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By: Howe, Carol
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Topic: Resend of my earlier commen
Sent: 04-18-97
From: rwoodard@goldeneye.water.ca.go
To: Howe, Carol; Carol Howe

c Fred

Mail*Link»

Resend of my earlier comments on the CalFed

>Date: Fri, 18 Apr 1997 16:02:02 -0700 (PDT)
>From: Chris Foe <chrisf@bptcp1.swrcb.ca.gov>
>Subject: Resend of my earlier comments on the CalFed water quality issues (fwd)
>To: cdarling@water.ca.gov, rwoodard@water.ca.gov
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>
>Board and the Orange County stormwater management agency. As with the Delta,
>there are major pulses of diazinon, chlorpyrifos and other pesticides in the
>tributaries to Upper Newport Bay. One of the issues we hope to address over
>the next two years is what is the significance of the pulses of toxicity
>associated with stormwater runoff events that enter the Bay every time there
>is any significant precipitation. This same issue has to be addressed for
>the Delta. We know that there is toxicity. We know that it persists, in
>some cases, for several weeks. We also know that apparently it is restricted
>to a limited number of types of zooplankton. Does the death of a limited
>number of types of zooplankton and possibly other organisms for several
>weeks per year significantly, adversely impact the fisheries and other
>aquatic life resources of the Delta? CALFED must fund studies of this type
>before it initiates its pesticide control programs.
>
>With respect to C. Darlings item 3 devoted to urban runoff, as I have
>summarized above and discussed in detail in my comments to CALFED management,
>there is no evidence that urban area stormwater runoff is contributing
>constituents to the Delta or its tributaries that are adverse to the
>beneficial uses of the Delta's resources. In fact, there is substantial
>evidence to the contrary. Before any program to control chemical constituent
>inputs from urban area and highway stormwater runoff to the Delta is
>initiated, CALFED must fund reliable, comprehensive studies to define what,
>if any, real water quality use impairments are occurring in the Delta due to
>these inputs.
>
>C. Darling (CALFED) has, as with other constituents, jumped the gun with
>respect to formulating a reduction program for copper, zinc and cadmium
>associated with abandoned or inactive mines. While there is no question that

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>acid mine drainage in some parts of the Delta tributary causes toxicity to
>aquatic life in a Delta tributary there are, as S. Luoma indicated,
>significant questions about the water quality - ecological significance of
>the limited areas in Delta tributaries where the metals are in a form that
>toxic to aquatic life.
>
>Two things have to be done before large amounts of CALFED's money should be
>spent controlling acid mine drainage problems. It either has to be shown
>that the heavy metals which exceed US EPA water quality criteria in Delta
>tributaries and within the Delta are in toxic, available forms and that the
>toxicity associated with them is significantly adverse to Delta aquatic
life
>resources or it must be shown that the toxicity found in the tributaries
due
>to acid mine drainage problems is of major significance to Delta aquatic
life
>resources. There is no question that there are adverse impacts near where
>the acid mine drainage enters the tributary waters. However, from a CALFED
>perspective, does this apparently limited sphere of influence adversely
>impact Delta resources? This issue must be reliably resolved since the
acid
>mine drainage problems could consume massive amounts of CALFED money and
have
>little or no impact on "fixing" the Delta water quality problems.
>
>C. Darling's item 5 focusing on the reduction of selenium input to the
Delta
>is similar in character to the heavy metal problem discussed above. I am
>still waiting to see anyone demonstrates with any degree of reliability
>that
>the selenium inputs to the Delta are significantly adverse to Delta aquatic
>and terrestrial resources. It should not be assumed, as is apparently
being
>done, that the selenium problems for waterfowl in the Kesterson Basin are
>occurring in the Delta. As with other constituents of concern, there is
need
>to first do the work necessary to define what real, significant water
quality
>problems are likely occurring due to elevated selenium inputs to the Delta,
>then develop control programs for those inputs that are causing real water
>quality, waterfowl, etc. use impairments.
>
>C. Darling's item 6 devoted to coordination of watershed water quality
toxic
>contaminant reduction has been discussed in connection with other items she
>has raised. Obviously it is important to coordinate these activities. I
>have heard CALFED staff discuss how CALFED is going to be the master
>coordinator for these activities. In order for CALFED to assume this role,
>it must bring substantial dollars to the table to enable the various
>watershed groups to address many of the issues they cannot now address
>because of the limited funding. For CALFED to assume that it is going to
>impose a layer of bureaucracy on the existing watershed toxics control
>programs without providing these programs with substantial funding is, in
my
opinion, highly inappropriate.

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>
>C. Darling's item 7 is devoted to reduction of mercury. As discussed above,
>the issue is not, as currently framed, the reduction of mercury inputs to the
>Delta. The issue that must be addressed under conditions of limited
>financial resources that can be devoted to mercury reduction is the reduction
>of mercury that leads to methyl mercury formation within the Delta and Bay
>that leads to excessive bioaccumulation in fish and other aquatic life within
>these waterbodies. For CALFED to start throwing money at mercury input
>reduction without regard to the aquatic chemistry of mercury is technically
>invalid and can be highly wasteful of public funds. There is need for CALFED
>to establish a mercury advisory committee who would assist CALFED in
>developing technically valid approaches for defining the magnitude of the
>current mercury problem within the Delta, the sources of mercury that are
>causing real problems and in formulating technically valid, cost effective
>programs for controlling mercury from these sources.
>
>With respect to C. Darling's Water Quality Specific Selection Criteria, I am
>concerned with what I have been observing in the Water Quality Task Force
>with how water quality benefits are to be assessed. Thus far, the approach
>is grossly over-simplistic and unreliable where a brute force approach of
>assuming that the reduction in the total concentration of a chemical
>constituent that in some undefined way is related to a presumed water quality
>problem that exists in the Delta, should be redirected to first defining that
>real water quality problems exist within the Delta and its tributaries that
>influence Delta resources, determining their cause and the source of the
>specific constituents responsible for the problem. By specific constituent I
>do not mean mercury irrespective of its chemical form but those forms of
>mercury that lead to excessive bioaccumulation within Delta aquatic life.
> The issue of predicting and assessing benefits from the CALFED water quality
>projects is far from being reliably formulated at this time.
>
>With respect to C. Darling's items 2 and 3 of focusing on regional sustained
>water quality benefits, I fully agree that this is an appropriate goal. It
>remains to be seen, however, how CALFED plans to achieve this goal.
>
>C. Darling's selection criteria item 4 - achieving water quality targets must
>be demonstrated, is, based on the meetings I have attended, an inappropriate
>approach as it is being formulated. The targets as formulated now are
>chemical concentrations in the Delta or at a particular location. This
>assumes that there is a well defined link between a concentration of a
>chemical and a real water quality problem of significance to the public
>within the Delta. As I indicated at the Water Quality Task Force
>subcommittee meeting, while today, exceedance of a water quality standard

is,
>from an administrative perspective, defined as a water quality use
>impairment, it is well known that in many cases this exceedance is an
>administrative exceedance that is not related to a defined water quality
use
>impairment. For a water quality use impairment to occur with respect to
>aquatic life resources, there should be reasonable evidence that the
numbers,
>types and characteristic of desirable forms of aquatic life are being
>adversely impacted by the constituent of concern.
>
>A significant number of the exceedances that are occurring today relate to
>the US EPA's adoption, without public review, of it's Independent
>Applicability Policy which mandates that chemical constituent criteria must
>be met even if proper investigation of aquatic life resources and
biological
>impacts shows that there are no discernable adverse impacts on aquatic life
>resources. While it is not possible to reliably state there is no adverse
>impact associated with the presence of a constituent in a water, in the
>CALFED situation, the funds available must be directed toward controlling
>real pollutant inputs to the Delta and through the Delta to the Bay and to
>water supplies that use the Delta as a source. Once the major water
quality
>use impairments have been addressed then residual funds should be used to
try
>to identify other more subtle problems of potential significance to Delta
>resources.
>
>The problems in formulating water quality control programs in the Delta are
not unique to CALFED. In my over 37 years of work on water quality
problems,
>I have repeatedly found individuals as well as agencies try to oversimplify
>the complexity of the issues that must be addressed to develop reliable
>problem definition and formulate technically valid, cost effective
management
>programs. In the 1970s, the water quality management field was well on its
>way toward properly using aquatic chemistry and aquatic toxicology in
problem
>definition and management. In the early 1980s, however, the US EPA
abandoned
>that approach in favor of a bureaucratically simpler but obviously
>technically invalid approach of focusing only on chemical constituents
>irrespective of chemical forms and developing worst case assessments of
>toxicity duration of exposure relationships for estimating impacts of
>chemical constituents in aquatic systems. The Agency is beginning to turn
>this situation around. It would certainly be inappropriate for CALFED to
now
>focus its water quality problem definition and management programs on what
is
>clearly an outdated, technically invalid approach.
>
>In an effort to try to assist the field in focusing water quality
management
>resources on water quality problems of significance to the public, Dr.
Jones-Lee and I have formulated what we call the Evaluation Monitoring
approach. This approach is a technical stakeholder driven, watershed based

>water quality management program that focuses on first defining real water
>quality use impairments in the waters of interest, determining their cause
-
>significance and developing control programs. This approach is being
implemented for the control of toxic inputs to Upper Newport Bay in Orange
>County, California. Further, the Evaluation Monitoring approach is serving
>as the basic framework for developing the Phase 1 water quality monitoring
>program for the Sacramento River Watershed Toxics Control Program. As
>discussed herein, the Evaluation Monitoring approach should be used to
>formulate CALFED's water quality management program.
>
>I have published extensively on many of these topics. Many of Dr.
Jones-Lee
>and my papers and reports on these issues are available as downloadable
files
>from our Web site (http://members.aol.com/gfredlee/gfl.htm). If any of the
>reviewers of these comments have comments or questions on them or wish
>further information, please contact me. I hope these comments are of
value.
> The CALFED water quality situation for the Delta is a highly unique
>situation that must be more properly formulated and implemented than what I
>see occurring today.
>
>_____Sincerely,
>
>
>   Fred
>
>_____G. Fred Lee, PhD, DEE
GFL:djc
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