

Printed: 09-22-96

By: Howe, Carol

Priority: Normal

Topic: Ecosystem Water Quality Mee

Sent: 09-20-96

From: Phyllisfox@aol.com@INET1

To: Howe, Carol; bfinlays@hg.dfg.ca.gov@INET1; +; Carol Howe

CC: ronott@water.ca.gov@INET1

PAHs; MAHs; Arsenic

Mail*Link

Ecosystem Water Quality Meeting

Chris, Brian, & Carol:

There are a few issues from yesterday's meeting that I would like to follow up on.

PAHs

I suggested that PAHs be added as constituents of concern based on Spies work with starry flounder and the Cooperative Striped Bass study. You stated that the Cooperative Striped Bass study did not find any impacts from PAHs. I checked the Executive Summary (SWRCB, 9/87) today. The study apparently evaluated MAHs (monocyclic aromatic hydrocarbons), not PAHs. They did find significant correlations between MAHs and bass condition, including: (1) high concentrations of benzene were correlated with blood cell destruction, abnormal blood cell development, and other blood parameters; (2) toluene and ethylbenzene were correlated with the presence of lesion scars; (3) ethylbenzene and 1,2-dimethylcyclohexane were correlated with reduced relative conditions of eggs; (4) MAHs in fish ovaries were as high as those observed in the laboratory to have adverse effects on eggs; and (5) high levels of petrochemicals were strongly correlated with egg resorption and abnormal reproduction. Based on these data, I suggest that MAHs be added as constituents of concern.

ARSENIC

The arsenic water quality exceedances I mentioned are reported in: Metals Implementation Plan Project: Metals Monitoring of Central Valley Reservoir Releases: 1991-1992 (Goetzl and Stephenson, 1993). That report shows that three out of four samples collected from the upper Sacramento River at Dunsmuir and Delta and two out of four samples collected from the Pit River at Highway 299 and Bend exceeded the water quality objective of 5 ug/L.

Frequent exceedances have also been reported in the lower watershed in the Coordinated Water Quality Monitoring Program. I don't have those reports, I am trying to get them. I suggest that As be added as a constituent of concern.

DEGRADATION OF DIAZINON AND CHLORPYRIFOS

Several folks suggested that holding agricultural drain waters and urban runoff would allow chlorpyrifos, diazinon, and other pesticides to degrade. While this is certainly true, I question whether it would necessarily reduce toxicity because the degradation byproducts themselves are often toxic. I suggest that the toxicity of transformation byproducts be added as an issue.

D - 0 3 2 8 3 0

D-032830

of concern for these actions.

SELENIUM ACTION LEVEL

The San Francisco RWQCB recommended the use of a proportional limit and TSI guideline (0.06 - 1.1 ug/L depending upon relative percentage of selenite) as

ecological assessment guidelines to evaluate compliance with the narrative toxicity objective. This work is reported in: Mass Emissions Reduction Strategy for Selenium by Kim Taylor and others, 10/92.

Phyllis

=====