Response to Comments Received on Draft EIR

Letter #1 - Russell Lukey

Comment #1

I am concerned about property that is on water which would be considered navigable, however, the property itself is difficult or practically impossible to get to because the water around its dock, bank, etc is infested with the Egeria weed. This is not a hypothetical situation for at least 61 renters of spaces on berms in Disappointment Slough owned by King Island Resort. We pay rent and property tax on these spaces and if the others are like mine their use is severely limited by the Egeria. It is virtually impossible to swim, fish or get our boat up to our dock. Yet 10-20 yards in front of our dock the water is navigable. At the present time our only source of control of the weeds is to harvest them. This is very hard work, ineffective, and worse, it adds to the proliferation. The alternative is to give up our place of 7 years and we love it too much to do that at this time. The Delta is very much a part of our life but the past 4 years since the advent of the Egeria it has been very trying.

Response to Comment #1

The DBW utilized a structured methodology to select and prioritize sites for the EDCP (see Appendix G of the EIR). This methodology was based on weighing both the existing degree of navigational impairment (as measured by aerial photography) and the significance of the navigational impairment (assessed based on intensity of navigation activities). Site rankings are identified in Exhibit G-1. As part of the ongoing EDCP, the DBW would continue to assess the degree and significance of navigational impairment and prioritize future EDCP treatments accordingly. Part of this ongoing assessment would come from evidence of *Egeria* infestations provided by citizens.

Based on the selection methodology identified above and the DBW's priority to control *Egeria* for navigation purposes, the DBW cannot guarantee that it will treat the waterways you identify in your letter. While the DBW may not directly treat the area in and around your property, the EDCP may indirectly benefit you in terms of reducing spread of *Egeria* and contributing to an overall reduction in the existing levels of *Egeria* in the Delta.

Comment #2

I know there are a lot of property owners or renters with a problem similar to ours throughout the Delta and I want to know what we can expect from the control program that will help us. I.e. if the program is to only maintain navigable access to the waterways can we as individuals obtain whatever chemicals are deemed proper? Also, what are businesses such as marinas, restaurants, etc going to do? I would hope the program can be expanded to include us.

Response to Comment #2

The EDCP is targeted to control navigation channels. Expected five-year efficacy levels for each treatment type are provided in Table 1-5 on page 1-31. The DBW expects that with these efficacy levels and assuming no newly identified priority infestation sites, it may be able to reduce the amount of *Egeria* infestation in the Delta over time.

The California Department of Pesticide Regulations has registered each of the aquatic herbicides proposed for the EDCP. However, because of the potential environmental concerns associated with applying these chemicals to the Delta, the DBW elected to prepare an Environmental Impact Report (EIR) and consult with numerous regulatory agencies prior to conducting EDCP activities. The DBW has proposed extensive monitoring and methods to avoid or minimize environmental impacts where possible.

The DBW also is conducting ongoing consultations with the United States Fish & Wildlife Service (for an incidental fish take permit) and has submitted a National Pollutant Discharge Elimination System (NPDES) permit application to the Central Valley Regional Water Quality Control Board (addressing the potential that herbicide use in the Delta creates a waste discharge). The outcome of these permits is pending, however these agencies likely could impose various additional conditions for use of the aquatic herbicides in the Delta.

The DBW would not provide aquatic herbicides to citizens so they can use them in the Delta. However, please check with your local Agricultural Commissioner for a list of licensed applicators in your area. The DBW also cannot advocate use of aquatic herbicides in the Delta by the public without first obtaining associated permits from regulatory agencies. One of the benefits of the EDCP is that it would provide a single coordinated and managed *Egeria* control program in the Delta, thus potentially reducing the need for businesses to perform control efforts on their own.

Letter #2 - David T. Mott

Comment #1

The proposed area of treatment is of concern. I assume it was established with consideration of a guesstimate of the funds that will be made available. I think its wrong to include all the area of Franks Tract. Franks Tract is not a natural navigable water. Since the spread of the Egeria infestation is largely the result of it being cut up by boaters and the particle spreading and re-rooting. I believe some areas of the Delta (Franks Tract plus other areas such as Mildred Island etc) need to be made restricted areas so the control money can be used to control the weed in more of the channels used by boaters going to and from marinas, clubs, restaurants, and private docks.

Response to Comment #1

Franks Tract is one of 35 sites the DBW intends to treat during the five-year EDCP. The DBW does not intend to treat all of Franks Tract, but estimates it would control three 100-foot wide channels approximately 3 miles in length and one 100-foot wide channel approximately 4 miles in length (see Exhibit 1-5 on the top of page 1-28). These channels would provide navigation opportunities for boaters traveling through Franks Tract and would reduce the spread of *Egeria* caused by boaters traveling through the area.

Letter #3 - Reclamation District 799

Comment #1

Sandmound Slough is clogged with egeria densa and deserves the highest priority in the control program.

Response to Comment #1

The DBW utilized a structured methodology to select and prioritize sites for treatment (described in Appendix G of the EIR). This methodology was based on weighing both the existing degree of navigational impairment (as measured by aerial photography) and the significance of the navigational impairment (assessed based on intensity of navigation activities). Site rankings are identified in Exhibit G-1. As part of the ongoing EDCP, the DBW would continue to assess the degree and significance of navigational impairment and prioritize future EDCP treatments accordingly.

Based on this objective prioritization methodology, Sandmound Slough is one of the 35 sites that the DBW would treat over the five-year EDCP.

Comment #2

The mailed CD on the draft report was not complete and disappointing.

Response to Comment #2

The DBW regrets that Reclamation District 799 found the CD of the draft EIR disappointing. The draft EIR met all substantive and procedural requirements identified under the California Environmental Quality Act (CEQA).

Comment #3

Using copper in the control program should not be a problem since copper is a natural substance and will not remain in the water for a long period of time.

Response to Comment #3

Despite the fact that copper is a natural substance, numerous studies indicate that it can adversely impact aquatic plants and organisms (Eisler, 1997). Eisler states that copper is among the most toxic of the heavy metals in freshwater and marine biota, and can accumulate and cause irreversible harm to some species at concentrations just above levels required for growth and reproduction. The chelated form of copper used in the formulation of Komeen is not as toxic to aquatic plants and animals as is ionized copper. However, extreme care must be taken when using any copper-based herbicide in bodies of water utilized by fish and other aquatic organisms.

Letter #4 - California Department of Health Services

Comment #1

As the draft EIR acknowledges, there is the potential for the chemicals proposed for use in controlling Egeria densa to find their way into water taken by several surface water treatment plants that treat water from the Delta for domestic use. Therefore, it is appropriate that the program will be closely coordinated with the water purveyors that may be impacted and with the DWP.

Response to Comment #1

The DBW intends to establish Memorandum of Understanding (MOU) with primary water purveyors drawing water from the Delta. For example, the DBW would establish an MOU with the Contra Costa Water District (CCWD) who draws water through the Contra Costa Canal (at Rock Slough). Requirements of the MOU would include notification of the agency at least two weeks prior to commencement of treatment. This MOU would identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.

For the EDCP, the DBW would use this same one-mile buffer zone around any other water treatment plant intakes in the Delta (see top of page 3-26). Two-Year Komeen Trials are not proposed for areas near drinking water intakes.

The DBW also would contact the Department of Health Services Drinking Water Program to inform them of the EDCP treatment schedules near water intakes.

Comment #2

Although it is not clear, the location of the intake of the LPSMWC at the intersection of Little Potato Slough and State Highway 12, on the eastern edge of the Delta, may be adequately upstream and distant from the areas requiring treatment to minimize the concerns with respect to this water system. However, this is a relatively small water system that has its greatest water demand during the months of May through September. As a result, scheduling any treatment that might impact the source water to the remaining months of the year could mitigate any potential impacts. The water system has a fairly large water storage tank for the more limited demand when recreation is less significant. As a result, it may be possible to avoid taking water from the Delta for limited time periods when impacts may be a concern.

Response to Comment #2

The DBW would establish a Memorandum of Understanding (MOU) with the Little Potato Slough Mutual Water Co. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get approval for any treatments inside the zone from the Little Potato Slough Mutual Water Co. This MOU would consider scheduling treatments during months of the year that could mitigate any potential impacts to this water system.

Comment #3

If any treatment that might impact the water pumped into the DMC could be performed during that scheduled plant shutdown, it is likely that any impacts could be avoided. Similarly, it is possible that the timing of the shutdown of the Tracy plant could be arranged to occur at some time of year other than December and January, provided that the shutdown would occur during a period of lower water demand and the duration of the shutdown could be limited. These are details that would have to be arranged with the City.

Response to Comment #3

Comment noted. The DBW would coordinate with the City of Tracy and/or the Department of Water Resources as needed to minimize impacts from treatments on water pumped into the Delta Mendota Canal.

Comment #4

Therefore, coordination of the timing of herbicide applications with the MHCSD could probably be arranged to minimize impacts by having the system utilize water from storage during periods of maximum potential impact.

Response to Comment #4

The DBW would establish a Memorandum of Understanding (MOU) with the Mountain House Community Services District (MHCSD) prior to when that district begins taking water from the Delta. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get for approval any treatments inside the zone from MHCSD.

Comment #5

Perhaps the use of this chemical should be avoided in those situations where any of the chemical might reach the intake of a domestic surface water system. The risks related to the use of Sonor (sic) appear to be more manageable, since the MCLG is several times higher than the dose needed to treat the Egeria densa. Similarly, the action level for copper in the Department's Lead and Copper rule suggest that the risks associated with the use of copper sulphate may be the least significant of the three chemicals proposed. In addition, copper sulphate has been used to control algae in domestic water supply reservoirs for decades. Therefore, considerable experience with its impact on drinking water exists.

Response to Comment #5

As indicated, herbicide use within the vicinity of a domestic surface water intake would be governed by an MOU between the DBW and the water agency. Requirements of the MOU will include notification of the agency prior to commencement of treatment. Additionally, a one-mile buffer zone would be established around water intakes. No herbicide treatments would occur within this buffer zone without approval by the agency. The DBW would coordinate with appropriate agencies to establish buffer zones. By following these measures, the DBW will avoid adverse impacts to domestic surface water due to Reward or either of the other herbicides.

DBW is not proposing to use copper sulfate because it does not effectively control *Egeria densa*. While the target water column concentration for the chelated copper Komeen under the Two-Year Komeen Trials is below the MCL for copper (equal to 1.3 ppm as indicated on page 4-20 of the draft EIR), Komeen is only being proposed for use under these limited field trials due to uncertainty regarding potential impacts to the environment. As currently proposed, Komeen research trial sites are not in the vicinity of any intake facilities.

Letter #5 - Sally Mecham

Comment #1

We are also members of Diablo Water Ski Club, located in area #31 of the Levels of Infestation map on page E-2. It appears that it will be an area in which treatment will occur. Will we have any say as to where in area #31 that treatment will occur?

Response to Comment #1

The public would not directly influence how, when, and where the DBW's treatments would occur throughout the Delta. As identified in Appendix G, the DBW has a methodology for prioritizing sites for treatments. However, the DBW would accept information from the public on the status of *Egeria* infestation at locations throughout the Delta. The DBW may use this information to identify new infestations of *Egeria* in the Delta and as part of the exercise of ground-truthing aerial photography (i.e., checking aerial photography results on the ground to assess accuracy) to identify the degree of *Egeria* infestation at a particular site.

Comment #2

Obviously, we would like to see treatment occur where our slalom course is located. Also it would be very helpful to know when and where treatments will occur, so that we in no way interfere in the progress. Possibly the schedule could be posted on the Web site.

Response to Comment #2

The DBW may post when and where EDCP and Two-Year Komeen research trials would occur prior to a given treatment. This information would be provided on the DBW's website at www.dbw.ca.gov.

Letter #6 - North Delta Water Agency

Comment #1

We would only suggest that it be included in the report to recommend to those responsible for any chemical applications that they determine if there is any possibility of damage to nearby crops through either water borne chemicals entering irrigation diversions or by aerial drift. Irrigation diversions are numerous in the Delta and often difficult to locate since in many cases small siphons over the levees are used. The potential for any crop damage would vary with the type of chemical, type of crop and stage of the crop.

Response to Comment #1

As part of pre-treatment site survey efforts, the DBW would provide the County Agricultural Commissioners (CACs) with a schedule of EDCP treatments and two-year Komeen trial treatments. This schedule would be provided in advance of the treatment. Should the CAC determine that EDCP or Komeen trials would interfere with irrigation activities, the DBW would postpone treatment at that site and reschedule treatment for a later date when there is no irrigation activity at that site.

Additionally, the DBW may post the schedule for EDCP and two-year Komeen trial treatments on its web site (www.dbw.ca.gov) in advance of a treatment. Local landowners could use these two sources to identify treatment timing.

Letter #7 - California Department of Parks and Recreation

Comment #1

The Department of Parks and Recreation should be listed as a stakeholder. Franks Tract and Little Franks Tract are owned by the Department of Parks and Recreation and managed by the Delta Sector. Franks Tract is the single largest site for the EDCP.

Response to Comment #1

The DBW agrees with this oversight and will include the Department of Parks and Recreation as a stakeholder in addition to those listed in Exhibit 1-10.

Comment #2

The EIR does not describe methods to restrict the public from areas during application and periods of toxicity. The delta is a very popular area for boating, fishing, waterskiing and swimming. Public usage of areas being treated should be anticipated. Proactive steps need to be in place prior to herbicide application to prevent contacts with the public. Some suggested steps should include posting information at local marinas, information in periodicals and newspapers, and patrol boat(s) on scene.

Response to Comment #2

The EIR specifies a number of ways in which the DBW would limit or restrict public access to treatment areas during periods of toxicity. Prior to treatments, marina owners would be notified regarding treatment timing. During applications sites would be marked with buoys, making herbicide treatments visible to the public. DBW staff also would patrol treatment areas in a support boat, informing those recreating that treatments are occurring (see pages 3-77 and 4-65).

Note that the product label indicates that areas treated with Komeen may be used for swimming or other water recreation immediately after application (see pg. 4-63). Komeen trial sites would however be monitored following treatment and attempts made to restrict public use of the area.

Letter #8 - California Department of Pesticide Regulation

Comment #1

See attached letter for comment. The DPR provided specific comments on Chapter 3, Section 3.5.2.1.1 (page 3-69).

Response to Comment #1

Change the 3rd paragraph of Section 3.5.2.1.1, titled Toxicity (page 3-69) to read:

> Federal and state law require that herbicides be registered prior to sale or use. Registration by the Cal/EPA Department of Pesticide Regulation (DPR) is required for sale or use of an herbicide in California. To obtain registration, manufacturers are required to conduct numerous studies (sometimes over 120 depending upon the intended uses). The registration process in California includes evaluation of human health acute toxicity data on the formulated product. The formulated product includes the active and inert ingredients. Further, manufacturers must submit a thorough and extensive data set to USEPA and to DPR to demonstrate that, under its conditions of use, the product would not pose a significant risk to human health and the environment, and that the herbicide is effective against target weeds or plants. Although these documents are classified, they are considered, under CEQA (Pub. Res. Code Sec. 21080.5), to be the functional equivalent of a full-scale environmental impact report. As such, these documents must include a discussion of environmental impacts, mitigation measures and alternatives. There is also a public comment period for proposed decisions.

Change the 1st sentence of the 4th paragraph of Section 3.5.2.1.1, titled Toxicity (page 3-69) to read:

> All of the herbicides included in the proposed EDCP have been through this review process and are currently registered for use in California.

Comment #2

See attached letter for comment. The DPR provided comments on Section 8.1.5, titled Chemical Control Methods (page 8-7)

Response to Comment #2

Change the 2nd paragraph of Section 8.1.5, titled Chemical Control Methods (page 8-7), to read:

> Hundreds of herbicides are registered in the United States. Only a limited number of these herbicides effectively control aquatic weeds. All registered herbicides must meet these criteria. Currently, herbicides…

Comment #3

See attached letter for comment. It is not clear how the DBW obtained the list of herbicides it considered for *Egeria* control identified in Section 8.1.5 (page 8-7).

Response to Comment #3

Based on discussions with the *Egeria densa* Task Force, the DBW narrowed the list of herbicides to the eight identified in Section 8.1.5 (page 8-7) by identifying those aquatic herbicides currently labeled for controlling aquatic weeds and known to be effective. From this list of eight, the DBW further identified three aquatic herbicides that were effective for *Egeria* control in the Delta: Copper, Diquat, and Fluridone.

Comment #4

In addition, the document should specify which copper compounds (e.g. copper sulfate, copper ethylenediamine complex) and which forms of 2,4-D (e.g. amine, ester, amine salt) were considered.

Response to Comment #4

The DBW considered currently available aquatic herbicides containing copper. Based on this assessment, the DBW did not propose any copper based herbicides for use under the EDCP. Copper-based aquatic herbicides other than those containing chelated-copper were considered infeasible for controlling *Egeria* in the Delta due to significant potential environmental impacts. The chelated form of copper used in Komeen is significantly less toxic to aquatic organisms than is the non-chelated form. However, potential environmental impacts of Komeen use in the Delta are unknown.

Thus, the DBW proposed Komeen use exclusively for the Komeen Research Trials. The purpose of the Komeen Trials is to thoroughly assess the environmental impacts of the herbicide. If the trials indicate that Komeen would not adversely affect the aquatic environment, the DBW may propose, through submittal of supplemental environmental documentation, to use Komeen on a routine basis in the Delta as part of the EDCP. Such a proposal would be subject to all applicable environmental laws, such as CEQA, ESA, CESA, etc.

Some forms of 2, 4-D were considered infeasible by the DBW because they are not labeled for *Egeria* control.

Comment #5

See attached letter for comment. The DPR provided comments on Appendix I, Background of Herbicides.

Response to Comment #5

Change the 1st sentence of the 1st paragraph under Chemical Registrations (page I-1) to read:

> Every herbicide sold or used in California must be registered by the United States Environmental Protection Agency (EPA) and by the California Department of Pesticide Regulation (DPR) before the product can be sold or used in California.

Delete the 1st sentence of the 1st paragraph under Types of Herbicides (page I-1), beginning with "Herbicides break down..."

Change the 2nd paragraph under Systemic herbicides (page I-2) to read:

> Herbicides used by the DBW for treatment of *Egeria* are aquatic herbicides. The aquatic herbicides proposed for this project are non-persistent in water, or they degrade rapidly. Because these aquatic herbicides are highly water-soluble they quickly dilute to non-detectable concentrations.

Change the 1st paragraph under Means of Implementing Chemical Control Methods (page I-2) to read:

> The aquatic herbicides being considered for this project are formulated as liquids, suspensions, or concentrates. Products would be applied either as liquids, diluted concentrate or suspension, or as pellets.

Liquid aquatic herbicides would be applied by boat using a hose dragged below the water surface over the entire target area, or would be sprayed onto the water surface. Pelleted aquatic herbicides would be applied over the treatment area with a bow-mounted broadcast spreader. Aquatic herbicides also may be applied from a helicopter, an airplane, or sprayed from a truck, if permitted by the label.

Comment #6

See attached letter for comment. The DPR provided comments on Appendix M, Management Plan.

Response to Comment #6

Add the following paragraph as the last paragraph on page M-2 of Appendix M:

Any suspected case of pesticide related illness or injury would be reported to the appropriate agricultural commissioner. In addition, physicians treating suspected cases of pesticide-related illness or injury would be notified by county agricultural commissioners of their requirement to report such cases by telephone to the local health officer within 24 hours of examining the patient (Health and Safety Code Section 105200).

Letter #9 - Lauritzen Yacht Harbor

Comment #1

Egeria densa is not just a Delta problem but is, also, a State problem. A key point for it to be picked up and transported to other bodies of water is on the bunks of boat trailers. Soon this weed will impact every fresh water body of water in the State if we do not try to stop its growth. There are a great number of black bass fishermen who use the Delta for tournament fishing. It's not uncommon to see black bass pros come from other states to fish the Delta. They could transport this weed back to their own body of water in other states.

Response to Comment #1

While it is clear that *Egeria* can establish itself at other locations within the Delta through fragmentation and while it is known that other weeds are spread by trailers, the DBW has no direct evidence to suggest that transfer of *Egeria* fragments is occurring to other water bodies within California or out of California.

Comment #2

When Egeria densa is at its peak-growing season we can see it everywhere in the Delta. Sherman Lake, Frank's Tract, most of the sand bars alongside the channel just to name a few problem areas. An area like Frank's Tract is not navigable at low tide.

There are over 1,000 boats berthed and dry stored around the Antioch Bridge area on the San Joaquin River. All of us have Egeria densa in our harbor basins and it's getting worse. At low tide it can be difficult getting in or out of a berth.

Response to Comment #2

The DBW agrees with the characterization of *Egeria* levels at peak growth periods. During this time, *Egeria* is highly visible to those navigating the Delta. Additionally, one can observe dense mats of *Egeria* readily in the areas you have mentioned, particularly during periods of low tide.

The DBW is proposing to treat sites throughout the Delta for navigation control. The 35 sites selected for the five-year EDCP and the methodology for selecting these sites is extensively documented in the EIR (Chapter 1 and Appendix G). Though DBW treatments will not focus on harbor basins, the efforts of the DBW to treat sites for navigation throughout the entire Delta likely would have associated secondary benefits to Delta harbors.

Comment #3

I urge the commission to fight the water weed with everything you have at your disposal from mechanical to chemical means to get rid of this problem. If you could have the success with the water weed that you have had with the water hyacinth we all would be happy.

Response to Comment #3

The DBW proposes to use Diquat, Sonar, and Mechanical Harvesting to control *Egeria* in the Delta. The DBW believes these three methods would provide flexibility in controlling *Egeria* while minimizing environmental impacts to the Delta. The DBW considered a number of alternative methods for control that could not be used in the Delta (see Chapter 8, Alternatives). Additionally, should the two-year Komeen Trials suggest Komeen is consistent with EDCP objectives and does not result in significant environmental impacts, the DBW also may consider incorporating Komeen into the EDCP.

Letter #10 - Contra Costa Water District

Comment #1

Referring to Section 1.7.4, the District supports a scientifically sound test of the effectiveness of Komeen on the control of *Egeria densa*.

Response to Comment #1

Comment noted.

Comment #2

Referring to Exhibit 1-5, reference should be made in the table to the fact that the active ingredient in Reward, diquat, has a health based primary maximum contaminant level (MCL) of 0.02 mg/L, as regulated by the State Department of Health Services.

Response to Comment #2

The DBW acknowledges that Diquat does have a health based primary maximum contaminant level (MCL) of 0.2 mg/L, as regulated by the State Department of Health Services. This number is referenced in the discussion of Reward toxicity on the 2nd paragraph of page 3-13 under the heading Characterization of Reward Toxicity.

Comment #3

Referring to Exhibit 1-8 (#7, page 1-36) and Exhibit 1-9 (#7, page 1-39), not aware of a probe that can measure hardness on a datasonde. This is generally either done by titration or by totaling the ions in a scan by ion chromatograph.

Response to Comment #3

Comment noted. The DBW agrees with this correction.

Comment #4

Referring to Section 2.4, second paragraph, would suggest the following change for greater accuracy in the description: "...through the Contra Costa Canal supplying the cities of Oakley, Antioch, Pittsburg, Bay Point, Concord, Clyde, Clayton, Port Costa, and portions of Pleasant Hill, Walnut Creek and Martinez."

Response to Comment #4

Change the 3rd sentence of the 2nd paragraph under Water-Related Infrastructure on page 2-35 to read:

> Municipal and industrial demands in the Delta are met by conveying water through the Contra Costa Canal supplying the cities/unincorporated county areas of Oakley, Antioch, Pittsburg, Bay Point, Concord, Clyde, Clayton, Port Costa, and portions of Pleasant Hill, Walnut Creek, and Martinez.

Comment #5

Referring to Section 2.12, last paragraph, the District current official count of population served by CCWD (raw and treated water) is 430,000.

Response to Comment #5

Change the 1st sentence of the last paragraph on page 2-46 under Land Use Planning to read:

> The Contra Costa Water District currently provides the water needs of 430,000 residents (raw and treated water).

Comment #6

Referring to Exhibit 3-2, under "Chemical Constituents," a note should be made that diquat has a health based primary maximum contaminant level (MCL) of 0.02 mg/L, as regulated by the State Department of Health Services.

Response to Comment #6

Comment noted. The DBW acknowledges that Diquat does have a health based primary maximum contaminant level (MCL) of 0.2 mg/L, as regulated by the State Department of Health Services. This number is referenced in the discussion of Reward toxicity on the 2nd paragraph of page 3-13.

Comment #7

Referring to Section 3.1.2.2.1 – Sonar, the District is unaware of a primary MCL for fluridone. It is our understanding that fluridone is not currently regulated, or routinely monitored, in the Drinking Water standards. The referenced 0.15 mg/L limit is believed to be an agricultural limit; as such is not a MCL.

Response to Comment #7

The reference in the Draft EIR to an MCLG for fluridone is in error and should be deleted. Change the reference to an "MCLG for fluridone" to an "acceptable level of fluridone" on pages 3-15, 3-22, and 3-72.

Comment #8

In Chapters 3 & 4 several references are made to the formation of THM precursors being an "Avoidable Significant Impact." The District contends that unless the effected biomass is removed from the Delta system this is, in actuality, an Unavoidable Significant Impact." The decomposition of the biomass will release the various organic carbon species that are the precursors to trihalomethane formation.

However, having stated that it must be recognized that even if left untreated the plants would eventually die and contribute their organic carbon to the Delta environment. The program, over the long haul, has the potential to reduce the available biomass, thus reducing this source of natural organic matter as THM precursors.

Response to Comment #8

The DBW views the formation of trihalomethane (THM) precursors as an avoidable significant impact to *drinking water quality*. The DBW does not dispute the fact that THM precursors would be released following herbicide treatment. However, the agency categorizes this as an "avoidable significant impact" due to the fact that avoidance measures would be taken to insure that water treated with herbicides would not enter any water treatment plant intakes. Measures to avoid influx of herbicide treated water include notification and coordination with appropriate drinking water utilities, as well as establishment of a one-mile buffer zone around water treatment plant intakes. No treatment or research trials would occur within this buffer zone without consultation with appropriate public water agencies. The DBW would coordinate with the appropriate public water agencies to establish these buffer zones.

The DBW concurs with the position stated in this letter that decomposition of plant biomass—due to either herbicide treatment or a natural process of death and decomposition—will result in the release the various organic carbon species that are the precursors to trihalomethane formation. If properly implemented, the EDCP would bring about an overall decrease in the abundance of *Egeria* in the Delta over the long-term. This would reduce the source of natural organic matter available as THM precursors, and thus benefit Delta water quality.

Comment #9

Referring to Appendix F, #4. is "Contra Costa Water District" not "Contra Costa Water Agency"

Response to Comment #9

In Appendix F, change the reference from Contra Costa Water Agency to Contra Costa Water District.

Comment #10

Referring to Appendix F, add #7. "Diablo Water District"

Response to Comment #10

In Appendix F, add:

7. Diablo Water District.

Comment #11

Referring to Appendix Q, Page 68, clarification of what constitutes “a significant adverse impact” would be helpful.

Response to Comment #11

The criteria used to assess impact significance depend on the resource being considered. For example, the criteria used to assess impacts to general water quality are the water quality standards established and enforced by the Central Valley Regional Water Quality Control Board in the Basin Plan. Likewise, the criteria for impacts to drinking water quality are the National Primary and Secondary Drinking Water Regulations, established by the U.S. Environmental Protection Agency and enforced by the California Department of Health Services. Conflicts with or violations of these standards are considered significant adverse impacts.

Criteria for determination of impacts to biological resources tend to be more qualitative. Impacts to plants, invertebrates, fish and wildlife populations are significant when project operations cause or contribute to substantial short or long-term reductions in abundance and distribution. A biological effect is viewed as significant based on CEQA Guidelines if it:

- Substantially affects a rare or endangered species of animal or plant or the habitat of the species;
- Interferes substantially with the movement of any resident or migratory fish or wildlife species;
- Substantially degrades water quality (thus adversely affecting species dependent on the water source); or
- Substantially diminishes habitat for fish, wildlife or plants.

More quantitative determinations of impact significance to biological resources are currently being determined through the formal consultation process with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Game. These formal consultations are part of the compliance process for the ESA and CESA.

Letter #11 - SePRO Corporation

Comment #1

A MCL has not been required for fluridone since there are no potential health effects from ingestion of water where Sonar is used according to its labeling. The Environmental Protection Agency, Office of Pesticides and Toxic Substances registered the use of Sonar as an aquatic herbicide. At the time of its registration the Agency said, "The Agency is designating an acceptable residue level for fluridone in potable water of 0.15 ppm. This concentration reflects the maximum application rate for the herbicide registration(s) issued pursuant to FIFRA." The Agency has not changed its position with fluridone since its federal registration in 1986.

SePRO believes that it would be appropriate to modify language in the Draft Environmental Impact Report on pages 3-15, 3-22, 3-72 and any other locations in the Draft Document referring to a MCL for fluridone since there is not an established MCL for fluridone. Language should be modified to state that the acceptable level of fluridone in potable water is 0.15 ppm.

Response to Comment #1

Change the reference to an "MCLG for fluridone" to an "acceptable level of fluridone" on pages 3-15, 3-22, and 3-72.

Comment #2

Regarding Page 3-72, the first sentence under the Sonar section states, "There are also health risks associated with consumption of water treated with Sonar." SePRO believes this to be an incorrect statement and contradicts health and safety data. Additionally, regulatory agencies would not have allowed the labeling where consumption of water is permitted after a Sonar application at its maximum application rate of 150 ppb if the health and safety data did not support this use. Labeling does state that application greater than 20 ppb must be made greater than ¼ mile of a potable water intake. This distance is required to ensure that adequate mixing of fluridone in the water column has occurred where concentrations do not exceed 150 ppb.

Response to Comment #2

Change the 1st sentence of Section 3.5.2.1.2 - Sonar (page 3-72) to read:

> There are no health risks associated with the consumption of water treated with Sonar, as long as the herbicide is used at or below label rates and is administered in accordance with label recommendations.

Comment #3

Regarding Page 3-77 (Buffer Zones), the Draft Report states: "to avoid drinking water quality impacts (e.g., influx of diquat and fluridone), a one-mile buffer zone would be established around water treatment plant intakes. No treatments would occur within this buffer zone while utilities are drawing water. Treatments within buffer zones would be coordinated with utilities. The DBW would coordinate with the appropriate public water agencies to establish buffer zones." As noted above, regulatory agencies, including Federal EPA and CAEPA, have agreed with Sonar labeling that applications greater than 20 ppb must be ¼ mile from a potable water intake and concentrations less than 20 ppb may be made at a potable water intake.

Response to Comment #3

In consultation with water purveyors, the DBW has established that a one-mile buffer zone would be established around drinking water treatment plants regardless of what type of herbicide is being applied in the vicinity. Under certain mutually agreed upon circumstances, treatment may occur within this one-mile zone. The one-mile buffer was established with respect to any type of herbicide, not Sonar in particular.

Comment #4

Referring to Page 3-73 (Sonar), while SePRO agrees with the conclusion of the Draft Report on Consumption of Fish or Aquatic Organisms Exposed to Herbicides, alternative wording is proposed. For the sentence, "Considering the rapid dilution of fluridone in the water column and the low target concentration for the herbicide, it is unlikely that bioaccumulation would occur to any significant degree," SePRO proposes, Considering the rapid dissipation and dilution of fluridone in the water column and the low target concentration for the herbicide, impacts to human health due to bioaccumulation of Sonar in tissues of fish and aquatic organism would not be significant.

Response to Comment #4

Change the 4th sentence of the 1st paragraph of Section 3.5.2.1.3 - Sonar (page 3-73) to read:

> Considering the rapid dissipation and dilution of fluridone in the water column and the low target concentration for the herbicide, impacts to human health due to bioaccumulation of Sonar in tissues of fish and aquatic organisms would not be significant.

Comment #5

While the stated goal of EDCP program is to be flexible, the document suggests that most of the priority target treatment areas and control measures have been chosen for a 5 year timeline. Language to allow changes in control methods at each site based on management practices that provide optimal Egeria control from year to year should be considered. Moreover, the current program would provide little flexibility for new application strategies that may significantly enhance control. As the program becomes operational and matures, control strategies that provide superior control will likely emerge. Flexibility to change treatment options to those strategies which provide optimal egeria control with minimal negative environmental impacts should be addressed in the Draft EIR.

Response to Comment #5

The DBW has proposed to apply Sonar over a 6 to 8 week period to maintain a concentration of 20 parts per billion at a given site, at no time exceeding the labeled rate. Based upon actual results from use of Sonar for the EDCP, the DBW may adjust these proposed application rates up or down or may utilize different application strategies in the future to provide better efficacy, again at no time exceeding the labeled rate. The DBW also may identify sites better suited to palletized forms rather than liquid forms of Sonar, and visa versa. In each case, such modification would be part of the adaptive management approach to controlling *Egeria* (identified on page 1-4).

Based on consultations with USFWS, the DBW also agreed to the following changes to the project description that relate to modifying treatment methods as needed:

- Propose to control each of the 35 sites with one treatment method for the EDCP (as identified in the project description of the draft EIR). The DBW would expect a potential need to use a different treatment method than was proposed for a given site. Such changes to treatment methods would be consistent with an adaptive management strategy for controlling *Egeria densa*. For example, a site originally proposed for Diquat treatment may be better suited for mechanically harvesting.

- Work with USFWS to simply amend the project description should there be no change in the significance of the potential environmental impacts. The USFWS has indicated that the DBW could submit to USFWS a letter identifying potential program changes. If newly identified sites or treatment methods would not substantially alter the project's potential environmental impacts, the USFWS would consider these changes as an amendment to the Biological Assessment and a re-initiation of the consultation process, rather than a new consultation.

Comment #6

The Draft EIR mentions that Sonar will be used at rates of 10-20 ppb and will be applied in up to 12 applications. This language should be modified to reflect the varying use patterns that are likely for Sonar in the Sacramento Delta. While the optimal target concentration in the water is between 10-20 ppb, treatment strategies used to achieve these rates will often differ. For example, the slow release pellet (SRP) granular formulation should be applied at much higher rates to achieve the target concentration of 10 to 20 ppb. Use of the liquid A.S. formulation will result in maximal concentrations at the time of treatment and therefore use rates will actually reflect the 10-20 ppb stated in the Draft EIR. When dilution is expected, split applications of both the A.S. and SRP formulations are utilized to maintain efficacious concentrations and exposure. The treatment frequency, rates, and formulation will vary greatly between treatment sites depending on the characteristics of the treatment area (size, depth), potential for dilution, and treatment objectives (selective control vs. elimination of vegetation).

Response to Comment #6

Comment noted. See Response to Comment #5 above.

Comment #7

In addition, it is likely that as more is learned about the efficacy of Sonar in the Sacramento Delta, use recommendations may change to reflect different use patterns from those used today. For example, Sonar works best on actively growing vegetation when the biomass is low. Based on these criteria, Sonar treatments in late January through March would likely prove optimal control based on the phenology of the Egeria. While the plants tend to be more dormant from November through January, by late January new growth is obvious. In the current Draft EIR, applications are proposed from March through November. The flexibility to treat when Sonar has the greatest likelihood to achieve successful results may require altering the current Draft EIR to include Sonar treatments in January and February. Earlier treatments would also have less impact on irrigation practices. Adding flexibility to the current Draft EIR to allow earlier treatments will serve to improve the chances for successful Egeria control while not increasing the potential for a negative impact on the environment. It is likely that Sonar treatments conducted after August, would provide marginal control due to higher biomass and slower growth rates.

Response to Comment #7

Comment noted. See Response to Comment #5 above.

Comment #8

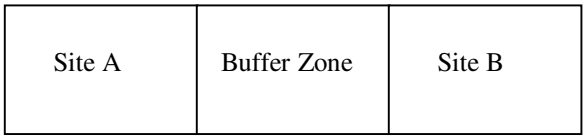
Page 3-25 of the Draft EIR contains language that states the maximum acreage that the DBW would treat would be no more than 20 acres at a given site over a 14-day period. This mitigation measure is proposed to prevent impacts to dissolved oxygen. On page 3-17 of the Draft EIR it is noted that the use of Sonar would not adversely impact dissolved oxygen. Several years of experience with Sonar use following large-scale treatments (up to thousands of acres) indicate that decreases in dissolved oxygen are not associated with Sonar use. Moreover, larger treatment blocks in areas where dilution is expected generally provide the best control when using Sonar. Based on experiences with Sonar, impacts to dissolved oxygen are not likely and treatments of greater than 20 acres should not adversely impact water quality.

Response to Comment #8

Based on consultations with USFWS, the DBW has agreed to the following modification to the project description:

a. Treat no more than 20 acres, per site, per day

b. Create a buffer zone equal to the linear dimension of the longer treatment site. Referring to the figure below, if Site A were treated on Day 1, then Site B could not be treated until Day 3. If Site B were treated on Day 3, then the DBW could not treat Site A again until Day 5.



c. Not exceed 10 acres per day with mechanical harvesting.

Comment #9

In the Draft EIR, the "unavoidable significant impacts" for Sonar use listed for birds, reptiles/amphibians, and insects are related to loss of wetland and river bank vegetation. This classification does not accurately reflect the intended use of Sonar in the Sacramento Delta. In the Draft EIR it is clearly stated that areas containing dense infestations of Egeria will be targeted. Moreover, the Draft EIR indicates that the threat to native submersed plants in these areas would be "Less than Significant". The fact that wetland communities are not likely to receive direct applications along with the greater tolerance to Sonar for emergent species suggests that injury to wetland species should be minimal. While temporary chlorosis of new shoot growth is often noted on wetland plants such as cattails and tules, large-scale loss of wetland vegetation is not characteristic of low-rate Sonar applications. Furthermore, emergent woody species growing along the river bank

such as Northern California black walnut and elderberry (intermediate in susceptibility) are generally not impacted by low-rate Sonar applications. Given the likely use patterns and use rates of Sonar in the Sacramento Delta, both the direct threat to wetland vegetation as well as the indirect threat to birds, reptiles/amphibians, and insects from subsequent habitat loss should be considered for designation as "Less than Significant Impacts."

Response to Comment #9

The Draft EIR stated that Sonar, Reward and Komeen all could result in loss of intertidal wetland vegetation, and indicates that, in each case, this would be considered an unavoidable significant impact to wetland communities and certain wildlife species. It is more accurate to say that *any* adverse impact to wetland plants and plant communities would be considered an unavoidable significant impact. The Final EIR will reflect this position more clearly.

Adverse impacts to and/or loss of wetland and channel bank vegetation due to the use of Sonar are considered an "unavoidable significant impact" to birds, reptiles, amphibians and insects that use this vegetation as habitat. While SePRO argues that emergent species are generally more tolerant of Sonar than are submersed species, the label for Sonar identifies at least two desirable native wetland plants—cattail (*Typha* spp.) and spikerush (*Eleocharis* spp.)—as "vascular aquatic plants partially controlled by Sonar [A.S. or SRP]". This indicates that both adverse impacts and potentially loss of plants could occur. Additionally, as indicated in SePRO's comment, the native tule (*Scirpus*) is susceptible to temporary chlorosis of new shoot growth; this would be considered an adverse impact. Further, the assertion that woody species growing along channel banks, such as Northern California black walnut, are not impacted by low-rate Sonar applications is not consistent with the recommendation on the label that irrigation of established tree crops (which could include walnuts) be suspended for seven days following treatment with Sonar. SePRO's comment also states that elderberry would not be impacted because it is only "intermediate in susceptibility". Any impact to this shrub, which is protected as habitat for the Federally threatened Valley elderberry longhorn beetle, would be considered significant.

Thus, the available information indicates that plants such as cattails, tules, elderberry and possibly walnut could be adversely impacted by exposure to Sonar even at low concentrations. Further, the label does not provide information on many desirable wetland plant species present in the Delta. Absent this information, it must be assumed that the herbicide could impact these species as well.

The assertion in the Draft EIR that native aquatic vegetation would not be significantly impacted by herbicide treatments is based on the fact that areas exhibiting high relative abundance of native aquatic plants would not be treated. Overall, native aquatic vegetation in the Delta is not likely to be significantly impacted by EDCP or Komeen Trial operations for this reason.

While efforts will be made to treat so that herbicides will not impact wetland plants, the potential for contact exists. Because treatments with Sonar extend over a period of weeks, inundation of some tidal wetland vegetation could occur repeatedly and would likely adversely impact affected vegetation and wildlife species that use such vegetation.

Comment #10

There are several references in the Draft EIR suggesting that herbicide treatments near potable water intakes will be prohibited due to the decaying vegetation increasing organic carbon loads and thus increasing the potential for formation of trihalomethane (THM) when the water is chlorinated. In our view, the continuous presence of a dense stand of actively growing vegetation presents the greatest risk for increased organic carbon loading near a potable water intake. Moreover, due to the mode of action of Sonar, the very slow nature of plant death does not represent an increased risk for a large spike of organic carbon into the water. Removal of the vegetation near the potable water intakes would likely represent the best long-term strategy for reducing the risk of THM formation. As previously noted, Sonar at rates of less than 20 ppb can be used within ¼ mile of a potable water intake without use restrictions.

Response to Comment #10

The Draft EIR does not state that herbicide treatments near potable water intakes would be prohibited due to concern over organic carbon loading. Rather, treatment in the vicinity of water intakes would be governed by an MOU established between DBW and water agencies. One component of this MOU is that a one-mile buffer zone would be established around water treatment plant intakes. No treatments or mechanical harvesting operations would occur within this buffer zone *without approval by the water agency.* The DBW anticipates that treatment near intakes would be allowed during predetermined times when the water agency is not pumping.

Letter #12 – U.S. Army Corps of Engineers

Comment #1

In general, the proposed actions are consistent with ongoing flood damage reduction efforts in the Sacramento and San Joaquin River Basins. Removal of noxious weeds from area waterways is a viable measure of ensuring or increasing flow capacity.

Response to Comment #1

Comment noted.

Comment #2

While navigation is a major reason for the proposed actions, there is little effort put into quantifying impacts.

Response to Comment #2

Where possible, the DBW estimated impacts based on the acreage proposed for *Egeria* control. In many cases it was not possible to quantify impacts due to the complexity of the interactions between ecosystem and treatment. However, impact quantification will be clarified to the extent possible through the consultation process with regulatory agencies, such as USFWS, NMFS and RWQCB. As part of the adaptive management strategy of the EDCP and Komeen Research Trials, impacts would be quantified as more information is made available through program implementation, monitoring, and research.

Comment #3

In fact, the report is totally silent on the increased boating benefits that are attributable to the control program.

Response to Comment #3

The proposed EDCP likely would have a positive effect on Delta navigation. The EDCP likely would result in a reduction in surface acres of waterbody covered with *Egeria*. The projected reduction in *Egeria* surface area is shown in Table 1-6. Such a reduction in surface area is only possible with estimated efficacy levels are as stated in Table 1-6 and no significant newly infested areas.

With the above estimated reduction in surface area, there likely would come associated improvements to navigation and potential improvements to the habitat used by fish and other aquatic life. Additionally, recreational users likely will spread less *Egeria* to other locations within the Delta.

Based on consultations with USFWS, the DBW would make the following change to the project description:

a. Agree that there are a number of potential beneficial cumulative impacts of the proposed project. Potential cumulative benefits that should be weighed against the potentially adverse cumulative impacts are identified below:
   i. Increased foodweb productivity
   ii. Enhanced water quality
   iii. Increased viability of native plant species
   iv. Relieved interference with water conveyance and flood control systems
   v. Opened shallow water habitats for fish rearing
   vi. Improved navigation of Delta waters.

The DBW will make an attempt to quantify these potential beneficial impacts once the EDCP becomes operational.

Comment #4

A Department of the Army permit from Sacramento District Regulatory Branch is not required for the project provided the work is conducted as proposed in the above document. The proposed work is not a type, as defined at 33 CFR 322.2, which requires a Section 10 permit Provided there is no discharge of dredged or fill material into waters of the United States, including wetlands, no Clean Water Act Section 404 permit is required.

Response to Comment #4

The DBW agrees with the comment that no permits are required from the U.S. Army Corps of Engineers for implementation of the proposed project.

Letter # 13 - National Marine Fisheries Service

Comment #1

The NMFS has general concerns regarding the use of the aquatic herbicides diquat, fluridone, and copper. The large biomass of decaying plant material generated once the herbicides exert their toxic effect on *E. densa* will create an extremely large biological oxygen demand that will be maximal after sundown, resulting in conditions that could suffocate fish. The monitoring of dissolved oxygen prior to herbicide applications appears an inappropriate mitigation measure.

Response to Comment #1

Regarding the comment that monitoring for dissolved oxygen is an inadequate avoidance/minimization measure, the DBW is currently in formal consultation with USFWS and NMFS as required under section 7 of the Endangered Species Act.

Revised measures to avoid or minimize impacts to dissolved oxygen that were adopted through this process are described in the "Global Response to Comments on Dissolved Oxygen Concentration".

See also the following two sections in the enclosed "Changes to the draft Environmental Impact Report Resulting from Consultations with USFWS": 1. Provide Additional Dissolved Oxygen Monitoring, and 3. Restrict Timing of Treatment Based on Presence/Absence of Sensitive Fish Species.

Comment #2

The NMFS prefers the mechanical removal of *E. densa*, and suggests removal of dead *E. densa* when aquatic herbicides are used to reduce the biological oxygen demand. Mechanical based control methods may still harm listed species, but are preferable to chemical control methods that create large biological oxygen demands, pose toxicological hazards to salmonids, or permanently alter critical salmonid habitat.

Response to Comment #2

See "Global Response to Comments on Dissolved Oxygen Concentration".

Comment #3

Diquat (Reward), although listed for elodea control, does not appear to be a good aquatic herbicide for use in turbid Delta waters because the active ingredient binds quickly to particulate matter and reduces the proportion of diquat available for direct contact with *E. densa*, thus decreasing effectiveness.

Response to Comment #3

The efficacy of Reward is estimated to be 30 to 50 percent in Delta waters. The estimated efficacies of both Sonar and Komeen can be higher than this range. However, in the case of Sonar, high efficacy can only be achieved in slow or quiescent waters. With respect to Komeen, more research is needed to determine the potential for environmental impacts before this herbicide is used as a control method in the Delta. Extensive use of mechanical harvesting is not a viable alternative to herbicide treatment (See "Global Response to Comments on Impacts to Dissolved Oxygen Concentration".) Thus, Reward remains the most viable alternative for control of *Egeria* in the Delta. The DBW would maximize Reward treatment efficacy by treating during periods of low turbidity to the extent that it is possible and practical.

Comment #4

The MSDS for the formulation of diquat, Reward, states that Reward is toxic to fish and wildlife, but does not indicate which species of fish, and what concentration of Reward is toxic to fish. The NMFS has limited toxicological data for rainbow trout and chinook salmon indicating an 8-hour LC50s of 12.3 mg/L and 28.5 mg/L respectively. The NMFS requests toxicological information for longer exposure durations be obtained for rainbow trout and chinook salmon and compared to the target concentration of Reward in the EDCP.

Response to Comment #4

Limited information is available on longer duration tests of diquat toxicity to rainbow trout and chinook salmon. Johnson and Finley (1980) report 96-hour LC_{50} value of 20.4 ppm for fingerling trout. Information from toxicity tests of shorter duration tests is as follows: Alabaster (1969) reports a 24-hour LC_{50} value of 90 ppm for rainbow trout, while Pimentel (1971) reports an 8-hour LC50 of 12.3 ppm for this species. Pimentel (1971) reports an 8-hour LC_{50} value of 28.5 ppm for chinook salmon. These concentrations are significantly greater than the target concentration for use of Reward under the EDCP (0.37 ppm diquat). Further, exposure time during Reward treatments would be brief, three to six hours. Due to its tendency to bind to particulate matter, diquat rapidly becomes immobilized following application. The immobilized chemical is not "biologically available" and thus not toxic to aquatic plants or organisms. Based on the data described above, and characteristics of the herbicides, the DBW concluded that diquat, as used under the EDCP, would not be toxic to salmonids. DBW is not currently planning to conduct research on the toxicology of diquat to salmonids, although additional research could be required through the consultation process. (A table of LC_{50} values for various fish species is shown on the next page.)

The response of various fish species to varying concentrations of diquat.

Species	LC_{50} value (ppm)	Comments	Reference
Chinook salmon	28.5	8-hour test	Pimentel 1971
Chinook salmon	90	24-hour test	Alabaster 1969
Rainbow trout	12.3	8-hour test	Pimentel 1971
Fingerling trout	20.4	96-hour test	Johnson and Finley 1980
Northern pike	16	96-hour test	Johnson and Finley 1980
Bluegill	245	96-hour test	Johnson and Finley 1980
Bluegill	35	96-hour test	Gilderhus 1967
Yellow perch	60	96-hour test	Johnson and Finley 1980
Black bullhead	170	96-hour test	Johnson and Finley 1980
Larval walleye, largemouth bass, smallmouth bass	0.74 to 4.9	96-hour test	Paul and others 1994
Largemouth bass	7.8	96-hour test	Surber and Pickering (1962)
Mosquito fish	298	96-hour test	Gilderhus 1967

Comment #5

The target concentration for Reward as stated in the EDCP (0.5 mg/L) is greater than the maxi (sic) application rate stated on the product label (0.37 mg/L). The NMFS requests that target concentration be revised in the EDCP to reflect the product label. Failure to comply with label restrictions is a violation of applicable state and Federal laws.

Response to Comment #5

The target concentration for Reward under the EDCP would be 0.37 ppm. Instances in the Draft EIR stating that the target concentration is greater than this are in error and will be corrected in the Final EIR.

Comment #6

Fluridone (Sonar) appears to be of limited use for *E. dense* (sic) control in Delta waterways. Systemic herbicides require a long exposure time to exert their toxic effects on *E. densa*. Consequently, fluridone can only be used in areas with minimal flow so that dilution of the active ingredient is minimized.

Response to Comment #6

Field trials conducted at various locations in the Delta indicate that Sonar can be effective at controlling *Egeria* in the Delta under certain environmental conditions (Anderson and others 1998). The DBW has identified various sites in the Delta at which Sonar may be used effectively. (See Chapter 1, Exhibit 1-6 of the Draft EIR.) However, it is true that Sonar cannot be used in as many locations in the Delta as can Reward, due to the moderate to high flows at most locations. For this reason, only 20% of the total treatment area under the EDCP would be treated with Sonar each year.

Comment #7

The use restrictions for fluridone will exacerbate biological oxygen demand problems, because water with high dissolved oxygen will not be able to refresh treated areas due to low flow conditions.

Response to Comment #7

Research indicates that use of Sonar does not result in significant decreases in dissolved oxygen (Parka and others 1978, Arnold 1979, Struve and others 1991). See "Global Response to Comments on Dissolved Oxygen Concentration".

Comment #8

The 96-hour LC50 for rainbow trout ranges between 4.25 and 8.4 mg/L with the average; LC50 being 6.6 mg/L. The potential for exposure to fluridone (Sonar) is greater than exposure, potential for diquat (Reward) because the treatment regimen is designed to maintain target concentrations through repeated applications over a 42 to 126 day period, a duration greater dm the product label states as necessary for control (30-90 days).

Response to Comment #8

The USEPA (1986) reports that the LC_{50} for rainbow trout *(Oncorhynchus mykiss)* exposed to fluridone for a 96-hour period was 11.7 ppm. This is between 585 and 1,000 times greater than the target water column concentration of fluridone (0.01 ppm to 0.02 ppm) for the EDCP. Even the lowest value identified in NMFS's comments (96-hour LC50 of 4.25 ppm) is still between 212 and 425 times greater than the target concentration mentioned above. Thus, despite the extended exposure time required by Sonar, it does not seem likely that use of this herbicide under the EDCP would result in toxicological effects to salmonids.

Under the EDCP, the DBW would maintain this target concentration for Sonar for a period of six to eight weeks. This is within the exposure period allowable under the Sonar label rate. The perception that DBW intends to continue treatments at a given location for up to 126 days is in error.

Comment #9

The target concentration of 0.2 mg/L for both Sonar formulations as stated in the EDCP is greater than the maximum application rate stated on the product label (0.075 - 0.15 mg/L). The NMFS requests that target concentration and exposure duration be revised in the EDCP to reflect the product label. Failure to comply with label restrictions is a violation of applicable state and Federal law.

Response to Comment #9

The target concentration for Sonar under the EDCP would be 0.01 to 0.02 ppm fluridone. Instances in the Draft EIR stating that the target concentration is greater than 0.02 ppm are in error and will be corrected in the Final EIR.

Comment #10

Komeen contains 8% elemental copper by weight, and is applied to the treated area at concentrations ranging from 0.5 to 0.75 mg/L (500 to 750 µg/L). The product labeling for Komeen states that "trout and other species of fish may be killed at application rates recommended on this label". Indeed, the rainbow trout 24-hour LC50s for copper compounds range from 32 to 150 µg/L.

Response to Comment #10

The chelated form of copper used in Komeen is significantly less toxic to aquatic organisms than is the non-chelated form. For instance, the LC50 value for rainbow trout exposed to Komeen (48 hour test) is 4000 ppb (Meyers and Stoner 1974), while the LC50 for rainbow trout and steelhead exposed to ionized copper (96 hour tests) is between 13 and 33 ppb (Buhl and Hamilton 1990, Chapman 1973, Colorado Game, Fish and Parks 1971, McKim and Benoit 1971).

The DBW is currently completing formal consultation with USFWS and NMFS as required under Section 7 of the Endangered Species Act. The following describes revisions to the Komeen Research Trial project description. These revisions should insure that impacts to salmonids are avoided and or minimized, largely due to the fact that Komeen treatments will not occur during peak salmonid migration periods.

Based on consultations with USFWS, the DBW would revise the project description to conduct the Two-Year Komeen Trials at the following three sites:

- Disappointment Slough
- Sandmound Slough
- Venice Cut.

The DBW also would propose to use Frank's Tract (along the edges and not near areas proposed for the EDCP) as an alternate site. The DBW would conduct the trials at Frank's Tract if one of the other three sites identified above had either pre-treatment (as identified in Exhibit 1-9 on page 1-39 of the draft EIR) or day of treatment conditions (identified in 1.8.2.2 on page 1-30 and in Exhibit O-1 on page O-2 of Appendix O in the draft EIR) which would restrict the DBW's ability to perform the treatment or properly capture the necessary data for the trial.

Additionally, over the next five years, the DBW would perform toxicity tests in the laboratory on the following three sensitive fish species:

- Delta smelt
- Sacramento splittail
- Chinook salmon (salmonids).

Where a species is unavailable through IEP and Cal Fed sources, the DBW would work with USFWS to identify an acceptable surrogate species. If the Two-Year Komeen Trials do not provide sufficient reason for the DBW to incorporate Komeen into the EDCP (requiring supplemental environmental documentation), then these toxicity tests may not be performed.

Comment #11

The acute ambient water quality criteria (CMC) for copper promulgated in the California Toxics Rule is 13 µg/L (at 100 mg/L hardness). The CMC for copper is hardness dependent, and is expressed as the dissolved concentration of copper, so the actual CMC for the Delta may be slightly higher or lower. Regardless, the target concentration of copper (Komeen) will be approximately 38 to 58 times greater than the water quality standard for aquatic life. The environmental safety of copper is of special concern to the NMFS because copper (an element), unlike organic chemical herbicides does not degrade, and becomes a permanent part of the Delta ecosystem.

Response to Comment #11

The DBW has applied for both a waiver of Basin Plan objectives regulating copper concentration in the Delta and an NPDES permit from the RWQCB. The RWQCB will determine whether an NPDES permit or a waiver is necessary, conditions regulating such a permit or waiver (such as under what conditions DBW may use the copper-based herbicide, Komeen), and whether either will be granted. Further, DBW is currently in formal consultation with USFWS and NMFS as required under Section 7 of the Endangered Species Act. Revisions have been made to the project description to insure that impacts to aquatic organisms are avoided or minimized. These revisions are described in the enclosed document titled "Changes to the draft Environmental Impact Report Resulting from Consultations with USFWS."

Comment #12

The label also states that "the activity of Komeen may be reduced if silt or algae are present in the water or cover the weeds". Delta waters are known to be very turbid, and have high algae counts, suggesting that Komeen may not be a good choice for use in the Delta.

Response to Comment #12

Komeen is by far the most effective method for *Egeria* control in the Delta. The DBW conducted small-scale, limited field trials using Komeen during 1997 and 1998 in the Delta, and determined that the estimated efficacy of Komeen in the Delta would be between 80 and 90 percent over a five-year period if it were used for *Egeria* control (Anderson pers. comm. 2000). The trials showed that Komeen is effective at controlling *Egeria* growth even in high flow conditions such as those present in the Delta (Anderson and others 1998).

Comment #13

The National Marine Fisheries Service cannot endorse the use of Komeen or other copper based herbicides in the EDCP.

Response to Comment #13

The DBW has not proposed the use of Komeen or any other copper based herbicides for use under the EDCP. Komeen would be used exclusively for the Komeen Research Trials. The purpose of the Komeen Trials is to thoroughly assess the environmental impacts of the herbicide. If the Trials indicate that Komeen would not adversely affect the aquatic environment, the DBW may propose, through submittal of supplemental environmental documentation, to use Komeen on a routine basis in the Delta. Such a proposal would be subject to all applicable environmental laws, such as CEQA, ESA, CESA, etc.

Letter #14 – U.S. Bureau of Reclamation

Comment #1

California Department of Boating and Waterways should consider using Sonar SRP before selecting Reward as the primary chemical control method. According to SePro, Sonar SRP is effective in flowing water. Both Reward and Sonar-treated water may be injurious to desirable foliage, however, damage from improper application of Reward will be visible in several days. In addition, Sonar is effective in muddy water and may have minimal effects on aquatic invertebrates and fish. A combination of Sonar A.S. and Sonar SRP treatments may be the best control strategy in the Delta.

Response to Comment #1

The Specimen Labels published by SePRO for Sonar SRP and AS both state that it is important to maintain the recommended concentration of Sonar in contact with weeds as long as possible. It further states that rapid water movement or any condition which results in rapid dilution of Sonar in treated water will reduce its effectiveness. Thus, Sonar is not expected to be as effective as Reward at many locations in the Delta. While Sonar is less likely than Reward to adversely impact desirable foliage or aquatic organisms, it would be ineffective at many locations in the Delta. For this reason, the DBW plans to use Sonar only in areas of low water flow.

Comment #2

Fluridone is degraded by sunlight and microorganisms. The speed of photodegradation is largely governed by the intensity and duration of sunlight and depth and turbidity of the treated water. In studies conducted by SePro, Fluridone photodegraded to 50% of its initial concentration within four weeks after application to water.

Response to Comment #2

Data on the rate of degradation of fluridone in sediments show some variation. USEPA (1986) asserts that the half-life of fluridone in the hydrosoil is 90 days. Studies conducted by SePRO indicate that fluridone photodegrades to 50% of its initial concentration within four weeks after application to water. It is safe to assume that, as stated in the Draft EIR, fluridone may remain in bottom sediments for four months to one year.

Comment #3

Page 1-34, 1.9: Monitoring Program should include a discussion of proposed monitoring procedures for public safety, domestic animals, and non-target wildlife.

Response to Comment #3

The EIR specifies several ways in which the DBW would limit or restrict public access to treatment areas during periods of toxicity. Prior to treatments, marina owners would be notified regarding treatment timing. During applications sites would be marked with buoys, making herbicide treatments visible to the public. DBW staff also would patrol treatment areas in a support boat, informing those recreating (and who may have domestic animals present in the area) that treatments are occurring (pages 3-77, 4-65).

Additionally, the DBW would conduct pre-treatment and post-treatment monitoring for presence of sensitive wildlife and plant species throughout the ongoing EDCP (see Exhibit 1-8, page 1-35) and Two-Year Komeen Trials (see Exhibit 1-9, page. 1-39).

Comment #4

CDBW should consult with NMFS on potential adverse impact of the proposed project on anadromous fish in the Delta.

Response to Comment #4

The DBW is currently involved in formal consultation with NMFS as required under Section 7 of the Endangered Species Act to determine, among other things, how to minimize and avoid project-related impacts to anadromous fish.

Comment #5

We have several environmental and health concerns: California Department of Boating and Waterways proposes to use a target concentration of Reward, 18.5 times higher than the maximum contaminant level goal and CDBW has no information on the identity or concentration of a carcinogen in the inert ingredients. This inert ingredient in Reward may pose a potential risks to pesticide applicators, public health and the environment. CDBW should consider an additional alternative, EDCP with Sonar (Alternative 8).

Response to Comment #5

While it is true that the target concentration for Reward is 18.5 times higher than the maximum contaminant level goal for diquat (0.02 ppm), avoidance measures proposed by DBW in the Draft EIR would insure that water diverted for drinking purposes is not contaminated with the herbicide.

Herbicide use within the vicinity of a domestic surface water intake would be governed by an MOU between the DBW and the water agency. Requirements of the MOU will include notification of the agency at least two weeks prior to commencement of treatment. Additionally, a one-mile buffer zone would be established around water intakes. No herbicide treatments would occur within this buffer zone without approval by the water agency. The DBW would coordinate with the appropriate public water agencies to establish buffer zones. By following these measures, DBW will avoid adverse impacts to domestic surface water due to Reward or either of the other herbicides.

Information on the inert ingredients in herbicides is proprietary and confidential. However, Zeneca Co., manufacturers of Reward, provided the following information regarding the potential risks to pesticide applicators, public health and the environment from the inert ingredients in Reward:

> "No inerts in REWARD pose a risk to the applicator. Under the EPA/RED (Registration Eligibility Decision) process the agency reviewed the impurity EDB. The agency assessment was the following:
>
> > "The manufacture of diquat dibromide may result in the occurrence of ethylene dibromide (EDB) as a process impurity in final formulations because EDB is a starting material in the manufacture of diquat dibromide. EDB is considered a carcinogen, and all pesticide uses of EDB were canceled. Since EDB may remain in diquat dibromide formulations, potential exposure risks were assessed (Guidance Document, 6/86). The Agency concluded that the presence of EDB, which may result from use of diquat dibromide in aquatic and terrestrial sites, does not pose a significant dietary risk, based on worse case assessments. In addition, the registrant certified an upper certified limit of 10ppm for EDB in diquat dibromide, and demonstrated that EDB does not persist as an impurity in diquat dibromide and will slowly dissipate over time." (Zeneca Co., pers. comm 2000)

Letter #15 - National Marine Fisheries Service

Comment #1

The Delta is designated critical habitat for endangered Sacramento River winter-run chinook salmon (*Oncorhynchus tshawytscha*), threatened Central Valley spring-run chinook (*0. tshawytscha*), and threatened Central Valley steelhead (*0. mykiss*). It is a major corridor for adult and juvenile salmonid migration, including candidate species Central Valley fall/late fall run chinook (*0. tshawytscha*). Juvenile salmon often enter the Delta before they are physiologically able to enter salt water, and rear there several months before migrating to the ocean. The proposed March through November implementation of Egeria control measures would occur during the upstream migration of adult winter-run, spring-run, fall- and late-fall run chinook, and steelhead; and during the emigration of juvenile winter-run, spring-run, fall and late-fall run chinook, and steelhead. Virtually all runs of chinook salmon and Central Valley steelhead utilizing the Delta could be directly or indirectly impacted by the EDCP.

Response to Comment #1

The Draft EIR does acknowledge that many runs of chinook salmon and Central Valley steelhead utilizing the Delta could be directly or indirectly impacted by the EDCP. The DBW is currently in formal consultation with NMFS as required under Section 7 of the Endangered Species Act regarding this and other issues specific to anadromous fish.

Based on consultations with USFWS and NMFS, the DBW would modify the project description to use the following treatment schedule:

- March 1 to March 30 - No treatment using any chemical or mechanical method because Delta smelt and Sacramento splittail may have eggs adhering to aquatic plants during this time. Treatment could bury and suffocate eggs or cause adverse impacts to developing embryos.
- April 1 to May 31 – Conduct Fluridone and mechanical harvesting treatments if Delta smelt and Sacramento splittail larvae are not present. To determine whether larvae are present, the DBW would sample *Egeria* to determine whether eggs are present. From a laboratory analysis of the *Egeria* to determine presence and growth stage, the USFWS would determine whether or not the DBW would treat at a given site during this period. The DBW would not treat with Diquat nor would it conduct Two-Year Komeen Trials during this period.
- June 1 to November 30 - Conduct the EDCP (using all proposed aquatic herbicides and mechanical harvesting) and perform the Two-Year Komeen trails during this period.

At any point throughout the year, the USFWS may prohibit chemical treatments when IEP data shows Delta smelt in the vicinity of proposed treatment areas (as defined in the Federal Reg. Notice listing Critical Habitat for Delta smelt (59 FR 65256)). For any of the cases where the USFWS would restrict treatment, the USFWS would notify the DBW within 2 working days prior to the proposed treatment time.

Other changes to the project description resulting from consultations are described in the enclosed document titled "Changes to the draft Environmental Impact Report Resulting from Consultations with USFWS."

Comment #2

There is particular concern over the shallow water "nursery areas" to be chemically treated. Juvenile salmonids favor intertidal and shallow subtidal areas which provide a rich food supply and protective cover. Salmon fry move from tidal channels during flood tide to feed in nearshore marshes. They scatter along the edges of the marshes at the highest points reached by the tide, then with receding tide, retreat into channels that dissect marsh areas and retain water at low tide. Larger fry and smolts tend to congregate in surface waters of main and subsidiary slough channels and move into shallow subtidal areas to feed.

Response to Comment #2

As noted in the answer above, the DBW is currently in formal consultation with NMFS regarding potential project-related impacts to anadromous fish. Measures to avoid or reduce impacts to salmonids and other sensitive fish have been developed through this process and are described under #1 above. The following discussion is presented in the interest of providing available information regarding the potential for impacts to juvenile salmonids due to the EDCP and for the use of Egeria by salmonids.

Priority Treatment Areas: NMFS states that there is particular concern over treatment of the shallow water areas, since these areas are favored by juvenile salmonids. Since the primary purpose of the EDCP is to improve navigation in the Delta, most of the sites chosen for treatment are not such shallow water areas. In general, water depth at priority treatment sites is between 8 and 15 feet deep. Although drift of herbicides into shallow water areas can occur, it is worth noting that such shallow water areas would not be the focus of EDCP treatments.

Use of Egeria by Special Status Fish: While shallow water habitat in general is heavily utilized by juvenile and fry salmonids, field research suggests that shallow areas infested with Egeria are not. As discussed in chapters 3 and 4 of the Draft EIR, researchers at San Francisco State University, under contract with the DBW, studied the use of Egeria beds by delta smelt, splittail, migratory salmonids, and other fish of the Sacramento-San Joaquin Estuary (McGowan 1998, and McGowan and March 1998). Pop nets and light traps were used to collect fish in Egeria beds. Additionally, piles of Egeria mechanically harvested during other DBW experiments were sampled and sorted in their entirety for fish and invertebrates. (See McGowan 1998 for an explanation of sampling methods.) Samples were collected from May through late October at six sites in the Delta: Sandmound Slough, Seven Mile Slough, White Slough, Big Break Marina, Frank's Tract, and Little Venice Island. A total of 257 pop-net samples and 193 light trap samples were collected over the sampling period. In the pop-net samples, 2,181 individual fish were collected; 840 fish were collected in the light traps, and 671 fish, crabs, and tadpoles were sorted from the harvested Egeria.

A total of fourteen (14) species of fish were collected from the sampling effort. Of the fourteen species of fish collected, only one is a native species (prickly sculpin). According to McGowan (1998), species collected were typical non-native residents of the Delta. Small individuals of bluegill, sunfish, largemouth bass, threadfin shad, and inland silversides dominated the catches. No sensitive species such as delta smelt, splittail, juvenile chinook, or steelhead were collected. These data should provide a fairly accurate picture of which species may be found in Egeria beds during EDCP operations, since the sampling was conducted during many of the same months that project operations would occur.

Similar results were obtained by Grimaldo and others (*In Prep.)* who conducted a 16-month study at three breached leveed wetlands in the Delta. Sample sites were shallow subtidal areas (< 4 m) mostly colonized by submerged aquatic vegetation (SAV); the dominant species at all sites was *Egeria*. A total of 47,138 fish representing 32 fish species were collected during the 16-month study period. The catch primarily consisted of juvenile lifestages. The five most abundant species, which accounted for 90 percent of the total catch, were introduced species: threadfin shad, inland silverside, redear sunfish, bluegill, and largemouth bass. The most abundant native species were tule perch, splittail, chinook salmon, and prickly sculpin. These species comprised two percent of the total catch.

While chinook salmon were captured during the study, they were associated with open water areas as opposed to areas with low to dense SAV. Likewise, peak splittail abundance was associated with low density SAV.

The findings of McGowan (1998) and Grimaldo (*In Prep.)* suggest that *Egeria* is not typically used by native fish species or specifically any threatened, endangered, or special status species as habitat or as a migration corridor.

Comment #3

Although there is some preliminary research evidence that salmon and steelhead may not utilize *Egeria*, the juvenile salmonids inhabiting the Delta would be vulnerable to indirect impacts from the chemical and mechanical harvesting controls, such as reduced food supply and chronic toxicity effects.

Response to Comment #3

As noted in the answers above, the DBW is currently in formal consultation with NMFS regarding potential project-related impacts to anadromous fish. Measures to avoid or reduce impacts to salmonids and other sensitive fish were developed through this process and are described in the enclosed document titled "Changes to the draft Environmental Impact Report Resulting from Consultations with USFWS."

Comment #4

The greatest potential impact of the EDCP is a potential major spill of toxic chemicals that could lead to mortality of either migrating adults or juveniles holding in the river. The reported residual copper readings taken up to 1000 feet from the treated research plot in Sandmound Slough corroborates movement of Komeen with the tidal flows, and possible impacts to native vegetation and fauna associations outside of the treated areas over a 24 hour time span.

Response to Comment #4

The DBW has developed a set of guidelines, entitled "Herbicide Handling Procedures and Spill Contingency Plan" which would be adhered to throughout implementation of the program. The plan contains guidelines for herbicide handling procedures, storage, transportation, mixing, loading and applications, as well as measures to take in the event of an herbicide spill. Although the potential for a chemical spill can never be entirely removed, the guidelines set forth by the DBW significantly reduce the possibility of a spill occurring. A copy of the plan can be found in Appendix S of the Draft EIR.

Comment #5

Copper compounds are toxic to fish and must be used with extreme care. Also, copper does not break down and can accumulate in sediments. It is known to damage the gills and interfere with respiratory function in fishes. Copper can have adverse effects on the behavior, physiology, and reproduction function of fish, damage tissue and organs, and result in mortality from either acute or chronic toxic effects. Despite all the proposed avoidance and mitigation measures stated in the EIR, this toxicant is our biggest concern of the EDCP.

Response to Comment #5

The DBW recognizes that the impacts described in this comment could potentially occur following the use of Komeen. (Indeed, these impacts were discussed in detail in the Draft EIR, Chapter 4.) For this reason, the DBW has proposed that Komeen only be used during limited research trials. Currently, the DBW is in formal consultation with NMFS and USFWS regarding project-related impacts due to the Two-Year Komeen Research Trials. Revisions to the project description and additional measures to avoid or reduce impacts include the following:

- The research trials will not occur at the two proposed research sites near the confluence of the Sacramento and San Joaquin rivers (Big Break and Sherman Island), but rather three sites further inland will be used including Disappointment Slough, Sandmound Slough, and Venice Cut.
- A revised research proposal will be completed with input from DBW, USDA, USFWS and NMFS, and circulated for peer review. The research proposal will include studies in addition to those proposed in the Draft EIR.
- The research will include field trials with "live cage" experiments to determine the effect of exposure to Komeen on delta smelt and splittail.

Comment #6

Specific concerns regarding the bioaccumulation of copper in the tissue of salmon and steelhead.

Response to Comment #6

Laboratory toxicity studies will be conducted as part of the Two-Year Komeen Research Trials to examine the effect of Komeen on salmonids (e.g. bioaccumulation, chronic and lethal toxicity levels).

Comment #7

Specific concern regarding the rate and accumulation of dissolved and ionic copper in the sediment profile.

Response to Comment #7

Questions regarding the rate and accumulation of dissolved and ionic copper in the sediment profile will be addressed in the Two-Year Komeen Research Trials. As noted above, a revised research proposal will be completed with input from DBW, USDA, USFWS and NMFS, and circulated for peer review.

Comment #8

Specific concern regarding the temporary loss of aquatic invertebrate prey base for fry and juveniles. Twenty acres per treatment site per day is a large area, especially if intact. What is the maximum number of acres that could be impacted in a day?

Response to Comment #8

Based on consultations with USFWS and NMFS, the DBW would use the following treatment schedule:

- March 1 to March 30 - No treatment using any chemical or mechanical method because Delta smelt and Sacramento splittail may have eggs adhering to aquatic plants during this time. Treatment could bury and suffocate eggs or cause adverse impacts to developing embryos.
- April 1 to May 31 – Conduct Fluridone and mechanical harvesting treatments if Delta smelt and Sacramento splittail larvae are not present. To determine whether larvae are present, the DBW would sample *Egeria* to determine whether eggs are present. From a laboratory analysis of the *Egeria* to determine presence and growth stage, the USFWS would determine whether or not the DBW would treat at a given site during this period. The DBW would not treat with Diquat nor would it conduct Two-Year Komeen Trials during this period.
- June 1 to November 30 - Conduct the EDCP (using all proposed aquatic herbicides and mechanical harvesting) and perform the Two-Year Komeen trails during this period.

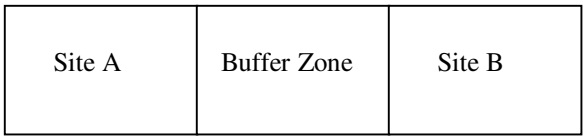
At any point throughout the year, the USFWS may prohibit chemical treatments when IEP data shows Delta smelt in the vicinity of proposed treatment areas (as defined in the Federal Reg. Notice listing Critical Habitat for Delta smelt (59 FR 65256)). For any of the cases where the USFWS would restrict treatment, the USFWS would notify the DBW within 2 working days prior to the proposed treatment time.

Restricting the timing of treatment to eliminate treatment in March and only use Sonar/Mechanical Harvesting during April and May essentially means that juvenile and fry salmonids would not be subject to direct or indirect effects, such as decrease in prey base, from the herbicides. Additionally, no more than a total of 30 acres would be impacted by treatments on any given day.

Based on consultations with USFWS, the DBW has agreed to the following modification to the project description related to the number of acres treated per day:

a. Treat no more than 20 acres, per site, per day

b. Create a buffer zone of a distance equal to the linear dimension of the longer treatment site. Referring to the figure below, if Site A were treated on Day 1, then Site B could not be treated until Day 3. If Site B were treated on Day 3, then the DBW could not treat Site A again until Day 5.



c. Not exceed 10 acres per day with mechanical harvesting.

Comment #9

Specific concern regarding the decrease in oxygen concentrations in the treated areas.

Response to Comment #9

See "Global Response to Comments on Dissolved Oxygen Concentration".

Comment #10

Specific concern regarding the type of environmental conditions that could initiate ionization of elemental copper in the sediment.

Response to Comment #10

Questions regarding the type of environmental conditions that could initiate ionization of copper in the sediment will be addressed in the Two-Year Komeen Research Trials. As noted above, a revised research proposal for the Komeen Trials will be completed with input from DBW, USDA, USFWS and NMFS, and circulated for peer review.

Comment #11

Specific concern regarding the cumulative direct and indirect effects that can be expected in the Delta environment after 5, 10, 20, (etc.) years of program implementation. It is assumed that the EDCP will continue on some basis for as long as there is the presence of Egeria in the Delta.

Response to Comment #11

Chapter 6 of the Draft EIR discusses cumulative impacts of the proposed project. It was concluded that the EDCP and Two-Year Komeen Research Trials could result in adverse cumulative impacts to water quality, shallow water habitat, wetlands, special status fish, plants and wildlife species, aquatic invertebrates and sediments.

Since the EDCP is to be managed adaptively, analyses of impacts will occur on a regular basis. Further, a primary goal of the Two-Year Komeen Research Trials is to assess the long-term impact of Komeen use on the Delta. Such analyses will facilitate further assessment of cumulative impacts due to the proposed project.

The DBW is proposing to implement the EDCP initially for a five-year period. Following that, an assessment would be made as to whether the program, in its current form, should continue. It is anticipated that, as the volume of *Egeria* in the Delta decreases, fewer treatments would be needed to control the plant's growth. Additionally, the DBW will continue to examine the possibility of alternative treatment methods that may be feasible in the future, such as biological controls. Currently, there are no biological control methods approved for use in the Delta.

Comment #12

The effect of the controls is dependent upon water quality characteristics. It would have been helpful to this evaluation if the EIR had included a summary of the water quality parameters of the Delta as they change during the year.

Response to Comment #12

See the enclosed "Water Quality Data" provided for the years 1992 to 1996. A total of four parameters are included: dissolved oxygen, pH, turbidity, and water temperature. The data is aggregated for various stations throughout the Delta and also is aggregated for the five-year period. Data is provided on a monthly basis with minimum, average, and maximum values shown.

Comment #13

The monitoring levels were summarized for each EDCP method; however, there was no discussion of the rating criteria for significance levels in the indicator analysis.

Response to Comment #13

See response to Letter #10 (Contra Costa Water District), Response to Comment #11.

Comment #14

There was also confusion regarding the application concentrations of chemical controls. Exhibit 1-7, Estimated EDCP Chemical Application Summary, lists the application concentrations of Reward and Sonar treatments at 0.37 ppm and 0.02 ppm respectively. However, under Appendix L, Herbicide Treatment Protocols, the target concentrations are 0.5 ppm for Reward and 0.2 ppm for both forms of Sonar.

Response to Comment #14

The target concentrations for Reward and Sonar under the EDCP would be 0.37 ppm and 0.02 ppm respectively. Instances in the Draft EIR stating that the target concentrations are greater than these values are in error and will be corrected in the Final EIR.

Letter #16 - California State Lands Commission

Comment #1

By way of general background, the State acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all the people of the State for statewide Public Trust purposes that include waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. The landward boundaries of the State's sovereign interests are generally based upon the ordinary high water marks of these waterways as they last naturally existed. Thus, such boundaries may not be readily apparent from present day site inspections. The State's sovereign interests are under the jurisdiction of the CSLC. Any activities involving these lands are subject to the Commission's leasing requirements. Please contact Diane Jones, (916) 574-1843, Public Land Management Specialist, concerning the Commission's leasing requirements.

Response to Comment #1

The DBW does not believe it needs a lease from the State Lands Commission to conduct the EDCP and Two-Year Komeen Trials.

Comment #2

The document states that wave-wash or flooding during high tide could adversely impact intertidal wetland plant communities if herbicide concentrations in the channel water are at treatment levels. It further discusses how loss of sensitive plant species in these communities may occur. Finally, it states that neither the extent of acreage of potential impacted nor the intensity of the impacts is known.

Response to Comment #2

The DBW is not currently planning to estimate acreage or intensity of potential impacts to wetland plant communities. However, prior to treatments, channel banks would be surveyed for sensitive wetland plants and wetland communities, and areas with a high percentage of wetland plant species would be avoided. Following treatments, channel banks would again be surveyed to determine whether loss of sensitive intertidal wetland plants occurred. If substantial loss is evident, changes may be made in the treatment protocol to decrease the possibility that impacts may occur in the future.

Comment #3

The document states that the EDCP may impact elderberry trees, which are protected as habitat for the Federally threatened valley elderberry longhorn beetle. This in turn will affect Valley elderberry longhorn beetles, which are tied to their host plant. An estimate of the number of trees that may be impacted should be made, and appropriate mitigation, such as planting of new trees, specified in the document.

Response to Comment #3

The DBW is not currently planning to estimate the number of elderberry trees that could potentially be impacted by the project. However, pre-treatment botanical surveys would be conducted to determine the presence of elderberry trees. Elderberry trees that could be inundated during high tide would be flagged. Herbicide treatment would not occur along channels where elderberry trees could be adversely impacted.

It is not considered likely that elderberry trees would be adversely impacted by the proposed project due to the avoidance measures described above. While the DBW is not currently proposing the mitigation measures such as planting of new trees, the agency will abide by all conditions put forth by the regulatory agencies through the formal consultation process.

Comment #4

The document states that Sonar could result in loss of intertidal wetland vegetation, which may serve as habitat for certain birds, including special status species. An estimate of the amount of such vegetation that may be lost should be made, along with mitigation to restore or compensate for these losses.

Response to Comment #4

The DBW is not currently proposing to estimate the amount of intertidal wetland vegetation that may be lost due to use of Sonar, Reward or Komeen. However, pre-and post treatment surveys would be conducted prior to use of herbicides, as described above under Response to Comment #2.

Comment #5

Mechanical Harvesting may impact birds that nest along channel banks during staging or maneuvering activities, or when equipment is placed along channel banks. Efforts should be made to avoid nesting habitat.

Response to Comment #5

Efforts will be made to avoid nesting habitat of birds during mechanical harvesting. Prior to mechanical harvesting, channel banks adjacent to treatment sites would be surveyed by a qualified botanist to determine the presence of sensitive plant species. The area around special status plants would be flagged and no staging or movement of harvester equipment would be allowed within the flagged area. Additionally, *Egeria* fragments would be collected by harvesters in such a way as to ensure that fragments do not pile up along channel banks.

Comment #6

The document states that prior to herbicide application, a qualified botanist would survey channel banks adjacent to treatment sites to determine whether sensitive plant species are present. It suggests that if the site exhibits a high percentage of intertidal wetland communities and associated sensitive plants, the site may not be treated. What constitutes a high percentage and will DFG and USFWS botanists be consulted in this effort.

Response to Comment #6

The DBW is currently in formal consultation with USFWS as required under Section 7 of the Endangered Species Act. The question of what constitutes a high percentage of wetland plants will be addressed through this process.

Comment #7

The document states that prior to mechanical harvesting, a qualified wildlife biologist would survey channel banks and uplands adjacent to treatment sites to determine whether special status reptile, amphibian, or bird species are present. It then mentions that no staging or mechanical harvesting equipment would be allowed in areas that show evidence of such species or which exhibit ideal habitat conditions. What type of buffer distance will be established to protect such species?

Response to Comment #7

The DBW will consult with the CDFG regarding the appropriate buffer distance to be used to protect any special status reptile, amphibian, or bird species.

Comment #8

The document states that local landowners could be informed of the particular periods of time during which irrigation should not occur. This should be revised to states that they would be informed of the particular period of time during which irrigation should occur, based on the results of monitoring the concentrations of Reward and Sonar after application.

Response to Comment #8

The DBW would provide the County Agricultural Commissioners with a schedule of EDCP treatments and two-year Komeen trial treatments. This schedule would be provided in advance of the treatment. The DBW also may post the schedule for EDCP and two-year Komeen trial treatments on its web site (www.dbw.ca.gov) in advance of a treatment. Also marina owners would be notified regarding the timing of treatments (pgs. 4-65). Local landowners can use these three sources to identify treatment timing. Additionally, the DBW would conduct a site survey prior to treatment and follow label restrictions related to irrigation.

Comment #9

One-mile buffer zones around water treatment plant intakes are proposed to avoid drinking water quality impacts. How long after a treatment within a buffer zone will the intake of water be conducted by the public water agencies? Will this be determined based on review of the monitoring results and coordination with the agencies?

Response to Comment #9

Based on the Memorandum of Understandings (MOUs) established with public water agencies, the DBW would work with the public agency to determine ideal times to treat within the buffer zone. The DBW would conduct post-treatment monitoring in accordance with Exhibit 1-8, page 1-35. The water agency also as a matter of practice would be monitoring water quality at intakes. The water agency would determine from the monitoring information how long after treatment within a buffer zone the water agency would wait prior to drawing water.

Comment #10

The document states that DBW staff could limit water-dependent recreational activities in and adjacent to treatment sites. This should be revised to state that such activities would be limited, as necessary, by authority of DBW staff to minimize the public's exposure to the herbicides.

Response to Comment #10

The DBW would make attempts to limit recreational activities to minimize public exposure to herbicides by patrolling a site during herbicide applications. However once the DBW informed an individual, it would not have authority to force that individual to leave a given site.

Comment #11

The document states that one-mile buffer zones would be established around water treatment plant intakes and that DBW would coordinate with appropriate public water agencies to establish the buffer zones. Would such coordination be based on the results of monitoring following application of the herbicides?

Response to Comment #11

The DBW intends to establish Memorandum of Understanding (MOU) with primary water agencies drawing water from the Delta. For example, the DBW would establish an MOU with the Contra Costa Water Department (CCWD) who draws water through the Contra Costa Canal (at Rock Slough). This MOU would identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.

For the EDCP, the DBW would use this same one-mile buffer zone around any other water treatment plant intakes in the Delta (page 3-26). Two-Year Komeen Trials are not proposed for areas near drinking water intakes (pg. 4-62).

The DBW also would contact the Department of Health Services Drinking Water Program to inform them of the EDCP treatment schedules.

The water agencies monitor regularly at their intakes and would work with the DBW to inform them of any irregularities follow application of herbicides.

Comment #12

Furthermore, drawing of water through the intakes should not be done until results of monitoring show that it is safe to do so.

Response to Comment #12

Through MOUs with various water agencies throughout the Delta, the DBW would coordinate its treatments within a one-mile buffer zone. Should at any time the water purveyors monitoring results indicate unsafe levels of any herbicide the DBW would postpone treatments at that site until it is safe to apply herbicides to that site.

Comment #13

The document states that sensitive intertidal wetland plant communities occurring along Delta channels and on in-channel islands would potentially be impacted by EDCP herbicide treatment and that this would be an unavoidable significant impact. DBW should monitor the losses of these sensitive plants and mitigate for such losses by restoration and re-colonization efforts.

Response to Comment #13

As noted above in answer #1 above, the DBW will monitor for loss of sensitive intertidal and wetland plants following herbicide treatment. The DBW will mitigate for such losses through restoration and/or recolonization as required by USFWS and/or CDFG.

Letter #17 - Department of Toxic Substance Control

Comment #1

The Department of Toxic Substances Control (DTSC) has reviewed the documents "Egeria densa Control Program: Volume /: Draft Environmental Impact Report; and Volume //: Research Trial Reports, in light of our previous comments regarding the potential for mechanically harvested *Egeria densa* to be a potential hazardous waste. The information presented to DTSC, referenced in Volume 1, Section 1.7.2.2, is sufficient to address our previous comments. In addition, the continued monitoring of treated *Egeria densa* for herbicide content, referenced in Volume II, Report 1, will also suffice to answer any future questions regarding the waste classification of harvested *Egeria densa*.

Response to Comment #1

Comment noted.

Letter #18 - Reclamation Board

Comment #1

The proposed project may be located within or adjacent to floodways and/or levees over which the Board has jurisdiction. Section 8710 of the California Water Code requires that a Board permit must be obtained prior to start of any work, including excavation and construction activities within floodways, levees, and 25 feet landward of the landside levee toes. A list of streams regulated by the Board is contained in the California Code of Regulations, Title 23, section 112.

Section 7 of the Regulations states that additional information, such as geotechnical exploration and analysis, soil testing, hydraulic or sediment transport studies, biological surveys, environmental surveys, and other analyses, may be required at any time prior to Board action on the application.

Section 8 of the Regulations states that applications for permits submitted to the Board must include a completed environmental questionnaire that accompanies the application and a copy of any environmental documents that have been prepared for the project. For any foreseeable significant environmental impacts, mitigation for such impacts shall be proposed. All applications are reviewed for compliance with the California Environmental Quality Act.

Response to Comment #1

The DBW does not believe that it needs a Reclamation Board permit. The project will not create impacts to flows that are adverse, nor would the project have material impacts to the flood control system or upstream and downstream property owners.

Letter # 19 - California Regional Water Quality Control Board

Comment #1

Page E-3; "The DBW does not intend to continue the EDCP if the program does not meet its objectives. Should the DBW determine at any point during the five-year period that the EDCP is ineffective, the DBW would recommend to the legislature and appropriate regulatory agencies that EDCP activities cease." The method for determining whether the program is meeting its objectives should be detailed. How does this project quantify performance goals?

Response to Comment #1

Objectives of the program are identified in Table I-1 on page 1-6. When the DBW has an ongoing EDCP, then it can establish measurable performance goals by which to judge whether or not the program is successful after five years. Additionally, as indicated in the 2nd paragraph on page 1-31, the DBW may be able to reduce the amount of aquatic herbicides used per year over time based on the success of the EDCP.

Comment #2

78% of the project acreage is proposed to be treated with Reward (Diquat) at a target concentration of 370 µg/L. The National Ambient Water Quality Criteria (U.S. E.P.A.) instantaneous maximum concentration intended to protect freshwater aquatic life is 0.5 µg/L. Diquat application target concentration is 740 times greater than the U.S. E.P.A. criterion.

Response to Comment #2

Federal law requires that aquatic herbicides be registered prior to sale or use. Registration by the Cal/EPA Department of Pesticide Regulation (DPR) is required for sale or use of an herbicide in California. The process for registering herbicides for use involves a thorough evaluation of the environmental impacts of the herbicide. The documents generated through the registration process are considered, under CEQA, to be the functional equivalent of an environmental impact report. Manufacturers must submit a thorough and extensive data set to USEPA and to DPR to demonstrate that, under its conditions of use, the product would not pose a significant risk to human health and the environment. Reward has been through such a registration process.

Although there is no precedent in the United States for viewing aquatic herbicide residues as waste, the DBW has applied to the CVRWQCB for a National Pollution Discharge Elimination System permit to cover EDCP and Komeen Trial activities. The RWQCB or the State WQCB will determine whether such a permit is necessary and whether it will be granted.

Comment #3

Komeen application target concentration is 500 to 750 µg/L, which far exceeds the Basin Plan objective of 10 µg/L for copper concentration.

Response to Comment #3

The DBW has applied to the CA RWQCB for a National Pollution Discharge Elimination System permit to cover EDCP and Komeen Trial activities. Additionally, they have applied for a waiver of the Basin Plan objective regulating copper concentration in the Delta. The RWQCB or the State WQCB will determine whether either an NPDES permit or a waiver is necessary, conditions regulating such a permit or waiver, and whether either will be granted.

Comment #4

Provide documentation that the active-ingredient, inert-ingredients, and surfactants have been evaluated with respect to impacts to non-target organisms and sediment.

Response to Comment #4

In general, information on the identity and concentration of the inert ingredients in herbicide formulations is proprietary and confidential, and thus not available for review or publication. Such is the case with most of the information regarding the inert-ingredients contained in the herbicides proposed for use under the EDCP and Komeen Trials. All available information on the impact of active-ingredients, inert-ingredients and surfactants was presented in the Draft EIR in sections 3.5 and 4.5. (The impacts of active ingredients on non-target organisms and sediments are discussed at length in the Draft EIR under sections 3.1 - 3.5 and 4.1 - 4.5.)

The review process for herbicide registration includes a thorough evaluation of the potential risks to public health and the environment due to the active-ingredients, inert ingredients and surfactants in each herbicide, as described below.

Federal law requires that aquatic herbicides be registered prior to sale or use. Registration by the Cal/EPA Department of Pesticide Regulation (DPR) is required for sale or use of an herbicide in California. To obtain registration, manufacturers are required to conduct numerous studies (i.e. sometimes over 120 depending upon the intended uses). The registration process in California includes evaluation of human health acute toxicity data on the formulated product. The formulated product includes the active and the inert ingredients. Further, manufacturers must submit a thorough and extensive data set to USEPA and to DPR to demonstrate that, under its conditions of use, the product would not pose a significant risk to human health and the environment, and

that the herbicide is effective against target weeds or plants. Although these documents are classified, they are considered, under CEQA (Pub. Res. Code. Sec. 21080.5) to be the functional equivalent of a full-scale environmental impact report. As such, these documents must include a discussion of impacts to target and non-target organisms and the environment in general, mitigation measure and alternatives. There is also a public comment period for proposed decisions.

All of the herbicides included in the proposed EDCP have been through this review process and are currently registered for use in California. Previous discussions of impacts resulting from Reward, Sonar and Komeen use have covered toxicological effects of the active ingredients, as well as of the entire herbicide formulation. Thus, any impacts due to inert ingredients would have been covered in the discussions of the latter.

Comment #5

Page EC-6; Environmental Checklist-VIII-c; How would the project substantially alter the existing drainage pattern of the site or area..."?

Response to Comment #5

Removal of large beds of *Egeria* could result in an increase in flow in areas that were heavily infested with the weed. Removal of the weeds could result in a change in the distribution of sediment on a localized scale. Any changes in flow or sedimentation would be less than significant.

Comment #6

Exhibit 1-3; The calculation of acre-feet of Egeria biomass does not take into account the percent of area covered. Biomass is overestimated.

Response to Comment #6

Exhibit 1-3 (page 1-17) may be confusing, but the calculation for "Estimated *Egeria* biomass" is correct. The calculation is Estimated Waterbody Surface Acreage Covered with Egeria multiplied by the Approximate Depth of *Egeria*. For example, for Site #1, 716 surface acres of *Egeria* multiplied by 7 feet of *Egeria* depth equals 5,012 acre-feet of *Egeria*.

What may be confusing is that the percentage of waterbody surface acreage covered with *Egeria* is not used in this calculation. To obtain total waterbody surface acres (i.e., with and without Egeria), one would divide the "Estimated Waterbody Surface Acreage Covered with *Egeria*" by the "Percent of Waterbody Surface Acreage Covered with *Egeria*."

Comment #7

More detail should be given to describe how coordination would occur with the agricultural commissioner to insure that irrigation will not be affected by the EDCP or Two-Year Komeen Trials. Include timeliness

Response to Comment #7

For EDCP treatments, the DBW would provide the County Agricultural Commissioners (CAC) with a schedule of EDCP treatments and two-year Komeen trial treatments. This schedule would be provided in advance of the treatment. Should the CAC determine that EDCP or Komeen trials would interfere with irrigation activities, the DBW would postpone treatment at that site and reschedule treatment for a later date when there is no irrigation activity at that site.

Additionally, the DBW may post the schedule for EDCP and two-year Komeen trial treatments on its web site (www.dbw.ca.gov) in advance of a treatment.

Comment #8

Page 1-20; 1.7.1.2; "The DBW intends to use two formulations of both". "Both" what?

Response to Comment #8

Change “both” to “Sonar” at the end of the 1st sentence of the 3rd paragraph under Sonar (Active Ingredient - Fluridone) on page 1-20.

Comment #9

Although research has demonstrated that fragments can potentially form new growth and attachment structures, do they actually attach and grow once they have been cut?

Response to Comment #9

Research has indicated that *Egeria* fragments are viable and can grow after they are cut. Because of the exponential spread of *Egeria* researchers have concluded that they actually attach and grow once they are cut.

Comment #10

Exhibit 1-8; Post application DO/herbicide monitoring must be such that the lowest DO and highest herbicide concentrations are picked up by the samples. The monitoring should be set up to accomplish this. The DO sampling schedule does not appear to accomplish this. Herbicide sampling should continue until concentrations drop to pre-application concentrations.

Response to Comment #10

Through the formal consultation process with USFWS and NMFS, the DBW has revised the monitoring plan for dissolved oxygen presented in the Draft EIR. These revisions address concerns expressed in this comment. The following outlines the plan for monitoring dissolved oxygen levels based on consultations with USFWS and NMFS:

a. Not treat using Reward and Komeen if pre-treatment DO levels are as follows:
   i. Low flow areas: between 4 and 6 ppm
   ii. High flow areas: below 5 ppm
b. Provide a protocol to the USFWS for DO monitoring
c. Develop operator procedures based upon actual operations for the first and second year (i.e., using adaptive management)
d. Establish a review committee to examine monitoring results.

Comment #11

Page 1-44; "The DBW is not certain that application of registered aquatic herbicides constitutes a discharge to surface waters" DBW must recognize that if any herbicide leaves the treatment area (e.g. moves to a non-infested area, or concentrations become dilute enough that they are no longer efficacious) a waste is generated. The dead vegetation is also a waste. DBW is responsible for these wastes.

Response to Comment #11

There is no precedent in the United States for treatment of herbicide residues or resulting dead vegetation as a waste. Despite the lack of precedent, the DBW has applied to the CVRWQCB for a National Pollution Discharge Elimination System permit to cover EDCP and Komeen Trial activities. Additionally, they have applied for a waiver of the Basin Plan objective regulating copper concentration in the Delta. The RWQCB will determine whether an NPDES permit or a waiver is necessary, conditions regulating such a permit or waiver, and whether either will be granted.

Comment #12

Many scientific statements in the environmental setting are unsupported. References should be used in this section. E.g. Page 2-3; Did A.C.O.E. state that surface water quality has declined "probably due to changing agricultural practices"? If that was their statement, reference should follow that sentence. Otherwise, the statement should be supported with a reference or omitted.

Response to Comment #12

The reference will be revised to indicate that the statement reflects the position of ACOE and DWR, 1981.

Comment #13

Page 3-11; Section 3.1.1.1; The Basin Plan sets forth water quality objectives and an implementation plan for meeting those objectives. The Basin Plan designates beneficial uses for a water body. The water quality objectives are intended to be protective of the most sensitive beneficial use. The second paragraph of this section should be restated. When citing the Basin Plan, entire sections should be used. The section on pesticides has been altered such that much of the meaning of the Basin Plan has been lost in this interpretation. See Pesticides section. -No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.

Response to Comment #13

Section 3.1.1.1 will be revised so that the entire section in question of the Basin Plan is shown. It should be noted that the process for registering herbicides involves the thorough evaluation of environmental impacts resulting from use of the herbicide. The registration process is considered to be the functional equivalent of an Environmental Impact Report. Typically, regulation of pesticides is the domain of USEPA and DPR. USEPA and DPR have approved the use of the herbicides proposed for use under the EDCP and Komeen Trials through the registration process.

Comment #14

The immobilized form of Diquat may be non-toxic to organisms, but the high concentrations are a matter of concern until it becomes immobilized. As they site in the document, after four days, the concentration of a 0.37 mg/L application can still be as high as 10 µg/L, 20 times the aquatic life protection number.

Response to Comment #14

As indicated in the text, the fact in question—that an instantaneous concentration of 0.37 ppm can still be as high as 0.01 ppm after four days—refers to changes in diquat concentration in standing water systems such as ponds or lakes. As discussed on page 3-14, the dissipation and dilution of diquat/Reward in flowing, tidally influenced and highly turbid waters such as the Delta are much more rapid (Richman and Lee 1988). Field studies conducted in the Delta indicated that an instantaneous concentration of 0.50 ppm (higher than the target concentration to be used under the EDCP) decreased to 0.01 ppm within 12 to 24 hours. Diquat will not be used in slow-moving, quiescent waters, since Sonar is particularly effective in such environments.

Comment #15

The Fluridone MCLG that is sited in the DRAFT EIR is not in our Compilation of Water Quality Goals. Provide a reference for this number.

Response to Comment #15

Change the reference to an "MCLG for fluridone" to an "acceptable level of fluridone" on pages 3-15, 3-22, and 3-72.

Comment #16

The last paragraph of the Sonar toxicity section mistakenly refers to Reward.

Response to Comment #16

Change Reward to Sonar in third and fourth lines of the 1st paragraph on page 3-16.

Comment #17

With respect to THM formation, the dibromide component of the Reward molecule should be addressed. This will increase the THM formation potential of the receiving waters. The bromide ion is well known to enhance THM formation.

Response to Comment #17

THM formation would be a problem if it occurred in the vicinity of a water treatment plant and contaminated the water supply. However, DBW would adhere to the following measures to avoid this possibility. Herbicide use within the vicinity of a domestic surface water intake would be governed by an MOU between the DBW and the local water district. Requirements of the MOU will include notification of the agency at least two weeks prior to commencement of treatment. Additionally, a one-mile buffer zone would be established around water intakes. No herbicide treatments would occur within this buffer zone without approval by the water district. The DBW would coordinate with the appropriate public water agencies to establish buffer zones. By following these measures, DBW will avoid adverse impacts to domestic surface water due to Reward or either of the other herbicides.

Comment #18

Basin Plan objective for DO is 7 mg/L (Delta west of Antioch bridge). Basin Plan objective for DO is 6 mg/L (San Joaquin River between Turner Cut and Stockton). The remainder of the Delta is 5 mg/L. The DRAFT EIR only mentions the 5 mg/L. If treatment is to occur in areas where the 6 mg/L or 7 mg/L objective applies, the higher objective must be considered. The potential of treatment to depress DO must be taken into account when setting lower-limits on DO prior to application. E.g. If an application generally results in a 2 mg/L drop in DO levels, an application to 5 mg/L DO water will undoubtedly result in an exceedance of Basin Plan objectives.

Response to Comment #18

The CVRWQCB is correct in pointing out that the 6 mg/L or 7 mg/L dissolved oxygen objective is likely relevant to the EDCP, as several proposed treatment sites occur in areas subject to this objective. As part of the DBW's formal consultation with the USFWS (required under Section 7 of the Endangered Species Act), the agency is revising its proposal for pre-treatment dissolved oxygen monitoring and the lower limit for dissolved oxygen at which treatment will still be allowed. The revised plan is described in Response to Comment #10 above.

Comment #19

Page 3-35; "USEPA (1986) asserts that the 48-hour LC50 value for exposure to fluridone is 6.3 ppm." For what organism?

Response to Comment #19

The LC50 value for Daphnia magna exposed to fluridone for 48-hours is 6.3 ppm.

Comment #20

Mechanical harvesting is (presumably erroneously) mentioned several times as part of the Two-Year Komeen trials.

Response to Comment #20

Comment noted. The Final EIR will correct these errors. See enclosed Errata to the draft EIR.

Comment #21

Although the Basin Plan objective for copper is 10 µg/L, DWR water quality data suggest that at times the hardness of Delta water is sufficiently low to facilitate acute copper toxicity at concentrations as low as 5 µg/L, and chronic copper toxicity at concentrations less than 4 µg/L. DBW should account for hardness at sites, when reporting potential for toxicity.

Response to Comment #21

Comment noted.

Comment #22

In target plots, three hours after application, why were some measured copper concentrations as high as 1.50 ppm, roughly twice the application target rate?

Response to Comment #22

One possible suggestion is that there was substantial remixing of the Komeen that caused the concentration at the point in the water column where the sample was taken to increase to the higher levels measured. The DBW does not propose to apply Komeen in the Two-Year Komeen Trials at target concentrations above the labeled rate of 0.75 ppm.

Comment #23

The statement that the [copper] dissipation rate is faster in the Delta than at Clear Lake should be supported with a reference. Not all Delta sites are flowing.

Response to Comment #23

The statement on page 4-14 of the Draft EIR will be changed to read as follows (italics indicate additions): "The dissipation rate *in general* is faster at the Delta treatment sites than at Clear Lake (Anderson pers. comm. 2000). It should be noted that copper would not be used in slow-moving, quiescent waters. Instead Sonar would likely be used as it is particularly effective in such environments.

Comment #24

Page 4-15; The DRAFT EIR should address the fact that eight days after application, some levels of copper remained elevated above Basin Plan Objectives for the Delta.

Response to Comment #24

The comment asks that the EIR address the fact that eight days after application of Komeen at Clear Lake, CA, some levels of copper remained elevated above Basin Plan Objectives for the Delta. As indicated on page 4-15 of the Draft EIR, copper concentrations at Clear Lake eight days following application were generally between 2 and 16 ppb. The Basin Plan Objective for copper is 10 ppb. Basin Plan Objectives do not apply to Clear Lake waters, so this does not constitute a violation of the Basin Plan Objectives. The concentration at Clear Lake eight days following application was only 6 ppb above the Basin Plan Objective for the Delta. It is expected that copper would dissipate more quickly at sites selected for Komeen research in the Delta, since these would be relatively high flow sites.

Comment #25

DBW should be aware that copper cannot be added to the system in areas having background copper concentrations above 10 ppb

Response to Comment #25

The DBW has applied for both a waiver of Basin Plan objectives regulating copper concentration in the Delta and an NPDES permit from the RWQCB. The RWQCB will determine whether an NPDES permit or a waiver is necessary, conditions regulating such a permit or waiver (such as under what conditions DBW may use the copper-based herbicide, Komeen), and whether either will be granted.

Comment #26

The Two-Year Komeen Trials, as well as the EDCP should consider THM concentration and THM formation potential prior to treatment.

Response to Comment #26

Comment noted. The DBW will check whether the water agencies and purveyors monitor for THM concentration and THM formation potential. The DBW would determine whether water agencies and purveyors are willing to share their data in a timely manner with the DBW. If the DBW can obtain this data regularly, the DBW would add THM monitoring into its pre-and post-treatment monitoring activities and adjust its treatment approach around water agency/purveyor intakes accordingly based on THM results.

Comment #27

Page 4-40; If high OC concentrations lessen the toxicity of copper, will higher application rates be required? If this is the case, these higher concentrations should be considered with respect to impacts to non-target organisms, sediment, and THMFP

Response to Comment #27

Whether or not high organic carbon concentrations are present near Komeen research sites, higher Komeen application rates would not be used. Komeen would be applied at target concentrations not to exceed the label rate.

Comment #28

The factors that influence ionization of chelated copper must be better described in relation to Delta waters.

Response to Comment #28

Factors affecting ionization of copper were discussed extensively in the Draft EIR (page 4-39 - 4-40). Currently, little is known about ionization of copper in the Delta. A primary goal of the Two-Year Komeen Research Trials would be to learn more about this relationship.

Comment #29

Page 4-48; 4.2.5. 1; "In conclusion, Komeen use could result in unavoidable significant impacts to reptiles and amphibians, including the special status species mentioned above, due to its toxicity and effect on channel bank habitat. This would be a less than significant impact." Why are Unavoidable Significant Impacts considered Less Than Significant?

Response to Comment #29

The sentence in the Draft EIR is a typographical error. The text in the Final EIR under section 4.2.5.1 regarding the impact of Komeen on reptiles and amphibians will be revised to read as follows: "This would be an unavoidable significant impact."

Comment #30

Proposed monitoring should be continued longer than 48 hrs, as previous information indicates that copper residue will remain elevated above Basin Plan Objectives for longer than two days (see comment 9). Monitoring shall continue until copper concentrations are below Basin Plan Objectives (background) at the application site.

Response to Comment #30

The DBW is currently in consultation with USFWS, NMFS, and others to identify an appropriate protocol for post-treatment monitoring of copper. This protocol would address the issue of whether the copper residue would remain elevated above Basin Plan objectives for an extended period of time. The protocol would also consider that the post-treatment monitoring needs to track copper levels until they fall to background levels.

Comment #31

Page 4-57; Personal communication with Anderson conflicts with prior information regarding persistence of copper at treated sites. According to Clear Lake Komeen Trials (Pages 4-14 and 4-15), copper does not appear to decrease to background levels within 24 hours.

Response to Comment #31

Dissipation and dilution of herbicides depends largely on flow and, where applicable, tidal flux. The difference between copper dissipation at Clear Lake and that in the Delta can be attributed to the difference in flow at the treatment sites. Treatment sites in the Delta exhibited relatively high flow, whereas those at Clear Lake did not.

Comment #32

Page 8-20; Mentioning Komeen use in the alternatives section implies that Komeen is being considered as a part of the EDCP, however, this is not the case.

Response to Comment #32

Komeen was considered as part of the EDCP in both Alternatives 5 and 6. However, though Alternatives 5 and 6 may meet the objectives of the EDCP, they do not significantly lessen the environmental impacts of the project. As indicated, Komeen use has the potential for significant long-term environmental impacts. This is the basis for the DBW proposing Komeen only as part of a two-year research trial and not as part of the EDCP.

Should the DBW conclude after completing the research trials that Komeen use is consistent with EDCP objectives (including minimizing environmental impacts), the DBW may prepare supplemental environmental documentation in accordance with CEQA requirements to incorporate its use into the EDCP.

Comment #33

Decomposition of plant and other organic matter will consume oxygen in the water column. Many proposed treatment areas are below or near Basin Plan objectives prior to application. All aquatic herbicide applications should be considered Avoidable Significant Impact with respect to DO. Poor management of applications could easily result in depressed DO levels.

Response to Comment #33

The DBW identified the impact of Sonar and Komeen on dissolved oxygen as Less than Significant because field research has shown that significant decreases in dissolved oxygen do not occur following use of these herbicides. See "Global Response to Comments on Dissolved Oxygen Concentration".

Comment #34

Mitigation is not appropriately addressed. It should be used to offset Unavoidable Significant Impacts, not as a management practice to try to avoid them. Mitigation must be provided for significant impacts, such as unavoidable toxicity. What about upstream load reduction, or habitat improvement outside the application areas?

Response to Comment #34

CEQA identifies five types of actions that fall under the category of mitigation: avoidance, minimization, rectification, reduction or elimination, and compensation. The Draft EIR proposes mitigation measures that would generally fall under the categories of avoidance and minimization. Any compensation measures (i.e. measures that replace or provide substitute resources or environments) to mitigate for unavoidable impacts will be determined through the formal consultation process with the regulatory agencies, such as USFWS, NMFS, CDFG, and RWQCB.

Comment #35

The California Toxics Rule contains copper criteria which apply to the Two-Year Komeen Trials.

Response to Comment #35

Because of the Basin Plan Objective regulating copper concentration in the Delta and the California Toxics Rule, the DBW has applied for both a waiver of Basin Plan objectives regulating copper concentration and an NPDES permit from the RWQCB. The RWQCB or the State WQCB will determine whether an NPDES permit or a waiver is necessary, conditions regulating such a permit or waiver, and whether either will be granted.