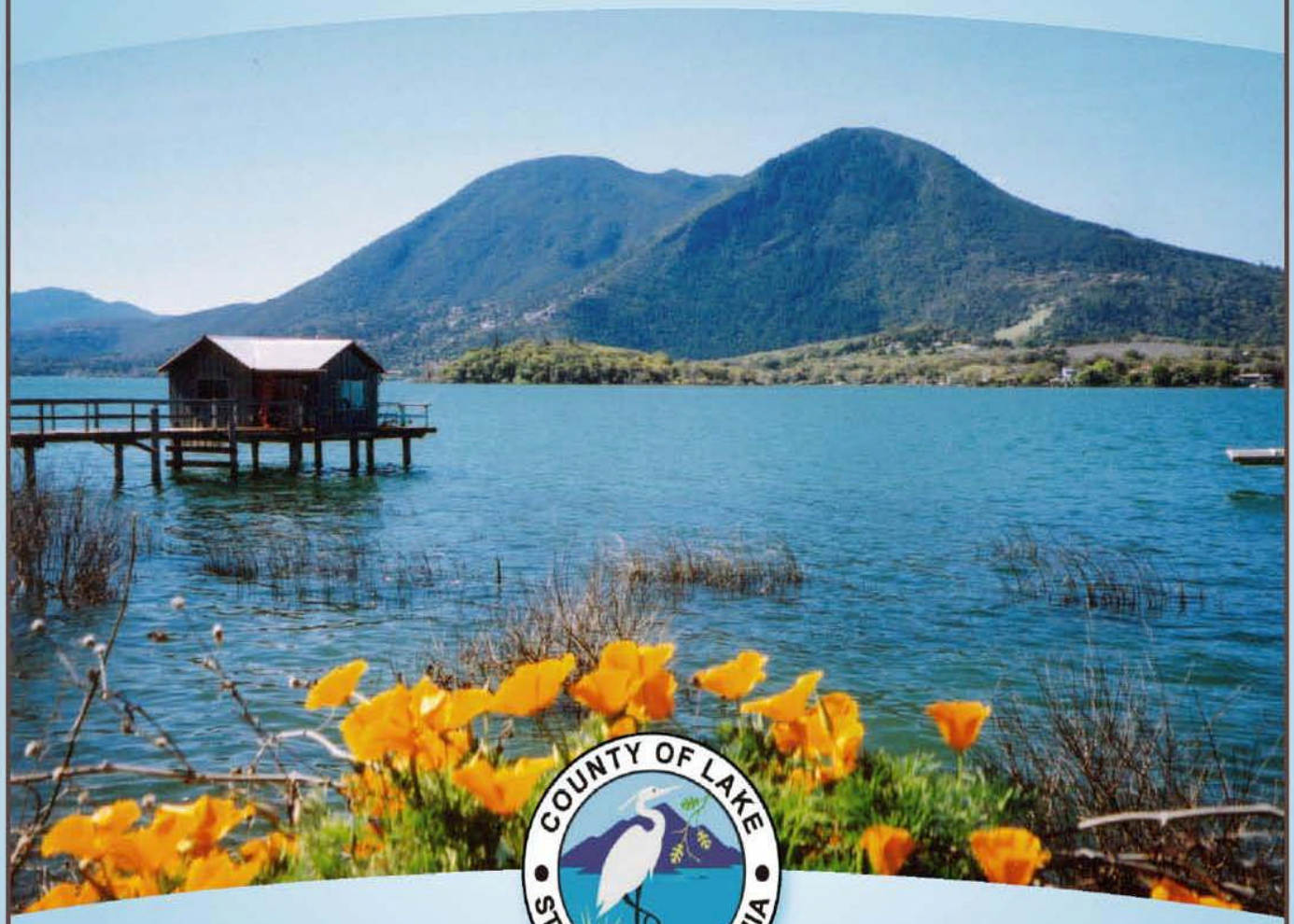
FINAL ENVIRONMENTAL IMPACT REPORT

CLEAR LAKE

INTEGRATED AQUATIC PLANT MANAGEMENT PLAN



COUNTY OF LAKE
STATE OF CALIFORNIA

Final
Environmental Impact Report: Clear Lake Integrated Aquatic Plant Management Plan

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Chapter 1 - Foreword

This document presents comments and responses pertaining to the draft Programmatic Environmental Impact Report (PEIR) for the County of Lake's "Clear Lake Integrated Aquatic Plant Management Plan" (IAPMP).

The PEIR was distributed to the public and to agencies for review and comment in January 2005. The PEIR includes a description of the proposed project, an assessment of potential effects associated with implementation of the project alternatives, and proposed mitigation measures aimed at avoiding or reducing significant environmental effects.

Comments on the PEIR were received at a public hearing held within the project area. Comments were also received in letters and other written materials submitted during the public comment period. The comment period expired on March 17, 2005.

The California Environmental Quality Act (CEQA) Guidelines require the lead agencies to respond to comments received during the comment period. This document has been prepared pursuant to these requirements. This response to comments volume, together with the PEIR (included as an electronic file on the enclosed CD), constitutes the Final Environmental Impact Report (FEIR) for the Clear Lake IAPMP.

This FEIR is being sent to all persons and agencies that submitted comments on the PEIR. CEQA requires that all agencies receive the FEIR at least 10 days prior to certification of the EIR by the lead agency. The FEIR will be sent no later than February 15, 2006 to persons and agencies that submitted comments on the PEIR. The lead agency will consider certification no sooner than March 8, 2006.

Chapter 2 – Responses to Comments

List of persons and agencies that submitted comments on the PEIR:

Commenting Agencies

Lake County Department of Agriculture
Steve Hajik County Ag. Commissioner
883 Lakeport Blvd.
Lakeport, CA 95453

Big Valley Band of Pomo
Mike Shaver, Environmental Director
2726 Mission Rancheria Road
Lakeport, CA 95453

California Department of Food and Agriculture
Jim Rains, Environmental Specialist
Integrated Pest Control Branch
1220 N Street, Room A-357
Sacramento, CA 95814

Lake County Special Districts
Peggy King, Resource Manager
230 N Main St
Lakeport, CA 95453

Non-Agency Comments

Judy Barnes
Clearlake Oaks, CA

Ed Calkins
Kelseyville, CA

Doug North
Kelseyville, CA

CLAS
Mr. George Speake
Kelseyville, CA

Pestmaster
Mr. Dennis Yows
Upper Lake, CA

Sierra Club
Ms. Cheri Holden
Lakeport, CA

SolarBee
Ms. Sandra Walker
Wilton, CA

Ms. Wendy White
Glenhaven, CA

Sarah Ryan
c/o Big Valley Rancheria
Lakeport, CA

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Ag. Commissioner	Pages 7-23 and 7-24 (Impact BIO1) address the effects of herbicide over-spray on sensitive habitats and special-status plants. In my opinion, the definition of "sensitive habitat" needs to be defined in more detail. This needs to be done to avoid conflicts over the definition in the future. If the definition is unclear, participating parties will define it in ways that favor their own agendas concerning aquatic weed control. Based on the wording in BIO1.1 (page 7-24) and the definition of "sensitive areas" in Appendix B in the Clear Lake Integrated Aquatic Plant Management Plan dated August 1, 2004, it means wetlands.... and fish and wildlife conservation areas that are protected by state law. Reading Chapter 7 (Biological Resources), it's implied that all wetland areas (Tule areas) are sensitive as-well-as bird and fish breeding areas. Based on BIO1.2 (page7-24) and BIO8.2 (page 7-33), it could be defined as areas that have existing special plants and special-status species. If the definition of sensitive habitat is construed too broadly, it can have a major impact on the number of application sites. In my opinion, it should be narrowly defined. This way it will protect the truly sensitive habitats, definition conflicts could be avoided and the participating public will be better served. [1] In regards to AIR 3.1, the narrative on page 7-24 is inconsistent with page 5-8. The following sentence should be added to the end of the narrative on page 7-24. It is as follows "... or at any time when the applicator determines that offsite drift could occur". [2] The definition of a restricted material needs to be defined in more detail on page 3-6. The definition on this page is based on section 14004.5 in the Food and Agriculture Code. The definition on this page could apply to any pesticide because the purpose of pesticides is to kill various organisms. For a more accurate definition, I recommend that the following words be added: (meaning the U.S. EPA or Director of the Department of Pesticide Regulation has designated certain pesticides to be restricted because they pose hazards to public health...being treated)...DPR License. [3]	[1] The draft PEIR uses the term *sensitive habitat* to refer to habitats under regulatory protection (e.g., wetlands and jurisdictional waters of the United States); riparian habitats; and habitats that are known to, or may, support special-status plant or wildlife species. This generalized usage was intentional, and is consistent with current biological practice and standards of care for biological resources. Specific prohibitions on the use of herbicides in proximity to various types of sensitive habitats are expressed in Mitigation Measures AIR3.1, BIO1.1, and BIO1.2 on page 7-24 [2] The comment is correct; where Mitigation Measure AIR3.1 is repeated on page 7-24, it should be consistent with the original text of the measure as presented on page 5-8. In full, the measure should read as follows. **Mitigation Measure AIR3.1—**Avoid application in windy conditions. No herbicide application will be permitted within 300 feet of residences, developed areas, recreational areas, cultivated crops, or native riparian, upland, or wetland vegetation when wind velocity exceeds 10 miles per hour, or at any other time when the applicator determines that the risk of drift is excessive. No herbicide application will be permitted within 100 feet of residences, developed areas, recreational areas, cultivated crops, or native riparian, upland, or wetland vegetation when there is any measurable wind, or at any time when the applicator determines that offsite drift could occur. [3] Comment noted. This definition is derived from text presented in the Fact Sheet accompanying the April 2004 draft NPDES permit (Draft Statewide General National Pollutant Discharge Elimination System Permit for the Discharge of Aquatic Pesticides for Aquatic Weed Control in Waters of the United States).

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	In my opinion, based on Mitigation Measure CR 1.1 - Develop Consultation Program To Identify Locations Of Significant Resources And Establish Guidelines Ensuring Protection on page 10-11, the ability of the private citizen to have their aquatic weed control work done could be impacted if there was a Native American plant collection location near the proposed application site. Under this mitigation, the county will consult with the Native Americans concerning traditional resources which includes learning of "...any specific areas or zones from which these resources are collected or harvested". Based on this idea, these locations are not limited to tribal lands. It further states, "Once locations of resources of concern have been identified, the county will adapt program design and implementation to ensure the protection of any such resources not deemed adequately protected under mitigation measures identified elsewhere in this PEIR." My interpretation of this sentence is the county is obligated to protect resources of concern beyond the tribal lands because private and county owned parcels could be determined to be inadequately protecting these resources of concern. Although collecting areas located on county and privately owned parcels versus tribal lands is addressed in Impact CR 1 on page 10-11, it's not addressed in the mitigation measure and it needs to be. [4] Lastly, this mitigation suggests possible protection measures, it states, "Protection measures might include such provisions as defining additional areas of exclusion for plant management; prohibition of herbicide use in some areas; stipulation of non-toxic plant control methods; and/or seasonal scheduling of program activities to reduce impacts on resources of concern to Native Americans. Based on my experience, suggested protection measures become mandatory measures unless there is a good reason not to implement them. [5]	[4] The County's intent is to explicitly protect resources of concern to Native Americans where they occur on County-owned lands, and to continue to recognize the sovereignty of the Tribes over resources on tribal lands. Key resource collection sites are unlikely to be located on private lands not owned by Tribes or tribal members, so the conflict envisioned by the comment is unlikely to arise in practice. [5] Mitigation Measure CR1.1 was developed to formalize the County's commitment to remain in dialogue with the Tribes about herbicide-related concerns, and to support substantive outcomes as a result of continued dialogue. Any or all of the approaches identified in this mitigation measure could be identified as appropriate in some areas, and might be implemented in the future, based on discussion with tribal members, and on site-specific environmental conditions.
Barnes, Judy	Regarding subject draft EIR, I would like the County to consider the option of not spraying chemicals on aquatic plants in Clear Lake. [6] Over the past 25 years since we moved to Lake County, I have noticed the cyclic nature of the Lake in all aspects of its flora and fauna. Most recently the Lake seems to be in better shape than it has been in the short history I have known it there are abundant waterfowl on the Lake, the water is very	[6] As part of the alternatives evaluation required by CEQA (see discussion in Chapter 13 of the draft PEIR), the County did consider a harvesting-only program alternative. As discussed in Chapter 13, if this alternative were selected, the use of harvesting would need to be restricted to reduce the potential to spread *Hydrilla* and other invasive non-native species that are propagated by mechanical fragmentation. Thus, harvesting alone would not offer a lakewide solution. Moreover, because the most aggressive species of nonnative aquatic weeds in the

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	clear (which I know contributes to aquatic weeds), and this year there seems to be a return of greater numbers of hitch in the tributaries to the Lake and they are actively spawning! [7] I understand aquatic plants cause problems such as clogging up the waterways for boating activities. But aquatic plants are also a part of a healthy ecosystem and the Lake is very large and mostly free of weeds. Aquatic plants provide habitat for the Lake's fish and wildlife. A couple years ago the problem was algae, which chokes out aquatic plants. There will always be these things in a healthy lake and they don't necessarily require human intervention. Where they are causing problems such as closure of the waterways, mechanical means to reduce the numbers of plants could be used. [8] Many years ago, as I am sure you are aware, the Lake was almost destroyed by the spraying of DDT to kill the gnats. While chemicals used today may not be quite so toxic, they still interfere with the natural processes and often have unintended consequences. [9]	lake include species that propagate by fragmentation, mechanical harvesting could not be used to control the species of greatest ecological concern. Finally, although mechanical harvesting controls biomass, it often does not kill the targeted invasive species. In light of these drawbacks, the County has concluded that a harvesting-only approach would not adequately accomplish the purpose of the proposed program. [7] Comment noted. [8] In general, it is true that a healthy aquatic ecosystem supports the growth of aquatic plants. However, the concern in Clear Lake—and the specific focus of the proposed program—is that excessive growth of nonnative species creates an imbalance that is ultimately unhealthy for the lake ecosystem, as well as impeding the beneficial uses associated with Clear Lake, including recreation. The State of California has already recognized the need for statewide control of *Hydrilla*, and the County program is intended to dovetail with the State's efforts, in order to provide more comprehensive control of invasive species over the long term. [9] Comment noted; the County agrees that chemical applications to manage vegetation should be tracked and carefully monitored to ensure the safe and appropriate use of herbicides in Clear Lake.
Big Valley Rancheria	The Big Valley Band of Pomo Indians appreciates the chance to make comments on the draft Programmatic Environmental Impact Report: Clear Lake Integrated Aquatic Plant Management Plan (PEIR). The Tribe takes these issues seriously of reviewing the impacts of overgrowth of invasive weeds on Clear Lake as well as the possible impacts on our members' cultural uses of the Lake because of pesticide applications. Our Tribe has lived on this lake for 11,000 years and our way of life was sustained by it. Tribal members continue to rely on the health and balance	

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	of this lake even today for many things: we eat the plants and animals in Clear Lake, our children swim in it, we hold cultural events on it. Last year, the Tribe's Environmental Protection Office began working with your staff as well as your consultants to give you our comments and concerns about the draft Clear Lake Integrated Aquatic Plant Management Plan. Our staff prepared several documents about use and consumption for Blankinship and Associates and coordinated efforts with the other Tribes in this county. It appears from our review of this PEIR that most of our previous comments were integrated into this document. I would like to take this opportunity to now comment on the program as a whole, which is found within the PEIR. Some of these comments were prepared by Dr. Dietrick McGinnis, of McGinnis and Associates, LLC. Dr. McGinnis is the Pesticide Circuit Rider for the Tribes in Lake County under a US EPA grant, besides assisting Big Valley Rancheria with other environmental projects. **Summary** The effect of invasive aquatic species on Clear Lake is of great concern to our Tribe. Our culture is defined by our relationship to the environment of which Clear Lake is a dominant part. The spread of invasive species has affected our use of this important natural resource. It is our understanding that measures to solve this problem may lead to temporary effects on lake water quality that are unavoidable. The effect of control methods on native aquatic plants and exposure to native populations is not properly addressed in this document. In addition, uses of aquatic plants as well as other native plants by Native Americans in Lake County is misinterpreted by the authors of this document. We would recommend that the use of Clear Lake resources by Native Americans be re-evaluated and that more appropriate measures be taken to protect our Tribal members during pesticide	[10] Please see specific responses to individual comments below.

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	application. [10] Chapter 10, page 11 includes the statement "if individuals are concerned about potential health risks they may alter traditional use patterns as a result. In summary, plants and/or animals important to Native Americans could be adversely affected by the program and or application of herbicides could restrict Native Americans' ability to use the plants due to health concerns". Although Native Americans may be willing to carry this heavy burden that exceeds that of their Euroamerican neighbors, this plan will not provide adequate measures to provide an informed consent of the Tribe. Perhaps what is most telling is that even one of the most basic plants used by the Tribe, the tule, is not included in the monitoring plan for pesticide residuals. [11]	[11] The County's intent in the quoted statement was to identify and disclose the possibility that traditional practices might be abandoned or altered as a result of individuals' concerns about the potential effects of chemicals, and to acknowledge that if this were to occur, it would represent a significant adverse effect under CEQA. The County has proposed Mitigation Measures CR1.1 and CR1.2 to ensure that the Tribes will continue to have opportunities for full representation in decision making about Lake management, and to formalize the County's commitment to continuing dialogue with the Tribes about how best to maintain their cultural heritage, including use of Lake resources.
	General Comments Appendix E, Page 5 Section 4.2. The reference to tules for basketweaving is a misquote. Ms. Sarah Ryan stated that tules are an important component to the Native diet and traditional activities, but most basketweaving uses plants such as sedge and redbud. It should also be noted that the stems and bulb are enjoyed by Tribal and non-Tribal residents around the lake. Unfortunately, this review does not accurately address this issue. [12] We are again submitting our Overview of Traditional Lake Foods document (dated 4/5/04) to be included as comments for the draft PEIR. Although U S EPA default values suggest subsistence fishers consume 147 grams per day, and the draft PEIR uses a consumption rate of 684 grams per week (228 grams per meal at 3 meals a week), our Tribal members say otherwise. Currently, Tribal members are catching and eating catfish at a rate of 1 pound of catfish per meal, four to six meals a week. Tribal members are looking forward to then feasting on chi within the next month, and crawdads and clams in the summertime. [13]	[12] The text of the first paragraph of Section 4.2 in Appendix E is revised to read as follows. > According to Sarah Ryan (Ryan pers. comm.), Native Americans have historically consumed, and continue to consume, various items near the lake. Food items include fish and clams and tubers of emergent plants such as tules. "Other" items not consumed but chewed include sedges, redbud, and other plants for basket making. The USEPA default value for subsistence fishers is 147 grams/day (USEPA 2002). In lieu of this lower, less conservative EPA default value, rates of consumption were conservatively estimated as follows… [13] Because of mercury contamination in Clear Lake, the California Office of Environmental Health Hazards Assessment (OEHHA) has issued a health advisory recommending limits on consumption of fish from the lake (see Table 8-3 in the draft PEIR). Similar limits would apply to other lake food resources that also have the potential to bioaccumulate mercury in their tissues. In light of longstanding concerns about mercury exposure through consumption of fish caught in Clear Lake, the human health risk assessment for the proposed program (See draft PEIR Appendix E) assumed consumption of lake resources at rates consistent with the recommendations of the OEHHA health

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	The report should also specify the source and types of funding and resources that have been made available to the County Agricultural Commissioner for enforcement. The Lake County Agricultural Commissioner has made it clear to our office that additional resources for enforcement are currently limited. [14]	advisory. The consumption rates provided by the comment would substantially exceed OEHHA's recommended limits, resulting in a health hazard related to mercury exposure. Further, the human health risk assessment used standard methodologies that yield very conservative results, and selecting alternate consumption data would be unlikely to substantively change the conclusions of the assessment. No further analysis is warranted. [14] Disclosure of funding sources is not specifically required under CEQA. However, this information can be obtained from the County Agricultural Commissioner's Office at 833 Lakeport Boulevard, Lakeport, CA 95453, telephone (707) 263-0217, AgCommissioner@co.lake.ca.us.
	General Comments from Dr. Dietrick McGinnis Disposal of the cut materials from mechanical harvesting must be more specific to prevent re-infestation. Allowing lakeside disposal creates conditions where wind, runoff and other transport can results in re-infestation or new infestations in nearby surface water. It is highly recommended that all material be transported to an appropriate disposal facility. [15] Educational measures should include local landscapers and pet shops that may use or sale species that can be invasive to Lake environments. In the cases of known hazards such as primrose and hydrilla, specific ordinances with appropriate enforcement capabilities should be used to limit the sale and use of these and other known and potential invasive species. [16] The use of triclopyr does not seem to be adequately reviewed within the document. The authors are directed to a recent review provided to the Massachusetts Pesticide board (http:/www.mass.gov/agr/pesticides/water/Aquatic/triclopyr_final.pdf). It should be noted that there are restrictions regarding application near drinking water intakes label of Sepro Renovate3). The plan (Appendix B, page 84) states that Renovate (triclopyr) ".... no restrictions on drinking water or swimming, only restriction on distance from irrigation intakes". This is	[15] The following environmental commitment is added to the description of the proposed program, following the last paragraph under *Commitments to Ensure Appropriate Disposal of Harvested Vegetation* on page 2-16. To avoid potential for re-infestation, the County will prohibit lakeside disposal under conditions where harvested materials could be accidentally transported back into Clear Lake, or into other surface water bodies. [16] Comment noted. [17] At the time the IAPMP was finalized (Spring 2003), Renovate (triclopyr) had just been registered by the Federal EPA and was still some months away from registration in the State of California. During the period when the IAPMP was being developed, it was thought that drinking water restrictions would not be included in FIFRA labeling requirements for the product. This understanding is reflected on page 84 of the IAPMP, as the comment identifies. Renovate was approved for use in California in 2004. Table 8-4 in the draft PEIR summarizes label restrictions as of April 2004 (during preparation of the draft PEIR) for all of the program herbicides, including the restrictions on use of triclopyr near potable water intakes,

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	inconsistent with labeling and failure to follow this labeling can endanger existing drinking water intakes currently used on Clear Lake. We recommend an extensive re-evaluation of triclopyr use for this application. [17] **Risk Assessment** Appendix E, Page 4 section 3.1 should discuss the available literature on the evaluation of the selected herbicides. The current research on these compounds may not prove that they are carcinogens but the question exists if adequate information is available to exclude them. This issue can be resolved with additional, well cited, discussion or a more conservative evaluation. [18]	which were added after the IAPMP document was completed. The proposed program includes a commitment to adhere to all FIFRA label requirements. Should label requirements change in the future, the County will require adherence to any new or altered provisions. No additional analysis is needed. [18] A summary of current toxicological literature on the program herbicides is beyond the scope of Appendix E, which was specifically focused on using current industry-standard methods to evaluate human health risk. None of the herbicides that would be used under the proposed program is currently considered a carcinogen by the U.S. EPA. The County will continue to monitor and respond to EPA guidance regarding the safe and appropriate use of herbicides in aquatic environments. Should the EPA's guidance, or its classification of any of the program herbicides, change in future, the County will modify the program accordingly. However, no additional analysis is required at this time.
	Appendix E. Page 4 - 5. Section 4.1 states that consumption rates of 1.4 liters (the conversion to quarts on this page is incorrect [19]) for 50 years. A more appropriate assumption for lifetime risk is the consumption of 2 liters daily for 70 years. These values are not only the norm but also the same used for calculation of the EPA MCLs. This 50 vs. 70 years assumption occurs in numerous section of Appendix E. It should be understood that many of the Tribal members here and in other Rancherias spend their entire lives in and near the Lake. Using 50 years instead of a more realistic 70 years not only differs from the conservative expectation of this study, but also undermines the local research done to support the effort. [20]	[19] 1.4 liters is equal to 1.479363 quarts. This quantity is correctly described as "approximately 1.5 liters," as identified at the bottom of page 4 in Appendix E. [20] The human health risk assessment (draft PEIR Appendix E) generally followed the U.S. EPA's Superfund risk assessment methodology and Cal/EPA guidelines (U.S. Environmental Protection Agency 1989, California Environmental Protection Agency 2001). Consistent with this methodology, exposure level calculations used the EPA's average drinking water consumption rate rather than the worst-case maximum used to develop the MCL thresholds. EPA's Superfund risk assessment guidance identifies a duration of 30 years as the 90th-percentile level for residence duration at a single location (see U.S. Environmental Protection Agency 1989); that is, only 10% of the U.S. population is expected to spend more than 30 years at a single residence. The EPA's default value for total lifetime exposure duration is 70 years. The 50-year value assumed for exposure duration in Appendix E was derived by averaging these two values (30 years and

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		70 years) to provide an exposure duration that is substantially more conservative than the EPA's 90th-percentile level, but still recognizes that some persons may spend portions of their lives outside the Clear Lake area. Note however that in the EPA's Superfund risk assessment methodology, the assumed exposure duration ultimately has no effect on the total exposure level calculated, because the exposure duration value appears in both the numerator and denominator of the dose equation, and thus cancels out. In light of these factors, and based on discussion with consulting toxicology experts, the County has concluded that the assessment presented in Appendix E is appropriately conservative and that no additional analysis is warranted.
	Appendix E, Table 2. An aquatic half-life of 19 hours is provided for copper. Copper, as with any element, does not degrade. Subsequently, this factor should be more appropriately identified as an absorption or dilution factor. [21]	[21] The *aquatic half-life* refers to the persistence of copper in a bio-available form in the lake environment. No revision is needed.
	Appendix E. The use of MCLs as maximum factors should be reconsidered. Many plants can concentrate heavy metals and even some organic materials resulting in elevated exposures when these materials are consumed even though the MCL in the surrounding water is below MCLs. *Recent data from Big Valley Rancheria found this to be possible for copper and barium in tules, an important plant for their Tribal members.* The discussions and calculations presented here should better support these assumptions. The use of MCLs proposes a legal standard for a risk-based assumption that is not appropriate. [22]	[22] The health risk assessment used bio-concentration factors when calculating the concentration of a given contaminant in plant tissue, and factored in plant consumption as an exposure pathway. No inappropriate use of an MCL has been identified, and no revision is needed.
	Appendix E. calculations area based on "an average lake depth of 15 feet to predict concentration". CDFA in a recent presentation to Tribal Environmental Directors for Lake County that at least some of the pesticides currently and planned for use on the Lake are engineered to target specific depths. This is of great concern since the target depths are on the bottom of the lake and include the sediment zone that includes tule stems bulbs, a widely consumed food of both Pomo Indians and Lake County residents. It is more appropriate then to use a smaller zone for these calculations that is more accurate for exposure and pesticide use. [23]	[23] County data from the past 4 years of permitting indicate that navigational areas and boat lanes leading to open water constitute a large proportion of the area treated with herbicides. The depth of 15 feet was used to approximate the range of conditions under which herbicides may be applied, and is considered representative while at the same time being adequately conservative. Based on discussion with consulting toxicology experts the County has concluded that no additional analysis is warranted as a result of this comment.

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	Consultation and Monitoring The consultation programs proposed in Section 10 does not include assistance for technical support or monitoring of Tribal resources. The Tribes around Clear Lake are able to provide high quality data on water and in some cases, plant, pesticide residual concentrations. The use of this information could be critical in the evaluation of the actual exposure of Lake County residents including Tribal members. [24]	[24] The County welcomes the opportunity for data sharing with the Tribes, and hopes to explore possibilities through ongoing dialogue.
	The proposed sampling of target vegetation for mercury and methyl mercury is an important step in addressing this important concern. However, this would not quantify re-suspension of mercury laden sediments during mechanical harvesting, does not identify action levels and does not describe how these activities will interact with current EPA actions at the Sulphur Bank superfund Site. It should be noted that current monitoring at the site may address many of the concerns for mercury monitoring related to this program but do require discussion in the document. [25]	[25] The potential for vegetation management to increase mercury availability in Clear Lake is identified as significant and unavoidable (see Impact HWQ6 on page 3-28 of the draft PEIR); note that this analysis includes discussion of the potential for harvesting to resuspend mercury-contaminated sediments. No further analysis is required. However, the County is committed to continued participation in co-development of the forthcoming TMDL program for mercury in the Clear Lake watershed, which will provide an enforceable means of managing mercury levels in the lake.
	Monitoring of culturally significant aquatic species for the applied pesticides is not discussed. It should be noted that the Tribes, including Big Valley Rancheria, current do monitor for pesticides in aquatic plants under an EPA approved QAPP and are able to expand this monitoring to this program. In addition, CDFA has a current program for pesticide method development for tules, a project that the Big Valley Rancheria Environmental Program is a participant. Since concentrations of pesticides and metals in lake water can in many cases be far less than that accumulated in plants, this type of monitoring is very necessary. The Big Valley Rancheria can provide efficient support to meet this important need that can be added to the scheduled monitoring for mercury in the invasive species. [26]	[26] As identified in Response 24 above, the County welcomes the opportunity for data sharing and cooperative monitoring in collaboration with the Tribes.
	Monitoring for mercury and pesticides should be done at project start as well as at the end of the season to estimate actual changes in the studied factors due to program activities. [27]	[27] Comment noted.

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	Time of day can be important for DO measurements. The DO standards should specify a time of day for measurement. In addition, there should be a time interval specified for lag between measurements of threshold for herbicide application and actual application. [28] Although turbidity is an important factor with successful and safe herbicide application as addressed in the "Thresholds for Herbicide Application" the actual action level is based on "judgment of qualified applicator". It should be noted that portable turbidimeters, such as a HACH 2100P Portable Turbidimeter that list for $837.00, are in the same price range of the DO meters already required and would permit an action level to be clearly stated and consistently followed. [29] Table 2.3 on page 2.8 states that "Maximum permissible concentrations of program herbicides discharged from treated areas to ambient Clear Lake waters…….Fluridone 560 µg/L" which is approximately 560 ppb. On page 2-1 1 it is stated that the maximum level of fluridone permitted in Clear Lake is 5 parts per billion (ppb). This discrepancy requires clarification. [30]	[28] The emergency NPDES permit for aquatic herbicide applications stipulates measurement of key parameters, including dissolved oxygen level, "immediately prior" to treatment. Consistent with this requirement, which was in place when the IAPMP was developed, the IAPMP also requires testing for dissolved oxygen levels "immediately prior to treatment." The County intends to continue this procedure as the proposed program moves forward. [29] Comment noted. For the immediate future, the County plans to continue the current procedure, which relies on best professional judgment based on visual inspection. This is consistent with FIFRA labeling, which does not provide quantitative turbidity thresholds, and also with the April 2004 NPDES permit monitoring and reporting plan (MRP). [30] The **560 µg/l** value presented in Table 2-3 is the maximum permissible level of fluridone in water "discharged" from treated areas to surrounding waters, as specified in the new NPDES permit. This limit applies to all water bodies treated with herbicides under the new permit, including but not limited to Clear Lake. The **5 ppb** value cited on page 2-11 represents the maximum *lakewide* fluridone level permitted *in Clear Lake* by CDFA's *Hydrilla* Eradication Program. Note that herbicide levels would be locally elevated as a result of treatment, but would decrease through dilution and herbicide breakdown. Thus, locally elevated fluridone levels would not necessarily translate into exceedances of the lakewide 5-ppb limit, and the draft PEIR acknowledges that "Any fluridone applications implemented under the proposed program would need to consider levels already present as a result of CDFA's *Hydrilla* management activities…" (page 2-11). To ensure coordination between the two programs and prevent over application of fluridone, each County permit is reviewed and signed by a CDFA *Hydrilla* Eradication Program representative.

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	Page 2-13 and 2-14 discusses new technology evaluation on Clear Lake. Please indicate how test locations will be selected. [31]	[31] Test locations will be selected based on the best professional judgment of County staff, technical staff of the equipment manufacturer or representative, and members of the Clear Lake Technical Advisory Group. Selection will be based on the factors expected to influence the efficacy of the technique or equipment, in light of lake conditions at the time of testing.
	The plan discusses monitoring under multiple circumstances for multiple factors. For each monitoring activity, a QAPP and or SAP should be specified or included. [32]	[32] Comment noted. The County has had a QAPP for the NPDES Monitoring and Reporting Plan (MRP) in place since 2002. It is now in the process of being updated for compliance with the State Water Resources Control Board's Surface Water Ambient Monitoring Program (SWAMP) protocol, and to incorporate triclopyr, recently registered by Cal/EPA for use in California. The corresponding SOP (Standard Operating Procedures) is also in place and will be updated for SWAMP compliance. The County will continue to comply with all applicable regulations in administering the proposed program, and will prepare any additional QAPPs/SAPs when required.
	In summary, the Tribe supports the idea of a permitting program, which takes into account the impacts on concentrations of pesticides in any one area. [33] This plan should evaluate the health impacts by considering a wider consumption of local traditional use of resources, such as tules and crawdads. [34] The PEIR indicated that there was not a need to give health warnings for pesticides that already had current warnings and limitations set due to mercury levels. [35] We are also interested in more information on the potential risk to children within this assessment.[36]	[33] Comment noted. Note that the new NPDES permit addresses pesticide concentrations in specific locations by identifying receiving water discharge limitations that must be met at the boundary of the application area.
	Thank you for the opportunity to comment on the draft Clear Lake Aquatic Plant Management Plan. This information is from some Elders at Big Valley Rancheria and was compiled on March 4, 2004. The information has since been discussed with younger Tribal members who confirm the historical and current consumption. Overview of Traditional Lake Foods Main staple eaten year round - fish <u>Fish (Sha)</u> 10 lbs per family/2-3 lbs per day Blackfish (extinct) Hitch (extinct) not to be confused with Chi Ah-ah-sha (extinct) yellow cat	[34] Please see Appendix E Page 5 for discussion of the types of foods considered in the human health risk analysis prepared for the proposed program. [35] Comment noted. However, the PEIR does identify mitigation stipulating notification in advance of treatment; please see Mitigation Measure USS1.1 (*Provide advance notice of application to area residents and recreational users*) beginning on page 11-10. This measure requires the County to post a map identifying parcels that have been issued a permit allowing herbicide application. The map is to be posted prior to the start of the treatment season and updated as new permits are issued throughout the treatment season. In addition, the County must require applicators to notify adjacent property owners 24

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	Sha-pal (extinct) like steelhead Dee-tah (extinct) like crappe Sun Perch (extinct) Bluegill Trout Bass Catfish Whole fish was eaten either baked or dried traditionally. Still consumed, although currently at smaller amounts. Tules unable to get amount eaten. Still consumed. Stalks eaten April - May Roots eaten June - July Mudhens (American coots) Eaten twice a week, 1 per person when available Still consumed by a few Tribal members Eggs (Xkoh) crane, duck, mudhen, grebe. etc. As much as one could gather, as often as possible Still consumed by a few Tribal members Clams (August, September, October) 3-4 lbs per family per day (when desired) At the present time, children collect as many clams through the summer to be cooked at home every day - boiled to open, floured and deep fried Cattails New shoots eaten during the spring Ducks (September - November) When desired Still consumed by a few Tribal members [37]	hours in advance of herbicide treatment on County- or privately owned parcels. Mitigation Measure REC4.1 on page 8-13 of the draft PEIR further requires the County to use buoys or other visible markers to delineate and restrict access to treated areas on County parcels during and following herbicide application. [36] Methods for evaluating toxicological risk to children are controversial. Experts disagree about whether adult risk assessment methods can appropriately be used for children, and there is no scientific consensus about an alternative approach specific to children. The human health risk assessment presented in Appendix E in the draft PEIR adopted one widely used approach, which is to use adult methodology, but make very conservative assumptions in the modeling, and is considered by the County to adequately represent the risk to children as well. In light of these factors, and based on discussion with consulting toxicology experts, the County has concluded that the assessment presented in Appendix E is appropriately conservative and that no additional analysis is warranted. [37] The County appreciates this supplemental information regarding Tribal consumption.

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Calkins,Ed	**EIR Purpose/Overview** This EIR is to evaluate the potential impacts of the Clear Lake IAPMP towards the goal of allowing the county to execute the plan. The IAPMP is broad in scope and clearly defined in the early plan sections (Plan Overview, Problem Statement, Aquatic Plant Management Goals). The actions defined in the plan include: lake wide management/control of plants, creation of a technical advisory group of experts, monitoring and tracking of non-native invasive species, single point permitting to allow property owners to manage plants, as well as other plan actions. The CDFA Hydrilla effort while state funded and executed is within the plan's scope and would be a high county priority if the state had not assumed the role, so by definition ensuring continued control of Hydrilla is also a plan action. It also is obvious that many of the plan actions require funding beyond what is now available. Considering this, I have the following comments based on my review of the EIR to date: 1. **No Program Alternative:** CEQA requires that an EIR evaluate the impacts of a no-program alternative to allow decision makers to compare the environmental impacts of approving the program with the impacts of not approving the program. (This comparison is also very material in raising funds to implement plan actions.) This has not been done in this draft EIR. Adding an extensive substantial section on the impacts of not implementing any part of the plan must be the highest priority change to this document. These impacts exist in most resource areas considered for impact in this plan. No control of invasive weeds will severely impact: hydrology and water quality, noise (as in some south-eastern waterways, airboats could become the only viable way to navigate the lake), biological resources (Chapter 7 goes into great detail on all the impacts on wildlife of executing the plan but fails to define the impact on wildlife if the lake was overgrown with weeds), recreation, ag uses, cultural, etc. Over a period of 5 to 10 years this lake could completely become plant dominated, as Hydrilla and several other invasive species that are now here have done to many other waterways in our nation.	[38] The County shares Mr. Calkins' concern regarding the potential adverse outcomes of failing to manage invasive aquatic vegetation in Clear Lake; as discussed under *Program Background and Need* in Chapter 1 of the draft PEIR, this was the motivation for developing the proposed integrated management program. In response to the concern regarding evaluation of No Program outcomes, please refer to the alternatives analysis in Chapter 13 of the draft PEIR, which includes discussion of the No Program Alternative and comparison between the No Program scenario and anticipated program outcomes, presented in Table 13-4. The Staff Report prepared by the County Community Development Department on the proposed program and draft PEIR, which is part of the administrative record under CEQA, discusses the No Program Alternative in additional detail, including additional information on the County's concern for potential adverse outcomes if aquatic weed growth is not managed effectively in Clear Lake. Consistent with standard CEQA practice, the resource chapters of the draft PEIR focus on outcomes of the proposed program (IAPMP approval and implementation) only. Analysis of all alternatives is presented in Chapter 13, and includes discussion of all resource of the resource topics analyzed for the proposed action. The level of detail

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	This EIR must provide in-depth analysis of this do-nothing alternative including the case where all CDFA Hydrilla actions cease. [38]	presented in these analyses reflects what the County has concluded meets the CEQA standard for "reasonably foreseeable" outcomes of the No Program Alternative; note that CEQA requires analysis sufficient to support comparison between program alternatives and between program and no-program approaches, but does not require that all alternatives be analyzed in the same level of detail provided for the proposed program. Effects of the No Program Alternative on hydrology and water quality are discussed in the *Hydrology and Water Quality* section on page 1 of Table 13-4, as follows. … Two outcomes are possible. Some individuals might choose to not to manage vegetation. In this case, nuisance macrophytes would grow essentially unchecked, which could increase nutrient loading in the lake, contributing to the lake's identified nutrient impairment, and could have corollary adverse effects on DO, pH, and mercury availability in the lake. Impacts could be significant, and with no program in place, would be unavoidable. Other individuals might choose to apply herbicides without obtaining the appropriate permits. With no centralized regulation of pesticide applications in the lake, it would be more difficult to ensure compliance with the new NPDES general permit, and to prevent over-application or adverse combinations of herbicides. It would also be difficult to ensure appropriate follow-up monitoring or adaptive management of herbicide use, and to modify treatment techniques to address any water quality problems potentially arising from treatment. Impacts could be significant, and with no program in place, would be unavoidable. Additional analysis relevant to water quality is presented in the *Hazardous Materials* section on page 1 of Table 13-4: If no program were implemented, there would be no centralized permitting or oversight of herbicide use in the lake. Consequently, because vegetation management activities would be more difficult to regulate under the No Program Alternative, the potential for spills/ releases of herbicide chemicals could be slightly greater than that identified for the proposed program. Effects of the No Program Alternative on noise are discussed in the *Air Quality, Noise* section on page 1 of Table 13-4, as follows. Air quality and noise impacts under the No Program Alternative are

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		difficult to predict because vegetation management would not be centrally coordinated. By comparison with existing conditions, the level of vegetation control activity could either increase (if many individuals elect to conduct unpermitted activities), or decrease (if many individuals choose not to address nuisance macrophyte growth). The County agrees that unchecked vegetation growth could further complicate any future vegetation management activities, but because outcomes for air quality and noise under the No Program Alternative are so difficult to predict, the County has concluded that further in-depth analysis at this time would be speculative. Effects of the No Program Alternative on biological resources are discussed in the *Biological Resources* section on page 2 of Table 13-4, as follows. Under the No Program Alternative, management of invasive nonnative species would be less centralized and probably less effective than under the proposed program. Current adverse trends related to the presence of invasive species on the Clear Lake ecosystem would likely continue and could worsen, possibly threatening the success of native species such as tules and cattails. Unregulated use of herbicides (see related discussion in *Hydrology and Water Quality* above) could result in water quality impacts with adverse implications for biological resources; in particular, the potential for toxicity and/or bioaccumulation could be substantially greater under the No Program Alternative than under the program alternatives that provide for regulation of herbicide use. In addition, with no centralized monitoring and adaptive management program in place, lakewide effects of vegetation management would not be documented or tracked, and adaptive management would be hampered or impossible. Consequently, the potential for adverse modifications of vegetation communities and corollary ecosystem effects would be greater under the No Program Alternative than under the proposed program. With no program in place, mitigation would not be feasible, and any significant impacts would be unavoidable. Effects of the No Program Alternative on recreation are discussed in the *Recreation* section on page 2 of Table 13-4, as follows. With less centralized—and probably less effective—vegetation control, existing problems with nuisance macrophyte growth would likely persist, and could worsen, under the No Program Alternative. Uncontrolled

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	2. **Partial Implementation:** The lack of funding is the real barrier to implementing the important strategic aspects of the plan. With few exceptions, the only funded significant action in the plan is the treatment of plants by individual property owners. This EIR should do an analysis of the impact if the strategic (whole lake management) types of actions are left unfunded while only the treatments by property owners (less than 1% of lakeshore) are funded. [39]	macrophyte growth is expected to interfere increasingly with swimming, boating, and fishing use on the lake, and could ultimately result in significant impacts. With no program in place, mitigation would not be feasible, and any significant impacts would be unavoidable. Effects of the No Program Alternative on agricultural uses are discussed in the *Agriculture* section on page 2 of Table 13-4, as follows. Under the No Program Alternative, there would be no centralized regulation of herbicide use in Clear Lake, so the potential for excessive herbicide use and adverse effects on downstream agricultural uses, although difficult to quantify, would likely be greater than under the proposed program. At worst, effects could be significant, although this is unlikely because of the comparatively short residence times of most herbicides in the water column. With no program in place, mitigation would not be feasible, and any significant impacts would be unavoidable. Effects of the No Program Alternative on cultural resources, including traditional uses of lake resources, are discussed in the *Cultural Resources* section on page 2 of Table 13-4, as follows. Under the No Program Alternative, uncontrolled macrophyte growth could reduce the success of native plants such as tules and cattails. This could ultimately result in a significant impact on traditional cultural practices. Unregulated herbicide use could also significantly increase health risks related to use of lake resources, resulting in indirect adverse effects on traditional cultural practices. With no program in place, mitigation would not be feasible, and any significant impacts would be unavoidable. As identified above, the analysis presented in Chapter 13 reflects the County's judgment regarding reasonably foreseeable outcomes of the No Program Alternative. No further analysis is required or appropriate at this time. [39] As described in Chapter 2 of the draft PEIR, a key focus of the proposed program is to provide centralized permitting and coordination of private vegetation management activities, while the County continues to take responsibility for managing vegetation on County-owned parcels; this is the combination of activities analyzed at a "project" level of detail in the draft PEIR. The proposed program would not, as the

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	3. **Coverage:** The EIR seems too focused on the permitting process and the actual practices of herbicide usage etc. The coverage should encompass the broad scope of the plan. The summary should provide a clear picture of the EIR's assessment of the entire plan including risks such as the previously stated lack of funding. [40]	comment implies, directly provide funding for private vegetation management activities—rather, it would fund permitting, oversight, coordination, and regulation of these activities by County staff. However, the County will continue to explore funding strategies for implementing more comprehensive lakewide invasive species management. In the near term, funding mechanisms for the County vegetation management effort, and for permitting and coordination, are expected to be similar to those now in place, so continuation of the program at current levels is expected to be feasible under the reasonably foreseeable funding climate. The scope of analysis in the draft PEIR is thus appropriate given the existing and foreseeable funding climate. No additional analysis is warranted. [40] As discussed in Chapter 1 of the draft PEIR (see *Scope and Intent of this Document* beginning on page 1-5), the proposed action would encompass a wide range of public outreach and administrative activities that are not expected to result in significant impacts on the environment and thus are not analyzed in the PEIR. If it becomes clear as the program is developed further that there is potential for significant impacts as a result of any of these activities, the County will conduct additional tiered environmental review as required by CEQA. Consistent with CEQA and the State's CEQA Guidelines, the draft PEIR focuses on the aspects of the proposed program with the potential to result in significant environmental impacts. However, by law, an EIR must cover the "whole" of a proposed undertaking (CEQA Guidelines Sec. 15378[a]). Thus, to fully analyze the potential outcomes of the proposed program, the draft PEIR is required to address the details of how permitting would work, and the specifics of herbicide usage, to the extent that these details have the potential to affect environmental outcomes. As identified in Response 39 above, the program is expected to continue at current levels of funding under the reasonably foreseeable funding

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	4. **EIR defined mitigation:** The purpose of this EIR is to allow the county to proceed to implement the IAPMP. I am troubled by the many times I see the EIR Mitigation define that the county should "work with DFG to develop measures" or some similar wording stating that the solution is for the county to reach agreement with DFG on how to proceed. Chapter 7, Biological Resources, is a good example of this concern. Based on the impacts and mitigations defined in this chapter, I believe our debates with DFG on how to best control plants will be similar after the EIR as they were prior to the EIR. This EIR should define real impacts and real mitigation options and not put it off on future DFG agreements. (DFG has stated many times that they do not have the resources to do anything else than shoot from the hip when we ask for their advice.) [41] 5. **Mechanical Harvesting Alternative:** The EIR seems to state that mechanical harvesting is the preferred method to controlling plants in this lake. It seems to state that due to the Hydrilla program's limitations on harvesting, the less desirable herbicide approach is proposed. In fact, my research over several years and from several experts indicates a different conclusion: when dealing with most invasive plants mechanical harvesting is not effective and in most cases will spread and strengthen the plants. (Not unlike mowing grasses to develop a thick lawn.) Harvesting is even very dangerous to young fish etc., as anyone who has hand harvested will realize. Harvesting is best relegated to opening up navigable channels when a waterway has been overcome by plants, or removing parts of plants that for other reasons you do not want to permanently remove. My findings indicate that if the Hydrilla limitation was lifted and all plant control on this lake was via harvesting, we would accelerate the complete control of the lake by the invasive species we already have. This EIR should be changed to better evaluate all implications resulting from mechanical harvesting. [42]	climate. Analysis of potential deficits in funding would be speculative; moreover, funding deficits would result in curtailed activities, with outcomes more similar to existing conditions than to "with-program" conditions. Rather than analyze a speculative funding scenario (and one that may not constitute a significant effect or change with regard to existing, pre-program conditions), the County has elected to focus PEIR analysis on activities it is confident will occur, and that have the potential to result in significant changes from existing conditions. The scope of analysis in the draft PEIR is thus appropriate given the existing and foreseeable funding climate. No additional analysis is warranted. [41] Under Section 15126.4[b] of the State's CEQA Guidelines, it is permissible for mitigation to identify a performance standard that would mitigate the significant effect of the project and may be accomplished in more than one way. This is often necessary because it may be impossible to predict the response of complex natural systems in accurate detail; although a target condition can be identified, the best way to attain it may depend on the response of the system to management actions. In such cases, the best—most environmentally favorable—approach is commonly to identify a general mitigation strategy that will support an adaptive management framework, in which responses can be developed based on the current state of an evolving ecosystem. This was the approach taken in developing the draft PEIR's strategy for mitigating potential effects on special-status species as a result of vegetation management in Clear Lake. No further analysis is required.

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	6. **Unjustified Restrictions:** we have had many restrictions on herbicide application that were not properly scientifically justified. Examples are not treating over 30% of the water frontage to any parcel, not treating during certain spawning times, etc. These were always explained as DFG rules that we had to follow until we had CEQA/EIR approval to manage the effort. I now see these same restrictions picked up and stated in the EIR. The applicators have never been able to properly comply with the 30% rule; it is close to impossible to do so. The property owners and applicators should be able to determine the coverage and treatment timings according to plants present and proper labeled practices for the less than 1% of the lake frontage that is treated through the permitting process without these arbitrary restrictions. This EIR should eliminate all restrictions without scientifically proven basis. [43] 7. **Other technologies:** the IAPMP clearly supports continuing review and usage where appropriate of new methods to control plants. This EIR briefly mentions this and does mention laminar flow technology as something planned for evaluation, this is under a heading about using equipment not currently in use. We do have two trials, funded and now underway, on the lake of the SolarBee laminar flow	[42] The PEIR does not advocate mechanical harvesting. It does acknowledge the advantages of mechanical harvesting that justify its inclusion in the proposed program, but also clearly identifies risks associated with mechanical harvesting, including the potential to contribute to the spread of invasive plants that propagate by fragmentation, such as *Hydrilla* (Impact BIO6, page 7-31), and the potential for conventional mechanical harvesters to injure or kill fish, amphibians, and reptiles entrained with harvested vegetation (Impact BIO8, page 7-32). These issues are addressed in the following mitigation measures identified in Chapters 6 and 7 of the draft PEIR. • Mitigation Measure BIO6.1 (required)—Use dip nets during and immediately following mechanical or physical operations to collect plant fragments. • Mitigation Measure BIO6.2 (recommended)—Use a vertical barrier curtain to contain plant fragments. • Mitigation Measure BIO8.1 (required)—Require the use of close-cut harvesters. • Mitigation Measure BIO8.2 (required)—Avoid use of mechanical harvesting in sensitive habitat areas. No further analysis is required. [43] The County has adopted a number of restrictions—including the limit on the permissible area of treatment and other limitations included in the proposed program—as reflecting an appropriate level of caution for the use of herbicides in biological systems in general, and specifically in Clear Lake, which receives heavy recreational use as well as supporting subsistence use of resources. Further, it should be clarified that the IAPMP's restriction on treatment area does not refer to 30% of a property's water frontage; on page 55, the IAPMP states that "Treatment shall be limited to no more than 30 percent of the area

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	technology. While this product is not yet proven to be effective here, it is worthy of a paragraph in the EIR describing the trials and the claims to properly represent what is now being done. [44] 8. **Editorial Comment:** Table S-6 in the summary does not display properly or print properly using the latest Adobe Reader. (This may be unique to my usage?) I am unable to properly see the keys tying the various alternatives to the level of significance. [45]	designated by a continuation of property lines lakeward of shore for 300 feet…." The IAPMP further limits treatment in any given year to a maximum of 10% of the total lake surface area showing elevated or high potential for vegetation growth (see page 2-7 of the draft PEIR). [44] Comment noted; the comment is correct that SolarBees® have been in trial use on the lake since August 2004. Paragraph 2 on page 2-13 is amended to read as follows. **Incorporating additional equipment not currently in use—**The County hopes to broaden the palette of mechanical management techniques available to the proposed program in the future. To support this, the County plans to continue conducting controlled trials of various types of equipment not presently in use to assess their efficacy on the target species and their potential to contribute to undesired corollary effects such as the spread of *Hydrilla*. SolarBee® laminar flow systems are currently being evaluated as a means of controlling dissolved oxygen levels locally within the lake. Weed rollers may also be tested in the future. Trials would take place in small, contained areas around the existing docks. [45] Comment noted.
California Dept. of Food and Ag.	The above cited draft Programmatic Environmental Impact Report has been reviewed by staff of the Integrated Pest Control Branch of the California Department of Food and Agriculture. We appreciate the integration of the document with CDFA's Hydrilla Eradication Program (HEP), which is on-going in Clear Lake. We offer the following points of clarification and supplemental information: • Page S-8, 2nd paragraph and elsewhere: It should be noted that CDFA has no authority to approve pesticide applications in Clear Lake beyond it's own program. However, the IQPMP is structured to allow CDFA review of applications for control of aquatic weeds to ensure that the proposed activity will not conflict with the goals of its Hydrilla Eradication Program (p. S-14). [46] • Page S-10: The BMP's proposed for the County permit are consistent	[46] Comment noted.

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	with the protocol used in the HEP. CDFA considers adherence to FIFRA label instructi0ns to be fundamental to any application of pesticide. CDFA has monitored for the same type of water quality parameters for several years (Reference: CDFA HEP Water Monitoring Report, 2002, 2003, 2004, etc.). [47] • Page S-25, No-Program Alternative: It should be noted that the HEP is winding down and may conclude within a few years. [48] • Page 2-14, Figure 2-6: Note that because application of herbicide is declining, CDFA operates only six water monitoring sites at this time; an inlet, an outlet and four stations near the town of Nice. These may decrease in the future as the CDFA applies less herbicide to Clear Lake. [49] • Page 3-5, General Permit requirements and page 3-23, Impact HWQ1: These requirements are consistent with the protocol used in the operation of the HEP. [50]	[47] Comment noted. [48] Comment noted; text of second paragraph under No-Program Alternative on page S25 is amended to read. Other ongoing programs, such as CDFA's *Hydrilla* Eradication Program, would continue as previously planned under the No-Program Alternative. [49] The comment is correct. CDFA currently monitors for fluridone levels and other physical characteristics stipulated by the existing NPDES permit, as described by the comment. Figure 2-6 shows DWR monitoring sites active as of 2002 when the IAPMP was written. These sites will continue in use in coming years, but as *Hydrilla* is brought progressively further under control, CDFA will have less need to apply herbicide, and is expected to scale back its monitoring program accordingly, although surveys will likely continue. The California Department of Water Resources also monitors water quality parameters including, nutrient levels in Clear Lake. To ensure that there is no lapse in monitoring in the event of unforeseen changes in the State's monitoring program, the County has proposed Mitigation Measure HWQ3.1 on page 3-26 of the draft PEIR (*Monitor long-term nutrient levels in Clear Lake and adjust herbicide use accordingly to protect water quality*), which addresses potential changes in the State's water quality monitoring program as follows: "If DWR discontinues or substantially reduces its monitoring program, the County will undertake monitoring at a similar level, following similar protocols, to ensure that a comparable dataset continues to be available, to the extent feasible." Pre- and post-application DO levels in treated areas will also continue to be monitored under the proposed program, as described in Chapter 2 and Mitigation Measure HWQ2.1 (*Monitor long-term DO patterns in Clear Lake and adjust herbicide use accordingly*) on page 3-25 of the draft PEIR.

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		[50] Comment noted.
	• Page 3-25, Impact HWQ2: Post treatment monitoring conducted by the HEP indicates that for treatment of hydrilla with fluridone, DO levels remain well above the 5mg/l threshold (ref. HEP Water Monitoring Reports). This is likely due to the extremely slow death of the plants from the action of fluridone, which is the only herbicide that CDFA used in 2004. [51]	[51] Comment noted. This response is also typical of other systemic herbicides proposed for use under the IAPMP, such as glyphosate and triclopyr.
	• Page 3-28, Impact HWQ6: As noted above, the post treatment monitoring of the HEP shows no adverse effects to water quality from the application of fluridone. Consequently, CDFA does not anticipate an increase in mercury methylation rates from its activities in Clear Lake. In addition, the no-program alternative may cause uncontrolled growth of weeds, algae, and blue-green algae in the water column, depleting the DO at the bottom of the lake increasing the methylation of mercury. [52]	[52] Comment noted.
	• Pages 7-25and 26, Impacts BIO2and 3: FIFRA label restrictions incorporate the findings of risk assessment studies on sensitive species conducted by the U.S. Environmental Protection Agency. [53]	[53] Comment noted.
	• Page 7-27, Impact BIO4, food web: CDFA considers effects to the food web in Clear Lake to be short term. The goal of the HEP, and any aquatic plant management plan, is to restore the health of the ecosystem by eliminating the invading species. One of the results of a "no project" alternative could be the collapse of the lake's ecosystem due to massive invasion by non-native plant species, which supplant the native species and destroy the natural food web. [54]	[54] Comment noted. [55] Comment noted.

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	• Page 7-28, Impact BIO5, herbicide bioaccumulation: CDFA has monitoring data that shows this effect, at least for fluridone, to be insignificant (ref. L. Anderson, 2003). [55] • Page 8-13, Impact REC4: The mitigation listed is consistent with the protocol used for the HEP, with particular reliance on FIFRA label restrictions and public notification. [56] • Page 10-11, Impact CR1: Monitoring and product testing have shown that tules are not very sensitive to fluridone even at high doses, and fluridone is nontoxic to humans. In addition, the CDFA has a policy of informing the Native Americans before hand when fluridone applications are to be made in tule beds and other areas they designate as sensitive. This allows them to schedule harvesting and other activities to avoid exposure, if they choose to do so. [57] • Appendix B, page 65. The CDFA is not authorized to participate in any cost share program for the control of general aquatic vegetation at Clear Lake. The HEP must focus on the eradication of hydrilla. [58]	[56] Comment noted. [57] Comment noted. [58] Comment noted.
CLAS	The Clear Lake Advisory Subcommittee (CLAS) is charged with providing input to the Board of Supervisors on issues related to the lake. Due to the current status of the EIR in the public comment period we felt it was more appropriate to make our comments directly to you, with only an information copy to the Board. At our meeting on 25 February, 2005 we had an extensive discussion on the EIR for the Aquatic Plant Management Plan for Clear Lake. Based on that discussion the CLAS would like to comment as follows: First, CLAS has been strongly committed to moving the Aquatic Plant	

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	Management Plan forward. We are delighted that the draft EIR is out for comment and want to reaffirm our support for the prompt implementation of the Plan. We want to see the EIR approved in an appropriate form in a timely fashion in order to allow the prompt acceptance and implementation of the plan. Second, with regard to the draft EIR itself we would like to see a simple expansion of the "No Action" summary in Section 13 of the EIR. We believe the plan is more than "permitting" and no action is more than just uncoordinated control. We are not asking for an advocacy position or unsupported projections, only a broader expression of the possible consequences no Aquatic Plant Management Plan action, [59] Third, there as some specific comments on which we have not reached consensus and it is likely that individual members of the CLAS will respond for themselves with their specific concerns. In closing, we are delighted to see the County so close to the goal for which we have all worked for so long. We appreciate the quantity and quality of work which county staff has put into the document along with your consultants and make these comments in the context of wanting to take the existing good document and make it a little better.	[59] The County appreciates the CLAS members' support for timely implementation of the proposed program, and shares the Committee's concern regarding the potential adverse outcomes of discontinuing active management of Clear Lake's invasive aquatic weeds. In response to the committee's request for expansion/clarification of the summary description of the No Program Alternative in Chapter 13, the text under the heading *No-Program Alternative* on page 13-8 is amended to read as follows. Under the No-Program Alternative, none of the proposed program components would be implemented. There would be no County permitting program; no County oversight or regulation of herbicide use in the lake; no County outreach or educational activities; and no ongoing County studies of lake ecology and the effects of vegetation management in the lake. Because there would be no single-source permitting pathway through the County, individuals and organizations could undertake independent vegetation management programs, but would need to satisfy all permitting and follow-up monitoring requirements individually, through separate processes. All legal, permittable activities could be undertaken; however, the County would neither establish nor enforce County-specific guidelines regarding the suitability of various control techniques for use in Clear Lake. Other ongoing programs, such as CDFA's *Hydrilla* Eradication Program, would continue as previously planned under the No-Program Alternative. For consistency, the text under the heading *No-Program Alternative* in the draft PEIR *Summary* section (blue pages at the front of the document) is changed to read as follows. Under the No-Program Alternative, none of the proposed program components would be implemented. There would be no County permitting program; no County oversight or regulation of herbicide use in the lake; no County outreach or educational activities; and no ongoing County studies of lake ecology and the effects of vegetation management in the lake. Because there would be no single-source permitting pathway through the

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		County, individuals and organizations could undertake independent vegetation management programs, but would need to satisfy all permitting and follow-up monitoring requirements individually, through separate processes. All legal, permittable activities could be undertaken; however, the County would neither establish nor enforce County-specific guidelines regarding the suitability of various control techniques for use in Clear Lake. Other ongoing programs, such as CDFA's *Hydrilla* Eradication Program, would continue as previously planned under the No-Program Alternative. The County agrees that these changes more accurately reflect the nature of the No Program Alternative. However, no new analysis of outcomes under No Program is needed, because the whole of the No Program Alternative was considered in preparing the impact analysis presented in Chapter 13.
North, Doug	The IAPMP plan has been generated for Lake County to provide guidance for the environmentally sound management of aquatic plants in Clear Lake. The following are taken from this plan. 1. IAPMP PLAN clearly states the long-term threat to clear lake from invasive weeds could result in the closure of the lake to all activity and severe damage to the county's economy if the weeds are left unmanaged. It also states that a healthy lake requires a sustainable healthy aquatic plant community to combat the invasive weed threat. 2. The goals of the plan are to be attentive. This means invasive weeds can be prevented if they are addressed at an early stage. 3. The plan should be realistic which means a long-term program is necessary to identify the future invasive weed threats that need county attention after the Hydrilla weed issue is resolved. 4. Provide an EIR to review the IAPMP to assure the plan would meet all of the goals the county and management of aquatic plants while protecting beneficial uses of the waters of Clear Lake. 5. The Aquatic Plant Task Force (MAP) generated the plan and was dissolved in January 2002 and the role was given to the Clear Lake Advisory Subcommittee (CLAS).	[60] Section 15123 of the State's CEQA Guidelines requires an EIR to identify known areas of concern or controversy with regard to the

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	With the above set of comments taken directly from the IAPMP I look to the preliminary EIR to address each. In that regard I have the following comments to the EIR. 1. I do not find in the EIR the effects of doing nothing, which directly effects item 1 above, the long-term threat. The State of California recognized the danger of Hydrilla and provided support for the county to control that weed issue. The county must take ownership of the next several threats and identify which invasive weed needs county attention. The permitting process along with the lake front businesses and homeowners cannot provide the financing to maintain Clear Lake free of invasive weeds. Therefore in the EIR section on page S-5 (Known issues of Concern) it is recommended that, Doing Nothing be added as an item and then a large section in the EIR devoted to the threats of doing nothing. [60] 2. The IAPMP states the plan should be attentive and realistic. (See Item 2 and 3 above). In reading page 66 in the plan, it states the action to address Invasive Species on Lake Ecosystem Basis. Also on page 67 the Action is to Prioritize Plant Species of Local Concern. Both of these issues are not addressed in the EIR. Both issues require funding. The EIR needs to address both these issues as this falls into the category of doing nothing, which is item 1 above. [61]	implementation of a proposed project/program; because this topic focuses specifically on *public* concerns about outcomes should the lead agency go forward with a proposed undertaking, by definition it does not appropriately include the effects of choosing *not* to implement the proposed undertaking. However, CEQA does require analysis of the No Project or No Program alternative, so decision makers and the public can compare the outcomes of proceeding with those of choosing not to proceed. Consistent with this requirement, the draft PEIR analyzes the impacts of the No Program Alternative in Chapter 13. No further analysis is required. (As discussed above, please note that CEQA requires analysis sufficient to support comparison between program alternatives and between program and no program approaches, but does not require that all alternatives be analyzed to the same level of detail provided for the proposed program.) [61] CEQA does not require analysis of economic effects except as they result in physical changes in the environment. Moreover, as discussed above, the current level of program funding is expected to remain available for the foreseeable future, enabling the program to operate as described and analyzed in the draft PEIR. The action *Address Invasive Species on Lake Ecosystem Basis* described on page 66 of the IAPMP (PEIR Appendix B) reflects the County's commitment to ensuring that control of invasive species contributes to the health of the overall lake ecosystem, rather than degrading it. To support this goal, the action identifies the need to continue ecological studies in the lake. These studies are described as a program component in Chapter 2 (see *Ongoing Research*, beginning on page 2-11), and their impacts are addressed in Impact BIO12 (*Impacts of research and monitoring activities included in IAPMP*) on page 7-36 of the draft PEIR As discussed on page 1-5, the draft PEIR does not analyze program components that are not expected to result in impacts on the environment; if it becomes clear as the program is developed further that there is potential for significant impacts as a result of any of these

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	3. For the EIR to become final, I assume that all of the Issues of Known Concern on page S-5 have been addressed somewhere in the EIR so the county has the freedom to operate to the IAPMP in the future? This should be clearly stated in the EIR Summary to assure there is no conflict in the future. [62]	activities, the County will conduct additional tiered environmental review, consistent with CEQA requirements. As shown in Table 1-1 on pages 1-6 and 1-7, the activities excluded from PEIR analysis are primarily administrative and public outreach tasks. The action *Prioritize Plant Species of Local Concern* described on page 67 of the IAPMP would allow the County to allocate limited resources to target the weed infestations that most need treatment. As such it would be an integral part of implementing the proposed program. However, because it is an administrative process and would affect the environment only through implementation of the proposed program, it does not require separate analysis, and in fact cannot be analyzed separately in any meaningful way. [62] Issues of known concern are identified on page 1-10 of the draft PEIR. Each is addressed in the relevant resource topic chapter, as follows. • Impacts of herbicide application on water quality in Clear Lake and downstream (Cache Creek, Sacramento River basin)—Chapter 3 (see in particular Impacts HWQ1, HWQ2, HWQ3). • Impact of organic loading (accumulation of dead vegetation in lake waters) on Clear Lake water quality and aquatic ecosystems—Chapter 3 (Impact HWQ 3). • Effects of herbicide on drinking water uses (impacts on human health, potential interference with water treatment)—Chapter 11 (Impacts USS1 and USS3), see also Appendix E for screening-level human health risk assessment. • Increased testing requirements for local municipal water companies that draw water from Clear Lake—Chapter 11 (Impacts USS1 and USS3). • Potential for interaction between different herbicides used in the lake—Because of the comparatively short residence time of most herbicides in the water column and the restrictions on co-application of some herbicides, significant interaction between

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	4. In paragraph 5 above it is stated that the management role has been given to CLAS. Since the IAPMP plan has many action items, which has no apparent funding what is CLAS power to implant the plan. Therefore the EIR should show an organization chart on how the plan and the EIR are managed. [63]	herbicides is not anticipated. Human health risks associated with co-application of permissible herbicide combinations are evaluated and found to be less than significant in Appendix E of the draft PEIR. No further analysis is warranted. • Potential interaction between herbicides and mercury in the lake; effects of IAPMP activities on mercury methylation potential in Clear Lake, and corollary effects on fish and wildlife—Chapter 7 (Impact BIO13). • Effects on air quality as a result of herbicide drift and decay of dead vegetation—Chapter 5 (Impacts AIR3 and AIR 4). • Potential for reduction of macrophyte populations to foster algal growth, which can cause nuisance odors—If needed, nuisance algae could also be managed through the program framework, so this issue was not analyzed in detail in the PEIR. No information requiring further analysis is presented by the comment. • Biological effects of herbicide use—Chapter 7 (all impacts), Chapter 8 (Impact REC6). • Human health implications of herbicide use; effects on contact recreation and pets—Chapter 4 (all impacts), Chapter 8 (especially Impacts REC5 and REC6). Note that impacts on pets are not addressed specifically because of the scarcity of relevant data; however, the precautions implemented to safeguard human health are expected to provide similar protection for pets. • Implications of herbicide use for agriculture, including organic food crops—Chapter 9. • Impacts on traditional Native American uses of the lake and its resources—Chapter 10. • Potential interactions between the IAPMP and other invasive species management programs, such as CDFA's *Hydrilla* Eradication Program—Chapter 2.

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		[63] Organizational and management aspects of plan implementation are beyond the required scope of PEIR analysis.
Pestmaster	The following comments on the PEIR are provided for your review and resolution: 1. page S-7. first paragraph. A reference to chemical methods such as "pesticide or herbicide". Pesticides are a general term for all classes of chemicals that control pests. Herbicides control vegetation, insecticides control insects, etc. Herbicides are one type of pesticide. [64] 2. page S-8. first paragraph, line 3. Is "areal" a correct word? [65] 3. page S-8. fifth paragraph. States mechanical harvesting is an "extremely" effective means of removing vegetation. The use of "extremely" is not an appropriate word. Mechanical harvesting is one method of controlling vegetation, but based on the reasons in the remainder of the paragraph, it is not the most effective. It may be extremely effective if you are anti pesticide, but it has a plethora of problems associated with this method. Should read " is one means of'. [66] 4. page S-9. first paragraph. What does "intelligent adaptive management" mean? [67]	[64] Comment noted; see additional information provided in footnote 1 on page 4-3 of the draft PEIR. [65] Yes—*areal* means describing, pertaining to, or relating to an area. [66] Comment noted. Mechanical harvesting is considered extremely effective as a physical means of temporarily removing vegetation; however, as the comment points out, and the remainder of paragraph 5 on page S-8 clarifies, it is not appropriate for use in all circumstances. No change is needed. [67] *Adaptive management* refers to a management strategy that implements carefully designed monitoring programs to evaluate the success of management actions, and then uses the results of monitoring, in combination with other new information, to adjust management activities as necessary. A hallmark benefit of this approach is that—unlike traditional management approaches—it recognizes the uncertainties inherent in managing complex natural systems and provides a practical means for addressing these uncertainties (e.g., Kershner 1997; also Holling 1978, Walters 1986). This allows management to move forward even when understanding of the systems being managed is incomplete. The process is based on the assumption that management will become increasingly successful as the knowledge base increases, and that management itself will contribute to increased

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	5. page S-9, last paragraph. "program would only permit application of herbicides via a boat on the water". This is not feasible. Some applications may be made from shore with the use of power sprayers on a truck or with a backpack sprayer. Any reference to equipment or methods of application, times to perform a job, etc. should not appear in this document. [68] 6. page S-10. last paragraph. "water turbidity". Are measurements going to be taken, and if so, what method is to be used? What is the reasoning behind this requirement? [69] 7. page S-11. " Dissolved Oxygen Content". What are the criteria for 5 mg/l? What time of the day are these measurements to be taken? The entire area of DO needs to be more thoroughly evaluated with specific	understanding of the needs of the managed species or systems. On page S-9, and elsewhere in the draft PEIR, the phrase *intelligent adaptive management* was intended to refer to adaptive management that makes reasonable, discerning use of available information and technologies, in light of current standards of care. [68] Information on herbicide application methods and procedures, including the typical duration of application operations, was included to meet the CEQA requirement for disclosure and public review—in order to satisfy the CEQA requirement to identify and disclose reasonably foreseeable outcomes of the whole of the action (per Section 15378[a] of the State's CEQA Guidelines), the draft PEIR must identify the proposed methods of herbicide application and describe the process involved to the public. The statement that the proposed program would "only permit application of herbicides via a boat on the water," which appears on pages S-9 and 2-6 of the draft PEIR, was intended to exclude wide-scale helicopter or aerial broadcast applications like those seen in parts of the Sacramento–San Joaquin Delta, helping to ensure that herbicide application over the lake would be targeted to specific, limited areas. However, the County does intend to continue to permit hand application from docks or shoreline areas when this is the most appropriate technique. For instance, spot spraying along shoreline areas can help to avoid trapping fish in dead vegetation. It is also the best (most controlled) approach to treating some shallow-water species such as *Ludiwigia*. [69] The criteria are based on visual inspection and a professional determination by an individual holding a current pesticide applicator's license from the State of California. This is consistent with the terms of the new NPDES general permit and current standards of care for aquatic pesticide application.

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	criteria, based on scientific need, included in the plan. The very small amount of area treated in relation to the entire lake has an insignificant impact on overall DO levels. DO levels change drastically during one 24-hour period, depending upon the time of day. Water turbidity, DO etc. all add significant amounts of time to the treatment process, therefore increasing the over-all cost to the property owner, with no foreseeable benefits to the program. Table S-4, BIO11 shows less than significant impact. [70]	[70] The water quality control plan (Basin Plan) for the Sacramento and San Joaquin River Basins (Central Valley Regional Water Quality Control Board 1998) requires that a dissolved oxygen level of 5 mg/l be maintained in all inland surface waters outside the Sacramento–San Joaquin Delta that are designated as warm-water habitat, including Clear Lake. The comment is correct that dissolved oxygen levels may vary throughout the day. However, because of the potential for herbicide application to reduce dissolved oxygen levels in the vicinity of treatment, the County has elected to prohibit herbicide use in areas where dissolved oxygen levels are already below the 5-mg/l Basin Plan standard. This precaution is intended to ensure against cumulative degradation of dissolved oxygen conditions as a result of multiple treatments on different parts of the lake. With this requirement, and the monitoring and adaptive management provisions of Mitigation Measure HWQ2.1 (see page 3-25 of the draft PEIR) in place, the comment is correct that the proposed program's impact on dissolved oxygen levels in the lake is expected to be less than significant.
	8. page S-11. "no more than 30% of any individual parcel or ownership" What is the basis for this requirement? It is not in any relation to a treatment area size. A large property owner could treat a very large area that may be ten or one hundred times the size of a small property owner. It is beyond comprehension what this requirement is based upon. (It came from F&G, from one individual, now retired and had no scientific basis) [71]	[71] The County feels it is important to limit the use of chemicals in the lake, in light of the lake's rich and diverse biological resources and its importance to traditional native American uses, recreation, and the area's economy and scenic values. The 30% limitation provides a practical, easily implemented guideline to control overall herbicide input to the lake while offering individual property owners substantial flexibility to manage their own property.
	9. page S-13. last paragraph. Many other problem plants found in Clear Lake propagate by fragmentation also, not just *Hydrilla sp.*, but are not listed on the Noxious Weed A list. Mechanical harvesting would aid in the distribution of these plants also and these plants have the potential to have as large an adverse impact on Clear Lake as *Hydrilla sp.* [72]	[72] Comment noted. This issue is addressed in Impact BIO6 (Impacts related to plant fragmentation during vegetation harvesting) and Mitigation Measures BIO6.1 (Use dip nets during and immediately following mechanical of physical operations to collect plant fragments) and BIO6.3 (Recommended—use a vertical barrier curtain to contain plant fragments) presented on page 7-31 of the draft PEIR. Note also

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	10. page S-23. What was the basis for the selection of the program alternatives? The program should include the option to use any of the methods, i.e., mechanical, chemical, (selective, non-selective, copper based, non-copper based, contact, systemic, or a combination of any or all of the above). [73] 11. page 1-9. "potential for interaction between different herbicides used in the lake". The potential interaction between herbicides is routinely evaluated during the registration process by EPA and Cal EPA and any problem areas are noted on the label. The label is the law and must be followed. If a conflict arises, the herbicide cannot be used. [74] 12. page 1-10. Effects on air quality as a result of drift. Drift is addressed by Department of Pesticide Regulation law and is very specific. This should not be addressed in this document. [75] 13. page 2-6. This whole section is too specific as to application techniques and should not be addressed in this document. [76] 14. page 3-21. Herbicides. "while a 0.25 mile restriction was in place". Where did this restriction come from? It is not on any label for any of the herbicides currently registered for use in Clear Lake. This paragraph seems to be in error. [77]	that the County's permitting process for mechanical harvesting requires the permit applicant to perform a pre-activity survey to identify and record the species present in the treatment area, and their relative abundance. Sites that contain Eurasian water milfoil, or other species easily propagated by fragmentation would be carefully evaluated for suitability before a mechanical harvesting permit would be issued. [73] Chapter 13 of the draft PEIR (*Alternatives Analysis*) explains how the techniques included in the proposed program were selected, and describes the development of program alternatives. [74] As discussed in Chapter 2 and throughout the document, the County will require strict adherence to FIFRA labeling, including limits on co-application of herbicides. The text cited by the comment appears in the section of Chapter 1 describing known areas of public concern with regard to the proposed program and reflects input from scoping meeting attendees regarding the issues they felt should be covered in PEIR analysis. [75] To ensure thorough analysis and disclosure, CEQA requires an EIR to address all reasonably foreseeable outcomes of a proposed program or project, regardless of whether they are regulated by agency oversight or not. [76] As discussed in Response 68 above, the level of detail provided is necessary to meet the CEQA requirement to fully analyze and disclose all reasonably foreseeable outcomes of implementing the proposed program. [77] The 0.25-mile restriction is documented in the *Clear Lake Watershed Sanitary Survey—2002 Update Report* prepared by Archibald & Wallberg and Montgomery Watson Harza. Table 8-4 in the draft PEIR shows intake setbacks (buffer zones) and other FIFRA

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	15. page 7-27. BIO3.1. Limiting the use of copper in any spray program would probably reduce the effectiveness of other herbicides used. Copper has a synergistic effect on plants when used with contact herbicides and has been used for years to obtain better control results. Any restrictions on the use of copper should be at the State or Federal level and not at the County level. The County does not have the resources necessary to effectively develop a program for the use of copper [78] 16. page 11-10. The 0.25 mile restriction around potable water intakes is not on the label. Additional restrictions that are not mandated by the State or Federal governments should not be placed on the program by the County. [79] 17. page 11-10. USS1.1. Notification of adjacent properties 24 hours in advance is another County imposed restriction that is not required by any State or Federal government. Additionally, it is not required by	label requirements as of the date of preparation of the draft PEIR. However, FIFRA labeling is not static; it is revised as new data become available and best practices evolve. Consequently, throughout the lifespan of the proposed program, the County will continue to require applicators to adhere to the most current FIFRA labeling to ensure that herbicide application follows up-to-date best practices. [78] The proposed program would permit the use of both copper-based and non–copper-based herbicides. This mitigation measure embodies the County's commitment to continuing dialogue with DFG to ensure that any potential adverse biological effects of using copper-based herbicides in the lake are avoided or minimized, particularly as regards special-status species; a similar commitment for non–copper-based herbicides is expressed in Mitigation Measure BIO2.1 on page 7-26. The two types of herbicides are analyzed separately for clarity, because their potential biological effects differ somewhat. [79] As identified in Response 67 above, the 0.25-mile buffer around potable water intakes is documented in the *Clear Lake Watershed Sanitary Survey—2002 Update Report* prepared by Archibald & Wallberg and Montgomery Watson Harza. As discussed in Impact USS1.1 (see page 11-10) and shown in Table 8-4, FIFRA labeling as of the date of preparation of the draft PEIR required similar or more protective buffers for most of the program herbicides, as summarized in Table 8-4 in the draft PEIR. For example, glyphosate could not be applied within 0.5 mile of an active potable water intake, and fluridone could not be applied at concentrations in excess of 20 ppb within 0.25 mile of a potable water intake. The setback for triclopyr treatment areas varied, depending on the area treated and the concentration applied. Use of diquat in the vicinity of potable water intakes was not explicitly prohibited, but 0.25-mile buffer was required around areas where diquat is being applied, with the effect of restricting use in the vicinity of potable intakes. Note however that these requirements are not static; as discussed in Response 77 above, FIFRA labeling is revised as new data

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	the label of any of the registered herbicides. It is almost impossible to accomplish because of the privacy of adjoining property owners and the limited ability of the private applicator to obtain names, addresses etc. of these property owners. If any notification is to be required, the County should do this notification as they have the resources (names, addresses, etc.) and manpower to perform this function. The County imposes the requirement, the County performs the function. [80]	become available and best practices evolve. Consequently, throughout the lifespan of the proposed program, the County will continue to require applicators to adhere to the most current FIFRA labeling to ensure that herbicide application follows up-to-date best practices. [80] As the lead agency for CEQA compliance, the County is legally responsible for identifying mitigation to avoid, minimize, or reduce potential adverse outcomes of program implementation. The County also has a stewardship responsibility to ensure that FIFRA label requirements—including the restrictions on human contact and water uses following treatment—are met for all herbicide use under the proposed program. On County-owned properties, the County intends to require the use of buoys and other appropriate markers to identify treated areas, as described in Mitigation Measure REC4.1 (*Restrict access to treated areas during and immediately following herbicide application on County parcels*). This is not feasible on private properties, where the implementation responsibility for the FIFRA restrictions rests with applicators and the public, in practice. Because of the level of development and the intensity of recreational use along parts of the lakeshore, it is the County's judgment as lead agency that the notification precaution is necessary to ensure that FIFRA label restrictions—particularly restrictions on contact with and uses of treated waters—can be effectively implemented.
Ryan, Sarah	Handwritten comments; copy inserted on the last pages.	[81] Comment noted; the County shares the perspective that outreach and public education will be important in helping to control the introduction of invasive species not already present in the lake. [82] The County does not assume that Native Americans will want or be willing to change their activities on the lake, or that they should do so. Impact CR-1 on page 10-11 of the draft PEIR identifies that abandonment or alteration of traditional cultural practices would constitute a significant adverse effect under CEQA. The County has proposed Mitigation Measure CR-1 to ensure that the Tribes will continue to have opportunities for full representation in decision making

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		about Lake management, and to formalize the County's commitment to continuing dialogue with the Tribes about how best to maintain their cultural heritage, including use of Lake resources. [83] The County agrees that health concerns are the top priority; this includes the health of all County residents and visitors. [84] Methods for evaluating toxicological risk to children are controversial. Specifically, experts disagree about whether adult risk assessment methods can appropriately be used for children, but there is no scientific consensus about an alternative approach specific to children. The human health risk assessment presented in Appendix E in the draft PEIR adopted one widely used approach, which is to use adult methodology, but make very conservative assumptions in the modeling. It is the County's judgment that the resulting exposure scenarios are very conservative—that is, that Appendix E analyzes exposure levels greater than those that would realistically occur in real life. Based on discussion with consulting toxicologists, the County has concluded that the existing analysis is adequately protective of children, and no further analysis is warranted. [85] Comment noted.
Sierra Club	The Sierra Club applauds continued efforts made in drafting this PEIR. Goals of Developing a single-point permitting process for vegetation management activities and assuring compliance with the plethora of related agencies are good management efforts. We also commend commitments to continued evaluations, investigations, studies and research seeking a "wide palette" of environmentally sound and far-reaching solutions to exotic plant infestations in Clear Lake. From Chapter 2, page 1 of PEIR; "At the heart of the IAPMP is a commitment to the integrated pest management approach. Integrated pest management refers to a pest control strategy that seeks to maximize the effectiveness of control while minimizing effects on	

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	human health and environment (University of California Division of Agriculture and Natural Resources 2004). This may be achieved in a variety of ways; key strategies can include encouraging natural biological control through predation or consumption, managing habitats to reduce their suitability for pests, and managing invasive species that out compete native species and alter the natural balance of species in the ecosystem. Chemical methods, such as pesticide or herbicide application, are typically used when other options are limited or ineffective, with the most target-specific and least toxic methods preferred. Integrated pest management emphasizes the need to thoroughly understand the dynamics of the treated system and to manage adaptively, so that the outcomes of each phase of treatment inform the strategy and selection of techniques for the next phase." With the above intent of this PEIR expressed, the Lake Chapter of the Sierra Club continues to hold serious concern regarding the following specific program objectives, as stated in chapter 2, page 2. 1. " providing guidance for lakefront property-owners who wish to abate nuisance vegetation adjacent to their properties, including a palette of environmentally sound abatement strategies and a framework of adaptive management techniques;" Currently guidance seems to include information regarding permit processes and permit compliance. The process seems to present three options...mechanical, herbicidal, or no action. There is no sense that property owners are regularly educated regarding the lake's ecosystem and it's sustainability. Property owners are acting on the shoreline environment inside and outside of the permit process with little understanding of long-term and even short-term effects. Sierra Club believes that stake holders should be active participants in the health and well-being of Clear Lake. For instance, individuals may be very effective in small areas of management techniques, such as manual weed pulling and gathering. [86] Knowing about the nuisance plants, distinguishing these from native plants, being on-site observers of fish, birds and other habitat/wildlife indicators create informed stewards of invested owners. Another opportunity for contribution is suggested by chapter	[86] The County agrees that public outreach is an important component of effective and appropriate management of lake resources. As described in Chapter 2 of the draft PEIR, the proposed program includes an educational and outreach component. Some materials and activities are already in place, such as a 5th-grade Aquatic Weed Workbook; the Resource Conservation District's annual "Kids in the Creek" event; a public weed tour organized by the Lake County Weed Management Area, an Invasive Species Week awareness event proclaimed by the County Board of Supervisors each year, with an informational display and video and other public activities; and cooperative annual "Creek Cleanup Days." Additional activities planned under the program include hand-pulling training for the public; a variety of educational materials, including a web page, brochures, pamphlets, and mailings; and workshops and training for commercial applicators. In addition, an interpretive center (The Discovery Center) offering exhibits on Clear Lake watershed ecology and tribal culture is being developed through the efforts of a driving committee, with grants administered by the County. [87] Comment noted; see previous response. The permitting program addresses specific regulatory requirements that are triggered when an

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	7 which notes that "loss of lakeshore vegetation has resulted in the loss of cover and habitats for fish species." Support for appropriate local replanting would positively impact the lake's health. Additionally, support for innovative and low impact possibilities, such as solar and non-solar laminar systems,(one known as Solar Bee) should be encouraged. Permit processes should include an on-site training period as well as resource suggestions and options so that individuals are facilitated in their own education and ability to make knowledgeable decisions. [87]	individual or organization makes the decision to use pesticides, so education is outside the appropriate scope of the permit process *per se*. However, as described above and in Chapter 2 of the draft PEIR, the proposed program would include a substantial component of outreach and education. SolarBee® technology is currently in trial use on the lake as a means of improving local dissolved oxygen levels in portions of the lake system, and the proposed program includes an ongoing commitment to continue to evaluate new technologies and approaches as they become available, as discussed on page 2-12 of the draft PEIR.
	2. "maintaining the current multi-use management framework so that reasonable and easy lake access continues to be available to residents, recreators, and traditional users of the lake." Sierra Club agrees that "vegetation management offers the potential to benefit aquatic vegetation by fostering species composition more similar the lake's historic vegetation patterns." However the Lake Chapter of Sierra Club notes in this PEIR narrow solutions that would appear to speak predominately to boat lanes and human aesthetics. Continued threats to a healthy web of life are perhaps merely issues for mitigation and responses to bureaucratic restrictions rather than elevated by a philosophy of sustainability. Sierra Club suggests and hopes that sound research and a commitment to the commons that is Clear Lake will drive responses and solutions now certainly and in the future. [88]	[88] Comment noted.
	3. "avoiding impacts on human health, injury, to non-target plants and animal life, and damage to property, to the extent possible." Sierra Club continues to have serious concern regarding the continuing reliance on herbicidal solutions. The core of the issue seems to be nutrient overloading in the lake and downstream. Some projects have alleviated some of this overload, including; improvements in gravel removal processes in watershed creeks and streams; sewage waste and septic clean-up; and the much needed Middle Creek wetlands restoration project. These projects, their continuation and expansion	

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	will benefit Clear Lake's health and sustainability in an ongoing manner. As suggested in the earlier draft. "Increase education and outreach on detrimental land use practices that contribute to aquatic plant problems by adding nutrients; fertilizing, septic system integrity, creek side and shoreline burning and dumping of yard wastes, grading and development... these social and cultural methods of controlling nutrients are the least toxic methods for controlling weeds. The solution for much of the problems remains wise watershed management practices." It cannot be overstated that Clear Lake will always be a nutrient rich environment. All stake holders in the lake will have to live with this reality. To approximate a healthy balance in order that the lake continue as a viable source for life is the goal. It is clear that herbicide solutions may indeed kill the intrusive plants, but this process contributes to nutrient overloading[89], as well as disruption and danger to the living things in the area. Though the PEIR speaks strongly to safety standards in using herbicides, it is dismissive of the "significant and unavoidable" local negative impacts. The following describes sane issues and responses presented by the Lake Sierra Club submitted 1.15.04 during the earlier scoping period of this report. "Below are some comments from the NOAA Fisheries on the toxicity of diquat and fluridone on salmonids: This document transmits the National Marine Fisheries Service's biological opinion based on our review of the proposed Water Hyacinth Control Program in the Sacramento-San Joaquin Delta in the state of California, and its effects on endangered Sacramento River winter-run Chinook salmon, threatened Central Valley spring-run Chinook salmon, and threatened Central Valley steelhead in accordance with section 7 of the Endangered Species Act of 1973, as mended. Diquat, the active ingredient of Reward, has been shown to have an acute toxicity to salmonids at concentrations as low as 11 parts per million (ppm) for juveniles and potentially as low as 0.76 ppm for	[89] The comment is correct that Clear Lake is a naturally eutrophic system, and the County agrees that the goal of lake management should be to approach a natural, healthy ecosystem balance as closely as possible. The potential for herbicide use to increase nutrient loading to the lake is evaluated in Impact HWQ3, beginning on page 3-25. To summarize, although removal of harvested material from the lake would reduce overall nutrient loads in the lake, both mechanical harvesting and herbicide application have the potential to result in short-term local increases in nutrient levels in treated areas. Nutrient-rich waters would disperse and become diluted in the days and weeks following treatment, such that substantial effects on lakewide nutrient levels are not anticipated, and the program is not expected to increase net nutrient loading to the lake, interfere with the TMDL currently under development for nutrients, or result in violation of Basin Plan standards. Over the long term, the proposed program would likely reduce net nutrient loading to the lake, as aquatic weed growth is brought under control. However, because Clear Lake has been identified as impaired for nutrients, even short-term localized increases in nutrient concentrations could represent a significant impact under CEQA, particularly in the near future. To address this concern, the County has committed to monitoring nutrient levels in the lake for the lifetime of the proposed program, and adjusting vegetation management activities if warranted (Mitigation Measure HWQ3.1; see page 3-26 in the draft PEIR). [90] The potential for fish toxicity is discussed in Chapter 7 of the draft PEIR. No information requiring new or expanded analysis is presented in this comment.

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	larval fish. Fluridone, the active ingredient of Sonar has been show to have an acute toxicity of 7 to 12 ppm in rainbow trout. Both herbicides are expected to have environmental concentrations one to two orders of magnitude lower than acutely toxic levels, but only after complete mixing in the water column. Furthermore, sublethal effects related to the herbicides may occur even at the lower concentrations, and indirect adverse effects from the dieback of the treated aquatic vegetation on water quality may cause take of listed salmonids within the treatment area. (National Oceanic and Atmospheric Administration, NATIONAL MARINE FISHERIES SERVICE, letter to US Army Core of Engineers, dated Oct. 27, 2003) [90] The following document describes the hazards of using herbicides in lakes for controlling weeds. Aquatic Herbicide Alert [91] Sarah Little, Ph.D., Wellesley Pesticide Awareness Coordinator, 781.431.1019 x294 Sherry Ayres, Toxics Action Center 617.747.4362 Pease read this document if you are considering the use of herbicides in ponds or lakes for controlling nuisance and invasive weeds. False and misleading statements on the safety and characteristics of these herbicides are being promulgated in Massachusetts. Executive Summary: Certain vendors are approaching pond and lake associations, city councilors, conservation commissions, and selectmen and advocating herbicide use as the method of choice for controlling nuisance and invasive weeds in water bodies. These vendors are not revealing the health risks involved with pesticide use, and are, in fact, illegally making false and misleading claims about the safety, characteristics, and endorsements of their products. The most serious misleading statements encountered involve understating the health risks, environmental effects, and persistence of	[91] The County thanks the comment for resubmitting these comments, which were received during the scoping period and considered during preparation of the draft PEIR. The County emphasizes that herbicides were selected for inclusion in the proposed program based on their track record in similar uses, and FIFRA labeling; some highly effective herbicides, such as acrolein, were eliminated from program use because of unacceptable toxicity levels or other restrictions. In addition, it should be noted that the County expects herbicide use to continue even if the proposed program is not approved. The proposed program would provide a mechanism to regulate herbicide use and would entail a commitment on the County's part to implement a number of mitigation measures specifically intended to minimize health risk to both traditional and recreational users of lake resources. None of these measures would be in effect without the program. Thus, the proposed program would likely reduce health risks substantially by comparison with the No Program scenario.

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	the chemicals; falsely linking United States Environmental Protection Agency and false claims of endorsement by the Massachusetts Audubon Society for using herbicides in water bodies. Never accept the material presented by a vendor on the health and environmental effects of an herbicide without verifying it with an independent authority such as the EPA, Department of Environmental Protection, Extoxnet, the Material Safety Data Sheet, or the Product Label itself. Herbicides are a type of pesticide. The following four synthetic herbicides are being proposed, all are subject to site-specific local and state approval; 2,4-D, Diquat bromide (Reward), or Fluridone (Sonar), for killing aquatic plants; and glyphosate (Round-up or Rodeo) for killing embankment plants. All four pose health and environmental risks and provide only temporary relief from the weed problems. Although EPA allows registration and restricted use of pesticides,) they do not encourage their use. Registration of a product by the EPA does not imply that it is safe; there are currently thirty-six EPA registered pesticides which are carcinogenic. In fact, the EPA states that all "pesticide use creates some risk of harm to humans, animals, or the environment." Pesticides should not be used as a routine, repeated, or long-term method for controlling invasive weeds in ponds and lakes. Even single-use applications must be carefully considered to ensure that the voluntary and involuntary health and environmental risks associated with broadcasting toxic chemicals into the environment are justified, and that alternative methods are not available. Presented here is a summary of what is known about the actual health and environmental effects, and persistence, of the chemical herbicides in question. This information is obtained from the manufacturer's Material Safety Data Sheets' the EPA; the DEP; EXTOXNET multi-University pesticide database; the New York State Board of Health; and the references appended to this document. A description of some of the non-chemical alternatives is also presented. Chemical Summary	

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	2,4-D: (2,4-dichlorophenoxy) acetic acid. Exposure Routes: 2,4-0 is toxic if inhaled, ingested, or absorbed through the skin. Acute toxicity: 2,4-D is moderately toxic via ingestion: an amount equivalent to two Lifesavers administered to each of four kindergarteners would kill two of them (oral LD50 as low as 320mg/kg). It is highly toxic via eye exposure. It is readily absorbed through the skin and lungs. Chronic toxicity includes adverse effects to the lover, nerves, bone development, and possibly concer. Environmental effects: It is moderately toxic to birds and highly toxic to fish. Persistence: The half-life in soil is less than 7 days. Despite its short half-life in soil and in aquatic environments, the compound has been detected in groundwater supplies in at least five states and in Canada. Very low concentrations have also been detected in surface waters throughout the U.S. The current Maximum Contaminant Level 2 (MCL) drinking water standard is 0.07mg/1. Breakdown products: 2,4-D transformation products include at least 4 dioxins, which are carcinogens, and TCDD, which suppresses the immune system of developing children. Contaminants and inerts 3. The carcinogen dioxin, a common by-product of the manufacturing of chlorinated compounds such as 2,4-D, has been known to contaminate 2,4-D products. Diquat bromide (Reward): 1,1'-ethylelne-2,2'-bipyridyldldiylium dibromide salt. Wxposure routes: Diquat bromide is toxic if inhaled, ingested, or absorbed through the skin. The possibility for poisoning increases with repeated exposure. Acute toxicity" It is moderately toxic via ingestion: an amount equivalent to two Tic-Tacs, administered to each of four kindergarteners, would kill two of them (oral LD50 as low as 30 mg/kg) . Chronic toxicity includes adverse effects to the gastrointestinal tract, eyes, kidneys, liver, and the lungs, in particular cataracts in the eyes. Environmental toxicity: It is moderately toxic to birds, fish and aquatic invertebrates, to non-target plant species. Persistence: It is highly persistent, with reported field half-lives of greater than 3 years. It has the ability to eventually use up all the available adsorption sites on soil clay particles. Field studies for the New York State Board of Health showed that 5 days after application the concentration in the	

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	water is greater than MCL2 current drinking water standards of 0.02mg/1. "Swimming, fishing and watering of domestic animals should not be allowed for at least 14 days after application of the herbicide to water," according to Extoxnet. Breakdown products: unknown. Contaminants and inerts3: From the MSDS: "This product contains a chemical known to the State of California to cause cancer (Ethyl-4,4'-dichlorobenzilate)." Fluridone (Sonar): 1'-Methyl-3phenyl-5- [3-(trifluoro-methyl) phenyl}-4(1H)-pyridinone Exposure routes: Fluridone is toxic if inhaled, ingested, or absorbed through the skin. Acute toxicity: Fluridone is considered an immediate health hazard. It has low acute toxicity via ingestion: an amount equivalent to a scoop of ice cream administered to each of four kindergarteners would kill two of them (LD50 5000mg/kg). Chronic toxicity includes adverse effects to eyes, liver, kidney, and testicular atrophy. Studies by Dynamac Corporation for the EPA reported fluridone to be a carcinogen. Environmental toxicity: Fluridone is moderately toxic to birds, fish and aquatic invertebrates. Trees and shrubs growing in treated water may develop chlorosis(loss of green pigment). Irrigation with treated water may result in injury to plants. Persistence: It has a half-life of 5 -60 days, depending on conditions. It must remain in contact with target plants for 45 days to be effective. NO DRINKING WATER STANDARDS CURRENTLY EXISTS. Breakdown products: Fluridone degrades to a number of intermediates, including n-methylformamide(NMF) which has been shown to cause birth defects, liver damage, spina-bifida, and deformity of the brain and internal organs. Contaminants and inerts3: The "inert"1,2-propanediol may be harmful by ingestion, inhalation or through skin contact, and causes skin or eye irritation. Glyphosate (Round-up, Rodeo): N-(phosphonomethyl) glycine. Exposure routes: Glyphosate is toxic if inhaled, ingested, or absorbed through the skin. Acute toxicity: Glyphosate has low acute toxicity via ingestion: an amount equivalent to a scoop of ice cream administered to each of four kindergarteners would kill two of them (LD50 5000mg/kg). Chronic toxicity: Miscarriages, premature births, non_Hodgkin's lymphoma. Environmental toxicity: It is a abroad	

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	spectrum, non-selective herbicide that affects non-target and native plants. It is slightly toxic to birds, fish and aquatic invertebrates. Persistence: Glyphosate is moderately persistent in soil, with field half-lives of up to 174 days. Its half-life in pond water ranges from 12 days to 10 weeks. It is extensively metabolized by some plants, while remaining intact in others. Current MCL2 drinking water standards are 0.7mg/i. Breakdown products: Transformation products include formaldehyde, a known carcinogen, and N-nitrosoglyphosate. Contaminants and possible other"inerts" are moderately toxic and appeared to be the cause of a wide range of respiratory, cardiovascular, reproductive and central nervous system problems. A 1999 study by the American Cancer Society found elevated incidence of the cancer, non-Hodgkin's lymphoma. It is a violation of Massachusetts State Law ; to make false or fraudulent claims about pesticides, including verbally. "12) all persons shall: c) Make no false or fraudulent claims. The term fraud includes misrepresentation personally or through the media, falsified records, invoices or reports,"-333 CMR 13.03 Massachusetts Pesticide Regulations. "The law requires EPA to determine safe levels of chemicals in drinking water which do or may cause health problems. These non-enforceable levels, based solely on possible health risks and exposure, are called Maximum Contaminant Level Goals (MCLG). Based on this MCLG, EPA has set an enforceable standard called a Maximum Contaminant Level (MCL). MCL's are set as close to the MCLG's as possible, considering the ability of public water systems to detect and remove contaminants using suitable current treatment technologies. "_U.S. EPA. Note that the pesticide concentration in the MCL drinking water standard may be higher than the level at which health risks may be expected to occur. Be aware that chemicals listed as inert ingredients can be highly toxic. Inert ingredients may comprise up to 99% of a pesticide product, but are considered trade secrets so are not disclosed. "Since neither the federal law nor the regulations define the term "inert" on the basis of toxicity, hazard or risk to humans, non-target species, or the	[92] As discussed in Chapter 13 (*Alternatives Analysis*), the County considered the use of biological controls in developing the proposed program and program alternatives. Biological controls are strictly regulated in California because of the potential for adverse ecological effects in the event of inappropriate use, and the County has concluded that none of the species currently approved for biological control use is likely to be effective in Clear Lake. However, as new controls are approved for use in California, they will be evaluated as an additional tool for managing invasive species in Clear Lake [93] Vegetation harvesting is currently in use in Clear Lake, as discussed in Chapter 2 of the draft PEIR, and the proposed program would continue to allow vegetation harvesting where there is no potential to spread invasive plants that propagate by fragmentation, such as *Hydrilla* and Eurasian watermilfoil. However, because of the presence of such plants, harvesting would not offer a stand-alone solution in Clear Lake. In addition, as discussed in Impact BIO8 on page 7-32 of the draft PEIR, standard harvesters have the potential to trap and injure or kill fish and aquatic wildlife along with harvested

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	environment, it should not be assumed that all inert ingredients are non-toxic," _U.S. EPA. Alternatives Pond weed treatment should not be considered until the creation and implementation of a watershed management plan to address the root causes of the pond's excess eutrophication. It is primarily the nitrogen and phosphorus in run-off from lawn fertilizer, atmospheric disposition, and septic system releases which cause excess growth of weeds and algae in the first place. Reducing the source of nutrients coming into a pond will alleviate excess weed and algae growth. Consideration should be given to the "no action" option with the understanding that aquatic vegetation provides critical habitat for pond organisms, which could be adversely affected by its removal. Removal of weeds can also stimulate growth of algae, which take advantage of the nutrients no longer sequestered by the plants. Some sustainable solutions to weed infestation include 1) biological controls which will establish an equilibrium [92] and keep the weeds in check, or 2) a harvesting program to clear the water and reduce the total organic matter [93], which will allow or reverse the natural eutrophication process. the harvested material, if not contaminated with heavy metals or herbicides, can be used as feed for municipal and commercial composting systems. [94] Such programs should be evaluated for their impact on overall pond health and environmental impact. One approach being developed for this season as a comprehensive hand-pulling program. For information of alternatives, contact Jackson Madnick in Wayland, at jacksonmadnick0 msn.com, or James Straub, Program Director of Mass. Dept. of Environmental Management, Lakes and Ponds Program (508) 792-7716. When considering the use of herbicides to control invasive weeds, remember that information provided by herbicide applicators on	vegetation, so the County will stipulate the use of “close-cut” harvesters that minimize fish kills (*Mitigation Measure BIO8.1—Require the use of close-cut harvesters*) and require hand-removal rather than mechanical harvesting in sensitive habitat (*Mitigation Measure BIO8.2—Avoid use of mechanical harvesting in sensitive habitat areas*). [94] Comment noted.

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	effectiveness and safety involves a conflict of interest. In addition, there is a higher profit margin involved with pesticide and herbicide applications than with manual labor. Always obtain your health, environmental, and effectiveness information from independent sources such as the EPA, the National Institutes of Health, or other non-industry funded studies. Then make sure you have thoroughly explored alternatives and have weighed the risks you are taking as well as those you might be imposing on other people and the environment. The issue of false-safety claims by pesticide manufacturers and applicators is quite serious. The United States General Accounting Office (GAO) was charged with reviewing the information that pesticide industry_manufacturers, distributors, and professional applicators_provides to the public about the safety of its products. They found that the pesticides industry continues to make prohibited claims that its products are safe or nontoxic. The GAO also found that EPA has yet to establish an effective program to determine whether pesticide manufacturers and distributors are, in fact, complying with requirements. It is illegal in the State of Massachusetts to make fraudulent claims, even verbally. In particular, beware of claims that a product is "safe as salt", "less toxic than caffeine", "safer than aspirin", "a child would have to drink 50 gallons a day for four years" or other such comparisons of the pesticide toxicity to common foods, medicines, or consumption. This type of comparison is based on the acute toxicity of a chemical. The value used is the amount of material necessary to immediately kill 50% of the rats to which it is fed (known as the LD5O). Extrapolating these acute toxicity values to represent long-term, low dose, or chronic exposure effects in humans has been proven to be extremely inaccurate and can lead to widespread adverse health effects, particularly in the developing child (lead and mercury are two cases in point). Conclusions The use of herbicides to control pond weeds involves chemicals with both known and unknown health and environmental risks. These add to the risks imposed by the many chemical exposures that we as citizens	

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	are voluntarily and involuntarily exposed to each day. Children are particularly susceptible to the harmful effects of herbicides, and "just a small amount of toxin exposure during critical periods of development can have an irreversible effect lasting a lifetime." -American Public Health Association We do not recommend the use of pesticides such as herbicides unless human or environmental health is at risk, and viable alternatives do not exist. Please independently verify all the information presented to you by pesticide applicators, learn about alternatives, and make a sound decision based upon protecting public and environmental health. " Sierra Club, Lake Chapter members look forward to working with all agencies, property owners, and traditional users of the lake to support a healthy and sustainable Clear Lake. Respectfully Submitted;	
Solar Bee	We respectfully submit our comments on the Draft PEIR for the Clear Lake Aquatic Plant Management Plan. Our comments focus primarily on the alternatives analysis where we believe that there has been insufficient consideration for alternatives to pesticides and mechanical harvesting. Alternative technologies such as circulation are gaining experience and acceptance in the management of lakes, and there is direct and relevant and local experience with SolarBees that we believe warrant consideration in evaluating alternatives. Attachment 1 provides more background on SolarBees approach and is entitled: “Ecological benefits associated with preventing blue-green algae blooms through SolarBee circulation: a new approach for controlling eutrophication in lakes.” We believe that solar powered circulation devices are well within the ‘reasonable range’ of alternatives that should be evaluated. The SolarBee Division of Pump Systems, Inc. has developed a solar powered circulation device to move large volumes of water in open water bodies very efficiently, employing near laminar flow to achieve long distance (up to 50 surface acres) horizontal and vertical mixing. The units have a 25-year life expectancy with	The attachments cited in the Solar Bee comments are not included here. See Solar Bee.pdf .

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	very little ongoing maintenance. Solar powered circulation devices should be considered as feasible as there are now more than 700 such installations in the US, with more than 135 of them in California. In addition, there are multiple third party reports validating the technology in a wide variety of applications directly relevant to Clear Lake. And there are two SolarBees presently in Clear Lake; and four in a lake in the County (Hidden Valley Lake in Middletown). For more background on local and relevant SolarBee installations see Attachment 2. Throughout the Draft PEIR, it states that Clear Lake turned from algae-dominated in 1980's to macrophyte-dominated today. In our opinion, a big unknown is whether the macrophyte control program will cause the lake to revert to blue-green algae dominance, which could be even worse. Based on SolarBee's experience in controlling blue green algae surface blooms, SolarBee has come to understand that there is a relationship between blue green algae and invasive aquatic weeds such as those present at Clear Lake and is directly relevant to the challenge at Clear Lake today. SolarBee circulation will help reduce submerged macrophyte growth in two ways: First; decomposing blue green algae represent a significant source of ammonia- nitrogen and soluble phosphorus to the sediments in forms that readily available to aquatic weeds. The elimination of blue green algae surface blooms by means of circulation should help control invasive weed infestations in Clear Lake by reducing nutrient availability. Second: The circulation of oxygenated water across the sediments helps convert ammonia nitrogen to nitrate, a form of nitrogen not readily utilized by submerged macrophytes. In conclusion, SolarBee circulation would benefit Clear Lake by controlling blue green algae surface blooms and reducing macrophyte infestations all using solar powered, non chemical means that are sustainable and very cost effective. [95] In terms of economic analysis, a comparison of the costs of circulation to mechanical harvesting and chemical applications is warranted. We have prepared comments that appear as Attached 3 on Appendix B. A summary table below highlights the differences in cost when comparing solar powered	[95] As identified in Response 44 above, SolarBee® systems have been in trial use on the lake since August 2004 to determine its effect on macrophyte growth. The commentor's proposal that SolarBee® would provide a means for lakewide control of invasive vegetation represents a program alternative not previously evaluated in detail. However, if effective, the SolarBee® approach would offer control over the longer term and but would not meet the program need for rapid results. In addition, installing enough SolarBee® systems to provide effective lakewide weed control could affect circulation patterns throughout the lake, with potentially profound effects on lake ecology in this naturally productive system. For these reasons, the County has concluded that SolarBee® systems would not provide a stand-alone solution to the need for control of invasive vegetation in Clear Lake. No further PEIR analysis of this approach is warranted, although the County intends to continue the use of SolarBee® technology on a local basis.

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circulation devices, such as SolarBees, to chemical applications and mechanical harvesting as cited in Appendix B of the draft PEIR. Projecting out the cost for treating the problems associated with invasive macrophytes at Clear Lake, given 5,000 impacted acres, the following table compares solar powered circulation to chemical applications and mechanical harvesting. The comparison shows a dramatic savings by investing in solar powered circulation devices rather than annual expenditures for chemical applications and mechanical harvesting.
<table>
<tr><td colspan="3">Total 25 Year Costs to Treat 5,000 Acres at Clear Lake</td></tr>
<tr><td>Category</td><td>Cost Per Year</td><td>Over 25 years</td></tr>
<tr><td>SolarBees
(400 SolarBees at $40,000 each)</td><td>$16 million one time/25 yrs= $640,000</td><td>$16 million</td></tr>
<tr><td>Chemicals</td><td>$10 million to $25 million</td><td>$250 million to $625 million</td></tr>
<tr><td>Mechanical</td><td>$7.5 million</td><td>$187.5 million</td></tr>
</table>
As illustrated in the table above, t he potential economic benefits alone make a case for deploying SolarBees a t Clear Lake. While we appreciate that the County would want additional demonstration applications and pilot studies before rolling out a full scale approach with 400 SolarBees a the targeted ‘hot spots’ in Clear Lake , we believe more units in the water by the summer of 2005 would advance the understanding of the potential benefits of solar powered circulation for Clear Lake. [96]

Attachment 4 includes comments on the Screening Level Human Health Risk Assessment – Appendix E. In summary, our comments are relative to lake health concerns: herbicides kill more than the target plants; they can also reduce biodiversity by negatively
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[96] Comment noted. As identified above, SolarBee® systems would not provide a stand-alone approach to meet the program purpose and need, so cost is irrelevant to evaluation of the proposed program.

[97] Appendix E of the draft PEIR focuses specifically on human health risks; longer-term and broader-scale ecotoxicological issues are addressed in Appendix D. Impacts of herbicide use on the aquatic food web in Clear Lake are addressed in Impact BIO5 on page 7-27 *ff*. of the draft PEIR.
As identified in the discussion on page 7-28, herbicide use does have some potential to affect the local food web in treated areas, although the effects of changes in the trophic system are difficult to predict, and could be either adverse or beneficial. Because of Clear Lake’s size and the areal limitations on herbicide treatment, local effects are unlikely to have an adverse effect on the lakewide food web. Moreover, as described in Chapter 2, the proposed program includes provisions for monitoring and adaptive management that would help to avoid and/or correct ecosystem effects, and further protection would be provided by mitigation measures identified in Chapter 7. Significant adverse
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	impacting native plants as well non -blue -green algae - the foundation of a healthy aquatic food web. Potential collateral damage within the lake ecosystem should be evaluated before making any large-scale applications. As for long -term sustainability: generally, herbicides must be applied on a regular basis (e.g., monthly, seasonally, annually, etc.) because the effective period is short, and nuisance plants frequently (if not nearly always) eventually return. Using toxic chemicals to control invasive weeds is a long-term commitment, with long-term ecological consequences and economic obligations. Those consequences were not evaluated in Appendix E. [97] A brief review of the summary impacts and mitigation measures for the proposed program for the Clear Lake IAPMP illustrates examples of how SolarBees can lessen or avoid impacts from currently proposed control methods. **Biological Resources:** BIO4 was rated as significant and unavoidable on the biological resources, BIO4 Adverse effects on food web. No mitigation measures were identified, and the impacts with implementation remained significant and unavoidable. In our opinion, SolarBees would have a significant benefit to the food web, and should be considered as an alternative to chemical applications that would avoid the significant impacts relating to chemical applications. [98] **Noise:** N1 and N2 Noise levels were rated as significant and unavoidable. SolarBees are virtually noiseless and illustrate that there are ways to avoid noise associated with air boats and noise associated with conducting delivery, transfer of control methods near sensitive receptors. [99] In summary, the potential benefits of applying solar powered circulation as a sustainable and ecologically friendly and non-chemical solution with compelling economic advantages warrants consideration in the final Aquatic Plant Management Plan. Solar powered circulation devices have proven to be	impacts are not anticipated, but because the potential for ecosystem effects cannot be entirely ruled out, this impact is identified as significant and unavoidable in the draft PEIR. No further analysis is required. [98] Comment noted. As identified above, SolarBee® systems have been in trial use on the lake since August 2004, and the County expects to continue their use to determine their effectiveness in controlling macrophyte growth. However, the County's experience suggests that SolarBee® systems would not provide a stand-alone solution to the need for control of invasive vegetation in Clear Lake. [99] See previous response. [100] See previous response.

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	feasible and would help to avoid or substantially lessen the impacts of the proposed control methods proposed in the present plan. [100]	
Special Districts	Lake County Special Districts manages ten potable water systems in Lake County and four wastewater treatment plants. Two of these systems treat Clear Lake water for drinking water including the North Lakeport and Soda Bay water treatment plants. Wastewater from all three treatment facilities owned and operated by the Lake County Sanitation District discharge treated wastewater into the Geysers effluent pipeline. The Geysers effluent pipeline associated projects are also known as Basin 2000. The following comments are not intended to disagree with the overall approach and consideration of environmental impacts and mitigation measures. [101] I have reviewed portions of the referenced Programmatic EIR and the following comments are for clarification purposes: **Page # Comment** 3-21 The "Herbicides" section is erroneous. Several of the herbicides listed in the paragraph were not utilized at the time of water system intake sampling, such as diquat, endothall and 2,4-D. The information in the Clear Lake Watershed Sanitary Survey conducted by Archibald & Wallberg and MWH, August 2002 (Sanitary Survey) is based on data provided in the Department of Pesticide regulation database that encompasses the entire county, and is not specific to Clear Lake. Please refer to the attached correspondence from the Lake County Agricultural Commissioner to DHS for corrections to the Sanitary Survey. Other herbicide applications in Clear Lake were associated with the hydrilla program (fluridone and copper). The Sanitary Survey states that some of the herbicide sampling data conducted by water utilities was collected during the growing season, some were clearly not, and others could not be determined (see page 3-32 Sanitary Survey). The Sanitary Survey encompasses the time period from 1996 to the spring of 2002. [102] Corrections should be made by removing strikethrough text and adding the text in italics below so that the information is accurately stated: Herbicides. Monitoring conducted at *several* water systems on Clear	[101] Comment noted. [102] Consistent with discussion in the *Clear Lake Watershed Sanitary Survey—2002 Update Report* (Archibald & Wallberg and MWH 2002), paragraph 2 on page 3-21 is revised to read as follows. **Herbicides.** A number of water utilities located on Clear Lake have tested Clear Lake waters near their intakes for the non–copper-based herbicides diquat, endothall, and 2,4-D. As of 2002, none of these substances was present at detectable levels in intake waters (Archibald & Wallberg and MWH 2002). In addition, CDFA and the California Cities Water Company have tested for the copper-based herbicide fluridone, used in the State's *Hydrilla* eradication program. CDFA's monitoring in treated areas has typically found maximum fluridone levels of less than 10 ppb, with more than 85% of the samples less than 5 ppb. (For comparison, the U.S. EPA considers a level of 150 µg/l as acceptably protective of human health.) Samples collected by the California Cities Water Company at their intake showed fluridone levels of less than 1.0 µg/l in raw intake water as of summer 2001 (Archibald & Wallberg and MWH 2002).

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	Lake concluded that diquat. endothall. fluridone, glyphosate, and 2.4-D were not present in excess of federal standards in intake waters.	
	3-25 **Impact HWQ3- Potential effects of vegetation management on water quality in Clear Lake (nutrient content).** The discussion of this impact is focused on mechanical vegetation management techniques and herbicide use. The **Mitigation Measure HWQ3.1** only addresses long-term nutrient level monitoring associated with herbicide use. A discussion of mechanical vegetation management practices and nutrient levels may be lacking. This is also reflected in the associated summary table S-4. [103]	[103] Mitigation Measure HWQ3.1 is revised to read as follows. Note also that a TMDL for nutrients is currently under development for Clear Lake, and additional nutrient data will become available through the TMDL process. **Mitigation Measure HWQ3.1—Monitor long-term nutrient levels in Clear Lake and adjust herbicide use and vegetation harvesting accordingly to protect water quality.** The County will support the existing California Department of Water Resources monitoring program for nitrogen and phosphorus content for the life of the program. To the extent feasible, the same sites now in use will continue to be used for post-program monitoring. Measurements will be taken at least monthly. Samples will be collected at the water surface and immediately above the lake bottom. If DWR discontinues or substantially reduces its monitoring program, the County will undertake monitoring at a similar level, following similar protocols, to ensure that a comparable dataset continues to be available, to the extent feasible. Water samples will be analyzed for total phosphorus, nitrate, nitrite, and total nitrogen, and algal and macrophyte growth will be monitored. If excessive growth occurs in conjunction with increased phosphorus or nitrogen content, the County will collaborate with resource and regulatory agencies as appropriate to identify and implement appropriate modification to treatment techniques and schedules, with particular emphasis on the need to reduce program-related nutrient loading. Additional monitoring will be implemented to assess the effectiveness of these preventive measures.
	11-5 **Wastewater** The section describes the utilization of treated effluent for various uses. Effluent produced from wastewater treatment facilities surrounding Clear Lake is in fact pumped into the Geysers geothermal reservoir. However, a percentage of the water that is utilized for this purpose is make-up water withdrawn from Clear Lake. The annual amount that can be withdrawn is 7950 acre feet. Withdrawals are affected by the decrees that limit water use during drought years. Clear Lake water is pumped directly from the lake to the Southeast Regional Wastewater Treatment Plant effluent storage reservoir where it is available for conveyance to the Geysers injection wells. The comment is made for clarification purposes. [104]	[104] Comment noted.

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	"Effluent is also used to irrigate pastures and vineyards, and supply water to constructed wetlands along the pipeline route (URS 2003)." This description is not entirely accurate. Effluent use for pasture irrigation is no longer a standard operating procedure. Such irrigation only exists as a back up mechanism at the Northwest, Southeast and Middletown Wastewater Treatment Facilities. Presently there is one vineyard that utilizes effluent for drip irrigation in Kelseyville. Several constructed wetlands along the effluent pipeline route were considered as a component of the original Clear Lake Basin 2000 program but after development of the Lyons Creek wetlands in 2000, it became clear that this approach was hindered by regulatory issues leading to a decision for no further development of constructed wetlands. [105]	[105] The last paragraph on page 11-5 is revised to read as follows. As described in *Clear Lake Basin 2000 Program* above, a large portion of the effluent produced from wastewater treatment facilities surrounding Clear Lake is transported to The Geysers Geothermal Field where it is pumped into the subsurface reservoir to generate geothermal power. Until recently, effluent was also used to irrigate several pastures and vineyards and to supply water to constructed wetlands along the pipeline route (URS 2003). At present, one vineyard in Kelseyville continues to use effluent for drip irrigation.
	11-10 The second paragraph is incorrect and should be modified as follows: "Monitoring of intake waters at several water systems on the lake for diquat, endothall, fluridone, glyphosate, and 2,4-D did not detect any of these chemicals or residuals. This monitoring was conducted under the recently expired emergency general permit, which stipulated a 0.25-mile no-treatment buffer zone around authorized potable water intakes (Archibald & Wallberg and MWH 2002)." [106] The monitoring conducted under the general NPDES permit was not directly related to water intakes but was applicable to areas that had actually been treated with aquatic herbicides, which may or may not have been in the vicinity of a drinking water intake. The water intake monitoring that water utilities undertook was with regards to the Sanitary Survey and assessment of possible contaminating activities (PCAs). The reference to the Sanitary Survey should be removed because it has nothing to do with the NPDES permit or subsequent monitoring. [107]	[106], [107], Paragraph 2 on page 11-10 of the draft PEIR is revised to read as follows. As discussed in Chapter 3, a number of water utilities located on Clear Lake have tested their intake waters for the non–copper-based herbicides diquat, endothall, and 2,4-D, and as of 2002, none of these substances had been identified at detectable levels. Note that this monitoring was undertaken with a 0.25-mile no-treatment buffer in place around potable water intakes (Archibald & Wallberg and MWH 2002). During the same period, monitoring of treated areas and raw intake waters for the copper-based herbicide fluridone found maximum levels substantially below the 150 µg/l threshold considered acceptably protective of human health by the U.S. EPA. Table 8-4 shows FIFRA labeling requirements as of the date of preparation of the draft PEIR, including no-treatment buffers and other protective measures for the herbicides used under the proposed program. For example, most uses of diquat and applications of fluridone at rates above 20 ppb are shown as requiring a 0.25-mile buffer around potable water intakes, and a 0.5-mile buffer is shown for glyphosate. Buffers of varying widths apply for triclopyr, depending on the amount used and the area treated; alternatively,

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		potable water intakes can be shut down until triclopyr residuals reach a safe threshold. FIFRA labeling changes periodically with the acquisition of new data, so these requirements will likely continue to evolve over the duration of the proposed program. As discussed in Chapter 2, the County will continue to require applicators to adhere to the most current FIFRA labeling, reflecting up to date best practices. With these precautions in place, and based on experience to date, herbicide use is not expected to result in exceedances of potable water treatment standards at known, authorized potable water intakes. No other changes to this impact analysis are required, and Mitigation Measure USS1.1 (*Provide advance notice of application to area residents and recreational users*) remains in place as proposed in the draft PEIR.
	The Sanitary Survey considered all known aquatic plant management activities in Clear Lake as a potential contaminant source to drinking water. The survey concludes that based on information available, the application of herbicides by shoreline residences and businesses was not measurably affecting the water systems to provide water that meets drinking water standards. The drinking water quality condition is not anticipated to change with activities analyzed in the proposed Integrated Aquatic Plant Management Program. [108]	[108] Comment noted.
	Following is attachment on Special Districts Comments from Ag. Commissioner. The purpose of this letter is to respond to the "Clear Lake Watershed Sanitary Survey-2002 Update Report." In the summary and on pages 3-29 through 3-33, endothall and 2, 4-D are listed as commonly used herbicides that are directly applied to Clear Lake to control aquatic plants. This is inaccurate. According to the Pesticide Use Reports for the years 2000, 2001 and 2002, endothall was used on a very small area (1,000 square feet) on an experimental basis. In addition, 2, 4-D was not used at all. This is because the NPDS permit doesn't	[109] Comment noted.

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	allow those herbicides to be used. [109]	
Wendy White	I have looked through the programmatic Draft Environmental Impact Report (PEIR) and had an hour with the printed version at Redbud Library in Clearlake. Thank you for providing that copy. I was unable to attend the February 24th public hearing at the planning commission but wish to submit these concerns regarding the plant management issues: • Noise from the program would considerably exceed residential and commercial standards, mainly from the airboat(s) and other boats used. The cumulative impacts of the program with existing noise sources, mainly bass boats and personal watercraft (by far the most prevalent noises on the lake), airplanes and highway vehicles would further impact negatively on residents, businesses and wildlife around the shores of Clear Lake. Trucks delivering the pesticides for the lake are currently causing noise impacts. [110] • Impacts of pesticides in the planned program on drinking water supplies could have adverse effects and need further study. Accumulations of pesticide residues in the lakebed sediments date from the disastrous uses of DDD in the 1940's. Eventually these and newer applications will reach drinking water sources. [111]	[110] The draft PEIR evaluates noise impacts associated with vegetation management on Clear Lake as significant, and identifies the following mitigation measures to reduce impacts to the extent feasible. • Mitigation Measure N1.1—Whenever possible, conduct delivery and transfer of aquatic plant management materials away from sensitive receptors. • Mitigation Measure N1.2—Whenever possible, conduct personnel communications using private radios and/or headsets near sensitive receptors. • Mitigation Measure N2.1—Avoid airboat use whenever possible. • Mitigation Measure N2.2—When airboats are necessary, avoid operation at "open plane." • Mitigation Measure N2.3—Keep apprised of efforts to develop quieter airboats. Even with these measures in place, however, noise impacts could still exceed the threshold of significance; as discussed in the draft PEIR, there is no feasible way of ensuring that significant noise impacts are entirely avoided while still accomplishing program goals. Consequently, the County has identified the proposed program's noise impacts as significant and unavoidable. No further analysis is required. [111] The potential impacts of herbicide use on potable water supply are addressed in Impact USS1, beginning on page 11-9 of the draft PEIR. With Mitigation Measure USS1.1 (*Provide advance notice of application to area residents and recreational users*) in place, the County has concluded that any impacts would be less than significant. Related discussion of the potential for herbicides/herbicide residues to accumulate in lakebed sediments is provided in Impact BIO5, beginning on page 7-28. With the exception of copper, none of the herbicides is persistent in water, soils, or sediments. 2,4-D has some potential to

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	• Assessing the cumulative applications of pesticides and plans for public education on issues related to the plan are inadequate. Old practices that are now known to be highly ineffective and harmful are still in use, some licensed applicators have been seen using excessive amounts of pesticides on land within 50 feet of the lake, i.e. by Caltrans along highway 20 and Lake County along the Nice-Lucerne Cutoff Road, all combining to magnify the negative impacts of this plan. [112] I also didn't see a plan spelled out to discourage unauthorized pesticide uses or improper weed dispersals by enacting county imposed fines and other enforcement incentives. [113]	persist for longer than 1 year in anaerobic bottom sediments, but once contained in the sediment column, 2,4-D residuals would only be a source of potable water contamination during storm events when bottom sediments could be agitated and re suspended. Because treatment areas (and hence, the total potential accumulation in sediment) would be very limited, and 2,4-D does degrade slowly over time, the level of contamination through this pathway is expected to be minimal. Similarly, the net amount of copper in the sediment column would increase over time as a result of copper-based herbicide applications, but only the uppermost portion of the column—that disturbed by boats, wildlife, and storm currents—would represent a potential source of potable water contamination. Moreover, the net amount of copper input to the lake would be limited by the standards established in the NPDES permit. As discussed on page 7-31 of the draft PEIR, the County has concluded that the potential for adverse effects as a result of herbicide residues in lakebed sediments is less than significant. No information requiring new or expanded analysis is presented in this comment. [112] Onland application of pesticides for roadway maintenance and other uses is outside the scope of the proposed program. In addition, it should be noted that the County expects pesticide use on the lake to continue even if the proposed program is not approved. Although violations may continue to occur even with the proposed program in place, the program would at a minimum create a framework for local regulation of herbicide use and thus would offer safety benefits by comparison with the No-Program scenario. [113] As described in Chapter 2 (see page 2-13), the County's goal is 100% voluntary compliance with the proposed program requirements, but the County shares the view that this may not be a realistic expectation. Accordingly, the County Board of Supervisors has adopted an Urgency Ordinance that authorizes permit revocation and/or fines for the following offenses. • Submission of false information on a permit application.

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	• The plan's mission and long term goals are unclear [114], starting with the emphasis on eradicating invasive plants rather than preventing their introduction and spread and, as any good gardener knows, removing one plant only provides room for other plants (unless that space is forever made infertile) [115]. I didn't see a tule reed replacement strategy in this plan nor an accurate delineation of the ecosystem involved in the plan (it was primarily wetland, originally, according to the soils, hydrology and native vegetation) [116]. There also doesn't seem to be an accurate assessment of wildlife and native plant populations along the lakeshore, including endangered and threatened species [117]. The various cumulative impacts of pesticide toxicity and loss of habitat were not addressed. Also absent were adequate health assessments of migrating waterfowl such as the ruddy ducks that brought avian cholera to Clear Lake last year. I have heard that chemical pollutants can weaken wildlife and make them more susceptible to diseases. Last year's avian cholera epidemic here also showed that the CA Department of Fish & Game is unable to deal with such a problem and I, personally, was devastated seeing a dead pair of herons among the afflicted ducks and other birds. [118]	• Violations of permit conditions or any other applicable local, state, or federal regulations. • Failure to complete the supplemental pesticide use report required under the program. In the future, enforcement responsibility would continue to be shared between the County Department of Public Works and the County Agricultural Commissioner. The Agricultural Commissioner would be responsible for pre-application inspections for compliance with labeling requirements; onsite application inspections; pesticide regulation; and reporting and enforcement of illegal applications. CDFA would evaluate permit applications for proximity to recorded *Hydrilla* finds; the County will not issue mechanical harvesting permits within 0.25 mile of known *Hydrilla* growth for the prior three years. During the treatment season (June–August), County Public Works staff would monitor DO levels, pH, and temperature on the lake in coordination with biology staff from the Agricultural Commissioner's office, as staffing allows. The enforcement program is planned to dovetail with the County's education and outreach activities, based on the idea that County residents and applicators cannot comply with a program with which they are not familiar. [114] The proposed program's goal and objectives are presented on Summary page S-3 and in Chapter 2, beginning on page 1-2. As described in these portions of the draft PEIR text, the goal of the proposed program is to manage nuisance aquatic plant populations to support beneficial uses in Clear Lake. The core of the proposed program is an integrated pest management philosophy that stresses low-impact approaches and adaptive management grounded in increased understanding of the lake ecosystem. Specific program objectives include • developing a single-point permitting process for vegetation management activities; • providing guidance for lakefront property owners who wish to

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	I would like the final EIR on this plan to include mitigations to eliminate the	abate nuisance vegetation adjacent to their properties, including a palette of environmentally sound abatement strategies and a framework of adaptive management techniques; • maintaining the current multi-use management framework so that reasonable and easy lake access continues to be available to residents, recreators, and traditional users of the lake; • avoiding impacts on human health, injury to nontarget plants and animal life, and damage to property, to the extent possible; • minimizing the potential for future introduction of nonnative plant and animal species; and • ensuring compliance with the Central Valley Regional Water Quality Control Board's (RWQCB's) NPDES permit, including its provisions enforcing the California Toxics Rule and the state's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, as well as applicable total maximum daily load (TMDL) requirements. [115] Comment noted. [116] Habitats in and around Clear Lake are described in Chapter 7 of the draft PEIR, beginning on page 7-7. Figures 7-1 and 7-2 show the present distribution of Clear Lake's open water habitats and wetlands, respectively. Figure 7-3 shows vegetation types adjacent to Clear Lake. The historic extent of wetlands at Clear Lake is discussed under *Wetland Habitats* at the bottom of page 7-14. [117] Special-status species in and around Clear Lake, including those listed as threatened or endangered, are addressed in Chapter 7, beginning on page 7-18. Table 7-6 lists and briefly describes the special-status plants of the Clear Lake area. Clear Lake's two special-status fish species—Sacramento perch (*Archoplites interruptus*) and Clear Lake hitch (*Lavinia exilicauda chi*)—are discussed in the section that begins on page 7-19, and their spawning periods are diagrammed in Table 7-8. Table 7-9 lists and describes special-status wildlife in the

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	need for toxic, expensive and otherwise adverse impacts of pesticides. The plan should strongly support the use of nonchemical means of removing unwanted plant growth and focus on preventing the introduction and spread of such plants. Native vegetation should be used to replace eradicated plants and to filter storm water runoff entering the lake. Such plants as tule reeds also provide wildlife habitat, recycle nutrients and help recharge ground water in many areas. [119] Development in the shoreline areas should have requirements to set aside adequate space for native wetland plants (such as tules, willows, etc.) to grow in the place of eradicated plants as well as to provide buffer zones and wildlife habitat between boat access ways or swim lanes suitable for (preferably nontoxic) local vegetation removal. The plan does recognize the use of shade cloth or other low impact lakebed covers for around docks. Many native lake plants have other uses, as well, as sources of nutrients to lake plankton, fish, birds and otters. Native Pomo use lake plants in traditional basketweaving and other uses and the plants prevent erosion of the shoreline. It is possible to paddle a boat through or over tules and swimming over most native lake plants is safely done with the right technique. It would be wise for the bass fishing industry and other high impact lake users to support a system of marker buoys around the lake to delineate the (appropriately) planted areas and to protect swimmers, wildlife and the fishermen themselves (one just died in an accident near shore in Clearlake). It also would cost relatively little to provide paddles for motor boaters to get through lake "weeds" in the later summer, early fall periods when low water in some areas fosters more plant growth. Individual homeowners currently must pay for their own 5 MPH marker buoys to protect themselves and the shoreline (and yet boaters still frequently speed between the buoys and shore). A good example of shoreline development with tules and other native plants is the Fetzer family's Ceago Del Lago at Tule Bay, off of Highway 20	Clear Lake area. [118] The proposed program's incremental (program-specific) effects on special-status wildlife are addressed in Chapter 7 of the draft PEIR, and cumulative impacts on special-status wildlife are addressed on pages 12-3 through 12-5. Health assessments of migrating wildfowl are outside the scope of the proposed program and thus outside the required scope of PEIR analysis. However, as defined in Mitigation Measures BIO2.1 and BIO3.1, the County proposes to work with DFG to develop approaches to ensure that effects on special-status species are avoided or minimized, consistent with current best practices. These measures should help to address the concerns. [119] Comment noted.

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	near Nice. [120] The agricultural pesticides that enter the lake should be phased out with better integrated pest management and incentives to grow organically. [121] Property owners who dump mechanically or hand picked invasive weeds into the lake should be inhibited by the threat of huge fines that are set to adequately fund enforcement efforts by the county. [122] Better efforts to alert boaters to inspect their props are needed. [123] One crooked sign on Highway 29 warns of the hydrilla problem but it's illegible at prevailing traffic speeds and boaters need more information on keeping out of weed beds as well as inspecting their boats before launching. [124] Highway pesticide use can be eliminated with more crushed gravel put along the roadway, as CalTrans has done along much of Highway 20 (mowing the roadside is also more effective than chemical applications). Where chemicals are used, properly maintained roadside ditches and tules planted where road culverts run into the lake would help mitigate a toxic runoff problem. [125] In conclusion, this is a complex issue that needs more public input and study. Once the studies are used to frame more suitable goals we can come up with better and cheaper methods to meet those goals and , hopefully, have a sustainable, healthy ecosystem that many generations ahead will enjoy. And, until this EIR process is completed, permitting most pesticide uses should be curtailed and invasive weed infested areas quarantined off to prevent spreading. Thank you for your kind consideration.	[120] Comment noted. [121] Comment noted; however, agricultural use of pesticides is outside the scope of the proposed program and thus outside the scope of this PEIR. [122] Comment noted. [123], [124] Comments noted; these concerns will be addressed in part by the proposed program's commitment to public outreach and education. [125] Comment noted; however, the use of pesticides in roadway maintenance is outside the scope of the proposed program and thus outside the scope of this PEIR.

Handwritten comments of Sarah Ryan follow on next pages