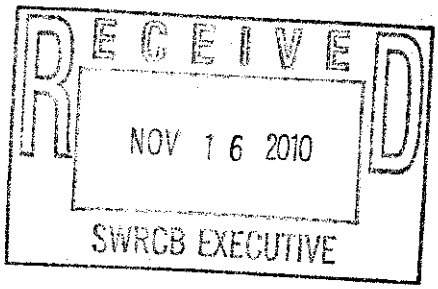
Public Hearing (11/2/10)
Dft Aqua. Animal Inv. Prmit
Deadline: 11/16/10 by 12 noon

MARIN MUNICIPAL WATER DISTRICT

220 Nellen Avenue Corte Madera CA 94925-1169
www.marinwater.org

November 16, 2010

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street 24th Floor
Sacramento CA 95814



RE: Draft Aquatic Animal Invasive Species Control Permit

Dear Ms. Townsend:

The Marin Municipal Water District appreciates the opportunity to comment on the above-noted draft permit. Located north of San Francisco, the Marin Municipal Water District provides drinking water for 200,000 customers. The majority of the District's public drinking water supply originates from surface water reservoirs which are potentially subject to invasive aquatic animal species.

Background

The Marin Municipal Water District relies on seven reservoirs as a source of water for roughly 75 % of the treated drinking water supplied to our customers via a local distribution system. In order to maximize reservoir storage, and to provide for the most effective treatment and production of drinking water, raw source water is moved directly to treatment plants and/or between reservoirs via intake and outlet structures, pumps and pipelines. The introduction of invasive aquatic animals could inhibit transmission of raw water through these conveyances.

We are currently working in concert with the California Department of Fish and Game to monitor quagga mussels in the veliger stage. We also plan to later monitor for the organism in the adult stage. As a proactive approach, the District also has in place a boat inspection program designed to prevent the introduction of invasive species into our reservoirs.

Due to our reliance on surface waters as a drinking water supply and the related issues as mentioned above, and to protect the native aquatic environment, we are interested in reviewing the draft Invasive Species Control Permit. We are particularly interested in the eventuality that the permit may be revised to include products other than hypochlorite as other alternative products might be registered by the State in the future.

The District has used the Aquatic Pesticide General Permit for Aquatic Weed Control (CAG990005), successfully since its adoption in 2004. We believe our experience with the Weed Permit provides us with insight to comment on some specific components of the Draft Animal Invasive Species Control Permit.

Specific Comments to the Draft Permit

Toxicity Testing

It has been our experience via the weed permit, that monitoring for the active ingredient contained in the pesticide formulation is a much more direct measure of potential toxicity, and also more useful in a timely determination of treatment efficacy and environmental protection during and after pesticide application. For instance, the Marin Municipal Water District's use of Copper Sulfate under the General Weed Permit has not resulted in fish mortality, or in any other deleterious aquatic environmental impacts. In fact, toxicity studies performed by the San Francisco Estuary Institute (SFEI), showed a lack of toxicity both in the water column and sediment layer of our reservoirs which have received copper sulfate applications for decades. The inclusion of data into EPA's Biotic Ligand Model confirmed a predicted lack of toxicity due to the source water characteristics of our reservoirs.

The problem with toxicity testing is that it does not define the constituent or constituents causing the toxicity. Determination of toxicity requires a Toxicity Identification Evaluation (TIE), which in turn may or may not conclusively identify the cause of toxicity, particularly when significant time has elapsed since the initial monitoring has occurred.

One major reason given for the inclusion of toxicity testing is that there may be other constituents, or adjuvents contained (other than the active ingredient), within the pesticide formulation which could cause or enhance toxicity of the pesticide product. In the case of hypochlorite there is no adjuvant. In the case of copper sulfate there is no adjuvant. In both cases all ingredients are listed. It seems particularly unreasonable to require toxicity testing in these examples. We give the example of copper sulfate with the expectation that it may be added to the list of registered products available in the invasive animal permit at some future date.

Another reason for toxicity testing would be to afford protection to impaired waterbodies, as pesticides have been implicated in a number of waterbodies under EPA's 303(d) list. If pesticides allowed under this draft permit had caused,

or had reason to cause impairment to waterbodies, there would be some rational for toxicity testing to be a part of the monitoring protocol.

The Marin Municipal Water District recommends that, as in the current Weed Permit, the active ingredient of the pesticide be monitored, and that toxicity testing be removed from the monitoring protocol.

Sampling Locations

Since the impact on receiving waters is the main assessment goal of this draft permit, the permit should state that the sampling location is representative of the receiving water, and "receiving water" should be included under an additional column heading "sample location" to be added to Table C-1 on page C-8 of the draft. So for consistency, the receiving water should be specifically named as the sample point for permit compliance.

Receiving Water Limitation Numeric Values

The Method Detection Limit (MDL), as noted in C-11 and generated by the procedure referenced in the draft permit (40 C.F.R. Part 13), is higher than the receiving water limitations for chlorine noted on 3.H. page 10, and on page D-26 of the tentative order. Additionally, the minimum level (ML), is by definition even higher than the MDL. The lack of precision and sensitivity in chlorine testing is due to the fact that chlorine (hypochlorous acid, and hypochlorite ion when hydrolyzed in water), residuals must be taken in the field, and field methodologies do not generate the precision required to generate a MDL low enough to characterize the numeric receiving water limitations stated, as the MDL is based on the precision of replicate analyses.

Again the Marin Municipal Water District appreciates this opportunity to comment on this important permit, a permit which affords protection to both native ecosystems and public drinking water transmission and supply.

Sincerely,

for Michael J. Ban, P.E., Manager
Environmental and Engineering Services Division

MB:mp