SOLANO COUNTY TAXPAYERS ASSOCIATION

Earl Heal, President
P.O Box 31
Dixon, CA 95620
<solanotaxpayers@sbcglobal.net>

February 25, 2011

Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

The Solano County Taxpayers Association is aware of the Central Valley Water Quality Board directives for treatment of wastewater for Vacaville and several other cities. Our charter directs the organization to monitor the efficiency of government so we request the science and risk management determinations used by the RWQB as required by EPA policy, i. e., ". . conclusions drawn from the science are identified separately from policy judgments and risk management decisions, and that the use of default values or methods, as well as the use of assumptions in risk assessments, are clearly articulated." We presume and expect the science will identify the research test records and results relative to the issues and the risk management decisions will identify the considerations evaluated, e. g. the health issues relative to various pollutant levels and the treatment costs necessary to establish those levels.

Specifically, we are requesting the science records that identified (a) the trihalomethanes and nitrates as pollutants of concern determining your requirements for Vacaville wastewater facility, (b) the specific health risks at various levels of these pollutants, and (c) the feasibility and costs of attaining these levels, and the records of risk management decisions that (d) established the directives. We also request the scientific basis for using treated drinking water Maximum Contaminant Levels for the basis of determining treated wastewater effluent limits in the basin plans

- THMs, NO_3
- Risk level
- Costs
- MCL

This request is made pursuant to our rights under the California Public Records Act (Government Code Section 6250 et seq.) and the California Constitution, as amended by passage of Proposition 59 on November 2, 2004). We ask for a determination on this request within 10 days of your receipt of it.

Thank you for your support.

Sincerely,

Earl Heal
President, SCTA

Cc: Terry Francke, General Counsel, Californians Aware
Tim Bittle, Howard Jarvis Taxpayers Association
Laura Kuhn, City Manager, City of Vacaville

U.S. EPA
Office of Research & Development
Cincinnati

From: "Solano County Taxpayers Association (SCTA)" <solanotaxpayers@sbcglobal.net>
To: James D Marshall <jdmarshall@waterboards.ca.gov>
Date: 3/12/2011 3:25 PM
Subject: Re: USEPA Water Quality Standards Contact

James,

Thank you for the updated contact information.

Earl Heal

— On Fri, 3/11/11, James D Marshall <jdmarshall@waterboards.ca.gov> wrote:

From: James D Marshall <jdmarshall@waterboards.ca.gov>
Subject: USEPA Water Quality Standards Contact
To: solanotaxpayers@sbcglobal.net
Date: Friday, March 11, 2011, 2:41 PM

Mr. Heal,

I hope you received my previous email with some information regarding water quality standards. Apparently, the contact I gave you earlier for USEPA Regoin 9 is not the best person to answer your questions. They have recommended someone else from USEPA's Office of Water. The contact information is below:

Heidi Bethel
USEPA Office of Water
(202) 566-2054
bethel.heidi@epa.gov.

Best of luck in your research.

Jim

James D. Marshall, P.E.
Senior Water Resources Control Engineer
Central Valley Regional Water Quality Control Board
NPDES Permitting Section
11020 Sun Center Dr. Suite 200
Rancho Cordova, CA 95670
(916) 464-4772 voice
(916) 464-4782 fax
jdmarshall@waterboards.ca.gov

James D Marshall - Fw: Wastewater Treatment Science and Risk Management

From: <Bethel.Heidi@epamail.epa.gov>
To: <jdmarshall@waterboards.ca.gov>, <Sablad.Elizabeth@epamail.epa.gov>
Date: 3/21/2011 8:08 AM
Subject: Fw: Wastewater Treatment Science and Risk Management

Jim and Elizabeth,
I spoke with your concerned citizen in CA and am going to provide him with our methodology document for human health calculations and information I can find on the CTR. He also e-mailed me (below). Part of his question is regarding treatment costs and this is probably best addressed by the wastewater treatment plant or someone else in CA. I can't answer this question. Can either of you please help with this?
Thanks,
Heidi

Heidi Bethel, Ph.D.
Environmental Scientist
(202) 566-2054

Postal Mail Address:
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US EPA
Office of Water
Office of Science and Technology
Health and Ecological Criteria Division (4304T)
1200 Pennsylvania Avenue, NW
Washington, DC 20460
http://epa.gov/waterscience/

Graduate of EPA Internship Class of 2004
http://intranet.epa.gov/hrtraining/wds/intern2.htm
http://www.epa.gov/careers/gradopp.html

-----Forwarded by Heidi Bethel/DC/USEPA/US on 03/21/2011 11:04AM -----

To: Heidi Bethel/DC/USEPA/US@EPA
From: "Earl Heal" <healearlniki@att.net>
Date: 03/18/2011 02:21AM
Cc: "Mike Marsh" <memafret@yahoo.com>, "Don Fulton" <eafulton@juno.com>, "Ourania Riddle" <ouraniar@yahoo.com>
Subject: Wastewater Treatment Science and Risk Management

Ms. Heidi Bethel
USEPA Office of Water

Pursuant to our telephone conversation the following statement will explain the information we request.

Earl Heal
President,SCTA

ED_000733_DD_NSF_00046411-00003

The Solano County Taxpayers Association (SCTA) is aware of the Central Valley Regional Water Quality Board directives for treatment of wastewater for Vacaville and several other cities. Our charter directs the organization to monitor the efficiency of government so we request the science and risk management determinations used by the water quality boards as required by EPA policy, i. e., ". . conclusions drawn from the science are identified separately from policy judgments and risk management decisions, and that the use of default values or methods, as well as the use of assumptions in risk assessments, are clearly articulated." We presume and expect the science will identify the research test records and results relative to the issues and the risk management decisions will identify the considerations evaluated, e. g. the health issues relative to various pollutant levels and the treatment costs necessary to establish those levels.

Specifically, we are requesting at this time the science records that identify (a) trihalomethanes and nitrates as pollutants of concern, (b) the specific health risks at various levels of these pollutants, and (c) the feasibility and costs of attaining these levels, and (d) the records of risk management decisions that establish these directives. We also request the scientific basis for using treated drinking water Maximum Contaminant Levels for the basis of determining treated wastewater effluent limits.

If you recommend addition of other pollutants, we are interested, but have at this time only identified two so as to minimize the study effort until initial analyses can be completed.

Thank you for your support.

From: <Bethel.Heidi@epamail.epa.gov>
To: <Sablad.Elizabeth@epamail.epa.gov>
CC: <jdmarshall@waterboards.ca.gov>
Date: 3/23/2011 5:16 AM
Subject: Re: Fw: Wastewater Treatment Science and Risk Management

Elizabeth and Jim,
FYI- Earl Heal sent me another e-mail and would like any information we can get to him by March 24th. I've collected some of the documents he will need. I would like to write up a description of the information, but I may not be able to write up too much, given his time frame. I'll send him the background documents today at least and CC the two of you so you know what has been sent. Jim will have to respond to the treatment cost question. If he has any follow up questions after he looks through the information, I guess those can be addressed later.
Thanks,
Heidi

Ms. Heidi Bethel

Our next Taxpayer meeting is Thursday, 24 March. Will the information you offered be received in time for our discussion?

Earl Heal

From: Earl Heal
Sent: Thursday, March 17, 2011 11:21 PM
To: bethel.heidi@epa.gov
Cc: Mike Marsh ; Don Fulton ; Ourania Riddle
Subject: Wastewater Treatment Science and Risk Management

Ms. Heidi Bethel
USEPA Office of Water

Pursuant to our telephone conversation the following statement will explain the information we request.

Earl Heal
President,SCTA

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Thank you for your support.

Heidi Bethel, Ph.D.
Environmental Scientist
(202) 566-2054

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US EPA
Office of Water
Office of Science and Technology
Health and Ecological Criteria Division (4304T)
1200 Pennsylvania Avenue, NW
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http://epa.gov/waterscience/

Graduate of EPA Internship Class of 2004
http://intranet.epa.gov/hrtraining/wds/intern2.htm
http://www.epa.gov/careers/gradopp.html

From: Elizabeth Sablad/R9/USEPA/US
To: Heidi Bethel/DC/USEPA/US@EPA
Cc: jdmarshall@waterboards.ca.gov
Date: 03/22/2011 05:40 PM
Subject: Re: Fw: Wastewater Treatment Science and Risk Management

Thank you, Heidi, for your help.

Jim - this looks like it should be answered through your office. Let me know if you would like some support.

-Elizabeth

Elizabeth Sablad
US EPA, Region IX (WTR-5)
75 Hawthorne St
San Francisco, CA 94105
Office (415) 972-3044
sablad.elizabeth@epa.gov

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| From: |
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|Heidi Bethel/DC/USEPA/US |
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| To: |
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|jdmarshall@waterboards.ca.gov, Elizabeth Sablad/R9/USEPA/US@EPA |
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| Date: |
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|03/21/2011 08:07 AM |
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| Subject: |
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|Fw: Wastewater Treatment Science and Risk Management |
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Thanks,
Heidi

Heidi Bethel, Ph.D.
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-----Forwarded by Heidi Bethel/DC/USEPA/US on 03/21/2011 11:04AM -----
To: Heidi Bethel/DC/USEPA/US@EPA
From: "Earl Heal" <healearlniki@att.net>
Date: 03/18/2011 02:21AM
Cc: "Mike Marsh" <memafret@yahoo.com>, "Don Fulton" <eafulton@juno.com>, "Ourania Riddle" <ouraniar@yahoo.com>
Subject: Wastewater Treatment Science and Risk Management

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USEPA Office of Water

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Thank you for your support.

From: <Bethel.Heidi@epamail.epa.gov>
To: James D Marshall <jdmarshall@waterboards.ca.gov>
Date: 6/6/2011 8:38 AM
Subject: Fw: Wastewater Treatment Science and Risk Management

Hi Jim,
Just got your message. Below is my response to Mr. Heal on March 24th. He also had one follow up question prior to his unhappy letter on May 5th (May 22nd was the date I received it), which I referred to Matthew Mitchell in Region 9. I will forward Matt's response to you in a separate e-mail. I asked region 9 to coordinate additional responses to Mr. Heal after his May 5th letter. I will also send along the May 5th letter and additional information provided by Matthew Mitchell after the May 5th letter. I will give you a call today so we can be sure we are all on the same page.

I CCed your e-mail address on my original response, but perhaps you didn't receive it for some reason? My apologies.

Heidi

Heidi Bethel, Ph.D.
Environmental Scientist
(202) 566-2054

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http://intranet.epa.gov/hrtraining/wds/intern2.htm
http://www.epa.gov/careers/gradopp.html
—— Forwarded by Heidi Bethel/DC/USEPA/US on 06/06/2011 11:30 AM ——

From: Heidi Bethel/DC/USEPA/US
To: "Earl Heal" <healearlnikl@att.net>
Cc: "Don Fulton" <eafulton@juno.com>, "Mike Marsh" <memafret@yahoo.com>, "Ourania Riddle" <ouraniar@yahoo.com>, Diane Fleck/R9/USEPA/US@EPA, Holly Green/DC/USEPA/US@EPA, Elizabeth Sablad/R9/USEPA/US@EPA, James D Marshall" <jdmarshall@waterboards.ca.gov, ...
Date: 03/24/2011 08:55 AM
Subject: Re: Wastewater Treatment Science and Risk Management

Dear Mr. Heal,

Thank you for your inquiry from the Solano County Taxpayers Association regarding the criteria for the protection of human health in California for nitrates and trihalomethanes (4 pollutants to include - bromoform, chlorodibromomethane, chloroform, and dichlorobromomethane which are all by-products of the chlorine disinfection process). After searching through the records for California, described below is what I was able to determine.

The majority of the human health criteria for toxic pollutants for California waters were promulgated in May of 2000 by the U.S. EPA in the California Toxics Rule - CTR -(http://www.epa.gov/fedrgstr/EPA-WATER/2000/May/Day-18/w11106.pdf). There is a table of the California criteria found in the Federal Register Notice referenced. Nitrate criteria for the protection of human health were not addressed in CTR and specific questions regarding this

pollutant should be addressed by your regional water quality control board. Chloroform criteria were reserved in the CTR, meaning no criteria were promulgated for it. However, we noted in the preamble that California should rely on its existing State narrative criterion to establish effluent limitations as necessary for chloroform. Questions regarding how the State interprets its narrative criterion with respect to chloroform should be addressed by your regional water quality control board.

Although EPA promulgated toxic pollutant criteria for California, the State's permitting agency, your regional water quality control board, will translate the criteria into permit limits for your local wastewater treatment facility. Permit limits must be set so that treatment plant effluent discharging to the local water body will not affect the beneficial uses of the water body; in most cases, permit limits must be set at levels to ensure for the protection of human health and aquatic life in the receiving water body.

Treatment costs are affected by the way that the criteria are interpreted into permits limits and by your local wastewater treatment facility processes and operations. For answers to questions regarding nitrate criteria, the chloroform narrative criteria, and how criteria are translated into permit limits and associated treatment costs, please contact James Marshall at the Central Valley Regional Water Quality Control Board. Contact information is below. If you have additional questions regarding the information provided in this e-mail, please feel free to contact me.

James D. Marshall, P.E.
Senior Water Resources Control Engineer
Central Valley Regional Water Quality Control Board
NPDES Permitting Section
11020 Sun Center Dr. Suite 200
Rancho Cordova, CA 95670
(916) 464-4772 voice
(916) 464-4782 fax
jdmarshall@waterboards.ca.gov

In general, water quality criteria for the protection of human health are calculated using the Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000) (EPA-822-B-00-004, October 2000). Criteria values are designed to ensure that people can safely consume both water and organisms (usually fish) from the water body.

Specific procedures and parameters that are used in the calculations are described in the document and include: default values used for human body weight (70 kg), drinking water intake (2 liters per day) and fish intake (17.5 g/day). Values specific to the pollutants include: toxicity factors (either a reference dose - RfD for non-carcinogens or a cancer slope factor for carcinogens - calculated by EPA's Integrated Risk Information System program - www.epa.gov/iris); relative source contribution (RSC) to account for exposure from other sources besides water - used only with non-carcinogens; and a bioconcentration factor for fish to account for pollutant uptake by organisms eaten by people out of ambient waters (calculated in EPA's 1980 criteria documents). Criteria are calculated for both a combination of drinking water plus eating fish (water + organisms criteria) and eating fish alone (organism only criteria). More detail on the selection of the calculation parameters and risk management factors can be found in the methodology document (
http://water.epa.gov/scitech/swguidance/standards/upload/2005_05_06_criteria_humanhealth_method_complete.pdf
).

Nationally recommended criteria and those used in California for carcinogenic pollutants only use a cancer risk of 1 cancer per one million people over a lifetime of exposure to a pollutant. The trihalomethanes are carcinogens. States have the option to calculate their state criteria at a risk level of 1 cancer per one hundred thousand people as long as a state can provide information to establish

that sensitive sub-populations are protected at a level not to exceed one cancer per ten thousand people (see page 2-6 through 2-7 of the above referenced methodology document). Additional information regarding the development of the methodology document can be found in the Federal Register notice announcing its publication (http://www.epa.gov/fedrgstr/EPA-WATER/2000/November/Day-03/w27924.htm). The Federal Register document also addresses the use of MCLs in place of ambient water quality. This is not an allowable practice as the MCLs take into account pollutant levels attainable through drinking water treatment processes whereas the ambient criteria do not consider drinking water treatment processes. See the Federal Register notice announcing the methodology document for additional information.

Chloroform - The federal register notice (FRN) (http://www.epa.gov/fedrgstr/EPA-WATER/2000/May/Day-18/w11106.pdf) announcing the promulgation of California criteria states that the numeric criteria for chloroform were reserved due to ongoing discussions at the time regarding the toxicity factors developed by EPA for chloroform (see page 31705 of the FRN). The FRN states that "Permitting authorities in California should continue to rely on existing narrative criteria to establish effluent limitations as necessary for chloroform." Nationally recommended criteria for chloroform are available. Questions regarding development of chloroform criteria in California or use of the narrative should be directed to James Marshall.

Nitrate - Criteria for nitrate were not promulgated in the California Toxics Rule. Additional questions regarding the criteria for this pollutant should be directed to James Marshall. Nationally recommended criteria are available.

Bromoform - Parameters used in calculating California criteria include: body weight of 70 kg; drinking water intake of 2 liters/day; a fish intake of 6.5 g/day; a cancer slope factor of 0.0079 per (mg/kg/day) (http://www.epa.gov/iris/subst/0214.htm) ; a bioconcentration factor of 3.75 L/kg and a cancer risk of one in one million people. Criteria values for California are 4.3 ug/L for the water + organism criterion and 360 ug/L for the organism only criterion. Because the nationally recommended criteria have been updated since the publication of the CTR and incorporate a higher fish consumption rate of 17.5 g/day, they are more stringent than the California criteria. The nationally recommended criterion for bromoform for water + organism is 4.3 ug/L and for organism only the criterion is 140 ug/L. All other input parameters are identical between the national criteria and the California criteria.

Chlorodibromomethane - Parameters used in calculating California criteria include: body weight of 70 kg; drinking water intake of 2 liters/day; a fish intake of 6.5 g/day; a cancer slope factor of 0.084 per (mg/kg/day) (http://www.epa.gov/iris/subst/0222.htm); a bioconcentration factor of 3.75 L/kg and a cancer risk of one in one million people. Criteria values for California are 0.41 ug/L for the water + organism criterion and 34 ug/L for the organism only criterion. Because the nationally recommended criteria have been updated since the publication of the CTR and incorporate a higher fish consumption rate of 17.5 g/day, they are more stringent than the California criteria. The nationally recommended criterion for chlorodibromomethane for water + organism is 0.4 ug/L and for organism only the criterion is 13 ug/L. All other input parameters are identical between the national criteria and the California criteria.

Dichlorobromomethane - Parameters used in calculating California criteria include: body weight of 70 kg; drinking water intake of 2 liters/day; a fish intake of 6.5 g/day; a cancer slope factor of 0.062 per (mg/kg/day) ; a bioconcentration factor of 3.75 L/kg and a cancer risk of one in one million people. Criteria values for California are 0.56 ug/L for the water + organism criterion and 46 ug/L for the organism only criterion. Because the nationally recommended criteria have been updated since the publication of the CTR and incorporate a higher fish consumption rate of 17.5 g/day, they are more stringent than the California criteria. The nationally recommended criterion for dichlorobromomethane for water + organism is 0.55 ug/L and for organism

only the criterion is 17 ug/L. All other input parameters are identical between the national criteria and the California criteria.

I hope this information is helpful to you. Please feel free to contact me if you have additional questions.

Heidi

Heidi Bethel, Ph.D.
Environmental Scientist
(202) 566-2054

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Thank you for your support.

SOLANO COUNTY TAXPAYERS ASSOCIATION

Earl Heal, President
P.O Box 31
Dixon, CA 95620
<solanotaxpayers@sbcglobal.net>

11 MAY 10 AM 10:56
SACRAMENTO
CVRWQCB

5 May 2011

Heidi Bethel, Ph.D.
Environmental Scientist, Office of Water
Health and Ecological Criteria Division (4304T)
1200 Pennsylvania Avenue, NW

Dear Ms. Bethel:

Thank you for your response of 24 March to our request of 18 March. (That request attached for your reference.) Though considerable information was received, we are, unfortunately, no closer to answers needed to evaluate the Central Valley Regional Quality Board mandates than we were previously. It appears, based on the failure of environmental agents to provide specific answers and documents, that we are recipients of the proverbial bureaucratic run around.

Your referral for us to contact Mr. Marshall of that board keeps us in the same circles of darkness (regional, state, and federal) we have been transported into for the past 15 months—he directed us to you because he supposedly has no supporting information in his office. Now you are advising us that you also do not have the scientific data and that we are to return to Mr. Marshall. We must assume that between the two separate agencies there is scientific information, to remedy this situation.

As citizens, taxpayers, and ratepayers of this great country, it is our historic right, and echoed by the EPA Methodology policy, that we should be informed of the science and risk management justifying these demands. The admissions by water quality board members that they have no information source to explain their mandates were truly disheartening and an apparent abrogation of governmental responsibility. Sadly, our members have found in the past that the local board, through their agents, are not interested in science, have little training in that area, and are only concerned with forcing the cities to meet a standard they do not understand and may or may not be valid.

To demand that a city spend millions of dollars to upgrade wastewater treatment and justify it because the resulting bond issue will not exceed the typical monthly cost paid by residents for cable television, as the executive director of the Sacramento board has publicly stated, is not justification by science or risk management, it is bureaucratic arrogance. We have no problem with cleaning our effluent to reasonable levels substantiated by repeatable, conclusive scientific studies. We have members that have been trained in "the scientific method" of research and we stand ready to review the documentation to determine its validity. We will not sign off on research which has only been done to justify political demands. Research conclusions based on conjecture and extrapolation rather than solid facts must also be questioned.

The specific science and risk management is surely available somewhere and citizens should not have to ask twice to see it. We do not want to believe that people are establishing standards without justification supported by laboratory testing or measured sampling identified and

dated in specific scientific reports that quantify the effects of various levels of contaminants. We do not want to believe that people will establish risk management decisions without consideration of alternative investments.

Life is precious, but a standard that "might" save one life in a million after 70 years of ingesting two liters of water per day raises serious questions of risk management decisions in addition to questionable science. We would expect that the scientific evidence and research would show quantitative illness or loss of life at various contaminant levels will occur. To date we have seen nothing in this vein.

The extreme monetary cost of removal of dubious constituents could instead be used to enhance life for thousands of citizens if not foolishly wasted on a vague possibility. We are not assuming mistakes are happening, but it is the right of "we the people" to make these decisions, not someone operating in secrecy or behind the curtain of pseudo-science.

No official has, in these past 15 months, treated us openly as the adversary, but we certainly now understand the life of a toad stool. That lack of cooperation could be construed as "passive/aggressive" behavior. We continue to hope that is not the case and that this is simply a matter of esoteric science having been filed away in places unbeknownst to all employees. Please assist us toward attaining our objective which may also serve to educate those within the bureaucracy for the time when others ask similar questions.

Sincerely,

Earl Heal
President, SCTA

Enclosure: E-mail—Heal to Bethel, 18 March 2011

cc: Charles Hoppin, Chair
Ca. Water Resources Control Board
P. O. Box 100, Sacramento, CA 95812-0100

Katherine Hart, Chair
Central Valley Regional Water Quality Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

dated in specific scientific reports that quantify the effects of various levels of contaminants. We do not want to believe that people will establish risk management decisions without consideration of alternative investments.

Life is precious, but a standard that "might" save one life in a million after 70 years of ingesting two liters of water per day raises serious questions of risk management decisions in addition to questionable science. We would expect that the scientific evidence and research would show quantitative illness or loss of life at various contaminant levels will occur. To date we have seen nothing in this vein.

The extreme monetary cost of removal of dubious constituents could instead be used to enhance life for thousands of citizens if not foolishly wasted on a vague possibility. We are not assuming mistakes are happening, but it is the right of "we the people" to make these decisions, not someone operating in secrecy or behind the curtain of pseudo-science.

No official has, in these past 15 months, treated us openly as the adversary, but we certainly now understand the life of a toad stool. That lack of cooperation could be construed as "passive/aggressive" behavior. We continue to hope that is not the case and that this is simply a matter of esoteric science having been filed away in places unbeknownst to all employees. Please assist us toward attaining our objective which may also serve to educate those within the bureaucracy for the time when others ask similar questions.

Sincerely,

Earl Heal
President, SCTA

Enclosure: E-mail—Heal to Bethel, 18 March 2011

cc: Charles Hoppin, Chair
Ca. Water Resources Control Board
P. O. Box 100, Sacramento, CA 95812-0100

Katherine Hart, Chair
Central Valley Regional Water Quality Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

18 March 2011

Ms. Heidi Bethel
USEPA Office of Water

Pursuant to our telephone conversation the following statement will explain the information we request.

Earl Heal
President,SCTA

The Solano County Taxpayers Association (SCTA) is aware of the Central Valley Regional Water Quality Board directives for treatment of wastewater for Vacaville and several other cities. Our charter directs the organization to monitor the efficiency of government so we request the science and risk management determinations used by the water quality boards as required by EPA policy, i. e., ". . conclusions drawn from the science are identified separately from policy judgments and risk management decisions, and that the use of default values or methods, as well as the use of assumptions in risk assessments, are clearly articulated." We presume and expect the science will identify the research test records and results relative to the issues and the risk management decisions will identify the considerations evaluated, e. g. the health issues relative to various pollutant levels and the treatment costs necessary to establish those levels.

Specifically, we are requesting at this time the science records that identify (a) trihalomethanes and nitrates as pollutants of concern, (b) the specific health risks at various levels of these pollutants, and (c) the feasibility and costs of attaining these levels, and (d) the records of risk management decisions that establish these directives. We also request the scientific basis for using treated drinking water Maximum Contaminant Levels for the basis of determining treated wastewater effluent limits.

If you recommend addition of other pollutants, we are interested, but have at this time only identified two so as to minimize the study effort until initial analyses can be completed.

Attachment 1

From: <Mitchell.Matthew@epamail.epa.gov>
To: <healearlniki@att.net>
CC: <Bethel.Heidi@epamail.epa.gov>, <Green.Holly@epamail.epa.gov>, <Fleck.Di...
Date: 5/11/2011 9:43 AM
Subject: Re: Wastewater Treatment Science and Risk Management

Dear Mr. Heal,

Heidi Bethel from EPA's Office of Water asked me to answer your question (see below) regarding your city's expenditures on wastewater facility upgrades. Since some of the pollutants you previously inquired about were promulgated as water quality criteria for California through the California Toxics Rule (CTR), I am answering your question with respect to how EPA interpreted the Unfunded Mandates Reform Act (UMRA), which you have referenced below, during promulgation of that rule.

When EPA promulgated the final CTR, the agency made a determination that the rule was not subject to the requirements of UMRA. Therefore, EPA determined that it was not required to perform the procedures set out in UMRA. EPA did not anticipate that the CTR was likely to result in the expenditure by State, local, and tribal govenments, in the aggregate, or by the private sector, of $100,000,000 or more in any one year.

Please note that the determination of whether the UMRA requirements apply are based on EPA's estimate of the impacts of the rule at the time of promulgation in the Federal Register rather than reports of costs after the promulgation of the rule.

If you have any other questions about this issue, feel free to contact me.

Matt Mitchell

Matthew Mitchell
Standards and TMDL Office (WTR-2)
USEPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

(415) 972-3508 (voice)
(415) 947-3545 (fax)

Reference your response of 24 March, I extract a portion of interest.
Namely,
USC 1532. SEC. 202. STATEMENTS TO ACCOMPANY SIGNIFICANT REGULATORY ACTIONS.
(a) IN GENERAL.?Unless otherwise prohibited by law, before promulgating any
general notice of proposed rulemaking that is likely to result in
promulgation of any rule that includes any Federal mandate that may result

in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more (adjusted annually for inflation) in any 1 year, and before promulgating any final rule for which a general notice of proposed rulemaking was published, the agency shall prepare a written statement containing

Question–Does the $100 million cap mean accrued annual expense or contract
expense. Example, our city is mandated and contracts for $150 million of wastewater facility upgrades in one year. The cost will be paid through bonds over twenty years at an annual expense in ratepayer fees of $15 million. Will the 150 million contract or the 15 million of fees determine
need for compliance requirement?

Thank you.

Earl Heal

From: "Earl Heal" <healearlniki@att.net>
To: Heidi Bethel/DC/USEPA/US@EPA
Cc: "Solano County Taxpayers" <solanotaxpayers@sbcglobal.net>
Date: 05/22/2011 01:15 AM
Subject: Wastewater Treatment Science and Risk Management

Ms. Bethel:

Pasted below is a letter, with attachment, that I mailed to you on May 5. Unfortunately, I failed to include the last line of your mail address and it was returned to me today, 15 days after it was postmarked in Sacramento. This information is critical to our investigation and our members were expecting some of the requested information at our meeting on May 25. Obviously you can not satisfy all requested information, but I will telephone you on May 25 for any comments you can provide, or you may choose to transmit vie an e-mail to my personal email address indicated above. I will remail the original letter Monday for your record, but this e-mail is being sent for any assistance you can provide on short notice. Thank you.

Earl Heal

SOLANO COUNTY TAXPAYERS ASSOCIATION
P. O. BOX 31
DIXON, CA 95620
solanotaxpayers@sbcglobal.net
5 May 2011

Heidi Bethel, Ph.D.
Water Health and Ecological Criteria Division (4304T)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Ms. Bethel:

Thank you for your response of 24 March to our request of 18 March. (That request attached for your reference.) Though considerable information was received, we are, unfortunately, no closer to answers needed to evaluate the Central Valley Regional Quality Board mandates than we were previously. It appears, based on the failure of environmental agents to provide specific answers and documents, that we are recipients of the proverbial bureaucratic run around.

Your referral for us to contact Mr. Marshall of that board keeps us in the same circles of darkness (regional, state, and federal) we have been transported into for the past 15 months—he directed us to you because he supposedly has no supporting information in his office. Now you are advising us that you also do not have the scientific data and that we are to return to Mr. Marshall. We must assume that between the two

separate agencies there is scientific information, to remedy this situation.

As citizens, taxpayers, and ratepayers of this great country, it is our historic right, and echoed by the EPA Methodology policy, that we should be informed of the science and risk management justifying these demands. The admissions by water quality board members that they have no information source to explain their mandates were truly disheartening and an apparent abrogation of governmental responsibility. Sadly, our members have found in the past that the local board, through their agents, are not interested in science, have little training in that area, and are only concerned with forcing the cities to meet a standard they do not understand and that may or may not be valid.

To demand that a city spend millions of dollars to upgrade wastewater treatment and justify it because the resulting bond issue will not exceed the typical monthly cost paid by residents for cable television, as the executive director of the Sacramento board has publicly stated, is not justification by science or risk management, it is bureaucratic arrogance. We have no problem with cleaning our effluent to reasonable levels substantiated by repeatable, conclusive scientific studies. We have members that have been trained in "the scientific method" of research and we stand ready to review the documentation to determine its validity. We will not sign off on research which has only been done to justify political demands. Research conclusions based on conjecture and extrapolation rather than solid facts must also be questioned.

The specific science and risk management is surely available somewhere and citizens should not have to ask twice to see it. We do not want to believe that people are establishing standards without justification supported by laboratory testing or measured sampling identified and dated in specific scientific reports that quantify the effects of various levels of contaminants. We do not want to believe that people will establish risk management decisions without consideration of alternative investments.

Life is precious, but a standard that "might" save one life in a million after 70 years of ingesting two liters of water per day raises serious questions of risk management decisions in addition to questionable science. We would expect that the scientific evidence and research would show quantitative illness or loss of life at various contaminant levels will occur. To date we have seen nothing in this vein.

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pseudo-science.

No official has, in these past 15 months, treated us openly as the adversary, but we certainly now understand the life of a toad stool. That lack of cooperation could be construed as "passive/aggressive" behavior. We continue to hope that is not the case and that this is simply a matter of esoteric science having been filed away in places unbeknownst to all employees. Please assist us toward attaining our objective which may also serve to educate those within the bureaucracy for the time when others ask similar questions.

Sincerely,

Earl Heal
President, SCTA

Enclosure: E-mail—Heal to Bethel, 18 March 2011
cc: Charles Hoppin, Chair
Katherine Hart, Chair
Ca. Water Resources Control Board Central Valley Regional Water Quality Board
P. O. Box 100, Sacramento, CA 95812-0100 11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

8 March 2011

Ms. Heidi Bethel
USEPA Office of Water

Pursuant to our telephone conversation the following statement will explain the information we request.

Earl Heal
President,SCTA

The Solano County Taxpayers Association (SCTA) is aware of the Central Valley Regional Water Quality Board directives for treatment of wastewater for Vacaville and several other cities. Our charter directs the organization to monitor the efficiency of government so we request the science and risk management determinations used by the water quality boards as required by EPA policy, i. e., ". . conclusions drawn from the science are identified separately from policy judgments and risk management decisions, and that the use of default values or methods, as well as the use of assumptions in risk assessments, are clearly articulated." We presume and expect the science will identify the research test records and results relative to the issues and the risk management decisions will identify the considerations evaluated, e. g.

the health issues relative to various pollutant levels and the treatment costs necessary to establish those levels.

Specifically, we are requesting at this time the science records that identify (a) trihalomethanes and nitrates as pollutants of concern, (b) the specific health risks at various levels of these pollutants, and (c) the feasibility and costs of attaining these levels, and (d) the records of risk management decisions that establish these directives. We also request the scientific basis for using treated drinking water Maximum Contaminant Levels for the basis of determining treated wastewater effluent limits.

If you recommend addition of other pollutants, we are interested, but have at this time only identified two so as to minimize the study effort until initial analyses can be completed.

From: <Bethel.Heidi@epamail.epa.gov>
To: James D Marshall <jdmarshall@waterboards.ca.gov>
Date: 6/6/2011 8:41 AM
Subject: additional info provided to Mr. Heal by Matt Mitchell on 5/24 - Fw: Proposed New Alamo Creek Site-Specific Objectives

last e-mail correspondence...

Heidi Bethel, Ph.D.
Environmental Scientist
(202) 566-2054

Postal Mail Address:
Do not use for FedEX or Courier
US EPA
Office of Water
Office of Science and Technology
Health and Ecological Criteria Division (4304T)
1200 Pennsylvania Avenue, NW
Washington, DC 20460
http://epa.gov/watersclence/

Graduate of EPA Internship Class of 2004
http://intranet.epa.gov/hrtraining/wds/intern2.htm
http://www.epa.gov/careers/gradopp.html
---- Forwarded by Heidi Bethel/DC/USEPA/US on 06/06/2011 11:39 AM ----

From: Matthew Mitchell/R9/USEPA/US
To: Janet Hashimoto/R9/USEPA/US@EPA, Heidi Bethel/DC/USEPA/US@EPA, Diane Fleck/R9/USEPA/US@EPA, Elizabeth Sablad/R9/USEPA/US@EPA
Date: 05/24/2011 07:44 PM
Subject: Fw: Proposed New Alamo Creek Site-Specific Objectives

I spoke with Mr. Heal this afternoon and provided him with the information below. I'm hoping that the State's site specific criteria for trihalomethanes near the City of Vacaville will address his concerns about the cost of treatment.

I've also included more background on the decision to establish a 10-6 risk level for carcinogens in the California Toxics rule. I'm also hoping this addresses his concern about the transparency of agency risk management decisions.

On the call, I directed him back to the Regional Board for any further information regarding nitrates.

Matt

Matthew Mitchell
Standards and TMDL Office (WTR-2)
USEPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

(415) 972-3508 (voice)
(415) 947-3545 (fax)

---- Forwarded by Matthew Mitchell/R9/USEPA/US on 05/24/2011 04:33 PM

|---------->
| From: |
|---------->
>----------|
|Matthew Mitchell/R9/USEPA/US |
>----------|

|---------->
| To: |
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>----------|
|healearlniki@att.net |
>----------|
|---------->
| Date: |
|---------->
>----------|
|05/24/2011 04:35 PM |
>----------|
|---------->
| Subject: |
|---------->
>----------|
|Proposed New Alamo Creek Site-Specific Objectives |
>----------|

Dear Mr. Heal,

As we discussed on our phone call today, I am attaching below the Central Valley Regional Water Quality Control Board's Staff Report for Site-Specific Water Quality Objectives for New Alamo and Ulatis Creek. It appears that the proposed site-specific objective, if approved by the State Water Resources Control Board and US EPA, may resolve the regulatory compliance issue for trihalomethanes faced by the City of Vacaville in operating the Easterly Wastewater Treatment Plant.

http://www.swrcb.ca.gov/rwqcb5/water_issues/basin_plans/r5-2010-0047_staffrpt.pdf

Other information and documents concerning the SSO is included here:

http://www.swrcb.ca.gov/rwqcb5/water_issues/basin_plans/alamocreek.shtml

Also see p. 31699 (page 19 of the PDF) of the California Toxics Rule below regarding EPA's decision and rationale to adopt a statewide risk level of 10-6 for carcinogens.

http://www.epa.gov/fedrgstr/EPA-WATER/2000/May/Day-18/w11106.pdf

Regards,

Matt Mitchell

Matthew Mitchell
Standards and TMDL Office (WTR-2)
USEPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

(415) 972-3508 (voice)
(415) 947-3545 (fax)

From: <Mitchell.Matthew@epamail.epa.gov>
To: <jdmarshall@waterboards.ca.gov>
Date: 6/8/2011 9:50 AM
Subject: Fw: EPA Policy

Another response to Mr. Heal regarding EPA's Methodology for Deriving Human Health Criteria.

Matthew Mitchell
Standards and TMDL Office (WTR-2)
USEPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

(415) 972-3508 (voice)
(415) 947-3545 (fax)

From:
Matthew Mitchell/R9/USEPA/US
To:
"Earl Heal" <healearlniki@att.net>
Date:
05/25/2011 11:58 AM
Subject:
Re: EPA Policy

Mr. Heal:

Thanks for sending this along. I have taken a quick look at the document. Please take a look at Section 2.4, Cancer Risk Range, which explains EPA's position of using a 10-6 as a default cancer risk level for deriving 304(a) criteria (EPA recommended criteria for the States and Tribes to adopt) or promulgating water quality criteria for States and Tribes under Section 303(c) (when EPA promulgates criteria on behalf of the State or Tribe like EPA did for California via the California Toxics Rule). I think that this section clearly explains EPA's rationale regarding this risk management decision. The State or Tribe may select a lower risk level as long as highly exposed subpopulations do not exceed a 10-4 risk level.

If you would like to discuss this risk level issue further, please let me know.

Matt Mitchell

Matthew Mitchell
Standards and TMDL Office (WTR-2)
USEPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

(415) 972-3508 (voice)
(415) 947-3545 (fax)

From:
"Earl Heal" <healearlniki@att.net>
To:
Matthew Mitchell/R9/USEPA/US@EPA
Date:
05/25/2011 09:44 AM
Subject:
EPA Policy

Mr. Mitchell:

Per our telecon the following extracts are forwarded from CPA Methodology.

Earl Heal

2.2 SCIENCE, SCIENCE POLICY, AND RISK MANAGEMENT
An important part of risk characterization, as described later in Section 2.7, is to make
risk assessments transparent. This means that conclusions drawn from the science are identified
separately from policy judgments and risk management decisions, and that the use of default
values or methods, as well as the use of assumptions in risk assessments, are clearly articulated.
In this Methodology, EPA has attempted to separate scientific analysis from science policy and
risk management decisions for clarity. This should allow States and Tribes (who are also
prospective users of this Methodology) to understand the elements of the Methodology
accurately and clearly, and to easily separate out the scientific decisions from the science policy
and risk management decisions. This is important so that when questions are asked regarding
the scientific merit, validity, or apparent stringency or leniency of AWQC, the implementer of
the criteria can clearly explain what judgments were made to develop the criterion in question
and to what degree these judgments were based on science, science policy, or risk management

page 37
Risk management is the process of selecting the most appropriate guidance or regulatory
actions by integrating the results of risk assessment with engineering data and with social,
economic, and political concerns to reach a decision. In this Methodology, the choice of a
default fish consumption rate which is protective of 90 percent of the general population is a risk
management decision. The choice of an acceptable cancer risk by a State or Tribe is a risk
management decision.

From: <Mitchell.Matthew@epamail.epa.gov>
To: <jdmarshall@waterboards.ca.gov>
Date: 6/8/2011 9:45 AM
Subject: Fw: Proposed New Alamo Creek Site-Specific Objectives

Hi Jim,

I apologize for not getting back to you sooner. Iwas out of the office the past week. Here is my latest exchange with Mr. Heal on the trihalomethanes. He is still not satisfied with my response and wants to meet with EPA in a few weeks. He seems to believe that EPA based on one of our Risk Assessment Guidance documents should be adjusting 304(a) water quality criteria based on some sort of cost-benefit exercise.

Matt

Matthew Mitchell
Standards and TMDL Office (WTR-2)
USEPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

(415) 972-3508 (voice)
(415) 947-3545 (fax)

From:
"Earl Heal" <healearlniki@att.net>
To:
Matthew Mitchell/R9/USEPA/US@EPA
Cc:
"Solano County Taxpayers" <solanotaxpayers@sbcglobal.net>
Date:
06/02/2011 05:25 PM
Subject:
Re: Proposed New Alamo Creek Site-Specific Objectives

Dear Mr. Mitchell:

Thank you for your response. Unfortunately, I find no answer to the basic question of what are the science facts and the risk management decisions. The science answer we are looking for is that Somebody Laboratory in 1997 experimented with 1000 rats and noted that a level of 25 ppb of ?A? chemical increased the natural cancer level from 1/100 rats to 2/100 and that a level of 50 ppb increased the cancer level to 6/100. In managing the risk the determination was made by an analysis of identified wastewater facilities that the cost of limiting wastewater to 50 ppb was X and the cost of further limiting to 25 ppb was 4X. Therefore, the decision was made to limit the level to ??.

That information has to be available somewhere and people making decisions to spend public monies should know that they are making a reasonable investment. Being told that ?individuals consuming 100 times the general population rate would be protected at a 10-4 risk level? as compared to the general population being protected at 10-6 is a fair explanation of math for a person who never studied Algebra I, but is neither science nor risk management. Actually that is not proven because it apparently assumes a linear relationship between contaminant level and cancer rate, a doubtful assumption without science to support it.

I think it will be worth our time if a couple of us from our organization visited you in your office and can hopefully get answers. Please provide approximately dates a couple weeks in advance and we will make that happen. Thank you.

Earl Heal

From: Mitchell.Matthew@epamail.epa.gov
Sent: Tuesday, May 24, 2011 4:35 PM
To: healearlniki@att.net
Subject: Proposed New Alamo Creek Site-Specific Objectives

Dear Mr. Heal,

As we discussed on our phone call today, I am attaching below the Central Valley Regional Water Quality Control Board's Staff Report for Site-Specific Water Quality Objectives for New Alamo and Ulatis Creek. It appears that the proposed site-specific objective, if approved by the State Water Resources Control Board and US EPA, may resolve the regulatory compliance issue for trihalomethanes faced by the City of Vacaville in operating the Easterly Wastewater Treatment Plant.

http://www.swrcb.ca.gov/rwqcb5/water_issues/basin_plans/r5-2010-0047_staffrpt.pdf

Other information and documents concerning the SSO is included here:

http://www.swrcb.ca.gov/rwqcb5/water_issues/basin_plans/alamocreek.shtml

Also see p. 31699 (page 19 of the PDF) of the California Toxics Rule below regarding EPA's decision and rationale to adopt a statewide risk level of 10-6 for carcinogens.

http://www.epa.gov/fedrgstr/EPA-WATER/2000/May/Day-18/w11106.pdf

Regards,

Matt Mitchell

Matthew Mitchell
Standards and TMDL Office (WTR-2)
USEPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

(415) 972-3508 (voice)
(415) 947-3545 (fax)

From: Matthew Mitchell <Mitchell.Matthew@epamail.epa.gov>
To: <jdmarshall@waterboards.ca.gov>
Date: 7/19/2011 1:13 PM
Subject: Fw: Economic Considerations to Mandates

FYI, below is the latest response to the latest follow up inquiry by Mr. Heal.

Here is Mr. Heal's e-mail:

Mr. Mitchell:

The Wall Street Journal, July 11, p. A 14, identifies an example where the EPA has no regard for economic considerations. EPA is proposing a requirement that New York City spend $1.6 billion to build a cover over a city reservoir to protect people from a pathogen that causes diarrhea. Perhaps EPA is reflecting knowledge of economic considerations in that they state this will prevent 112,000 to 365,000 cases annually, but the City reports that years of testing have never found the pathogen in the reservoir and that only 100 cases annually of diarrhea from the pathogen occur from all other sources. Quite a distortion to show concern for the cost.

We, Solano County Taxpayers Association, would appreciate a source of documentation promptly, as previously discussed, to support or deny requirements for using economic considerations in risk management decisions. Are cities being mandated to spend taxpayer monies, by the billions, because controlling policies are ignored or because controlling policies do not exist?.

Earl Heal

Matthew Mitchell
Standards and TMDL Office (WTR-2)
USEPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

(415) 972-3508 (voice)
(415) 947-3545 (fax)

From:
Matthew Mitchell/R9/USEPA/US
To:
healearlnlkl@att.net
Date:
07/19/2011 12:39 PM
Subject:
Re: Fw: Economic Considerations to Mandates

Mr. Heal,

In response to your question regarding economic considerations in derivation of EPA 304(a) criteria, EPA's "Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000)," clearly reflects EPA's longstanding policy that 304(a) ambient water quality criteria are developed to ensure water quality protection and that EPA does not consider economic impacts in deriving the criteria. This is explained right up front in the introduction section of the document on p.1-1:

Historically, the ambient water quality criteria (AWQC or 304(a) criteria) provided two
essential types of information: (1) discussions of available scientific data on the effects of the

pollutants on public health and welfare, aquatic life, and recreation; and (2) quantitative
concentrations or qualitative assessments of the levels of pollutants in water which, if not
exceeded, will generally ensure adequate water quality for a specified water use. Water quality
criteria developed under Section 304(a) are based solely on data and scientific judgments on the
relationship between pollutant concentrations and environmental and human health effects. The
304(a) criteria do not reflect consideration of economic impacts or the technological feasibility
of meeting the criteria in ambient water. These 304(a) criteria may be used as guidance by
States and authorized Tribes to establish water quality standards, which ultimately provide a
basis for controlling discharges or releases of pollutants into ambient waters." (emphasis added)
The language that you cited on p. 2-2, "Risk management is the process of selecting the most appropriate guidance or regulatory actions by integrating the results of risk assessment with engineering data and with social, economic, and political concerns to reach a decision," was intended to be a generic definition of risk management to distinguish it from risk assessment decisions. That paragraph goes on to state that EPA's choice of a default fish consumption rate and the choice of an acceptable cancer risk are risk management decisions specific to this guidance. The subsequent discussions of how EPA set the acceptable cancer risk (section 2.4) and default fish consumption rate (section 4.3.3) show that these choices were based on both scientific and policy considerations that are indicative of risk management decisions, but in both cases it is clear that economic impact was not a factor that was considered in making these risk management decisions.

We would like to make it clear that states and (tribes) do have some flexibility when adopting their own water quality standards. States (and tribes) may develop statewide or site-specific criteria to take into account unique conditions of their waters or different species of aquatic life in their waters, using scientifically defensible methods. States (and tribes) may also make alternative risk management decisions in developing human health water quality criteria including alternative cancer risk levels or different fish consumption values. The Human Health Methodology discusses this flexibility on p.1-2:

This Methodology does not substitute for the CWA or EPA?s regulations; nor is it a
regulation itself. Thus, the 2000 Human Health Methodology cannot impose legally-binding
requirements on EPA, States, Tribes or the regulated community, and may not apply to a
particular situation based upon the circumstances. EPA and State/Tribal decision-makers retain
the discretion to use different, scientifically defensible, methodologies to develop human health
criteria on a case-by-case basis that differ from this Methodology where appropriate.

In fact, it appears that the Central Valley Regional Water Quality Control Board is taking advantage of this type of flexibility in attempting to adopt site-specific criteria that would relax water quality criteria for a group of trihalomethane pollutants in the New Alamo and Ulatis Creeks.

I have included the link to the Human Health Methodology (2000) here:

http://water.epa.gov/scitech/swguidance/standards/upload/2005_05_06_criteria_humanhealth_method_complete.pdf

With regard to economic considerations, EPA regulations do specifically address those considerations for variances and designated use changes. States and tribes are permitted to grant variances (with an authorizing provision) or remove designated uses when water quality standards cannot be met due to economic hardship.

- Variances are time-limited designated uses and criteria intended to facilitate feasible progress towards meeting WQS. Where compliance would result in widespread and substantial social and economic impact, variances are a tool a discharger could use to comply with criteria. By maintaining the underlying standard rather than removing the use and criteria, a facility may achieve its permit limit while further progress is made in improving water quality.

- Use Changes are permanent changes to the use and criteria of a water body. Changing a designated use requires a use attainability analysis, an evaluation of the physical, chemical, biological, and economic factors affecting attainment of the use, and justification of one of the six factors listed at 40 CFR 131.10(g). 40 CFR 131.10(g)(6) allows for consideration of widespread and substantial social and economic impact in whether a use may be removed. A use change is the most permanent of the three WQS tools and is not intended for individual POTWs.

Therefore, economic hardship can be a factor in determining the appropriate temporary or permanent designated use for a water body, but once the appropriate designated use is selected, the water quality criteria must be derived in a way that is fully protective of that use.

Matt Mitchell

Matthew Mitchell
Standards and TMDL Office (WTR-2)
USEPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

(415) 972-3508 (voice)
(415) 947-3545 (fax)