

# **ENCLOSURE 5**



May 13, 2011

Mary Wagner or Daniel Sussman  
Environmental Scientists  
California Regional Water Quality Control Board, Lahontan Region  
2501 Lake Tahoe Blvd.  
South Lake Tahoe, CA 96150

Dear Ms. Wagner and Mr. Sussman:

The California Department of Food and Agriculture thanks the Board for the opportunity to comment on the document, "Proposed amendments to the water quality control plan for the Lahontan Region: Pesticide prohibition with exemption criteria." The Department has read the Proposed Amendments and associated documents with interest and offers the attached comments for your consideration.

Thank you for your time.

Sincerely,

Duane Schnabel  
Branch Chief, Integrated Pest Control Branch

Enclosure

cc: Patrick Akers



**Comments on "STAFF REPORT AND SUBSTITUTE ENVIRONMENTAL DOCUMENTATION FOR PROPOSED AMENDMENTS TO THE WATER QUALITY CONTROL PLAN FOR THE LAHONTAN REGION REVISING THE REGIONWIDE PESTICIDE WATER QUALITY OBJECTIVE TO A REGIONWIDE WASTE DISCHARGE PROHIBITION" and the "Draft Basin Plan Language – Draft Waste Discharge Prohibition and Exemption Criteria" and Chapters 3, 4, and 5**

Patrick Akers, PhD  
Sr. Environmental Scientist  
Calif Dept of Food and Agric  
Hydrilla Eradication Program

Major comments are only on the "Draft Waste Discharge Prohibition and Exemption Criteria". Comments on the Substitute Environmental Documentation were only minor and will not be included.

**Draft Waste Discharge Prohibition and Exemption Criteria**

**Pg 3, Exemption Criteria: "The treatment event shall not exceed one week..." and Pg 4, "Within one week of the application event compliance with water quality objectives..." and similar references**

The Board should be aware that the one-week criterion will preclude the use of most of the safest aquatic herbicides and force dependence on herbicides that, when used at effective legal rates, have much narrower safety margins for non-plant taxa, including fish and invertebrates. They can sometimes cause direct injury to these taxa even when used in compliance with the label.

Most of the aquatic herbicides that could be used in compliance with the one-week criterion are older, faster-acting contact herbicides such as acrolein, endothal, diquat, and copper. These herbicides usually require relatively high concentrations in the range of 0.8 to 3 or 4 ppm to be effective, and often their application rates approach the LC50's for various animal taxa. However, they usually kill their targets and degrade or are inactivated within a few days, so they can stay within the criterion period. Contrasted to these herbicides are newer herbicides such as fluridone, penoxsulam, imazapyr, imazamox, and several others that are in the process of being registered. These herbicides are slow-acting systemics. They generally take 2 to 5 weeks or more to exert their effects, and they break down or are inactivated more slowly than the contact herbicides, so they remain at effective concentrations for the required time or even longer, unless diluted. This means their use could not comply with the criterion period. However, they also are generally applied at much lower rates (0.01 to 0.3 ppm) and have similar to much better toxicity profiles for non-plant taxa than the contact herbicides, so in practice they have much higher safety margins for taxa other than plants. Some of these new herbicides are among the lowest-risk pesticides ever registered by EPA. They

also often have a range of effectiveness on different plant species, such that it is often possible to control a pest plant while favoring more beneficial species.

The Board would do well to consider rewording this criterion so that it does not exclude effective alternative compounds that provide lower risk.

**Pg 5, para. 1: "...and (d) prevent damage...species."**

Consider adding something similar to: "(e) manage waterways for safe navigation and effective water delivery."

**Pg 5: (a) The project is an eligible circumstance.**

Consider adding "as described below."

**Pg 5: (b):**

Change "project criteria" to "exemption criteria"?

**Pg 6, para 6: "Emergency Projects."**

CEQA Guidelines 15269 requires declaration by the Governor, but Resource Code 21060.3 does not specify the authority that declares the emergency. What will be the Board's stance on this question? Will declaration by a resources agency suffice?

**Pg 6, para 7, 2nd sentence**

Consider changing "not already infested by that species" to "where that species is not already established."

**Pg 6, para 7, 3rd sentence:**

Consider adding State and Federal noxious weeds to the list of species.

**Pg 6, para 8 et seq, General Comments**

The "Circumstances" and "Exemption Criteria" sections give the sense that the Board anticipates that projects will be put forward in reaction to a single current problem in a specific area with tightly limited geographic extents and in a tightly defined time frame. However, some problems, especially concerning facility or waterways maintenance, are often anticipated, but perhaps in a general way. For example, a canal company might know that some parts of its system are prone to developing weed problems, but the specific problem sites and weeds vary from year to year. The management people at Tahoe Keys know they're likely to have milfoil and curlyleaf pond weed problems in any given year, but the timing and extent might vary according to the year's weather. The Vector Control people probably have a good idea of the areas that are most likely to

develop mosquitoes in general, but the specific problem areas in any given year probably depend on factors at a microclimate scale and can't be accurately predicted. Water delivery companies may know that a particular reservoir has a history of cyanobacteria problems, but perhaps not always in the same location or in every year. The quagga mussel response team probably anticipates that the mussels will first be found in Tahoe at a boat ramp or marina, but not which one.

Managers in such conditions likely have general plans on a response, but all the important details of where, when, extent, and probably even the precise treatment method and protocol will depend on the specific situation. However, when the situation arises, in many cases the response needs to be swift if it is to be useful.

If the Board could give some direction as to whether they wish to consider projects with more generalized project descriptions, it would be appreciated. Such projects would appear to fall under the classification of "Projects that Are Neither Emergency Nor Time Sensitive", but, as noted above, when a specific circumstance arises, often time is pressing. If the Board would consider more generalized, proactive projects, some guidance as to how the Board envisions such projects fitting into the "Exemption Criteria" scheme would be helpful.

**Pg 7, para 3, 2nd sentence (NPDES requirements): "Project proponents...must obtain coverage under an applicable permit..."**

The timing between obtaining the Prohibition Exemption and a General NPDES permit is confusing. In paragraph 11, "2. Notice of intent for coverage..." implies that the two processes occur in parallel. Please clarify.

**Pg 7, para 11, 1st sentence:**

Should "...State Board or Regional Board permit..." be "...State Board or Regional Board NPDES permit..."?

**Pg 7, para 12, CEQA Documentation:**

1. In a declared emergency that is exempt from CEQA, no documentation is required?
2. Preparing CEQA documentation can be very expensive in time and money. To take on such an investment without good indication as to whether the Board is likely to grant the exemption places the applicant in a highly risky position. Will the Board be able to provide some guidance to the applicant prior to initiating the CEQA document process?

**Pg 9, para 4: "2. ... The Plan should include measures to remove..."**

Removal of biomass is likely not feasible for weeds treated with herbicides. The contact herbicides usually kill and break down the plants rapidly. Attempts to harvest the dying plants would only cause extensive shattering, greatly increasing the release rate of organic matter, thereby encouraging even more rapid bacterial blooms and the chance of

deleterious effects on dissolved oxygen. For contact herbicides that work rapidly, the more common mitigation (usually on the label) is to not treat when the DO is low (near 5 ppm) or to treat only a section (usually 1/3) of an infested water body at a time (usually with 1 to 2 weeks between treating sections), if it is infested over most of its area.

Another mitigation is to use one of the slower-working systemic herbicides. In these cases, a single plant does not die all at once: parts of it are decaying while other parts are still dying. The plant stand as a whole dies gradually over a prolonged period, so bacterial growth is not as intense and the effects on DO are usually less pronounced.

If the Board were to insist that only fast-acting contact herbicides were acceptable to control the spread of AIS weeds, a more logical approach to using harvesting to mitigate biomass decay in using such herbicides would be to harvest first and then immediately treat with a contact herbicide to kill the many plant fragments that harvesting generates. Plant fragments generated by harvesting or boating are a major means of spreading an invading weed within a water body.

**Pg 9, para 4 et seq, "4. Monitoring and reporting program..."**

The Board should consider requiring that the monitoring plans be structured along the lines of the statewide NPDES pesticide plans, where a representative fraction of treatments are monitored. The Board might perhaps also require that a project proponent takes care to include a treatment that represents a "worst case" scenario, if one can reasonably be anticipated.

As stated earlier, the current draft gives the impression that the Board largely envisions each project as a single treatment event, discrete in both time and space. The monitoring plan laid out in Time Sensitive Projects, section 4, is extremely extensive and will be very expensive. It would perhaps be reasonable if it were a one-time expense, but maintenance-type situations will probably entail multiple treatments in time or space. If each treatment event requires such extensive monitoring, the cost will be prohibitive. It would also help to know that the data is being incorporated into a scheme that will allow the Board at some future time to understand the effects of pesticides in the watershed and make judgments as to circumstances where a particular use was or was not especially deleterious. However, it seems a waste to require recurring large costs simply for data that will not lead to better understanding.

**Pg 10, para 2: Peer review**

The mechanism of peer review needs better definition, because there may be problems if the Board intends to follow the model of review for scientific journals.

Anonymous peer review is the cornerstone for scientific work being submitted for publication in a scientific journal. Publications form the basis for the advance of a publishing scientist, so having one's papers peer reviewed is of paramount importance. Publishing scientists review each other's work for free, with the understanding that each

is providing the favor in return for similar consideration. Project monitoring plans and reports generally provide no such incentive to a publishing scientist. Some scientists may provide limited review services out of a sense of public duty or to earn the right to list the activity on a resume, but scientists with appropriate backgrounds are few, and their good offices could easily be overwhelmed.

This means that project proponents will probably soon run into difficulty finding reviewers, unless the reviewers are compensated. However, if the project proponent compensates the reviewer directly, then the review is open to the criticism that it is no longer disinterested. To overcome this, the Board may have to set up a panel of reviewers that is has on retainer, and the project proponents will need to contribute to a general fund to pay for reviews.

Alternatively, monitoring plans could be anonymously reviewed by other potential project proponents. Project proponents would share incentive to review in the same way that scientists share an incentive to review. The Board would have to determine whether proponents in general have the technical ability to undertake the reviews, and whether such a scheme would provide an adequate perception of disinterestedness.

**Pg 10 para 3:**

The Board focuses its interest in population recovery on macroinvertebrates. This focus probably reflects its experience with rotenone, which is an insecticide as well as a piscicide. It would be helpful if the Board could give guidance on how it perceives dealing with other pesticide groups besides rotenone. For example, many aquatic herbicides have little to no direct toxicity for most invertebrates, although the fast-acting contact herbicides can be marginally toxic at normal use rates. On the other hand, it is conceivable that herbicides that are not directly toxic could alter the habitat enough by the removal of certain plant species that it could indirectly alter the invertebrate community. Carried further, if removal of AIS weeds allows the recovery of native plants, the invertebrate community might also move to a more "native" structure.

With herbicides, will the recovery target be a reference native plant community, a recovery of invertebrate populations to pre-treatment community, or a "native" invertebrate community based on a native plant community?

**Pg 10, para 4**

Paragraph 4 epitomizes the impression created by the BPA language that the Board perceives control projects as single treatment events discrete in both time and space. For rotenone-based eradication projects, this is sensible. However, for maintenance situations, the conditions in Paragraph 4 might be inherently unattainable. For example, if a water company may finds it needs to treat a section of a canal for weeds every two years or so, can it still operate under the BPA? The Board would serve the water infrastructure community if the Board could state whether it envisions maintenance-type

projects having any place under the proposed BPA amendment, and outline how they might fit in.



May 13, 2011

Ms. Mary Wagner  
Lahontan Regional Water Quality Control Board  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, California 96150

Dear Ms. Wagner:

The California Department of Fish and Game (Department) has reviewed the Proposed Amendments to the Water Quality Control Plan for Lahontan Region: Pesticide Prohibition with Exemption Criteria. We are appreciative of the efforts that have been put forth to provide an objective evaluation of the need and necessary protections for the use of aquatic pesticides.

Aquatic pesticides are a critical tool for fisheries management agencies to use for the protection, restoration, or enhancement of aquatic resources in unique circumstances. The proposed amendments to the Lahontan Region Basin Plan provide the necessary objective framework that will guide fisheries management agencies when the decision to use aquatic pesticides is being evaluated.

The Department is pleased that the proposed Amendment clarifies the "Exemption Criteria for Fisheries Management" and "Controlling Aquatic Invasive Species or Other Harmful Species". The recognition that there are emergency and time sensitive projects that require rapid response and monitoring is a significant step forward and welcomed by the Department.

We would like to see additional clarification in language that describes what type of projects fall under the time frame allotted for the treatment event (one week) as defined under the "Purpose and Need for Exemption" section. The limitations set forth in Chapter 3 (Water Quality Objectives for Fisheries Management Objectives Using the Fish Toxicant Rotenone) were developed primarily to address stream treatment conditions. The Department believes that compliance with the limitations is attainable in stream treatment scenarios.

Compliance with the Water Quality Objectives may not be attainable in some lake or pond treatment scenarios. The Department has data that indicates that constituent concentrations can be detected 30 to 60 days after the treatment event. This is primarily due to the half-life of chemical constituents in the active and inactive ingredients of the current formulations (CFT Legumine). The actual treatment (application) may be completed in a one week time frame but the residual chemicals may remain for some time after application. We recommend

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Ms. Wagner  
May 13, 2011  
Page 2 of 2

that language be incorporated that recognizes this and that post project monitoring should be in effect until the standard of non-detection is achieved.

If you have questions regarding our comments please contact us so that we can provide additional information.

Sincerely,



Stafford Lehr, Chief

Cc: Ms. Katherine Hill  
California Department of Fish and Game  
North Central Region - Region 2

Ms. Kimberly Nicol  
California Department of Fish and Game  
Inland Desert Region - Region 6

**Mary Fiore-Wagner - RE: Lahontan Draft Pesticide Basin Plan Amendment Language**

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**From:** "Lischeske, Carl (CDPH-DDWEM)" <Carl.Lischeske@cdph.ca.gov>  
**To:** Mary Fiore-Wagner <MFWagner@waterboards.ca.gov>  
**Date:** 5/19/2011 3:59 PM  
**Subject:** RE: Lahontan Draft Pesticide Basin Plan Amendment Language  
**CC:** <jcarr@ndep.nv.gov>, "Walker, Leah (CDPH-DDWEM)" <Leah.Walker@cdph.ca.gov>

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Mary,

I looked at the "Draft Waste Discharge Prohibition and Exemption Criteria Language Pesticide Basin Plan Amendment", and suggest you add two bullets on page 7 to the [Exemption Criteria for Aquatic Pesticide Use](#) section as shown below:

1. Project Information to include:

a. Project description including, but not limited to, proposed schedule, duration, name of pesticide, method and rate of application, spatial extent, water body, control/mitigation measures to be used, contact information.

b. Purpose and need for project.

c. The chemical composition of the pesticide to be used, including inert ingredients.

d. An estimate of the maximum foreseeable concentrations of pesticide components in any surface water intake used for drinking water supplies within ½ mile of the point of application.

e. Public notification and warning plan must be implemented before and during the project and include any water use restrictions or precautions during treatment if necessary. Suitable measures will be taken to identify potentially affected sources of potable surface and ground water intakes, and to provide potable drinking water where necessary.

f. Spill contingency plan to address proper transport, storage, spill prevention and cleanup.

## Carl Lischeske

Chief, Northern California Drinking Water Field Operations Branch  
1616 Capitol Avenue, MS 7407, P.O. Box 997377  
Sacramento, CA 95899-7377  
(916) 449-5596 / (916) 449-5656 FAX

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**From:** Mary Fiore-Wagner [mailto:MFWagner@waterboards.ca.gov]  
**Sent:** Monday, May 09, 2011 4:56 PM  
**To:** Lischeske, Carl (CDPH-DDWEM)  
**Subject:** Lahontan Draft Pesticide Basin Plan Amendment Language

Hi Carl,  
Again, thank you for attending today's meeting and providing your input.

We are currently developing an amendment to our regionwide water quality objective for pesticides. We are proposing to replace our existing water quality objective, a non-detect standard, with a prohibition on pesticide discharges with criteria for exemption.

As part of the public review process for the proposed (draft) language, we are holding a public hearing at our May 11 Board meeting in Victorville. On May 11, the amendment is an informational item and the Lahontan Board is not being asked to consider the draft language for adoption. This is the second public hearing; we held the first at our April Board meeting in South Lake Tahoe.

Documents for Review:

All documents for review can be found here:

[http://www.waterboards.ca.gov/lahontan/water\\_issues/programs/basin\\_plan/index.shtml#draftbpa](http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/index.shtml#draftbpa)

We are accepting written comment until May 13 at 5pm (see request for public comment letter).

Of these links, the environmental document is [Draft Substitute Environmental Documentation - Pesticide BPA](#)

You should focus your review on the actual language proposed for inclusion in our Basin Plan (including strike-out language of the existing objective) available at

[Attachment 2: Draft Pesticide Prohibition & Exemption Criteria](#). This is a 10 page document. In particular, we would appreciate any suggested language (e.g., requirement for pesticide application to be reviewed and accepted by affected purveyors, CDPH, and NDEP) you could provide for the section title Exemption Criteria for Aquatic Pesticide Use, that begins on page 7 of 10.

I will be at our Board Hearing in VVL and away from the office on May 11 and 12. If you have any questions, please contact me tomorrow at work. Thank you.

Thank you,  
Mary Fiore-Wagner

Please note: I work a reduced time base with every Friday off.

Mary Fiore-Wagner  
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07-00120



California Department of Public Health  
**MEMORANDUM**

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**DATE:** May 13, 2011

**TO:** Daniel Sussman, Environmental Scientist  
Lahontan Regional Water Quality Control Board  
2501 Lake Tahoe Blvd  
South Lake Tahoe, CA 96150

**FROM:** Vicki Kramer, Ph.D., Chief  
Vector-Borne Disease Section  
Division of Communicable Disease Control  
1616 Capitol Ave, MS-7307  
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**SUBJECT:** Comment Letter – Proposed Amendments to the Water Quality Control Plan for the Lahontan Region: Pesticide Prohibition with Exemption Criteria

The California Department of Public Health, Vector-Borne Disease Section (VBDS) submits these comments in response to the Lahontan Regional Water Quality Control Board (Water Board) publication of proposed amendments to the Water Quality Control Plan for the Lahontan Region (Basin Plan). VBDS understands the important function of the Basin Plan to protect beneficial uses of waters in the Lahontan Region. We appreciate that in drafting these proposed Basin Plan Amendments (BPA), the Water Board recognizes that judicious application of aquatic pesticides for the purpose of protecting public health is consistent with maximum benefit to the people of the State.

We are available for consultation on implementation of this plan in a way that balances protecting the water quality of the Lahontan Region while ensuring the health and safety of the people of California. Thank you for allowing VBDS the opportunity to provide the following comments.

**1) BPA Section: 6. Public Health and Safety – Vector Control (p.8)**

*California Health and Safety Code (HSC section 2000), provides the broad statutory authority for mosquito abatement and vector control districts to conduct effective programs for the abatement and control of mosquitoes and their vectors.*

Comment: Mosquitoes are a type of vector and, therefore, the phrase "...of mosquitoes and their vectors" should be changed to simply read "...of vectors". To be consistent with the California Health and Safety Code, VBDS recommends the following change: "California Health and Safety Code (HSC section 2000), provides the broad statutory authority for mosquito abatement and vector control districts to conduct effective programs for the abatement and control of vectors and public nuisances."

## **2) BPA Section: 9.C. i. Prohibition Exemptions and Coverage Under the Statewide General NPDES Permits for Vector and Weed Control (p.15)**

*Before receiving permit coverage, vector and weed control project proponents in the Lahontan Region must first be granted an exemption to the pesticide prohibition (once this Basin Plan Amendment is approved and in effect).*

Comment: Once in effect, this BPA offers a mechanism for vector control districts to legally apply aquatic pesticides in the region. VBDS is concerned that the BPA will not be approved and in effect by the Oct. 31 2011 implementation deadline of the Statewide Vector Control NPDES permit. If the BPA is not in effect before Oct. 31, how will the existing Basin Plan affect the issuance of NPDES permits to vector control agencies operating in the Lahontan Region?

## **3) References to public notification in BPA Sections: 11.B.3.c and e (p.31), 11.8.c (p.37), 12. Air Quality – Create Objectionable Odors Affecting a Substantial Number of People (4<sup>th</sup> sentence in paragraph, p.48), 12. Hazards and Hazardous Materials (3<sup>rd</sup> and 5<sup>th</sup> sentences in paragraph, p.50), and Attachment 2: Draft Waste Discharge Prohibition and Exemption Criteria p.7:**

*Public notification and warning plan must be implemented before and during the project and include any water use restrictions or precautions during treatment if necessary*

Comment: VBDS seeks clarification on the specific notification requirements proposed by the Water Board. For agencies seeking coverage under the Statewide NPDES permit (CAG 990004), do the public notice requirements specified in Attachment C Section IV (A)(1) of the permit (p. C-7) satisfy the Water Board's reporting requirements?

VBDS supports that the Water Board requires agencies seeking the vector control exemption be signatory to the Cooperative Agreement with the Department of Public Health. The Cooperative Agreement has two primary functions: 1) ensuring that signatory agencies safely, responsibly, and legally apply pesticides for the good of public health and 2) enabling these agencies to effectively control vectors. Due to the general understanding that vector control protects public health and rapid suppression is essential to achieve this protection, the California Education Code (Sec 17613), the California Food and Agriculture Code (Sec 13187) and California Code of Regulations (3CCR6620) provide notification exemptions for agencies signatory to the Cooperative Agreement. The proposed BPA notification language conflicts with these existing California statutes.

## **4) Attachment 1. Definition of Terms**

Comment: VBDS recommends including in the "Definition of Terms" the definition of vector from the Health and Safety Code Section 2002(k): Any animal capable of transmitting the causative agent of human disease or capable of producing human discomfort or injury, including, but not limited to, mosquitoes, flies, mites, ticks, other arthropods, and rodents and other vertebrates.

Throughout the BPA, when referring to activities of vector control agencies, “vector” is equated to “mosquito”. While the BPA exemptions are primarily focused on public health mosquito control activities, we would like the Water Board to recognize that vector control districts and agencies are mandated to protect California’s public health from any animals capable of transmitting causative agents of human disease and injury. The Water Board may need to review public health exemption prohibitions for vectors other than mosquitoes. Inclusion of the definition would clarify that the BPA vector control exemptions are not limited to mosquito control projects.

**5) Attachment 2: Draft Waster Discharge Prohibition and Exemption Criteria, Exemption Criteria for Aquatic Pesticide Use, Purpose and Need for Exemption (1<sup>st</sup> sentence, 6<sup>th</sup> paragraph, p. 3)**

*The treatment event shall not exceed one week, after which time the level of pesticide should be below its minimum effective concentration and water quality objectives should be met within the treatment area*

Comment: Specific for biological larvicides, VBDS requests the Water Board reconsider the restriction of treatment events to less than one week. Many of the biological larvicides used by vector control agencies and approved in the Statewide General Permit are designed to release over time, providing an effective life of more than one week. When applied at legal label rates, these products are very specific to mosquitoes. This combination of high specificity and extended mosquito control is advantageous to both the environment and public health. While specifically controlling larval mosquitoes, use of time-released biological larvicides minimizes the numbers of application events at a site which reduces further habitat disturbances, lessens the chance of a pesticide spill, and decreases other pollution concerns associated with repeated applications.

**6) Attachment 2: Draft Waster Discharge Prohibition and Exemption Criteria, spelling of the word larvacide [sic] (multiple pages)**

Comment: For the sake of continuity, please substitute “larvicide” for “larvacide” in the document. Larvicide is used in the main document and larvacide is used Attachment 2.

Comments submitted by e-mail. Please confirm receipt.

Date: May 10, 2011

To:

Mary Wagner [mfwagner@waterboards.ca.gov](mailto:mfwagner@waterboards.ca.gov) and  
Daniel Sussman [dsussman@waterboards.ca.gov](mailto:dsussman@waterboards.ca.gov)  
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From:

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Re: PROPOSED AMENDMENTS TO THE WATER QUALITY CONTROL PLAN FOR THE  
LAHONTAN REGION: PESTICIDE PROHIBITION WITH EXEMPTION CRITERIA

We are filing these comments on the proposed amendments to the Lahontan Basin Plan as private citizens, in the public interest. We have been reviewing government documents on the use of rotenone formulations to remove unwanted fish species from the waters of California, and many other parts of the country, for the past 16 years. We have reviewed much of the published and unpublished literature on the impacts of rotenone to non-target species. We have reviewed over the last 10 years many documents in the Lahontan Regional Water Quality Control Board (LRWQCB) files and have filed comments on the proposed project to poison most of the remaining parts of the Silver King Creek basin. We have also filed comments with the

Environmental Protection Agency (EPA) on the impacts of fish poisons on the non-target aquatic animal community (Erman and Erman, 2005, 2006, 2007).

Our detailed comments refer largely to the use of rotenone formulations to remove fish from aquatic systems. The more general comments apply also to other forms of government poison applications in and over water for such things as eliminating plants in water and for mosquito abatement, etc. The documentation supporting the statements we are making are found in LRWQCB and EPA files and are available from us upon request.

The proposed Lahontan Basin Plan change is an attempt by the staff of the LRWQCB to relinquish their responsibility for oversight of government poisoning projects using pesticides in and over water, to lower the standards of the Clean Water Act Antidegradation Policy, and to reduce or remove the role of the public members of the LRWQC Board in assessing government poisoning projects in the Lahontan region.

The changes define water poisoning by government agencies as in the public interest by definition. The draft revisions remove much of the regulatory authority and responsibility of the LRWQCB where government agencies are the parties seeking to poison water. They can remove the need for individual NPDES permits and give full authority to the Executive Officer to permit poisoning projects without going to the public Board and without holding public hearings to grant individual NPDES permits. As long as government agencies are doing the poisoning, for whatever reason, the LRWQCB staff will not make judgments about need for poisons or impacts of poisons. They will merely require that "monitoring" be conducted by the agencies before and after the completion of poisoning.

The U. S. Fish and Wildlife Service has been added to the list of government agencies who can now poison water in the Lahontan Basin. Private entities will also be allowed to apply poisons into and over water for a variety of reasons.

Perhaps the chief reason for the staff's proposed changes is to protect the LRWQCB and State Water Board from legal responsibility for the many failures and

misrepresentations that have occurred in poisoning projects conducted by the California Department of Fish and Game in the Lahontan region over the past 25 years. We suspect the staff foresees a significant increase in aquatic poison applications in the region in the future including poisoning in more visible and popular areas like Lake Tahoe, Fallen Leaf Lake, and other high mountain lakes and streams for a variety of reasons deemed essential by various agencies.

At present the LRWQCB is not enforcing the current requirements of the Basin Plan, and therefore of the Clean Water Act, where rotenone formulations are concerned, and so the easiest route for the staff is to just get rid of those requirements through redefinition. The intent of the proposed changes is to weaken the Basin Plan rather than to protect the aquatic resources and beneficial uses in the Lahontan Basin. We think they also violate the required standards of the Antidegradation Policy of the Clean Water Act.

It is unclear from the proposed revisions whether or not individual NPDES permits will be required in the future or whether a blanket permit will be given for all projects. It is not clear whether or not public hearings will be held or that the citizen Board will even be involved in future projects. One possibility listed in the policy changes suggests that the Executive Officer alone could grant permission for individual projects.

Rotenone projects in the Lahontan basin serve as a useful example of what to expect from future poisoning projects in the Lahontan basin when requirements are less strict than they are now, should these proposed changes be adopted.

The rotenone picture has changed significantly in the last few years. Many studies over the past 10 years have shown a connection between rotenone and Parkinson's disease. Two of the principle pesticides that will be used under this proposed revision of the Basin Plan are rotenone and the herbicide paraquat—both approved for use in California. Both pesticides are documented in laboratory studies as mitochondrial Complex I inhibitors that lead to Parkinson's Disease-like symptoms. Both pesticides have been shown in a recent study to be definitively associated with

Parkinson's Disease in humans. The authors concluded "The current study helps connect the dots between basic research and human populations." (Tanner and 19 others. 2011. Rotenone, paraquat and Parkinson's Disease. *Envir. Health Perspectives*, available at [ehponline.org](http://ehponline.org)).

The EPA conducted a review of rotenone in 2006. Subsequently, the manufacturers of rotenone withdrew it for all terrestrial use (insect and/or invertebrate control) in the U.S., Canada, and the European Union. The Environmental Protection Agency (EPA) asked the companies that produce rotenone to submit evidence on the neurotoxic effects of rotenone on humans. The companies chose to withdraw from the market the products containing rotenone rather than supply the data. (EPA website: [www.epa.gov/oppsrrd1/reregistration/rotenone](http://www.epa.gov/oppsrrd1/reregistration/rotenone) Docket ID: EPA-HQ-OPP-2005-0494)

In 2009, the EPA banned rotenone for use in marine and estuarine habitats.

The only use of rotenone now is as a freshwater poison to kill unwanted fish. It is, as the revision has stated, a non-specific poison that also kills aquatic insects, other aquatic invertebrates, and amphibians at the same time it kills fish. As a consequence, rotenone poisoning disrupts aquatic and terrestrial food webs for many years and affects many other species. These effects have been acknowledged by the EPA (see Erman and Erman, Silver King Creek, Draft EIS/EIR Comments, 2009). These proposed amendments to the Basin Plan admit the immediate, the long-term, the many-years and the probably permanent impact of rotenone poisons on aquatic invertebrates (Chapter 4).

Once poison has been applied to water, monitoring of either the poison or the animal life, no matter how thorough, cannot change the impacts of the poison, of the mistakes that were made, of information that was not known, revealed, or understood, or of species that were lost. And, yet, the LRWQCB has refused to require inventories of non-target species prior to rotenone projects. The assurances that "monitoring" will be "robust" and "rigorous" mean little based on past staff actions (e.g., see NPDES permit for Silver King Creek rotenone poisoning, 2010).

Monitoring is not mitigation. The monitoring being conducted by the agencies can and has documented the losses of broad taxonomic groups of organisms that represent many species, but it cannot bring back species that are permanently lost through poisoning. Many of the stream basins in the Lahontan region are isolated and likely contain endemic invertebrate species that are present nowhere else. The following two sentences in the proposed revision have no meaning : “Biological monitoring will be designed and conducted as long as needed, to effectively demonstrate that non-target macroinvertebrate populations have been fully restored to pre-project assemblages. These data will help determine realistic timelines for species recovery after treatment with aquatic pesticides.” Species and populations of species that are lost through poisoning may never return to the stream or lake and may be permanently extinguished. No amount of monitoring will change that reality. There is no mitigation for extinguishing a species.

Even the above requirement is later revised in the proposed revisions to say that an agency can apply for release from the obligation to monitor after five years.

The statement is misleading in another way as well: the monitoring being done by government agencies is not precise enough to identify species. Adult forms of invertebrates are not collected or identified. The “metrics” being used by the agencies are too crude to determine what species or how many are lost through poisoning. The LRWQCB staff passes off its responsibilities by leaving monitoring designs up to proponents and outside peer reviews selected by proponents.

The Clean Water Act allows the lowering of water quality under specified times and circumstances, but if and only if, such lowering assures protection of beneficial uses fully.

The following example from the EPA Water Quality Handbook is key (2nd Edition, updated through 2009, Appendix G, Questions and Answers:

Antidegradation): The question is asked and answered:

“THE WATER QUALITY STANDARDS REGULATION STATES THAT ‘EXISTING USES AND THE LEVEL OF WATER QUALITY NECESSARY TO PROTECT THE

EXISTING USES SHALL BE MAINTAINED AND PROTECTED.' HOW FULLY AND AT WHAT LEVEL OF PROTECTION IS AN EXISTING USE TO BE PROTECTED IN ORDER TO SATISFY THE ABOVE REQUIREMENT?

NO activity is allowable under the antidegradation policy which would partially or completely eliminate any existing use whether or not that use is designated in a State's water quality standards. The aquatic protection use is a broad category requiring further explanation. **Species that are in the water body and which are consistent with the designated-use (i.e., not aberrational) must be protected, even if not prevalent in number or importance. Nor can activity be allowed which would render the species unfit for maintaining the use. Water quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species.** (See Question 16 for situation where an aberrant sensitive species may exist.) Any lowering of water quality below this full level of protection is not allowed. A State may develop subcategories of aquatic protection uses but cannot choose different levels of protection for like uses. The fact that sport or commercial fish are not present does not mean that the water may not be supporting an aquatic life protection function. An existing aquatic community composed entirely of invertebrates and plants, such as may be found in a pristine alpine tributary stream, should still be protected whether or not such a stream supports a fishery. Even though the shorthand expression "fishable/swimmable" is often used, the actual objective of the act is to "restore and maintain the chemical, physical, and biological integrity of our Nation's waters (Section 101(a)(1). The term "aquatic life" would more accurately reflect the protection of the aquatic community that was intended in Section 101(a)(2) of the Act." (Emphasis added in bold).

The Department of Fish and Game (CDFG) has recently begun using a new rotenone formulation of rotenone called CFT Legumine. It was used for the first time in California in the 2007 poisoning of the Lake Davis and the surrounding streams and springs. It did not perform as expected. The CDFG was unable to apply the rotenone in CFT Legumine at target levels. Levels were far above the target levels (> 1000% above target levels at some stations in the first poisoning), and high concentrations were even more common in the second poisoning than in the first. These results indicate the inability of CDFG to deliver, under field conditions, the poison rotenone in CFT Legumine at designed concentrations (see Erman and Erman, 2010, Comments on Draft

NPDES permit, Silver King Creek; Erman and Erman, 2010, Comments on Final EIR/EIS Silver King Creek). Based on the Lake Davis watershed results, we think it highly likely that the Agencies will exceed the EPA/FIFRA label requirement for normal use of 50 $\mu$ g/L in Silver King Creek if this project is allowed.

The proposed new language in the basin plan eliminates monitoring of pesticide application during the treatment phase of a project. In so doing, the Regional Board staff eliminates any means of verifying pesticide label restrictions for maximum allowed rates of application.

Independent monitoring of rotenone projects is essential. The Department of Fish and Game (CDFG) has a poor record of compliance. In the Lahontan Region alone, 6 of 11 rotenone projects between 1988 and 1994 violated water quality standards. Rotenone, rotenolone, or naphthalene were detected downstream or persisted longer than limits established in the basin plan (LRWQCB files).

CFT Legumine contains 5% rotenone and 5% other cube resins (primarily deguelin and tephrosin) as active ingredients. Cube resins have not been analyzed and it is unknown if they are neutralized by potassium permanganate (verbal testimony by Bruce Warden, LRWQCB staff, April 14, 2010, NPDES hearing). Breakdown of deguelin and tephrosin, unlike rotenone, does not produce rotenolone (Caboni et al. 2004). Therefore, monitoring of either rotenone or rotenolone will not account for other cube resins in the active ingredients. Deguelin also has been shown in laboratory tests to elicit the same Parkinson's Disease-like changes in cells as rotenone (Caboni et al. 2004).

In other words, half of the active ingredients in CFT Legumine have not been analyzed or considered in any government document. We notice the same omission has appeared again in this proposed document (p. 4 pp 4.9-2125). It is assumed that the only active ingredient in rotenone formulations is rotenone. That is false. The statement is correct, however, in stating that many other chemicals are in the formulations. But the revision has omitted the information that some of these so-called "inert" chemicals are known carcinogens, or have other deleterious properties.

For example, N-methyl pyrrolidone (NMP) is 10% of the composition of CFT Legumine (i.e., twice the amount of rotenone). NMP is considered a Substance of Very High Concern by the European Union authorities and is on the candidate list for banning as of February 2011. The concern is over its toxicity to reproduction—teratogenic in children. ([wiki.answers.com/Q/Will\\_N-methyl\\_pyrrolidone\\_be\\_banned\\_in\\_Europe](http://wiki.answers.com/Q/Will_N-methyl_pyrrolidone_be_banned_in_Europe)). The California Department of Health Services issued a Health Hazard Advisory in October 2006 to workers exposed to NMP. "You should treat NMP as a potential human reproductive hazard".([www.cdph.ca.gov/programs/hesis/Documents/nmp.pdf](http://www.cdph.ca.gov/programs/hesis/Documents/nmp.pdf))

There often is a delay in officially recognizing harm in chemicals used in our environment. In the case of rotenone, NMP and others, the evidence is accumulating about their harm. One of the reasons we enacted a Clean Water Act was so that we do not pollute our water systems and then find out later it was a mistake.

Rotenone persisted in the bottom sediments of Lake Davis for at least six months following the 2007 poisoning. Rotenone was measured in stream water 14 days after it had been applied. It had apparently persisted in bottom sediments and was being released back into the stream. These results indicate that CFT Legumine behaves in some unexplained and unknown ways. It is unknown if rotenone persisted in streams longer than this measured period. Monitoring was apparently not conducted beyond two weeks in streams (Erman and Erman, Comments on Draft NPDES permit, Silver King Creek, 2010).

The persistence of rotenone in stream sediments and ground water is a significant environmental concern that has not been analyzed by the LRWQCB. Hyporheic invertebrate life will be affected by the residual rotenone in the substrate. Ground water should also be monitored. The Agencies are assuming that hyporheic invertebrates will re-populate streams that are poisoned (Silver King Creek, Final EIS/EIR p. 5.1-45; 5.1-19; Response to Comments, pp. F-50, F-80). They seem to assume that the rotenone in bottom sediments will not affect these invertebrates. (Incidentally, even assuming they would not also be poisoned, these would only be the hyporheic invertebrates in the upper part of stream bottom sediments. Invertebrates lower in the

hyporheos are restricted to that habitat.) But the LRWQCB did not consider the effects of rotenone in the stream sediments and hyporheos in the NPDES permit issued in 2010 for poisoning Silver King Creek.

If the lower Silver King Creek rotenone project is carried out, rotenone concentrations in the stream water will be 2 to 4.6 times the mean concentration that was measured in the 1991–93 poisoning of the upper part of Silver King Creek. It is likely that even greater losses of invertebrate life will occur than did as a result of the 1991–93 poisoning. (Incidentally, this proposed revision gives the false impression that fish poisoning was conducted for only one year the last time on Silver King Creek. In fact, the poisoning was done twice a year for three consecutive years. The 2010 NPDES permit allows poisoning for the same duration.)

We note that all of the wording on the problems the CDFG has of applying potassium permanganate (another poison that kills aquatic animal life) to neutralize rotenone has been eliminated in the revisions, thus omitting the information that fish kills from potassium permanganate have occurred far below project boundaries in past poisoning episodes in the Lahontan Region.

The proposed revision to the Basin Plan ignores or incompletely or incorrectly states the provisions of the Clean Water Act Antidegradation Policy.

For example, new LRWQCB staff language in Exemption Criteria for Aquatic Pesticide Use, Purpose and Need for Exemption, paragraph 4, summarizes and re-words the federal Antidegradation Policy as “...that water quality shall be preserved unless it is determined that the lowering of water quality is necessary to accommodate important economic or social development. Additionally, it requires that water quality be maintained at levels capable of supporting existing beneficial uses.” This last sentence changes the wording and meaning of the Antidegradation Policy which is, “In allowing such degradation or lower water quality, the State shall **assure water quality adequate to protect existing uses fully (40 CFR 131.12(a)(2)).**” (Our emphasis added).

The LRWQCB staff is using their creative interpretation of the Policy to claim that after water has been poisoned, even if species have been lost and the biological community has been altered, the water is still **capable** of supporting species once the poison is gone and, therefore, the staff maintains the revised plan is in compliance with the Antidegradation Policy.

The Antidegradation Policy says that the beneficial uses themselves must be fully protected in any project that proposes lowering of water quality “necessary to accommodate important economic or social development.” This distinction between the two components: 1) lowering of water quality under certain circumstances and 2) fully protecting beneficial uses if water quality is lowered, is fundamental to the Antidegradation Policy. The latest version of the EPA Water Quality Handbook (Section 4, 2<sup>nd</sup> Edition, last updated on 11/06/2009) provides ample discussion of these two distinct components.

Elsewhere, in Chapter 4, the proposed revision states that “Similarly, the federal Antidegradation Policy (40 CFR Section 131.12) dictates that water quality shall be preserved unless degradation is necessary to accommodate important economic or social development.” The section quoted conveniently leaves out the next sentence (40 CFR Section 131.12(2)) of the policy, which is “In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully.”

The state and LRWQCB are not at liberty to rewrite the Clean Water Act or change the plain meaning of the words used to define the regulations except “States may adopt antidegradation statements more protective than the Federal requirement.” (EPA Water Quality Handbook, 2<sup>nd</sup> Edition, Section 4.3)

It is also not at the discretion of a regional board to decide to vacate portions of the Clean Water Act Antidegradation Policy in favor of other acts of the state or federal government unless such acts so dictate. The Endangered Species Act, for example, does not specify what methods are necessary to carry out its provisions or claim superiority

over the Clean Water Act. The purpose of the Regional Boards (among other things) is to implement the provisions of the Clean Water Act and Porter-Cologne Act.

In section 4.4.2 of the Water Quality Handbook, the meaning of protection of beneficial uses is expanded.

“No activity is allowable under the antidegradation policy which would partially or completely eliminate any existing use whether or not that use is designated in a State’s water quality standards. The aquatic protection use is a broad category requiring further explanation. Non-aberrational resident species must be protected, even if not prevalent in number or importance. Water quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species.”

The intent of allowing lowering of water quality while fully protecting existing uses was reviewed and further explained in the Preamble by the EPA during the last revisions of rules for the Clean Water Act: “In Sec. 131.12(a)(2) a phrase was added that ‘In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully’. This means that the full use must continue to exist even if some change in water quality may be permitted” (Federal Register Vol 48, No. 217, Tuesday, November 8, 1983/ Rules and Regulations. (51402).

“In its entirety, the antidegradation policy represents a three-tiered approach to maintaining and protecting various levels of water quality and uses. At its base (Section 131.12(a)(1): all existing uses and the level of water quality necessary to protect those uses must be maintained and protected. This provision establishes the absolute floor of water quality in all waters of the United States” (Federal Register Vol 48, No. 217, Tuesday, November 8, 1983/ Rules and Regulations. (51402).

Further, in response to comments not discussed in the Preamble to the proposed rule, EPA discussed three options for changes in the existing antidegradation policy. “Option 3 would have allowed changes in an existing use if maintaining that use would effectively prevent any future growth in the community or if the benefits of maintaining

the use do not bear a reasonable relationship to the costs.” EPA response was “...commenters believed that allowances should be made for carefully defined exceptions to the absolute requirement that uses attained must be maintained. EPA rejects this contention as being totally inconsistent with the spirit and intent of both the Clean Water Act and the underlying philosophy of the antidegradation policy.” (Federal Register Vol 48, No. 217, Tuesday, November 8, 1983 / Rules and Regulations (51409))

The proposed new language on fisheries management recognizes the violation of Antidegradation Policy (Draft Waste Discharge Prohibition and Exemption Criteria Language: Pesticide Basin Plan Amendment, p. 4): “*It is not appropriate or possible for the Regional Board to find that discharges within the zone of impact comply with federal and state antidegradation policies.*” Not only is the use of rotenone formulations at odds with the policies during the period of treatment, the Regional Board acknowledges (Chapter 4, p. 4.9-21–25 revised Plan) such use has long-term and permanent adverse effects on aquatic invertebrates and frogs – beneficial uses protected by the state. The staff’s justification for approving such a project anyway, is that the purpose of the project is of value to the people of the State.

What the Regional Board staff is doing by these proposed revisions is to eliminate the elements of the Antidegradation Policy that fully protect beneficial uses when government agencies, and some private entities, claim they need to lower water quality through use of aquatic pesticides. They have chosen to focus on the aspect of the Federal policy that allows, under limited circumstances, the lowering of water quality, while ignoring or redefining the simultaneous requirement of fully protecting resident aquatic life.

In conclusion, these proposed revisions by the staff of the Lahontan Basin Plan seem to reduce the responsibility and liability of the LRWQCB for all poison applications in the basin by public agencies and to permit an increase in poisoning by private agencies. The public will have to decide whether it serves the purposes of protecting health, safety and the environment, as claimed

repeatedly in this staff document, to spray or pour an increasing amount of poison over or into water for an ever-expanding variety of reasons, under the banner of “in the public interest.” We urge the Regional Board to deny these suggested revisions to the Lahontan Basin Plan.



ANTONIO R. VILLARAIGOSA  
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RONALD O. NICHOLS  
*General Manager*

May 12, 2011

Mary Fiore-Wagner  
Environmental Scientist  
Lahontan Water Board  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, CA 96150

Dear Ms. Fiore-Wagner:

Re: Draft Pesticide Basin Plan Amendment, Lahontan Region (Region 6)

The Los Angeles Department of Water and Power (LADWP) appreciates the opportunity to provide comments on the Draft Pesticide Basin Plan Amendment for the Lahontan Region (Region 6) Basin Plan. LADWP supports the proposed Amendment and applauds the Lahontan Region staff (staff) for developing an approach that recognizes and facilitates pesticide applications for beneficial purposes. LADWP concurs with all elements of the proposed Amendment described in Section I., items A., B., C., and D. below.

**I. A. LADWP Supports the “Waste Discharge Prohibition With Criteria for Exemption” Alternative to the Basin Plan’s Current Water Quality Objective**

As discussed at the meeting/conference call held May 2, 2011, the purpose of the proposed amendment is to address and remedy the Basin Plan’s (Plan’s) current Water Quality Objective, found on Pages 3-5 of the Plan: “Pesticide concentrations, individually or collectively, shall not exceed the lowest detectable levels, using the most recent detection procedures available. There shall not be an increase in pesticide concentrations found in bottom sediments. There shall be no detectable increase in bioaccumulation of pesticides in aquatic life.” As discussed by staff, the current water quality objective does not easily facilitate the use of pesticides to protect human health, or for ecological preservation, vector control, or emergency situations.

Therefore, LADWP supports the staff selection – Waste Discharge Prohibition With Criteria for Exemption - as the appropriate alternative to the current water quality objective, as was presented in Slide 4 of the “Pesticide Basin Plan Amendment Presentation” by Dan Sussman and Mary Fiore-Wagner, Environmental Scientists; and

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Richard Booth, Senior Engineering Geologist). LADWP concurs with the staff that the other alternatives - no action, or chemical specific numeric water quality objectives, would prove problematic.

#### **B. LADWP Supports Eligible Circumstances Approach to Pesticide Applications**

LADWP strongly supports the "eligible circumstances" for waste discharge exemptions, namely public health and safety, and ecological preservation (as per Slide 6 of the "Pesticide Basin Plan Amendment Presentation." This approach will enable entities such as LADWP to apply pesticides to 1) meet drinking water standards and therefore guard public health; 2) control algae that may not endanger public health but causes odors in drinking water; 3) control aquatic weeds that could impair critical and expensive water conveyances or distributaries ; and 4) repel invasive aquatic species that endanger habitats and native species, and/or water conveyances or distributaries. The protection measures applicable to pesticide applications, as described on Page 4, in the "Purpose and Need for Exemption" section of the Draft Pesticide Basin Plan Amendment (application methods, compliance with pesticide label instructions, implementation of best management practices), are appropriate and will ensure that any lowering of water quality is limited to the shortest time possible.

#### **C. LADWP Supports Discharge Prohibition Exemption Process**

LADWP believes that the general exemption process that would allow such applications, as described in Slide 8 of the "Pesticide Basin Plan Amendment Presentation" is stream-lined and clear. LADWP appreciates that the need for accelerated exemptions – for vector control and in response to emergency situations, such as when toxic algae develops, has been considered and included.

#### **D. LADWP Supports Development of a Discharge Exemption Application Form**

During the May 2 meeting/conference call, staff said that a discharge exemption application form has not yet been developed. LADWP supports development of this form, in order to streamline the exemption process and help ensure that applicants provide all necessary information.

The following items address those issues where LADWP has concerns.

### **II. Pesticide Applications Under Dry Conditions**

A. The Item that will be numbered as "6" in Section 4.1, now presented on Page 2 of the Amendment states: "The discharge of pesticides to surface or ground waters is prohibited.<sup>1</sup>" The referenced footnote (No. 1), which is found on the same page, reads: "Compliance with this prohibition will be assessed or measured by evidence of pesticide application to *liquid water* (emphasis added) or by analyzing water samples (from either surface or ground waters) for the presence of pesticides. Therefore, proper application or terrestrial pesticides directly to plants or animals located in a surface water (as defined by the Water Code) *under dry conditions* (emphasis added) should not result in

a violation of the prohibition, nor require the Regional Water Board to consider exemptions to the prohibition.”

LADWP believes that even though this footnote is detailed, the potential for confusion about the scope of dry conditions and exemption procedures still exists.

**Recommendation:**

Given the significance of “dry conditions” in California, and the need for absolute clarity, LADWP recommends that the footnote referenced above be revised and expanded as follows: “

“Compliance with this prohibition will be assessed or measured by evidence of pesticide application to *liquid water* (emphasis added) or by analyzing water samples (from either surface or ground waters) for the presence of pesticides. Therefore, proper application or terrestrial pesticides directly to plants or animals located in a surface water (as defined by the Water Code) *under dry conditions* should not 1) result in a violation of the prohibition, 2) should not require that the pesticide applicator submit to the Regional Board an application for a waste discharge exemption; and 3) should not require that the Regional Water Board issue an exemption to the discharge prohibition. As an example, the application of terrestrial pesticides to the dry stream beds of *ephemeral streams* would not require that a discharge exemption be obtained, because the lack of “liquid water” in the ephemeral stream bed constitutes a ‘dry condition’.”

LADWP also recommends that the above language be presented more prominently, by means of a new Amendment Section titled “Categorical Exemptions.”

**III. Pesticide Applications Adjacent to Surface Waters**

As discussed during the May 2 meeting, the ‘proper application’ of pesticides includes, at minimum, application in accordance with the pesticide label and the use of best management practices (BMPs) that are sufficient to prevent overspray, drift, and runoff to liquid surface waters.”

It is unclear whether the application of terrestrial pesticides *adjacent* to surface waters (such as along canals, to kill weeds and help maintain structural stability), if applied in accordance with the label, and when all protective measures, such as necessary Best Management Practices (BMPs), are in place, would or would not require the applicator to apply for a discharge exemption.

**Recommendation:**

LADWP therefore recommends that the Amendment address this issue more clearly with a Section titled “Pesticide Applications Adjacent to Surface Water” that reads: “Pesticide applications to land that is adjacent to surface waters is allowed, provided that the applicator, at minimum, applies the pesticides in accordance with the pesticide label and employs best management practices (BMPs) that are sufficient to prevent

Ms. Mary Fiore-Wagner

Page 4

May 12, 2011

overspray, drift, and runoff to liquid surface waters. Compliance with the prohibition of the discharge of pesticides to surface or ground waters will be assessed or measured by evidence of pesticide application *to liquid water* or by analyzing water samples (from either surface or ground waters) for the presence of pesticides.”

Thank you for this opportunity to provide comments. Should you have any questions regarding this letter, please contact Ms. Jennifer Pinkerton of the Wastewater Quality and Compliance Group at (213) 367-4230.

Sincerely,

A handwritten signature in blue ink that reads "Katherine Rubin". The signature is written in a cursive style.

Katherine Rubin

Manager of Wastewater Quality and Compliance

JP:db

c Daniel Sussman, Lahontan Water Board

c: Ms. Jennifer Pinkerton



April 13, 2011

Via E-mail

Mary Wagner & Daniel Sussman  
Lahontan Water Board  
2501 Lake Tahoe Blvd., South Lake Tahoe, CA 96150  
[mfwagner@waterboards.ca.gov](mailto:mfwagner@waterboards.ca.gov) & [dsussman@waterboards.ca.gov](mailto:dsussman@waterboards.ca.gov)

Re: Proposed Amendments to the Water Quality Control Plan for the Lahontan Region:  
Pesticide Prohibition with exemption Criteria

Dear Ms. Wagner, Mr. Sussman, and Members of the Lahontan Water Board,

These comments are submitted on behalf of the League to Save Lake Tahoe (“League”). As referenced in our comment letter dated August 31, 2009, the League continues to remain concerned with the detrimental, cumulative, and long-term impacts associated with pesticide use in water. “The current pesticide water quality objective essentially prohibits pesticide application to water by requiring the pesticide concentration to not exceed the lowest detectable levels.” Lake Tahoe has special designation as an Outstanding National Resource Waters (ONRW), which affords the Lake a strict non-degradation standard.

The League has been a strong advocate for protecting the Lake from the introduction of aquatic invasive species (AIS), which have the potential for irreversible impacts to the Lake’s ecosystem and physical environment. For the control of AIS that have already established themselves in the Lake, such as Asian clam, Eurasian milfoil, and curly leaf pondweed, bottom barriers and similar mechanical methods need to be employed. For invasive warm water fish species like large-mouth bass and blue gill, electro-shock is a method that can be used without pesticide application. Realistically, these well-established invasive species cannot be eradicated, but only controlled at this point.

With respect to the significant impacts associated with pesticide use, conflicts with the current water quality objective, Lake Tahoe’s designation as an ONRW, and alternatives that exist that do not require pesticide application, the Lake Tahoe Basin needs to be excluded from this amendment, with the following exemptions:

1. In the emergency instance of the first introduction of the destructive quagga or zebra mussels within a water body in the Lake Tahoe Basin, pesticides may be considered, if eradication is probable. This needs to be limited by declaration of the California Governor.

Mary Wagner & Daniel Sussman, Lahontan Water Board  
League to Save Lake Tahoe Comment Letter –Proposed Amendments for the Lahontan Region:  
Pesticide Prohibition with Exemption Criteria  
Page 2 of 2  
April 13, 2011

2. In order to directly safeguard human health and safety, the vector control of mosquitoes should be maintained, with pesticides allowed, if necessary.

Thank you for this opportunity to provide further comments on the proposed amendments to the water quality control plan for the Lahontan region: pesticide prohibition with exemption criteria.

Sincerely,

Carl Young  
Program Director  
League to Save Lake Tahoe  
2608 Lake Tahoe Blvd  
South Lake Tahoe, CA 96150

**Daniel Sussman - Pesticide Basin Plan Amendment**

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**From:** Chuck Bell <chuckb@sisp.net>  
**To:** Mary Fiore-Wagner <MFWagner@waterboards.ca.gov>, <dsussman@waterboards.ca.gov>  
**Date:** 5/9/2011 2:43 PM  
**Subject:** Pesticide Basin Plan Amendment  
**CC:** Jackie Lindgren <Jackie.Lindgren@ca.nacdn.net>

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To: Mary and Dan

From: Chuck Bell, Pres. Mojave Desert Resource Conservation District - 760 964 3118

Date: 5/9/11

Re: **Lahontan's Pesticide Basin Plan Amendment.**

We appreciate both the scoping session and your excellent presentation at our recent Mohave Weed Mt. Area meeting in Barstow. The Amendment is obviously more practical and fair than the current policy.

It will be difficult for us to attend the Bd. hearing this Wed. evening in Victorville - but if you think critical - one of us will make it.

Feel free to pass this on to your Bd. at the hearing:

Per discussions at the Barstow meeting?::

"Water conservation" will be added as a criterion in support of weed management.

Jackie sent you a copy of the Corp's "Regional General Permit (RGP) 41 - (removal of exotics within Waters of the U. S. in s. Calif.). We assume the Amendment does not conflict with its provisions.

Compliance with a pesticide's label is a major element of the Amendment.

If there is "no discharge to surface water" - there is no need for the exemption or filing - and depending on circumstances - Lahontan will respond accordingly in writing to any filing or other contact in relation to the Amendment?

Removal of exotics within or on the banks of wastewater ponds - water from which does not directly flow out as - or to - surface water - might warrant special provisions under the Amendment?

Grant cut-off dates might be considered under "Time Sensitive" provisions - or at least prioritized accordingly?

Again, thanks for your outreach.

Chuck

**Nevada Division of Environmental Protection  
Bureau of Safe Drinking Water and Bureau of Water Pollution Control**

**Comments to the**

**Lahontan Regional Water Quality Control Board  
“Draft Basin Plan Language, Attachment 2: Draft Waste Discharge Prohibition and  
Exemption Criteria Language – Pesticide Basin Plan Amendment”**

General Comments:

- The Nevada Division of Environmental Protection (NDEP) appreciates the opportunity to comment on this important document and looks forward to working with the Lahontan Regional Board on these projects in the future.
  
- The Section-Specific comments include an item designed to target the fact that NDEP intends to limit our interest in proposed projects to those that only involve shared waters that exist within Nevada (i.e. Lake Tahoe) or interstate waters that flow into Nevada (i.e. the Truckee, Carson & Walker Rivers).
  
- As included in the Section-Specific Comments, NDEP requests active involvement in the review and decision-making process related to this Basin Plan. The dynamics of water bodies make it difficult to predict outcomes of proposed projects, and this is a good step toward ensuring that all parties are working together to ensure protection of our natural environment and communities who use our waters for consumption.
  
- As was discussed on the May 9, 2011 conference call, coliform and turbidity can be secondary adverse effects in projects designed to eradicate invasive species. Even for non-chemical approaches, it is prudent to evaluate and track projected and actual effects a project will have on drinking water quality. This is true of all water purveyors, but in the Tahoe Basin in particular, systems with Filtration Avoidance status must be actively involved in this evaluation process going forward with each project. NDEP comment on this Lahontan Regional Board Draft Basin Plan does not constitute concurrence that the future projects will not result in Filtration Avoidance status issues. With that said, the detection of a regulated chemical would not, in and of itself, nullify Filtration Avoidance status.
  
- As was also discussed on the call, the application of pesticides has the potential to impact any drinking water source, filtered or unfiltered. Intakes for filtration treatment plants are also

important to consider as they are designed to treat for bacteria, viruses and protozoa, not chemicals.

- NDEP recommends that any Basin Plan Aquatic Pesticide Use Exemptions granted by the Lahontan Regional Board be handled on a project-specific basis and that recurring annual “blanket” Exemptions not be utilized.

Section-Specific Comments:

All comments refer to the “*Draft Basin Plan Language, Attachment 2: Draft Waste Discharge Prohibition and Exemption Criteria Language – Pesticide Basin Plan Amendment*” Mar 2011, *Draft for Public Review*

- At the bottom of page 2, the NDEP suggests that the definition of a “pesticide” be expanded to include non-chemical approaches in order to be able to address secondary adverse effects from biomass decomposition & other issues. If the Lahontan Regional Board has another regulatory vehicle to address this concern, the NDEP is interested in discussion on what that mechanism is. The following language is offered:

For the purposes of this Exemption, “pesticides” also includes non-chemical applications of controls for aquatic animal or plant pests that could have a temporary adverse effect on water quality.

- On page 7, the NDEP requests consideration of the following language insertions in the section regarding Exemption Criteria for Aquatic Pesticide Use. The text in red was suggested by CDPH on May 19, 2011; however, the NDEP suggests amending the language to be less specific about distance to a surface water intake.

An exemption request must contain the following information acceptable to the Regional Board. The Regional Board will act in consultation with the California Department of Public Health (CDPH), the Nevada Division of Environmental Protection (NDEP) and drinking water purveyors for review and acceptance of the request. The NDEP will limit involvement to interstate waters that exist within, or flow to, the State of Nevada.

1. Project Information shall be submitted with four (4) copies and is to include:

- a. Project description including, but not limited to, proposed schedule, duration, name of pesticide, method and rate of application, spatial extent, water body, control/mitigation measures to be used, contact information.

b. Purpose and need for project.

c. The chemical composition of the pesticide to be used, including inert ingredients.

d. An estimate of the maximum foreseeable concentrations of pesticide components in any surface water intake used for drinking water supplies ~~within 1/2 mile of~~ with any potential to be impacted by the point of application.

e. Public notification and warning plan must be implemented before and during the project and include any water use restrictions or precautions during treatment if necessary.

~~f. Suitable measures will be taken to identify~~ Documentation that outreach was conducted to communicate with drinking water purveyors with potentially affected sources of potable surface and ground water intakes. Drinking Water Purveyors will respond, stating their interest in continuing involvement in the project, or if they do not believe the project has the potential to adversely affect their water supply. The project proponent will, and to provide potable drinking water where necessary and will obtain any necessary permits from CDPH and NDEP for supply of the potable drinking water.

g. Spill contingency plan to address proper transport, storage, spill prevention and cleanup.

In the proposed language offered in item f, the NDEP anticipates that a list of drinking water purveyors could be developed and a project proponent would simply be required to contact everyone on the list to determine their interest in continued involvement.

- On page 8, the NDEP request consideration of the following language insertion in the section regarding Exemption Criteria for Vector Control.

2. Aquatic pesticide applications must minimize impacts to beneficial uses by implementing BMPs to limit the effects of the pesticide to the shortest time and within the smallest area necessary for project success. If the beneficial uses include drinking water, then the impacts must be eliminated.

Jennifer L. Carr, P.E., C.E.M.  
Chief, Bureau of Safe Drinking Water

June 3, 2011  
P:/BSDW/Bureau Chief/Unique Issues/

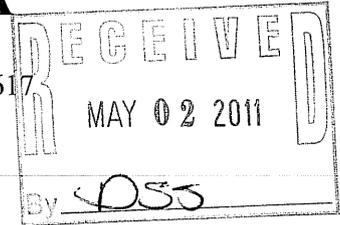


# COUNTY OF NEVADA

STATE OF CALIFORNIA

950 Maidu Avenue, Suite 200 • Nevada City, California 95959-8617

## BOARD OF SUPERVISORS



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Ed Scofield, 2nd District (Chair)  
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Clerk of the Board



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Web: [www.mynevadacounty.com/clerkofboard](http://www.mynevadacounty.com/clerkofboard)

April 26, 2011

Lahontan Regional Water Quality Control Board  
ATTN: Dan Sussman  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, California 96150

SUBJECT: Support for Proposed Amendment Regarding Consideration of Aquatic Pesticides

Dear Mr. Sussman and Members of the Board:

After evaluating recommendations from the Nevada County Agricultural Commissioner and the County Fish and Wildlife Commission, we support the development of the plan amendment. The current policy of prohibiting aquatic pesticide use for the control and eradication of aquatic invasive species is obsolete in light of the increasing threats the Lahontan Region is experiencing from these organisms. From our perspective, these threats seem to have accelerated in the last decade. The plan amendment is unquestionably warranted.

We strongly recommend that you include the establishment of a rapid assessment and response team in order to expeditiously evaluate and treat newly-identified infestations before they develop to major crises. Such a team would ideally include appropriate experts from local government, the university system and industry as it is unreasonable with today's budgetary constraints to expect Lahontan to shoulder the full burden.

An additional safeguard would be to include a requirement to notify those who use water for agricultural purposes when aquatic pesticides are being applied.

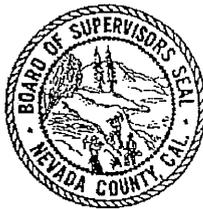
Serious local, regional, and national economic impacts have occurred and will increase unless policy is modified in light of these changed conditions. A few examples would be Davis Lake and Pike eradication, increase in wild land fire frequency cycles, loss of agriculture productivity due to invasive weeds, threats from diseases such as West Nile Virus, Avian flu and others, and declining population trends for many native wildlife species.

The LRWQB region has witnessed unprecedented modification to aquatic and terrestrial habitats from invasive species in the last two decades. Pest management programs can be established to control existing infestations such as Eurasian Watermilfoil. The exemption to the prohibition can enable public agencies to quickly eradicate Quagga or Zebra mussel if they were introduced into the region's water bodies.

Sincerely,

A handwritten signature in black ink that reads "Ed C. Scofield". The signature is written in a cursive style.

Edward C. Scofield  
Chairman, Board of Supervisors



**RESOLUTION No. 11-178**

**OF THE BOARD OF SUPERVISORS OF THE COUNTY OF NEVADA**

**RESOLUTION IN SUPPORT OF THE DRAFT AMENDMENT  
TO THE WATER QUALITY CONTROL PLAN FOR THE  
LAHONTAN REGION (BASIC PLAN) TO ALLOW SOME  
LAWFUL DISCHARGE OF AQUATIC PESTICIDES**

WHEREAS, the Lahontan Regional Water Quality Control Board's existing pesticide water quality objective in its Water Quality Control Plan for the Lahontan Region prohibits application of pesticides to surface waters; and

WHEREAS, the proposed amendment to the Water Quality Control Plan allows the Water Board to protect water quality from the unauthorized use and unintended effects of aquatic pesticides while still allowing some lawful discharge where that use is in the public interest; and

WHEREAS, the use of aquatic pesticides is necessary for the protection of public health and safety, the maintenance or restoration of certain beneficial uses and may be justified for certain situations where alternatives may be infeasible or inadequate to achieve effective control of pests; and

WHEREAS, the Nevada County Fish and Wildlife Commission, during its meeting on April 5, 2011, approved a recommendation that the Board of Supervisors support the proposed amendments with the addition that they include a requirement to notify those who use water for agricultural purposes when aquatic pesticides are being applied.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Nevada hereby supports the draft amendment to the Water Quality Control Plan for the Lahontan Region (Basin Plan) to allow some lawful discharge of aquatic pesticides. In addition to the draft amendment, the Water Board should require notification of those who use water for agricultural purposes when aquatic pesticides are applied.

PASSED AND ADOPTED by the Board of Supervisors of the County of Nevada at a regular meeting of said Board, held on the \_\_\_\_\_ 26th \_\_\_\_\_ day of April \_\_\_\_\_, 2011, by the following vote of said Board:

Ayes: Supervisors Nate Beason, Ed Scofield,  
Terry Lamphier, Hank Weston & Ted S. Owens.  
Noes: None.

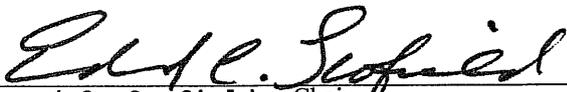
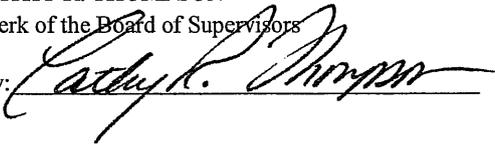
ATTEST:

Absent: None.

CATHY R. THOMPSON  
Clerk of the Board of Supervisors

Abstain: None.

By:

  
Edward C. Scofield, Chair

DATE	COPIES SENT TO
4/27/11	LRWQCB
	Agric. Comm.

April 12, 2011

Tahoe Area Sierra Club

S. Lake Tahoe, Ca

Contact: Co-Chairs:Laurel Ames 530-541-5752

Ron Grassi, 530-386-3862

**TASC BRIEF COMMENTS ON THE BASIN PLAN AMENDMENTS TO ACCOMMODATE PREVIOUS PESTICIDE USE PRACTICES AND INCREASE THE OPPORTUNITY FOR MORE USE OF MORE POISON IN THE LAKE TAHOE BASIN, THE EASTSIDE OF THE SIERRA AND THE EASTSIDE OF THE CALIFORNIA DESERTS.**

The TASC opposes unlimited poisoning experiments that last an unlimited amount of time, and produce unknown results. The accumulation of hundreds of these experiments is fraught with potential short and long-term impacts and it is entirely unknown whether the experiments will actually benefit the public in the long-term. All comments below apply equally to the entire Lahontan Basin and references to Lake Tahoe do not exclude the entire Lahontan Basin.

Comments

Lahontan RWQCB is proposing a basin plan amendment that accommodates and facilitates use of pesticides, herbicides and piscicides in the waters of the Lake Tahoe Basin and its tributaries. While mosquito abatement is expected to continue with or without the basin plan amendment, the application of these poisons directly to the waters of the basin is intended to kill plants, fish, bugs and macroinvertebrates in the waters and the bottom sediments.

The piscicide rotenone is prohibited for use on land and in marine bays, lagoons and estuaries. It is only allowed to be used in fresh water. It is banned in the EU for all applications. This poison kills everything in the water that uses oxygen.

The amendments to the Basin Plan constitute a dangerous action that permits long-term impacts that are unknown to be undertaken over an unlimited amount of time until results are actually known, and that time is not known. The fact that the permit allows three unknowns (amount of time to test the poison and its killing ability in the lake and tributaries, a date when the results will be known, and the long-term impacts) all in the name of the public benefit is precarious at best.

The long-term impacts are unknown and the public benefit is unknown.

This is an experiment with no limits. Projects can receive a permit, take three years to complete, and two years later the monitoring of results begins, and

sometime after that, results will be released, giving the public a five year project plus at least five to ten years for long-term results to be known

The process of permit to results described above is not limited to the number of experiments that can be conducted at any time. The only alleged limit is the requirement of an environmental document by the applicant. That kind of limit is about as fungible as possible – the agency can change the environmental document requirement to accommodate the poisoner. The agency can reduce the scope of the environmental document to accommodate the poisoner. The agency can waive the environmental document to accommodate the poisoner.

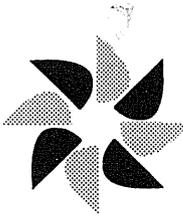
There is no limit on the number of projects that can be undertaken anywhere in the Tahoe Basin or in the entire eastside of the state in the Lahontan Region. In the next 20 years, hundreds of large poisoning projects can be undertaken even though most of the results of these poisonings won't be known for years.

#### WHERE IS THE PUBLIC BENEFIT?

The Proposed Basin Plan amendment claims a rigorous monitoring program. There is no contingency for a poisoner failing to monitor because of taxpayer funds being cut. There is no contingency for a poisoner failing to monitor because a contract was flawed. There is no contingency for a poisoner failing to monitor because climate change thwarted the monitoring regime. In short, there is no backup plan for the failure to perform the monitoring that is allegedly so rigorous.

The Lahontan RWQ basin is faced with using an old technique (poisoning) because it is both accommodating and facilitating for short-term solutions.

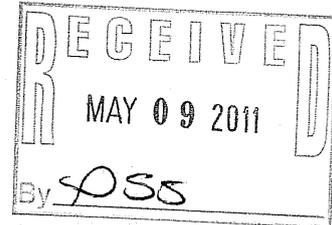
The action is unconscionable. TASC requests that the Regional Board at the very least reduce the number of poisoning experiments to two and await complete results of long-term trends until authorizing any more such projects.



# Tahoe Keys

## PROPERTY OWNERS ASSOCIATION

356 Ala Wai Blvd.  
So. Lake Tahoe, CA 96150  
FAX (530) 541-2521  
(530) 542-6444



May 4, 2011

Mary Wagner  
Dan Sussman  
Lahontan Water Control Board  
2501 Lake Tahoe Blvd.  
South Lake Tahoe, CA 96150

**Regarding: The Proposed Amendments to the Water Quality Control Plan for the Lahontan Region, Pesticides Prohibition with exemption criteria.**

Dear Lahontan Staff and members of the Lahontan Water Board:

The Tahoe Keys Property Owners Association (TKPOA) is a complex homeowners association of 1,500 homes, 5,000 citizens, and 11 miles of waterways in South Lake Tahoe. We commend the Lahontan Water Control Board and Lahontan Staff for their vision and perseverance in the ongoing challenge of controlling and irradiating invasive aquatic weed species in Lake Tahoe. We support the Lahontan Staff for their well-researched recommendation to the Lahontan Water Control Board allowing exemptions to the prohibition of aquatic herbicides in Lake Tahoe.

As board members, we treasure Lake Tahoe, and see ourselves as the current stewards of this national resource. While we may not agree on many local, regional, and national issues within our own ranks, we are united in our conviction that the use of limited and selective herbicides to control invasive aquatic weeds is not only prudent, but vital and essential at this important point in history. **If the spread of these species is to be controlled and reversed, it must be done now, while it is still possible.**

Current methods of controlling invasive aquatic weed species are successful only in maintaining open channels for navigation, but do not destroy the invasive weed infestations. As harvesters of aquatic weeds at a commitment level unmatched anywhere in Lake Tahoe, Tahoe Keys can attest to the limitations of this and other non-chemical methods. ***The problem is getting worse. It can still be controlled. It can still be eradicated. But we must be granted the tools to do so now.***

07-00153

the Keys) will demonstrate that the controlled application of herbicides in the Keys will not adversely impact surface water intakes in other areas of Lake Tahoe. The remoteness of the Keys to the intakes areas and the rapid dispersal of low herbicide concentrations used will assure compliance to the highest standards.

Our own Water Quality Committee here at Tahoe Keys, as well as our Board of Directors and upper staff, are actively involved with the Lake Tahoe Aquatic Invasive Species Work Group (LTAISWG) as they seek to explore all viable methods of controlling invasive aquatic weeds and other species in Lake Tahoe and in the Keys. For the next two seasons we will be partnering with this multi-agency body, of which Lahontan Water Control Board is a part, on a planned project in the keys this summer and next to test the effectiveness and feasibility of non-chemical management techniques. This comprehensive research will also include application of a surrogate, non-toxic dye to evaluate the dispersal and efficacy of focused herbicide application. It will also provide a basis for development of a long-term, integrated, aquatic weed management program for the Keys and will provide pertinent information for potential application to use herbicides, once the basin plan amendment is approved.

**We urge the Water Board to allow us the tools to contain and, we are confident, eventually eradicate invasive aquatic weeds in Lake Tahoe.**

We have heard from concerned and caring citizens that the eradication of invasive weeds is not possible, and that, because it is not possible, the careful use of chemical methods should not be allowed. **We strongly disagree with this contention of surrender and abandonment.**

**Eradication is possible!** But, more importantly, even if absolute eradication was not possible, this should not prohibit the use of this vital and proven tool against the problem. Whether herbicides would or would not completely eradicate the problem, they have been proven time and time again to be the best method for the control of invasive aquatic weeds.

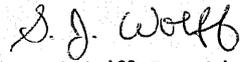
The TKPOA has invested vast resources towards controlling weeds in the Keys by the use of weed harvesters. A full summer crew is employed to operate 4 large mechanical weed harvesters which run 8 hours a day and 6 days a week. We can only remove weeds to a depth of 5-feet. After harvesting, the majority of weeds remain to adversely impact beneficial uses, degrade water quality by increasing water temperature and recycling nutrients, providing habitat for non-native warm water fish, and impacting the safety of water contact recreation. Because of these known adverse impacts, it is in the best interest of Lahontan to preserve and improve water quality by allowing the careful, controlled use of all proven methods to control aquatic weeds.

**We must be allowed to manage invasive aquatic weeds using all available tools, and we must begin doing so as soon as possible.**

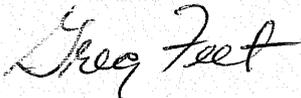
Please allow us to employ every reasonable and proven tool available to control the spread of invasive species in Lake Tahoe, and do so while the eradication of these species is still a viable goal.

We thank the Lahontan Board and the Lahontan Staff for their effort and courage in drafting this proposal. We particularly thank Dan Sussman and Mary Wagner for their unprecedented accessibility to our Water Quality Committee, Board, and manager in these past months.

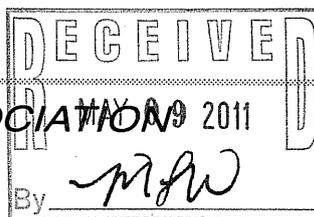
Sincerely,



Joey Wolff, President TKPOA  
Board of Directors



Greg Feet, General Manager  
Tahoe Keys Property Owners Association



356 Ala Wai Blvd.  
So. Lake Tahoe, CA 96150  
FAX (530) 541-2521  
(530) 542-6444

## **Lahontan Basin Plan Amendment – Aquatic Invasive Species**

### **Comments from the Tahoe Keys Property Owners Association**

May 2011

The Tahoe Keys Property Owners Association (Association) is comprised of 1529 owner/members. The Tahoe Keys is a master planned community located at the western edge of the City of South Lake Tahoe, about 1 mile north of the junction of state highways 50 and 89. The association or its members privately own all lots and canals.

The Association membership is very involved in, and concerned about the issue of Aquatic Invasive Species (AIS) at Lake Tahoe. About 30 years ago the first non-native weeds were spotted in Lake Tahoe. No one knows for sure where they came from, but it's safe to say that more than one introduction of these weed species has been made to Lake Tahoe, and probably in numerous locations. At least two invasive weed species (Eurasian Milfoil and Curly leaf pondweed) and two invasive fish species (Black Bass & Bluegill) now thrive in many of the harbors and marinas around the lake.

The Association has an annual weed control program that involves cutting and disposing of the weeds that encroach upon the navigation corridors. These techniques do not kill or eliminate these invasive weeds. The history of Milfoil and Curly leaf in North America shows a steady spread from the east to west coasts. The weeds spread from one fresh water body to another in numerous ways. Thousands of lakes and streams are affected.

Aquatic invasive weeds are spreading from the harbors and marinas to near-shore areas throughout Lake Tahoe. It is important that all agencies and organizations combine efforts to control, and where possible, eradicate AIS. Everyone must be vigilant to prevent re-introduction of AIS after infestations are destroyed, including guarding against introduction of AIS like Quagga and Zebra mussels.

The Association endeavors to be a good neighbor and is a partner-member of the Lake Tahoe Aquatic Invasive Species Working Group (WG). The WG is made up of representatives from many agencies, including researchers from UC Davis, University of Nevada-Reno, the Tahoe Regional Planning Agency, the Lahontan Region Water Quality Control Board, US Fish & Wildlife Service, US Forest Service, the Tahoe Resource Conservation District and many other state and local agencies.

The Association and the WG are cooperating in a multi-year study of AIS in the Tahoe Keys waterways. This includes a temperature/turbidity study, removal of non-native fish, and a dye study to track patterns of water movement throughout the canals. Other cooperative work being considered includes a 2-year test of non-chemical weed control techniques such as jute mats and permeable bottom barriers.

The Association commends the efforts by the Lahontan Board to amend the Basin Management Plan to include permitted exemptions that allow carefully planned and monitored used of aquatic herbicides. This is vital to the overall strategy of locating and destroying infestations of invasive weeds.

The Association rejects the notion spread by some organizations that established infestations of AIS cannot be controlled or eliminated. We are not ready to abandon this effort to destroy invasive weeds. Every reasonable alternative and solution must be tried and the best alternatives implemented.

The Association Board believes that the ultimate strategy to control and eradicate infestations of AIS must provide a wide variety of tools, and include use of aquatic herbicides that have been proven to be effective and safe throughout the United States.

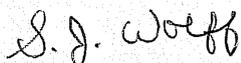
The Association supports inclusion of control techniques that are both safe AND economically feasible. Those who say that aquatic herbicides cannot ever be used at Lake Tahoe under any circumstances would doom this natural gem to the impacts AIS have on native fish and plants. If the techniques are limited to non-chemical methods that may be highly expensive, few if any private or public organizations will be able to afford to employ their use. Banning any use of aquatic herbicides also prevents adopting future advances in herbicide design and technology.

Aquatic herbicides must be one of the tools that are authorized. Special safe-guard techniques can be employed now and in the future that assure that aquatic herbicides do not have impacts upon open-lake environments here at Lake Tahoe.

The Lahontan Basin plan amendment will require strict standards be met by any project proponents, assuring that the herbicides used will not adversely affect the Lake Tahoe environment.

Approval of use of herbicides requires that these substances dissipate to an inert undetectable state within specific timeframes. Domestic water supplies will not be affected.

The Tahoe Keys, due to its geographic location, physical characteristics and isolation make it possible to use herbicides, in a carefully designed and controlled manner, without affecting the open-lake areas of Lake Tahoe.



**JOEY WOLFF**  
President, Tahoe Keys Property Owners Association

## Notes for Lahontan Meeting – 4/13/2011

I'm a resident of the City of SLT

I've been following the AIS issues for several years. I'm very concerned about what the long-term affects of AIS might be on LT, specifically non-native weeds, mussels and clams.

Few cost effective techniques exist for controlling the spread of non-native weed species like milfoil and curly leaf pondweed.

We worry that if the control methods are too expensive, the problems of AIS won't be dealt with quickly, if at all. As agency budgets continue to shrink, partnerships will be one way we might be able to fund this work...but only if the partners can afford to be partners.

We encourage Lahontan to get a permitting process for use of aquatic herbicides approved as-soon-as-possible so that these weed infestations in the harbors and marinas can be treated effectively...before it's too late.

I thank the board for pursuing this effort.

Tom Spencer

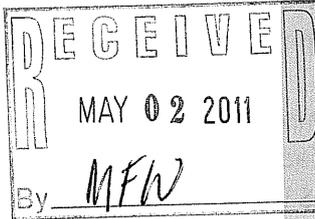
951-205-8862

POB 13140, SLT, 96151

[rangertom@earthlink.net](mailto:rangertom@earthlink.net)



**Tahoe Water  
Suppliers  
Association**  
Protect the Source



**TWSA Members:**

*Cave Rock Water System  
Edgewood Water Company  
Glenbrook Water Company  
Incline Village GID  
Kingsbury GID  
Lakeside Park Association  
North Tahoe PUD  
Round Hill GID  
Skyland Water Company  
South Tahoe PUD  
Tahoe City PUD  
Zephyr Water Utility*

April 27, 2011

Ms. Mary Wagner, Environmental Scientist  
Lahontan Regional Water Quality Control Board  
2501 Lake Tahoe Blvd. South Lake Tahoe, CA 96150

Dear Ms. Wagner,

Thank you for all your hard work to choreograph a working group to further research the Tahoe Water Suppliers Association's (TWSA) drinking water concerns into the development of the LRWQCB Basin Plan Amendment, regarding pesticide/herbicide chemical use.

We look forward to working with US EPA, NDEP, CDPH and LRWQCB on determining, if possible, how the proposal of chemical use will affect the filtration exempt status of the 6 TWSA members with that status.

I am assuming the spoken and submitted public comment from the LRWQCB meeting in South Lake Tahoe on April 13, 2011 will be incorporated into the record.

On behalf of the TWSA, we wish to have the following comments included:

The Tahoe Water Suppliers Association (TWSA) consists of public water suppliers in the Lake Tahoe Basin whose source of drinking water is Lake Tahoe. The majority of TWSA members pull water directly from Lake Tahoe to service their customers. The purpose of the TWSA is to protect the quality of the purveyors' drinking water from waterborne contaminants that are potentially harmful to human health. Source water protection is an effective tool in a multi-barrier approach to protecting drinking water.

The Lake Tahoe watershed has benefited from a long history of source water protection, allowing local water purveyors to supply exceptionally high quality drinking water to their customers, with minimal treatment. Several water providers maintain a rarely granted status for a drinking water provider within a watershed open to multiple uses; holding filtration exemption status with the US EPA regarding water treatment requirements.

There are 160,000 public water systems in the United States.  
 There are only 60 filtration exempt water systems in the entire nation.  
 6 of those 60 - are Tahoe Water Supplier Association members, here at Lake Tahoe.  
 It is exceptionally rare for EPA to grant filtration exemption status to a drinking water provider located in a watershed open to multiple uses, such as Tahoe.

Loss of the filtration exemption status would be decimating to area water suppliers.  
 Upgrading their existing facilities to filtration plants would require land expansion not available in the Basin, and at least \$10 million dollars per agency in capital expenses.

Due to the implications to drinking water supplies posed by chemical use; the TWSA is opposed to adoption of the proposed Basin Plan Amendment.

However, the TWSA realizes that the proposed amendment changes are related to the need for revised statutes to address vector control, aquatic invasive species and other water quality concerns within the entire Lahontan region; and that the existing regulations do not allow the LRWQCB to address these needs.

Therefore we wish to voice our most pressing concerns:

- 1) Lake Tahoe is a Tier 3, Outstanding National Resource Water (ONRW). The Tahoe Water Suppliers Association supports the continued prohibition on the use of any chemical agents in Lake Tahoe. If the LRWQCB does not want to grant an ongoing prohibition for Lake Tahoe, at a minimum provide a prohibition for 5 to 10 years at Lake Tahoe. This would allow for Lahontan's project review process to be developed. Through this process, the scientific documentation of selected chemical use affects on drinking water could be vetted in the lower tier water bodies within the Lahontan Board's purview.

Regarding the Tier 2 lands in the Tahoe watershed, allow selected chemical use and related waste discharge - only for projects related to public health, vector control and protection of drinking water supply. These projects must be subject to rigorous project review, including water purveyor review, before approval.

In the event of an emergency within Lake Tahoe, include language granting the LRWQCB a special exemption category. This category would allow LRWQCB to permit possible chemical use and waste discharge only after strict project review (inclusive of review by a potentially affected water provider) in the case of an emergency situation related only, to: public health, vector control and protection of drinking water supply.

- 2) Within this proposed Basin Plan Amendment, there is no reference to Lake Tahoe's status as a bi-state regulated water body. It is of great concern to the TWSA members

that the Nevada Department of Environmental Protection has not been formally involved or is even referenced in the development of this document.

- 3) All consideration of potential water quality impacts has been limited to the residents of the State of California. The Nevada Lake Tahoe area, the Truckee River Corridor and the final outlet at Pyramid Lake all have the potential to be affected by proposed projects at Lake Tahoe within California.

*(Page 15) This degradation\* of water quality may be allowed only if the Water Board finds that some degradation is in the best interest to people of the State, and that the lowering of water quality will not unreasonably affect the designated beneficial uses. Similarly, the federal Antidegradation Policy (40 CFR 131.12) requires that water quality be preserved unless degradation is necessary to accommodate important economic or social development.*

- 4) The EPA definition of 'long term' is not defined.

Any proposed project which has the potential to impact drinking water quality for even a short period of time may have the potential to affect the filtration exemption status and consumer confidence of an affected water purveyor.

*(Page 21) EPA guidance has not defined temporary and short-term specifically, but views these terms as limiting water quality degradation for weeks or months, not years.*

- 5) Mitigation Measures and Water Supplier Purview need clarification.

The TWSA has developed in cooperation with the US Army Corp of Engineers, a Risk Assessment Model which can be used to evaluate potential impacts to the drinking water supply of purveyors in certain areas of Lake Tahoe. This model may be used to evaluate potential impacts from a proposed project.

Due to storage limitations, any project having impacts longer than 1 day could create major service issues for surface water providers, and undermine consumer confidence in the quality of the municipal water supply. How much water would be provided per customer and for how long?

The volume of water needed for this mitigation measure need to be realistically evaluated. Many providers service thousands of customers. Using an alternative source of water during a project as a sufficient mitigation for the systems at Lake Tahoe, may not be realistic.

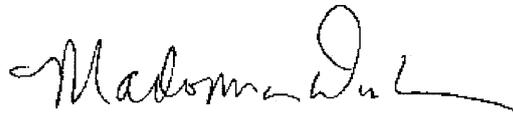
How will the permitting process delineate the geographic area of an "affected water purveyor?" How will the purview of the water provider be upheld? What happens if a water provider does not agree to proposed mitigation measures?

*(Page 52) In these pesticide projects, the proposed amendment's exemption criteria require that project proponents coordinate with potentially affected water purveyors and provide potable drinking water where necessary. That coordination should reduce the potential impact to water supplies, but the*

*agreement reached by the coordinating parties is the purview of the water suppliers [CCR Section 15091(a)(2)].*

*(Page 21) If a pesticide application project is proposed in an ONRW, like Lake Tahoe, the project must satisfy all applicable project criteria, which include compliance with water quality objectives specific to the affected waterbody and receiving water limitations. Permits that are issued to regulate the aquatic pesticide discharges will incorporate numeric receiving water limitations where State or US EPA-based water quality objectives or criteria are available. Additionally, the exemption criteria require implementation of control measures to limit the spatial extent and the temporal impact of the discharge. Compliance with these limitations assures that water quality is sufficient to support beneficial uses.*

Respectfully submitted on behalf of the TWSA Board,

A handwritten signature in black ink, appearing to read "Madonna Dunbar". The signature is fluid and cursive, with a long horizontal stroke at the end.

Madonna Dunbar, *Executive Director*, Tahoe Water Suppliers Association

1220 Sweetwater Road  
Incline Village, Nevada  
89451  
775-832-1212  
mod@ivgid.org

**Reference: excerpted sections of concern:**

Page 15: "Receiving waters" are defined in the permits as anywhere outside the treatment area at anytime and anywhere inside the treatment area after project completion. The Statewide Aquatic Pesticide permits do not require the duration of the treatment event to be discretely outlined in the permits, but the temporal extent of the pesticide application is intended to be short-term. The Statewide General Aquatic Pesticide Permits require post-treatment sampling of water to begin not more than a week from the time of aquatic pesticide application (or after project completion as determined by the Discharger, and accepted by the Water Board, for larvicides). The goal of the post treatment monitoring is to determine compliance with the receiving water limitations which indicates whether water quality is sufficient to maintain beneficial uses. (Any individual or general NPDES permits or WDR issued by the Water Board will contain monitoring requirements that specify the discharger begin post-treatment sampling no more than a week after the aquatic pesticide application or after project completion as determined by the Discharger, and accepted by the Water Board, for larvicides).

Lake Tahoe is recognized as an Outstanding National Water Body, the designation of which places it in Tier 3 protection category within the proposed Basin Plan Amendment. This tier placement resulted in the following language on page 21:

( Page 21) Tier Three - New or increased discharges to waters designated as Outstanding National Resource Waters (ONRWs) that would result in lower water quality in the ONRW are prohibited. The only exception to this prohibition, as discussed in the preamble to the Water Quality Standards Regulation, is for activities that result in short-term and temporary changes in the water quality of the ONRW. EPA guidance has not defined temporary and short-term specifically, but views these terms as limiting water quality degradation for weeks or months, not years. The intent is to limit degradation to the shortest possible time.

Discussion. Under the federal antidegradation policy [40 CFR 131.12 (a)(3)], ONRWs are provided the highest level of protection. The regulation requires that water quality be maintained and protected, though States are given flexibility to permit limited activities that temporarily lower the ONRW's existing high quality water. Such activities must not permanently degrade water quality or result in water quality lower than that necessary to protect the existing uses in the ONRW. Additionally, all practical means of minimizing water quality degradation shall be implemented so any lowering of water quality is limited to the shortest time feasible. In the Lahontan region, Lake Tahoe and Mono Lake are designated as ONRWs. As noted in the Tier One discussion, the use of aquatic pesticides for resource protection and pest management will be allowed only if the conditions of the exemption criteria are met. These conditions spell out the requirements and steps needed to ensure that lowering of water quality is limited to the shortest time feasible. If a pesticide application project is proposed in an ONRW, like Lake Tahoe, the project must satisfy all applicable project criteria, which include compliance with water quality objectives specific to the affected waterbody and receiving water limitations. Permits that are issued to regulate the aquatic pesticide discharges will incorporate numeric receiving water limitations where State or USEPA-based water quality objectives or criteria are available. Additionally, the exemption criteria require implementation of control measures to limit the spatial extent and the temporal impact of the discharge. Compliance with these limitations assures that water quality is sufficient to support beneficial uses. We believe the antidegradation discussions provided above justify any lowering of water quality consistent with Tiers One, Two, and Three of the test.

Page 38:

a) Application of aquatic pesticides by definition involves a discharge of chemicals into surface waters, including pesticide active ingredients and non-active "inert" ingredients such as emulsifiers and dispersants that may be present in the pesticide formulation. The use of aquatic pesticides may result in the temporary violation of water quality standards, including toxicity, and may temporarily impact beneficial uses, such as Cold Freshwater Habitat (COLD), Water Contact Recreation (REC-1), and Municipal and Domestic Supply (MUN). If not removed following herbicide treatments, dead plant

*material can affect water quality by lowering dissolved oxygen levels. Different pesticide products vary in their respective persistence, toxicity, and environmental fate. The Basin Plan amendment may allow temporary exceedence of narrative and numeric water quality objectives for projects given an exemption to the prohibition on aquatic pesticides.*

*Individual aquatic pesticide projects will be subject to environmental documentation and review requirements, and evaluation under the proposed Basin Plan amendments, on an individual project (or programmatic) basis. For water quality impacts, this review and evaluation must take into account persistence in waters and sediments, toxicity to humans and other organisms, and environmental fate including the potential for bioaccumulation. The criteria for evaluating projects under the proposed Basin Plan amendments stipulate aquatic pesticide applications cause no long-term impairment of beneficial uses. The criteria require that alternatives to pesticide use must be thoroughly evaluated and implemented when feasible. The criteria also require that the lowest possible effective pesticide concentration be used, that the smallest practicable area be treated, that a monitoring plan accepted by the Water Board be followed, and that BMPs be identified and implemented as appropriate to minimize water quality impacts. Even with these requirements, the temporary violation of water quality objectives cannot necessarily be avoided in each and every project.*

Page 45:

*c) The proposed action has the potential to result in environmental effects that may adversely affect human beings, either directly or indirectly. Pesticide projects allowed under this amendment may cause a temporary water supply loss when source waters are affected by pesticide application. Project proponents are required to coordinate with potentially affected water purveyors and provide potable drinking water where necessary.*

Page 52:

**MANDATORY FINDINGS OF SIGNIFICANCE – ENVIRONMENTAL EFFECTS THAT WILL CAUSE SUBSTANTIAL ADVERSE EFFECTS ON HUMAN BEINGS, EITHER DIRECTLY OR INDIRECTLY** The Water Board finds that the proposed action may indirectly result in substantial adverse effects on humans. The potential impacts to humans are indirect. Pesticide projects allowed under this amendment may cause a temporary water supply loss when source waters are treated, either to control an infestation of invasive species, harmful algal blooms, biofouling of a water intake system, or another circumstance. Without the pesticide treatment, the effects of the target species may prove worse than the temporary effects of pesticide use. In these pesticide projects, the proposed amendment's exemption criteria require that project proponents coordinate with potentially affected water purveyors and provide potable drinking water where necessary. That coordination should reduce the potential impact to water supplies, but the agreement reached by the coordinating parties is the purview of the water suppliers [CCR Section 15091(a)(2)].





# United States Department of the Interior

## Pacific Southwest Region FISH AND WILDLIFE SERVICE

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MAY 16 2011  
BY M&W

May 12, 2011

File No. 84320-2011-CPA-0085

Ms. Mary Wagner  
Lahontan Regional Water Quality Control Board  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, California 96150

Dear Ms. Wagner:

Subject: Comments on Proposed Amendments to the Water Quality Control Plan  
for the Lahontan Region: Pesticide Prohibition with Exemption Criteria

This letter transmits comments on the proposed amendments to the Water Quality Control Plan for the Lahontan Region (Plan) from the U.S. Fish and Wildlife Service's (Service) Nevada Fish and Wildlife Office. Our comments are based on information provided in a scoping letter dated March 21, 2011, and on the Lahontan Region's Water Quality Control Board's (Control Board) internet home page

([http://www.waterboards.ca.gov/lahontan/water\\_issues/programs/basin\\_plan/index.shtml](http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/index.shtml)). It is our understanding that the Staff Report completed by the Control Board functions as Substitute Environmental Documentation and fulfills the Control Board's obligations under the California Environmental Quality Act.

The Service supports the proposed amendments, including, but not limited to: the minor revisions to chapters in the Plan, removing the existing species composition objectives for rotenone projects, altering the project proponent monitoring and mitigation requirements, and deleting language regarding future actions for hatcheries. The Service agrees that these changes are likely to result in increased compliance by pesticide applicators with the Plan. In addition, these proposed amendment changes will assist collaborative efforts to implement the Aquatic Invasive Species Management Plan for Lake Tahoe and to minimize the deleterious effects of nuisance and aquatic invasive species (AIS) in the Lake Tahoe region. Changes to the Lake Tahoe region's economy, pristine water quality, aesthetic value, and recreational pursuits are occurring partly due to the harmful impacts invasive plants, fish, and invertebrates have had on

TAKE PRIDE  
IN AMERICA 

07-00167

Mary Wagner

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environmental quality. Lake Tahoe is threatened by new AIS introductions and the expansion of existing AIS populations and may be a source of AIS to other adjacent water bodies. The proposed amendment changes will facilitate a rapid response to an emergency AIS situation in Lake Tahoe and elsewhere in the Lahontan Region.

In an amendment approach such as the one proposed, it is critical that the potential spatial and temporal effects be adequately addressed since such effects may not be apparent in the subsequent environmental assessment of individual projects. The importance of these considerations is mentioned in the Staff Report (p. 7); however, only in regards to the "maximum benefit of the people of the State", meaning the people of California. Coordination with the Control Board's counterpart(s) in Nevada (e.g., Nevada Division of Environmental Protection) is also necessary since large portions of the watersheds overseen by the Control Board cross the state line.

If you have any questions or require any additional information, please contact me or Kerensa King (Environmental Contaminant Specialist) at (775) 861-6300.

Sincerely,



for: Jenny A. Ericson  
Acting State Supervisor

cc:

Field Supervisor, Sacramento Fish and Wildlife Office, Sacramento, California