

Printed: 09-15-97
By: Sarah Holmgren
Priority: Normal
Topic: FWD>CALFED WQTG meeting
Sent: 09-15-97
From: Carol Howe; rwoodard@goldeneye.water.ca.go; +
To: Sarah Holmgren; Carol Howe

Handwritten: Look at summary

Mail*Link»

FWD>CALFED WQTG meeting

>Date: Sun, 3 Aug 1997 21:16:03 -0700
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>Subject: CALFED WQTG meeting
>X-MIME-Autoconverted: from quoted-printable to 8bit by
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>> Via e-mail

>> August 2, 1997

>> Richard Woodard
>> CALFED Bay-Delta Program
>> Water Quality Technical Group
>> 1416 Ninth Street; Suite 1155
>> Sacramento, CA 95814

>> Dear Rick:

>> Please find presented below some comments on the July 15, 1997 memo you sent regarding the August 6, 1997 Water Quality Technical Group meeting. Upon receipt of this memo, I faxed the request for the Water Quality Component Report that you indicated should be available on about July 23rd. As of

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~~Summary of Comments needed~~

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>>today, I have not yet received this report and, therefore, cannot respond to
>>your request for comments on the "Component Report."
>>
>>I have submitted three proposals to CALFED to work with CALFED and others
in
>>helping to develop a technically valid, cost effective approach for
managing
>>excessive mercury bioaccumulation in Delta and North Bay fish, managing
the
>>pollution-actual use impairment of receiving waters caused by urban area
and
>>industrial stormwater runoff associated constituents, and in formulating
an
>>approach for developing a program that would allow the use of some
>>contaminated dredged sediments for beneficial uses in the Delta for levee
>>enhancement and shallow water habitat development. Basically, I am
proposing
>>to expand my occasional volunteer commenting on documents and issues to
one
>>of becoming an active participant and facilitator in helping to develop
and
>>implement programs that CALFED will ultimately need to develop if it is
going
>>to address all of the major water quality problems of concern to the Delta
in
>>a technically valid, cost effective manner.
>>
>>I would assume that the mercury and stormwater runoff water quality
programs
>>would be part of the Water Quality Technical Group activities. It is
unclear
>>to me where the contaminated dredged sediment activity fits in the CALFED
>>program. It is a water quality issue, although it interfaces with both
levee
>>stability enhancement and shallow water habitat development.
>>
>>If you review these proposals and have questions or comments on them,
please
>>contact me.
>>
>>Comments on the Draft Framework for the
>>CALFED Bay-Delta Program
>>Comprehensive Monitoring, Assessment, and Research Plan
>>
>>>From an overall point of view, I am happy to see that CALFED is beginning
to
>>address the issue of properly evaluating the impact of implementing
various
>>CALFED programs on Delta water quality and aquatic resources. Far too
many
>>times in my over 37 year professional career, I have seen large amounts of
>>funds spent conducting studies and developing programs to manage water
>>quality problems without any follow-up to determine whether the approaches
>>implemented were effective. Often the agencies responsible for
>>implementation of the programs lose interest once implementation has been

>>initiated and either do not have or do not make available the funds needed to
>>determine whether the approach adopted was effective.
>>
>>As I have discussed in previous correspondence, it is extremely important
>>that the CALFED WQTG focus on assessing impacts of actions on water
quality
>>characteristics of concern to people. Far too often those conducting such
>>programs focus on changes in the concentrations in a chemical, such as a
>>heavy metal, as a result of some type of control activity but fail to
>>understand that, with few exceptions, there is a poor coupling between the
>>concentration of the chemical in a water and its impact on the issues of
>>concern to people. For aquatic life related issues, the numbers, types
and
>>characteristics of desirable forms of aquatic life must be the focus of
the
>>evaluation program. The CALFED CMARP must, if it is to be a reliable
>>program, focus on aquatic organism issues and not chemicals unless it is
well
>>established that measuring a chemical concentration is directly
translatable
>>to an organism population impact.
>>
>>On page 1 of the Draft Framework, the first bulleted item mentions Phase
I.
>> Phase I is not defined. It should be.
>>
>>On page 1, first bulleted item under "Principles" states that the CMARP
will
>>be implemented through the efforts of others, presumably those responsible
>>for developing and implementing a particular action. This can lead to
>>unreliable assessments since those who develop control programs will have
a
>>vested interest in "proving" that their program is effective. CALFED WQTG
>>will need to establish a rigorous quality control of program effectiveness
>>through independent assessment of programs. If there is interest and
>>support, I would be willing to serve as a member of a panel who would help
>>CALFED develop the independent quality control for its WQTG projects
outside
>>of the areas I have already proposed to address in my three proposals.
>>
>>The second bulleted item under "Principles" states that CMARP is to be
>>devoted to "data evaluation and use." It is my experience that there are
few
>>individuals who work in some aspect of the water quality field who have
the
>>necessary expertise and experience to properly evaluate and use water
quality
>>data. CALFED WQTG cannot rely on the various investigators/implementors
of
>>proposed actions to properly evaluate and use the water quality data that
>>will be generated from a CMARP activity. Again, there will be need for
>>independent, high quality peer review of CMARP proposed programs and the
>>results of the control activities as they become available. CALFED WQTG
>>cannot rely on a technical review of the reports developed after the work
s

>>done but, instead, must be involved from day one through independent peer
>>review of all components of the work/project.

>>
>>On the second page of the Draft Framework, the first bulleted item
mentions

>>"zero base framework." This should have been defined.

>>
>>The third bulleted item on the second page mentions a "standardization" of
>>methods, equipment, etc. It is important for CALFED not to fall into the
>>trap of assuming that standardization of equipment, methods, etc. leads to
>>comparable results over time or between locations at the same time. I
have a
>>strong analytical chemistry background and for 30 years taught graduate
level
>>environmental engineering and environmental sciences water and wastewater
>>analyses courses. I also taught courses on the use of water quality data
in
>>the development of water quality management programs. I have also served
on
>>various "standard methods" committees for over 35 years. As I published
in
>>the late 1960's, there is a "standard methods" syndrome that exists among
>>those who are not familiar with analytical methods and the impact of
>>interferences in these methods that leads to the incorrect conclusion that
>>standardization yields comparable results. This is only true if the
amount
>>of interference in the method is exactly the same in all cases. That
>>situation never occurs.

>>
>>It is my experience that "standard methods" tends to cause investigators
to
>>fail to properly evaluate the reliability of the analytical methods being
>>used for the waters being examined. This type of situation is one of the
>>primary reasons why much of the analytical data generated in water quality
>>management programs is of limited reliability. Several years ago, Dr.
>>Jones-Lee and I developed guidance on conducting water quality studies,
>>"Guidance for Conducting Water Quality Studies for Developing Control
>>Programs for Toxic Contaminants in Wastewaters and Stormwater Runoff."
This
>>guidance provides additional information on some of the pitfalls of
>>improperly developed and implemented standardized approaches for gathering
>>water quality data. CALFED must be careful not to force standardization
for
>>the sake of standardization at the expense of high quality reliable
results.

>> Again, I can help with this if there is interest.

>>
>>Comments on CALFED Water Quality Technical Group - Parameter Assessment
Team

>>Recommendations for Ecosystem and Urban Water Quality Targets

>>
>>Under "Water Column" it states that the National Toxics Rule will soon
>>provide reference targets for various parameters, including ammonia, DO,
and
>>turbidity. It is my understanding that ammonia will not be part of the
>>National Toxics Rule. I doubt that DO and turbidity will be covered by it

as
>>well. I have recently been asked to serve as an advisor to the US EPA in
>>reviewing the soon to be released revised draft water quality criteria for
>>ammonia. I was a member of the US EPA peer review panel that reviewed the
>>original ammonia criteria document in the early 1980's. I am, therefore,
>>familiar with ammonia issues and can be of assistance to CALFED in this
area.

>>
>>I am concerned about the statements under "Water Column" regarding target
>>values since the focus seems to be on chemical concentrations rather than
>>chemical impacts. The CALFED program should focus on target values that
>>control the impacts of chemicals on beneficial uses of the Delta and its
>>resources not on the concentrations of chemicals. It is well known that,
for

>>most chemicals, there is a poor relationship between concentrations as
>>measured by various standard analytical procedures and impacts. CALFED
>>should not perpetuate the technically invalid approaches that are often
used

>>in developing water quality management programs which ignore the basic
>>science that has been available for over 25 years, such as focusing on the
>>toxicity of a chemical rather than on the concentration of the chemical.

>> This was the approach that the National Academies of Science and
Engineering

>>recommended in 1972 in their development of the "Blue Book" of water
quality

>>criteria. The US EPA initially adopted this approach for heavy metals and
>>then backed off to a bureaucratically simpler but technically invalid
>>approach based on total heavy metal concentrations. The Agency is finally
>>beginning to correct the error that was made in the early 1980's in
>>regulating constituents in water where it is beginning to change from
>>focusing on chemicals to focusing on chemical impacts.

>>
>>The target values for diazinon and chlorpyrifos should not be chemical
>>concentrations as implied, but should be on the control of aquatic life
>>toxicity that is significantly detrimental to the beneficial uses of the
>>Delta and its tributaries. There is increasing evidence that, in some
cases,

>>substantial parts of diazinon and especially chlorpyrifos which are
measured

>>in typical analytical procedures are in non-toxic forms. Further, there
is

>>considerable justification for questioning the water quality significance
of

>>toxicity to a limited number of types of organisms such as
Ceriodaphnia-like

>>organisms to overall ecosystem health and water quality. These are issues
>>for which CALFED will have to provide support that will need to be
addressed

>>as part of its control of organophosphorus pesticide toxicity in Delta
>>tributary waters and within the Delta.

>>
>>Under "Fish Tissue" it is stated, "in general, it was recommended that NAS
>>guidance numbers be used." This is a significant error and should not be
>>accepted by CALFED. As I have discussed in detail in previous
>>correspondence, the so-called NAS guidance numbers have no technical
>>credibility today. I was involved as a peer reviewer for the National

>>Academies of Science and Engineering "Blue Book" of water quality criteria
>>that was released in 1972. I am highly familiar with how the NAS guidance
>>numbers were developed. They were never intended to be used as the state
of
>>California is using them. Unfortunately, someone in the State Water
>>Resources Control Board did not take the time to find out how these
numbers
>>were developed and how they should be used when they adopted them as part
of
>>the Toxics Substances Monitoring Program. The US EPA, no other state, the
>>National Academies of Science and Engineering, nor, to my knowledge,
anyone
>>else uses the so-called NAS values for critical concentrations of chemical
>>constituents in aquatic life tissue.
>>
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