely result in increased public exposures to lead contaminated drinking water”.

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- Correspondence dated April 5, 2004, from the Mayor to John Kemmerer, Associate Director, Water Division, EPA, to the Director of Water Supply, advising that the County is apparently “caught between two regulatory standards, the lead and copper rule, and the disinfection by products rule”. The correspondence also transmitted correspondence dated March 2, 2004, from Marc Edwards, Professor of Civil and Environmental Engineering, Virginia Tech, providing testimony and background materials on lead and copper corrosion issues to the Committee on Government Reform, United States House of Representatives. In addition, the Mayor’s correspondence transmitted correspondence dated March 10, 2004, from Donald Yasutake, Environmental Engineer, Environmental Management, Safe Drinking Water Branch, Environmental Management Division, DOH, regarding scientific research about lead leaching.
- Correspondence dated April 27, 2004, from the Chair of the former Council’s Water Resources Committee, transmitting a *Maui Weekly* article dated April 22-28, 2004, entitled “MAUI PROBLEM HITS WASH. D.C.: Upcountry water situation parallels problem in Washington, D.C., as federal officials face same problem as Maui. Hawai`i pleads with EPA for a solution to additive problem which may worsen situation”; and correspondence dated April 22, 2004, from the Maui Coalition for Safe Water.
- Correspondence dated May 5, 2004, from the Mayor to William Wong, P.E., Chief of the Safe Drinking Water Branch, Environmental Management Division, DOH, requesting modification of the approved Corrosion Control Plan for Upcountry Maui.
- Correspondence dated May 7, 2004, from the Chair of the former Council’s Water Resources Committee, transmitting a copy of correspondence dated April 30, 2004, from the Associate Director, Water Division, EPA, to the Mayor, noting EPA’s support of the County using the EPA grant funds to hire a corrosion control consultant.
- Correspondence dated May 11, 2004, from the Chair of the former Council’s Water Resources Committee, requesting that DWS provide information on its corrosion control consultant.

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- Correspondence dated May 19, 2004, from the Director of Water Supply, providing copies of a draft contract and proposal to hire the Boyle Engineering Corporation and a draft proposal from Professor Marc Edwards of Virginia Tech.
- Correspondence dated May 21, 2004, from the former Council Chair, transmitting correspondence dated May 18, 2004, from the Maui Coalition for Safe Water, submitting 1,824 signatures on a document entitled “Petition to Protect our Water Supply”, requesting a prohibition on “the use of chemicals with no rigorous toxicity”.
- Correspondence dated May 21, 2004, from Lawrence K. Lau, Deputy Director for Environmental Health, DOH, to the Mayor, denying the Mayor’s request to eliminate all phosphate additives without alternative methods of corrosion control treatment.
- Correspondence dated June 3, 2004, from the Director of Water Supply to William Wong, P.E., Chief of the Safe Drinking Water Branch, Environmental Management Division, DOH, requesting modification of the approved Corrosion Control Plan for Upcountry Maui.
- Correspondence dated June 10, 2004, from the former Council Chair, transmitting correspondence dated June 10, 2004, from the Maui Coalition for Safe Water, requesting immediate assistance in providing the public with information regarding the modification of amounts of additives for the corrosion control program.
- Correspondence dated June 10, 2004, from William Wong, P.E., Chief of the Safe Drinking Water Branch, Environmental Management Division, DOH, to the Director of Water Supply, requesting that DWS initiate an ongoing monitoring program for Upcountry water.
- Correspondence dated June 15, 2004, from the former Council Chair, transmitting correspondence dated June 6, 2004, from the Maui Coalition for Safe Water, objecting to erroneous information regarding the application rate for phosphoric acid in the Upcountry water supply.

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- Written testimony dated June 15, 2004, from the Kula Community Association, expressing concerns about chemical additives in the water.
- Written testimony dated June 16, 2004, from Valerie Lane Simonsen, ND, expressing concerns about lead leaching.
- Written testimony dated June 16, 2004, from Angelina Coffin, expressing concerns about the lead in the water.
- Written testimony dated June 16, 2004, from Elliott Krash, requesting more public education about Upcountry water.
- Correspondence dated June 17, 2004, from the Chair of the former Council's Water Resources Committee, requesting the Board of Water Supply's comments on the corrosion control program.
- Correspondence dated June 24, 2004, from the Chair of the former Council's Water Resources Committee, transmitting a document dated June 21, 2004, entitled "UPCOUNTRY MAUI LEAD IN DRINKING WATER REDUCTION PROJECT: GRANT WORK PLAN" (draft).
- Correspondence dated June 24, 2004, from the Director of Water Supply, transmitting correspondence dated June 23, 2004, from William Wong, P.E., Chief of the Safe Drinking Water Branch, Environmental Management Division, DOH, approving modification of the corrosion control program.
- Correspondence dated July 1, 2004, from the Director of Water Supply to Professor Marc Edwards of Virginia Tech, regarding EPA's lead and copper rule.
- Correspondence dated August 5, 2004, from the Director of Water Supply, regarding the Upcountry Water Quality Study Report.
- Correspondence dated August 12, 2004, from the Chair of the Board of Water Supply, advising that further study would be required on the corrosion control program.

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- Correspondence dated August 19, 2004, from the Director of Water Supply, transmitting correspondence dated August 10, 2004, from William Wong, P.E., Chief of the Safe Drinking Water Branch, Environmental Management Division, DOH, regarding Upcountry water quality.
- Correspondence dated August 20, 2004, from the Director of Water Supply to Ginny Parsons, responding to her request for information on a draft report on water testing of the Upcountry water supply.
- Correspondence dated August 27, 2004, from the Director of Water Supply, transmitting a document dated August 25, 2004, entitled “Evaluation of Lead Corrosion Control Strategies in Maui Water” (Final Report), prepared by Becki Marshall and Marc Edwards of Virginia Tech.
- Correspondence dated September 9, 2004, from the Director of Water Supply, transmitting an *Opflow* article dated August 2004, entitled “Should We Switch to Chloramines to Meet D/DBP Rule?”.
- Correspondence dated September 14, 2004, from the former Council Chair, transmitting correspondence dated August 25, 2004, from the Director of Water Supply, transmitting a document dated July 16, 2004, entitled “WORKPLAN 1: A REQUEST FOR FUNDING PROPOSAL RESPONDING TO UPCOUNTRY MAUI WATER QUALITY ISSUES”.
- A *St. Petersburg (Florida) Times* article dated August 18, 2002, entitled “Shower is top suspect in illness”, submitted by Ginny Parsons.
- A chart dated September 15, 2004, entitled “Upcountry illness Symptom Survey”, from the Maui Coalition for Safe Water.
- A document received on September 15, 2004, entitled “Notice to Upcountry Water Users”, from the Maui Coalition for Safe Water.
- A document received on September 15, 2004, entitled “Neighborhood Survey Form”, from the Maui Coalition for Safe Water.

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- Correspondence dated October 11, 2004, from the Deputy Director of Water Supply, seeking the support of the former Council's Water Resources Committee for the convening of a "Review and Oversight Committee" to ensure proper management of the EPA grant.
- Correspondence dated October 11, 2004, from the Deputy Director of Water Supply to the Director of Water Supply, regarding the corrosion control program.

By correspondence dated February 15, 2005, the Chair of your Committee transmitted a DWS press release entitled "Upcountry water project manager sought".

At its meeting of February 16, 2005, your Committee met with the Director of Water Supply; the Administrative Officer, Department of Water Supply; and a Deputy Corporation Counsel.

Your Committee received the following:

1. A document dated February 16, 2005, entitled "Upcountry lead control program update (WR-9)", from the Administrative Officer;
2. A document, entitled "UNINTENDED CONSEQUENCES OF CHLORAMINE HIT HOME", prepared by the Virginia Tech Department of Civil Engineering, from Ginny Parsons; and
3. A document dated January 1995, entitled "LOWER KULA WATER SYSTEM (PWS 247): DIRECTOR'S STATUS REPORT ON TREATMENT OF WATER SOURCE", from Rosemary Robbins.

Your Committee received public testimony from two people who expressed concerns about the safety of Upcountry water and about the County's Administration of the EPA grant.

The Administrative Officer provided background information on the three Upcountry water systems, the EPA lead and copper rule, and the County's efforts to disinfect Upcountry water. She noted that adding soda ash to Upcountry water had been successful in "reducing lead below the action level". The Administrative Officer also

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provided an update on the results of compliance sampling and use of the EPA grant. She advised your Committee that the EPA grant is posted on the DWS website at: <http://mauiwater.org/lead.html>. She further noted that the EPA grant's purpose is to remove the source or sources of lead contamination and that Boyle Engineering Corporation had been contracted to provide a study.

Your Committee raised questions regarding water quality testing for metals and pesticides.

Your Committee deferred consideration of the matter pending further discussion.

By correspondence dated March 10, 2005, the Director of Water Supply advised that, despite questions raised at your Committee's meeting of February 16, 2005, "providing clean and safe water to our customers is of the highest priority" and that annual test results "are well below EPA and State allowable Maximum Contaminant Levels (MCL)".

By correspondence dated March 17, 2005, the Chair of your Committee transmitted correspondence dated March 3, 2005, from the Director of Water Supply, transmitting information on the Upcountry Unidirectional Flushing Program, designed to improve Upcountry water quality.

By correspondence dated August 26, 2005, the Chair of your Committee transmitted a DWS press release dated August 12, 2005, entitled "Upcountry water systems in compliance with EPA Lead & Copper Rule".

By correspondence dated October 5, 2005, the Director of Water Supply announced that Boyle Engineering Corporation would be making a presentation on the Upcountry Lead Control Strategy on November 2, 2005.

At its meeting of March 9, 2006, your Committee met with the Director of Water Supply, the Deputy Director of Water Supply, and a Deputy Corporation Counsel.

Your Committee received public testimony from three people who expressed concerns about the safety of Upcountry water and about the County's Administration of the EPA grant.

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Your Committee received a computer-generated slide show from Professor Marc Edwards of Virginia Tech, entitled "Understanding Lead and Bacteria Problems in Maui Water". The presentation discussed both lead- and bacteria-control measures. Dr. Edwards, who had been hired as a DWS consultant, said that Granular Active Carbon filtering is highly recommended for both lead and bacteria control - both by DWS and by consumers in their homes. He advised that phosphate should only be used as a last resort, in part, because it could lead to skin irritation.

After a lengthy discussion with Dr. Edwards, your Committee deferred consideration of the matter pending further discussion.

By correspondence dated May 31, 2006, the Chair of your Committee transmitted a *Honolulu Advertiser* article dated May 31, 2006, entitled "Deadline is June 30 for Maui lead testing".

At its meeting of June 7, 2006, your Committee met with the Director of Water Supply; the Deputy Director of Water Supply; two Executive Assistants to the Mayor; a Deputy Corporation Counsel; Lorrin Pang, M.D., District Health Officer, DOH, State of Hawaii; and Ginny Parsons, Brooke Richert, and Rosemary Robbins of the Upcountry Water Oversight Advisory Committee.

Ms. Parsons provided your Committee with the following:

1. A document dated June 29, 2005, entitled "GRANT AGREEMENT OF COUNTY FUNDS", to contract with Pamela Grossman to serve as Project Coordinator for the EPA grant;
2. Correspondence dated August 23, 2004, from Alexis Strauss, Director, Water Division, EPA Region 9, to the Deputy Director of Water Supply, approving a project; and
3. A document entitled "Suggestions for keeping your Upcountry water safe".

Your Committee received public testimony from two people who expressed concerns about the safety of Upcountry water and about the County's Administration of the EPA grant.

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Dr. Pang expressed concerns about whether the County's lead-control efforts had resulted in bacteria in Upcountry water that had caused skin irritation for Upcountry water uses.

Ms. Parsons, Ms. Richert, and Ms. Robbins informed your Committee about the Upcountry Water Oversight Advisory Committee's efforts to monitor the EPA grant. They discussed results of water tests and the Project Coordinator's effectiveness.

By correspondence dated September 8, 2006, the Chair of your Committee, informed Bruce A. Macler, Ph.D., EPA Region 9, of the following:

- The Upcountry Water Oversight Advisory Committee supported Dr. Macler's suggestion for an EPA review of the draft final report dated May 2006, entitled "Development of Lead Control Strategy", submitted by Boyle Engineering Corporation (Boyle report).
- Correspondence dated July 3, 2006, letter from Stuart Yamada, Chief of the Safe Drinking Water Branch, Environmental Management Division, DOH, raises many concerns regarding the efficacy of the Boyle report.
- The Council appropriated \$250,000 in the Fiscal Year 2007 Budget for preliminary test studies and design work to determine the most appropriate treatment system to remediate the Upcountry bacteria problem.
- The Council also appropriated \$750,000 towards construction of a treatment facility.

By correspondence dated September 12, 2006, the Chair of your Committee transmitted an EPA document entitled "Comprehensive Performance Evaluation (CPE): The Basics".

By correspondence dated September 12, 2006, the Chair of your Committee transmitted correspondence dated August 8, 2006, from Bruce A. Macler, Ph.D., EPA Drinking Water Office, to the Deputy Director of Water Supply, providing the following comments about the Boyle report:

- "In general, this report is weak and spotty."

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- “An overall view of the situation at the upcountry Maui water systems and what the study results mean with respect to that situation was not presented.”
- “Several work elections that were described in the QAPP [Quality Assurance Project Plan] were not done according to that plan.”

At its meeting of September 13, 2006, your Committee met with the Director of Water Supply, the Deputy Director of Water Supply, and a Deputy Corporation Counsel.

Your Committee received public testimony from one person who expressed concern about Upcountry water safety.

Your Committee discussed the possibility of requesting that EPA conduct a peer review, noting that Bruce A. Macler, Ph.D., indicated that the cost would be limited to out-of-pocket costs for a peer review team, estimated at \$10,000. Your Committee also discussed the possibility of requesting a comprehensive performance evaluation, the cost of which is estimated at \$20,000.

The Deputy Director provided background information relating to the Boyle report. He noted that the Boyle report concerned a lead-control project and that the Upcountry system is in compliance with the lead and copper rule and, therefore, currently requires reduced monitoring. He advised that bacteria was not covered by the Boyle contract, although bacteria has been identified as a potential cause of the lead leaching. He further advised that peer review was not within the scope of the original contract or the EPA grant.

Your Committee discussed whether Boyle should be allowed to respond to comments from DOH and EPA prior to requesting the peer review and comprehensive performance evaluation.

The Deputy Director advised that Boyle had prepared written responses to DOH and EPA comments. He provided your Committee with copies of two pieces of correspondence dated September 8, 2006 from Steven Duranceau, Vice President, Boyle Engineering Corporation, to the Deputy Director. The first responds to DOH’s review comments of the Boyle report; while the second responds to EPA’s review comments.

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Your Committee discussed the possibility of requesting that a comprehensive performance evaluation be conducted on the Upcountry water systems.

Your Committee deferred consideration of the matter pending further discussion.

By correspondence dated September 13, 2006, Bruce A. Macler, Ph.D., EPA, informed your Committee of the following information:

- Dr. Macler previously recommended a “peer review” based on his expectation that the Boyle report would “provide a comprehensive picture of the current operations and water quality situation for the upcountry systems”.
- Because the Boyle report is not as complete as he anticipated, Dr. Macler now recommends a “review workshop” instead of a “peer review per se”.

By correspondence dated October 10, 2006, the Chair of your Committee transmitted a *Washington Post* article dated October 5, 2004, entitled “Lead Levels in Water Misrepresented Across U.S.”.

By correspondence dated October 11, 2006, the Chair of your Committee transmitted a proposed resolution, entitled “REQUESTING A REVIEW WORKSHOP ON THE BOYLE STUDY ON CONTAMINATION IN THE UPCOUNTRY MAUI WATER SUPPLY”. The purpose of the proposed resolution is to request that the appropriate Council committee(s) facilitate a review workshop to evaluate the draft final report dated May 2006, entitled “Development of Lead Control Strategy IFB 2004-08”, prepared by Boyle Engineering Corporation.

At its meeting of October 18, 2006, your Committee met with the Director of Water Supply, the Deputy Director of Water Supply, and a Deputy Corporation Counsel.

Your Committee received public testimony from two people in support of the proposed resolution. Two other people submitted written testimony in support of the proposed resolution.

Ginny Parsons provided your Committee with the following:

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1. A digital video disc entitled “A Global Decline in Microbiological Safety of Water: A Call for Action”;
2. A document entitled “FREE: TAP WATER LEAD TESTS: UpCountry Residents qualify for free Lead screen tests”; and
3. An EPA press release dated September 1, 2004, entitled “EPA: Environmental News: EPA awards \$497,000 grant to County of Maui for Upcountry drinking water systems”.

Your Committee noted that criticism of the Boyle report by EPA and DOH justified a review workshop, as suggested by Bruce A. Macler, Ph.D., EPA. Your Committee reviewed the proposed resolution, including the following provision: “a review workshop - including a panel of qualified experts in hydrology, toxicology, and related scientific fields, and assisted by EPA and DOH - would provide the Council and other governmental entities with additional relevant information regarding lead and other contaminants in the Upcountry Maui water supply”. Your Committee noted that the proposed resolution would authorize the Council Chair to expend up to \$20,000 in costs associated with the workshop.

Your Committee voted to recommend adoption of the proposed resolution, as revised, to correct a spelling error.

Your Committee is in receipt of a revised proposed resolution reflecting your Committee’s recommendation.

Your Water Resources Committee RECOMMENDS that
Resolution No. _____, attached hereto, entitled “REQUESTING A REVIEW
WORKSHOP ON THE BOYLE STUDY ON CONTAMINATION IN THE
UPCOUNTRY MAUI WATER SUPPLY” be ADOPTED.

Adoption of this report is respectfully requested.

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MICHELLE ANDERSON Chair

DAIN P. KANE Member

CHARMAINE TAVARES Vice-Chair

MICHAEL J. MOLINA Member

ROBERT CARROLL Member

JOSEPH PONTANILLA Member

JO ANNE JOHNSON Member