

## **Item B**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, CA 94105-3901

March 19, 2010

Laurence K. Lau  
Deputy Director for Environmental Health  
Hawaii Department of Health  
P.O. Box 3378  
Honolulu, Hawaii 96801

Dear Mr. Lau:

The Environmental Protection Agency (EPA) has reviewed the Amendment and Compilation of Chapter 11-54, Hawaii Administrative Rules (HAR), dated May 27, 2009, which contains recent amendments to the water quality standards for the State of Hawaii. Pursuant to CWA section 303(c) and the implementing federal regulations at 40 CFR 131, EPA hereby approves these amendments.

These amendments include the correction of an inadvertent typographical error made in the adoption of HAR section 11-54-4(b)(3) on November 30, 1989 (toxic pollutant fish consumption criterion for chlordane) and two revisions to the State's specific criteria for recreational waters contained in HAR section 11-54-8(b) (geometric mean and single sample maximum enterococcus content in marine recreational waters within 300 meters of the shoreline, including natural public bathing or wading areas). These amendments were approved by Governor Linda Lingle on June 5, 2009, adopted by the Hawaii Department of Health (HDOH) on June 15, 2009, and submitted to EPA in a letter dated July 8, 2009. EPA received this submittal on July 18, 2009. EPA requested additional information from HDOH regarding the submittal on September 4, 2009, and again on October 20, 2009, to clarify statements written in HDOH's response to public comments on the proposed amendments to criteria for recreational waters. The requested clarification was submitted to EPA in a letter dated February 16, 2010.

The bacteria criteria adopted in these amendments are equivalent to EPA's 1986 bacteria criteria and consistent with the bacteria criteria applicable beyond 300 meters, as promulgated by EPA in 2004. The corrected chlordane criterion is more protective than EPA's recommended water quality criterion due to the higher fish consumption rate adopted by HDOH in 1989 to address fish consumption in Hawaii.

Section 303(c) of the Clean Water Act (CWA) requires EPA to approve or disapprove new or revised State-adopted water quality standards. Today's action regarding the May 27, 2009 amendments to Hawaii's water quality standards is based on the finding that these amendments are consistent with the requirements of the CWA and EPA's regulations at 40 CFR 131.5 and 131.6. This action pertains only to those portions of the amendments that are subject to EPA's water quality standards approval authority under section 303(c) of the CWA.

(i.e., the portions addressing antidegradation, beneficial uses, water quality criteria, and implementation of water quality standards for surface waters).

### **Public Participation**

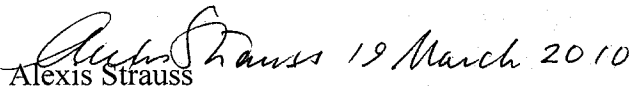
Public involvement is an integral component of a successful water quality program. EPA finds that the public participation procedures followed by the State in the development and adoption of the May 27, 2009 amendments are consistent with 40 CFR 131.20(b). A public notice announcing the proposed amendments was posted in five newspapers on March 9, 2009, and a public hearing was held on April 27, 2009.

### **Endangered Species Act**

Section 7(a)(2) of the Endangered Species Act (ESA) states that each federal agency shall ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. The criteria adopted in this action pertain to human health. Therefore, EPA has determined that today's action will have "no effect" on any federally listed endangered or threatened species or critical habitat.

If there are any questions regarding our action, please contact Janet Hashimoto at (415) 972-3452. As always, we look forward to continued cooperation with the State in achieving our mutual environmental goals.

Sincerely,

 Alexis Strauss 19 March 2010

Director, Water Division

cc: Dave Penn, HDOH  
Alec Wong, HDOH

# **Amended Chlordane Standard**

§11-54-4

state waters shall also be free from acute toxicity as measured using the toxicity tests listed in section 11, or other methods specified by the director.

(B) Chronic Toxicity Standards: All state waters shall be free from pollutants in concentrations which on average during any twenty-four hour period exceed the chronic standards listed in paragraph (3). All state waters shall also be free from chronic toxicity as measured using the toxicity tests listed in section 11-54-10, or other methods specified by the director.

(C) Human Health Standards: All state waters shall be free from pollutants in concentrations which, on average during any thirty day period, exceed the "fish consumption" standards for non-carcinogens in paragraph (3). All state waters shall also be free from pollutants in concentrations, which on average during any 12 month period, exceed the "fish consumption" standards for pollutants identified as carcinogens in paragraph (3).

(3) Numeric standards for toxic pollutants applicable to all waters. The freshwater standards apply where the dissolved inorganic ion concentration is less than 0.5 parts per thousand; saltwater standards apply above 0.5 parts per thousand. Values for metals refer to the dissolved fraction. All values are expressed in micrograms per liter.

<u>Pollutant</u>	<u>Freshwater</u>		<u>Saltwater</u>		<u>Fish</u>
	<u>Acute</u>	<u>Chronic</u>	<u>Acute</u>	<u>Chronic</u>	<u>Consumption</u>
Acenapthene	570	ns	320	ns	Ns
Acrolein	23	ns	18	ns	250

<u>Pollutant</u>	<u>Freshwater</u>		<u>Saltwater</u>		<u>Fish Consumption</u>
	<u>Acute</u>	<u>Chronic</u>	<u>Acute</u>	<u>Chronic</u>	
Acrylonitrile*	2,500	ns	ns	ns	0.21
Aldrin*	3.0	ns	1.3	ns	0.000026
Aluminum	750	260	ns	ns	ns
Antimony	3,000	ns	ns	ns	15,000
Arsenic	360	190	69	36	ns
Benzene*	1,800	ns	1,700	ns	13
Benzidine*	800	ns	ns	ns	0.00017
Beryllium*	43	ns	ns	ns	0.038
Cadmium	3+	3+	43	9.3	ns
Carbon tetra- chloride*	12,000	ns	16,000	ns	2.3
Chlordane*	2.4	0.0043	0.09	0.004	0.00016
Chlorine	19	11	13	7.5	ns
Chloroethers- ethy(bis-2)*	ns	ns	ns	ns	0.44
isoprophyl	ns	ns	ns	ns	1,400
methyl(bis)*	ns	ns	ns	ns	0.00060
Chloroform*	9,600	ns	ns	ns	5.1
Chlorophenol(2)	1,400	ns	ns	ns	ns
Chlorpyrifos	0.083	0.041	0.011	0.0056	ns
Chromium (VI)	16	11	1,100	50	ns
Copper	6+	6+	2.9	2.9	ns
Cyanide	22	5.2	1	1	ns
DDT*	1.1	0.001	0.013	0.001	0.000008

S11-54-4

<u>Pollutant</u>	<u>Freshwater</u>		<u>Saltwater</u>		<u>Fish</u>
	<u>Acute</u>	<u>Chronic</u>	<u>Acute</u>	<u>Chronic</u>	<u>Consumption</u>
metabolite TDE*	0.03	ns	1.2	ns	ns
Demeton		0.1	ns	0.1	ns
Dichloro-					
benzenes*	370	ns	660	ns	850
benzidine*	ns	ns	ns	ns	0.007
ethane(1,2)*	39,000	ns	38,000	ns	79
ehenol(2,4)	670	ns	ns	ns	ns
propanes	7,700	ns	3,400	ns	ns
propene(1,3)	2,000	ns	260	ns	4.6
Dieldrin*	2.5	0.0019	0.71	0.0019	0.000025
Dinitro					
o-cresol(2,4)	ns	ns	ns	ns	250
toluenes*	110	ns	200	ns	3.0
Dioxin*	0.003	ns	ns	ns	5.0x10 <sup>-9</sup>
Diphenyl-					
hydrazine(1,2)	ns	ns	ns	ns	0.018
Endosulfan	0.22	0.056	0.034	0.0087	52
Endrin	0.18	0.0023	0.037	0.0023	ns
Ethylbenzene	11,000	ns	140	ns	1,070
Fluoranthene	1,300	ns	13	ns	18
Guthion	ns	0.01	ns	0.01	ns
Heptachlor*	0.52	0.0038	0.053	0.0036	0.00009
Hexachloro-					

S11-54-4

<u>Pollutant</u>	<u>Freshwater</u>		<u>Saltwater</u>		<u>Fish Consumption</u>
	<u>Acute</u>	<u>Chronic</u>	<u>Acute</u>	<u>Chronic</u>	
benzene*	ns	ns	ns	ns	0.00024
butadiene*	30	ns	11	ns	16
cyclohexane-					
alpha*	ns	ns	ns	ns	0.010
beta*	ns	ns	ns	ns	0.018
technical*	ns	ns	ns	ns	0.014
cyclopentadiene	2	ns	2	ns	ns
ethane*	330	ns	310	ns	2.9
Isophorone	39,000	ns	4,300	ns	170,000
Lead	29+	29+	140	5.6	ns
Lindane*	2.0	0.08	0.16	ns	0.020
Malathion	ns	0.1	ns	0.1	ns
Mercury	2.4	0.55	2.1	0.025	0.047
Methoxychlor	ns	0.03	ns	0.03	ns
Mirex	ns	0.001	ns	0.001	ns
Naphthalene	770	ns	780	ns	ns
Nickel	5+	5+	75	8.3	33
Nitrobenzene	9,000	ns	2,200	ns	ns
Nitrophenols*	77	ns	1,600	ns	ns
Nitrosamines*	1,950	ns	ns	ns	0.41
Nitroso					
dibutylamine-N*	ns	ns	ns	ns	0.19
diethylamine-N*	ns	ns	ns	ns	0.41



S11-54-4

<u>Pollutant</u>	<u>Freshwater</u>		<u>Saltwater</u>		<u>Fish Consumption</u>
	<u>Acute</u>	<u>Chronic</u>	<u>Acute</u>	<u>Chronic</u>	
dimethylamine-N*	ns	ns	ns	ns	5.3
diphenylamine-N*	ns	ns	ns	ns	5.3
Pyrrolidine-N*	ns	ns	ns	ns	30
Parathion	0.065	0.013	ns	ns	ns
Pentachloro-ethanes	2,400	ns	130	ns	ns
benzene	ns	ns	ns	ns	28
phenol	20	13	13	ns	ns
Phenol	3,400	ns	170	ns	ns
2,4-dimethyl	700	ns	ns	ns	ns
Phthalate esters					
dibutyl	ns	ns	ns	ns	50,000
diethyl	ns	ns	ns	ns	590,000
di-2-ethylhexyl	ns	ns	ns	ns	16,000
dimethyl	ns	ns	ns	ns	950,000
Polychlorinated biphenyls*	2.0	0.014	10	0.03	0.000079
Polynuclear aromatic hydrocarbons*	ns	ns	ns	ns	0.01
Selenium	20	5	300	71	ns
Silver	1+	1+	2.3	ns	ns
Tetrachloro-ethanes	3,100	ns	ns	ns	ns
benzene (1,2,4,5)	ns	ns	ns	ns	16
ethane (1,1,2,2)*	ns	ns	3,000	ns	3.5

<u>Pollutant</u>	<u>Freshwater</u>		<u>Saltwater</u>		<u>Fish</u>
	<u>Acute</u>	<u>Chronic</u>	<u>Acute</u>	<u>Chronic</u>	<u>Consumption</u>
ethylene*	1,800	ns	3,400	145	2.9
phenol(2,3,5,6)	ns	ns	ns	440	ns
Thallium	470	ns	710	ns	16
Toluene	5,800	ns	2,100	ns	140,000
Toxaphene*	0.73	0.0002	0.21	0.0002	0.00024
Tributyltin	ns	0.026	ns	0.01	ns
Trichloro-					
ethane(1,1,1)	6,000	ns	10,400	ns	340,000
ethane(1,1,2)*	6,000	ns	ns	ns	14
ethylene*	15,000	ns	700	ns	26
phenol(2,4,6)*	ns	ns	ns	ns	1.2
Vinylchloride*	ns	ns	ns	ns	170
Zinc	22+	22+	95	86	ns

ns - No standard has been developed.

\* - Carcinogen.

+ - The value listed is the minimum standard. Depending upon the receiving water CaCO<sub>3</sub> hardness, higher standards may be calculated using the respective formula in the U. S. Environmental Protection Agency publication Quality Criteria for Water (EPA 440/5-86-001, Revised May 1, 1987).

Note - Compounds listed in the plural in the "Pollutant" column represent complex mixtures of isomers.

Numbers listed to the right of these compounds refer to the total allowable concentration of any combination of isomers of the compound, not only to concentrations of individual isomers.

(4) The following are basic requirements applicable to discharges to state waters.

These standards shall be enforced through effluent limitations or other conditions in discharge permits. The director may apply more stringent discharge requirements to any discharge if necessary to ensure compliance with all standards in paragraph (2).

(A) Continuous discharges through submerged outfalls. The No Observed Effect Concentration (NOEC), expressed as percent effluent, of continuous discharges through submerged outfalls shall not be less than 100 divided by the minimum dilution. In addition, such discharges shall not contain:

(i) Pollutants in twenty-four hour average concentrations greater than the values obtained by multiplying the minimum dilution by the standards in paragraph (3) for the prevention of chronic toxicity.

(ii) Non-carcinogenic pollutants in thirty day average concentrations greater than the values obtained by multiplying the minimum dilution by the standards in paragraph (3) for fish consumption.

(iii) Carcinogenic pollutants in twelve month average concentrations greater than the values obtained by multiplying the average dilution by the standards in paragraph (3) for fish consumption.

(B) Discharges without submerged outfalls. The survival of test organisms in an undiluted acute toxicity test of any discharge shall not be less than 80 per

cent. In addition, no such discharge shall contain pollutants in concentrations greater than the standards in paragraph (3) for the prevention of acute toxicity to aquatic life. The director may make a limited allowance for dilution for a discharge in this category if it meets the following criteria: the discharge velocity is greater than 3 meters per second; the discharge enters the receiving water horizontally, and; the receiving water depth at the discharge point is greater than zero.

- (c) The requirements of paragraph (a)(6) shall be deemed met upon a showing that the land on which the erosion occurred or is occurring is being managed in accordance with soil conservation practices acceptable to the applicable soil and water conservation district and the director, and that a comprehensive conservation program is being actively pursued, or that the discharge has received the best degree of treatment or control, and that the severity of impact of the residual soil reaching the receiving body of water is deemed to be acceptable.
- (d) In order to reduce a risk to public health or safety arising out of any violation or probable violation of this chapter, the director may post or order posted any state waters. Posting is the placement, erection, or use of a sign or signs warning people to stay out of, avoid drinking, avoid contact with, or avoid using the water. This posting authority shall not limit the director's authority to post or order posting in any other appropriate case or to take any enforcement action. [Eff 11/12/82; am and comp 10/6/84; am and comp 04/14/88; am and comp 01/18/90; am and comp 10/29/92, am and comp

§11-54-4

04/17/00; am and comp 10/2/04; am and comp  
JUN 15 2009 ] (Auth: HRS §§342D-1, 342D-4,  
342D-5) (Imp: HRS §§342D-4, 342D-5)

§11-54-5 Uses and specific criteria applicable to inland waters. Inland water areas to be protected are described in section 11-54-5.1, corresponding specific criteria are set forth in section 11-54-5.2; water body types are defined in section 11-54-1. [Eff 11/12/82; am and comp 10/6/84; am and comp 04/14/88; am and comp 01/18/90; am and comp 10/29/92, am and comp 04/17/00; am and comp 10/2/04; comp  
JUN 15 2009 ] (Auth: HRS §§342D-1, 342D-4, 342D-5)  
(Imp: HRS §§342D-4, 342D-5)

§11-54-5.1 Inland water areas to be protected.

(a) Freshwaters.

(1) Flowing waters: perennial streams and rivers, intermittent streams, springs and seeps, and man-made ditches and flumes that discharge into any other waters of the State.

A) Class 1.a.

- (i) All flowing waters within the natural reserves, preserves, sanctuaries, and refuges established by the department of land and natural resources under chapter 195, HRS, or similar reserves for the protection of aquatic life established under chapter 195, HRS.
- (ii) All flowing waters in national and state parks.
- (iii) All flowing waters in state or federal fish and wildlife refuges.

# **Revised Enterococcus Criteria**

§11-54-7

10/2/04; comp JUN 15 2009 ] (Auth: HRS  
§§342D-1, 342D-4, 342D-5) (Imp: HRS §§342D-  
4, 342D-5)

§11-54-8 Specific criteria for recreational areas. (a) In inland recreational waters:

- (1) Enterococcus content shall not exceed a geometric mean of 33 per one hundred milliliters in not less than five samples which shall be spaced to cover a period between 25 and 30 days. No single sample shall exceed the single sample maximum of 89 CFU per 100 milliliters or the site-specific one-sided 82 per cent confidence limit. Inland recreational waters in which
  - (2) enterococcus content does not exceed the standard shall not be lowered in quality.
  - (3) At locations where sampling is less frequent than five samples per twenty-five to thirty days, no single sample shall exceed the single sample maximum nor shall the geometric mean of these samples taken during the 30-day period exceed 33 CFU per 100 milliliters.
  - (4) Raw or inadequately treated sewage, sewage for which the degree of treatment is unknown, or other pollutants of public health significance, as determined by the director of health, shall not be present in natural public swimming, bathing or wading areas. Warning signs shall be posted at locations where human sewage has been identified as temporarily contributing to the enterococcus count.
- (b) In marine recreational waters:
- (1) Within 300 meters (one thousand feet) of the shoreline, including natural public bathing or wading areas, enterococcus content shall

not exceed a geometric mean of 35 CFU per 100 milliliters in not less than five samples which shall be spaced to cover a period between twenty-five and thirty days. No single sample shall exceed the single sample maximum of 104 CFU per 100 milliliters or the site-specific one-sided 75 per cent confidence limit. Marine recreational waters along sections of coastline where enterococcus content does not exceed the standard, as shown by the geometric mean test described above, shall not be lowered in quality.

- (2) At locations where sampling is less frequent than five samples per twenty-five to thirty days, no single sample shall exceed the single sample maximum nor shall the geometric mean of these samples taken during the thirty-day period exceed 35 CFU per 100 milliliters.
- (3) Raw or inadequately treated sewage, sewage for which the degree of treatment is unknown, or other pollutants of public health significance, as determined by the director of health, shall not be present in natural public swimming, bathing or wading areas. Warning signs shall be posted at locations where human sewage has been identified as temporarily contributing to the enterococcus count. [Eff 11/12/82; am and comp 10/6/84; am and comp 04/14/88; am and comp 01/18/90; am and comp 10/29/92, am and comp 04/17/00; am and comp 10/2/04; am and comp JUN 15 2009 ] (Auth: HRS §§342D-1, 342D-4, 342D-5) (Imp: HRS §§342D-4, 342D-5)