

The following changes apply to Chapter 4 of the Basin Plan available at http://www.waterboards.ca.gov/lahtontan/water_issues/programs/basin_plan/references.shtml. Deletions to language are shown in strike-out and additions are in underline. Instructions regarding edits, page numbers, and relocation placement are shown type in 12 point Times New Roman Font in bold type.

Chapter 4, pp. 4.9-21 – 25

Recommended Future Actions for Hatcheries

~~The Regional Board should be advised of routine and other applications of pesticides or other substances potentially containing toxic substances.~~

Rotenone Use in Fisheries Management

The California Department of Fish and Game (DFG) and the United States Fish and Wildlife Service (USFWS) ~~often~~ occasionally has cause to eliminate competitors, predators, and otherwise undesirable fish populations as part of ~~its~~ their fishery management programs. Such management programs may include the restoration or protection of threatened or endangered species, control of fish diseases, elimination of ~~prohibited~~ restricted species, actions to increase the abundance of desirable sport fish species, and actions to establish and maintain wild trout stocks.

In carrying out ~~its~~ their management programs, the DFG or the USFWS ~~occasionally~~ often finds it necessary to completely eliminate existing fish populations in designated areas; this practice provides ~~optimum~~ conditions for propagation of healthy, desirable fish. The DFG has determined that in certain situations the use of rotenone, a fish toxicant, is the only effective, practical method of achieving this objective.

The discharge of rotenone formulations and the detoxifying agent, potassium permanganate, can violate water quality objectives and adversely affect beneficial uses of water. Impacts may occur both within project boundaries and outside of those boundaries. (Project boundaries are defined as encompassing the treatment area, the detoxification area, and the area downstream of the detoxification station up to a thirty-minute travel time.) ~~Outside of project boundaries, impacts are expected to be minimal. Trace amounts of rotenone or other compounds may escape project boundaries, but these residues do not tend to persist beyond one or two days, and beneficial uses are not expected to be impaired in the long-term.~~

Rotenone treatment is typically followed by the addition of potassium permanganate, which is a strong oxidant used to detoxify the active ingredient(s). ~~In the past, some potassium permanganate has occasionally escaped project boundaries, and has sometimes been visible as much as one or two miles below project boundaries (Potassium permanganate may cause~~ Potassium permanganate may cause ~~has a characteristic purple or brown color to waters being detoxified and downstream receiving waters).~~ Unexpected fish kills have also occurred downstream of project boundaries due, at least in part, to permanganate toxicity. However, potassium permanganate decomposes quickly in water and does not persist for more than a day following the end of detoxification. At these levels, potassium permanganate is not considered a health threat to humans.

In addition to the active ingredient, liquid rotenone formulations also contain “inert” ingredients (e.g., carriers, solvents, dispersants, emulsifiers), and may also contain, in trace amounts, organic contaminants. Such “inert” ingredients and contaminants may include naphthalene, methylnaphthalene, xylene, acetone, trichloroethylene (TCE), benzene, and ethylbenzene.

~~Benzene is a known human carcinogen. TCE is a known animal carcinogen, and a suspected human carcinogen. Concentrations of these compounds in rotenone-treated water are expected to meet current drinking water standards. However, the Regional Board expects the DFG to make every reasonable effort to encourage the development of rotenone formulations containing less objectionable compounds, and to prepare annual progress reports.~~

~~Long-term impacts of rotenone use are distinct from short-term impacts. Long-term impacts normally last from two to six years and are expected to be limited to the area within project boundaries. Long-term~~

impacts result because the treatments are typically repeated at a given project site for several consecutive years, after which time the treated waters are restocked with fish. During this time, however, most or all fish have been eliminated from the project site. Other gill-breathing organisms (such as aquatic invertebrate and amphibian populations) are also impacted, but are expected to recover over time.

The long-term impacts therefore consist of a temporary loss of beneficial uses, specifically aquatic habitat and recreational fishing opportunities. In the case of endangered species restoration projects, permanent replacement of existing species with a threatened or endangered species is the project objective, and fishing opportunities for the existing species are permanently lost at the project site.

The use of rotenone and detoxifying agents has both short-term and long-term impacts. Short-term impacts (such as toxicity, discoloration, and odors) last only as long as chemical residues from the rotenone treatment persist. These chemicals are introduced to the water during the treatment and detoxification process, but tend to decompose or volatilize in a matter of hours or days, depending on site conditions. Some chemical residues may be detectable for longer periods, particularly where standing water (i.e. lakes) is treated up to two weeks. In addition to effects on aquatic life, short-term impacts can adversely affect aesthetics, recreation, and water supplies. Short-term impacts are generally limited to the area within project boundaries, except on occasions when chemical residues escape beyond these boundaries.

Long-term impacts of rotenone use are those that persist after the chemical residues have dissipated. Because rotenone is toxic to all gill-breathing animals, non-target aquatic invertebrates and amphibians are also killed. This may adversely affect non-target endemic species, including undiscovered species or threatened or endangered species, as well as instream assemblages of more common species. The time period for full recovery of instream invertebrate assemblages is unknown, and it is possible that endemic species with limited ranges could be lost entirely. Long-term impacts also result where treatments are repeated at a given project site for multiple years. During this time, most or all fish are eliminated from the project site causing a loss of fishing opportunities until fish are re-stocked after a multi-year project is completed.

As described above, the application of rotenone to surface waters by the DFG or the USFWS will result in a temporary lowering of water quality. The State Board's "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (Resolution No. 68-16) directs that whenever the existing quality of waters is better than standards established in water quality objectives, the existing level of quality shall be maintained. Deterioration of water quality degradation is permissible only if the Regional Board finds that such a change will be consistent with maximum benefit to the people of the State. Similarly, the Federal Antidegradation Policy (40 CFR § 131.12) dictates that water quality shall be preserved unless deterioration degradation is necessary to accommodate important economic or social development.

The temporary deterioration degradation of water quality due to the use of rotenone by the DFG or the USFWS, may be is justifiable in certain situations. The Regional Board recognizes that the State and federal Endangered Species Acts require the restoration and preservation of threatened and endangered species. The Regional Board also recognizes that situations may arise where outbreaks of fish disease or the threat presented by prohibited or exotic species may require immediate action to prevent serious damage to valuable fisheries resources and aquatic habitat. These resources are of important economic and social value to the people of the State, and the transitory degradation of water quality and short-term impairment of beneficial uses that would result from rotenone application may be is therefore justified, provided suitable measures are taken to protect water quality within and downstream of the project area.

Pursuant to federal regulations (40 CFR § 131.13), the Regional Board may grant variances to water quality objectives under certain circumstances. Narrative water quality objectives applicable to rotenone treatments include: toxicity, pesticides, color, and species composition (see Chapter 3, "Water Quality Objectives.")

In 1990, the Regional Board adopted Resolution No. 6-90-43 to allow the conditional use of rotenone by the DFG in the Lahontan Region. The Resolution granted authority to the Regional Board's Executive Officer to waive waste discharge requirements and reports of waste discharge for rotenone application projects meeting the conditions listed below. The Resolution also directed the Executive Officer to execute a

Memorandum of Understanding with the DFG to facilitate the implementation of rotenone projects within the Lahontan Region. The MOU was executed on July 2, 1990.

Control Measures for Rotenone Use and Other Fish Toxicants

The Regional Board's Executive Officer may grant conditional variances from applicable water quality objectives for DFG projects involving the use of rotenone, subject to the following conditions. A variance will not be granted for any project that fails to meet these conditions. If a variance is denied, any discharge of rotenone formulation or potassium permanganate may be subject to enforcement action by the Regional Board.

The Regional Board may grant the conditional use of rotenone by the DFG or the USFWS, provided the rotenone application is proposed for purposes of (1) the restoration and protection of threatened or endangered species (2) the control of fish diseases where the failure to treat could result in significant damage to fisheries resources or aquatic habitat or (3) the elimination of species (as defined in CA Fish and Game Code § 2118), where competition or predation from such species threatens native fish populations, or populations of other organisms (includes rare, unique, sensitive, or candidates for listing as endangered or threatened species).

The Regional Board may, on a project-by-project basis, grant exemptions for the use of fish toxicants in other kinds of fisheries management activities, when the DFG or the USFWS can provide the necessary justification for allowing a temporary lowering of water quality (i.e. degradation) according to the provisions of the federal Antidegradation Policy (contained in 40 CFR § 131.12) and State Board Resolution No. 68-16.

Before the Regional Board considers an exemption to the prohibition against discharges of pesticides to surface waters, the project proponent must submit a project proposal that satisfies the below criteria. A prohibition exemption will not be granted for any project that fails to meet these criteria.

The following strike-out language is relocated above to the first two paragraphs of *Control Measures for Rotenone Use*. A few minor edits to the relocated language have been made. Text highlighted in gray has been omitted and not relocated.

Conditions:

1. The purpose of the proposed project must be one of the following:

- (a) The restoration and protection of threatened or endangered species.
- (b) The control of fish diseases where the failure to treat could result in significant damage to fisheries resources or aquatic habitat.
- (c) The elimination of prohibited species (as defined in CA Fish and Game Code § 2118), where competition or predation from such species threatens valuable sport fish or native fish populations, or populations of other valuable organisms.

The Regional Board may, on a project-by-project basis, grant exceptions variances for the use of fish toxicants in other kinds of fisheries management activities, when the DFG can provide the necessary justification for allowing a temporary lowering of water quality according to the provisions of the Federal Antidegradation Policy (contained in 40 CFR § 131.12) and State Board Resolution No. 68-16.

21. Chemical residues resulting from rotenone treatment must not exceed the narrative or numerical limitations established in Chapter 3 of this Basin Plan, under the section entitled "Water Quality Objectives For Fisheries Management Activities Using the Fish Toxicant Rotenone."

3. Within two years of the last treatment for a specific project, a fisheries biologist or related specialist from the DFG must assess the restoration of applicable beneficial uses to the treated waters, and certify in

~~writing that those beneficial uses have been restored. A project will be considered to have been completed upon written acceptance by the Regional Board's Executive Officer of such certification~~

- ~~4. Based on information and project plans submitted by the DFG, the Regional Board's Executive Officer must determine that the proposed project will meet all applicable provisions (including subsequent amendments or revisions) of this Basin Plan, the DFG's Environmental Impact Report *Rotenone Use for Fisheries Management* (1994), and the Memorandum of Understanding between the Regional Board and the DFG regarding rotenone use. Whenever the language contained in the above-mentioned documents may overlap, the requirements that will provide the most restrictive protection of water quality shall apply. Furthermore, the Regional Board's Executive Officer must determine that the project meets all of the following additional criteria:~~
- ~~(a) The limitations on chemical residue levels referenced in Condition # 2 (above) can be met.~~
 - ~~(b)2. The planned treatment protocol will result in the minimum discharge of chemical substances that can reasonably be expected for an effective treatment.~~
 - ~~(c)3. Chemical transport, spill contingency plans, and application methods will adequately provide for protection of water quality.~~
 - ~~(d)4. Suitable measures will be taken to notify the public, and potentially affected residents. A public notification plan accepted by the Executive Officer.~~
 - ~~(e)5. Suitable measures will be taken to identify potentially affected sources of potable surface water intakes and ground water wellsintakes, and to provide potable drinking water where necessary.~~
 - ~~(f) A suitable monitoring program will be followed to assess the effects of treatment on surface and ground waters, and on bottom sediments.~~
 - ~~(g) For each project, the DFG has satisfied the requirements of the California Environmental Quality Act (CEQA).~~
 - ~~(h)6. The chemical composition of the rotenone formulation has not changed significantly (based on analytical chemical scans to be performed by the DFG or USFWS on each formulation lot to be used) in such a way that potential hazards may be present which have not been addressed.~~
 - ~~(i)7. Plans for disposal of dead fish are adequate to protect water quality.~~
8. To promote decomposition and minimize persistence of active ingredients and detoxifying agents, rotenone shall not be applied to waters when the water temperature is below five (5) degrees celcius.
9. Pre-project monitoring and mitigation plan to determine the presence of and to protect threatened or endangered species. Where threatened or endangered species are present, appropriate mitigation measures (e.g., temporary or permanent relocation) shall be implemented to lessen adverse effects.
10. A monitoring and reporting program and a mitigation program¹, accepted by the Regional Board, will be followed to assess the effects of treatment on surface and ground waters, and on bottom sediments if specified by the Regional Board. The monitoring plan shall specify, but not be limited to: chemical monitoring methods (for active ingredients, detoxifying agents, and any pesticide "inert" ingredients of concern), biological monitoring methods (pre-project and post-project bioassessment surveys at appropriate test and control sites, sufficient to characterize project impacts and recovery considering spatial and temporal variability), sampling locations, index period(s), frequencies,

¹ The mitigation program must examine potential measures to facilitate the restoration of non-target species to pre-project abundance and diversity. The mitigation program must include a discussion of mitigation measures included and those that were considered but rejected. The project proponent must justify why these measures were rejected as feasible mitigation measures. The requirement to implement mitigation measures may be waived during post-project recovery at the discretion of the Regional Board.

schedule, and QA/QC procedures.

Both the pre-project monitoring and mitigation plan for T&E species, and the monitoring, reporting, and mitigation program for non-target communities shall be peer-reviewed by independent experts. The peer reviewers shall be proposed by the DFG and/or USFWS and shall be mutually agreeable to both the project proponent(s) and the Regional Board.²

The biological monitoring plan must be based on an appropriate study design, metrics, and performance criteria to evaluate restoration of aquatic life. The indices used in the assessment must be commonly accepted by the scientific community and accepted by the Regional Board. Biological monitoring shall be designed, and conducted as long as needed, to effectively demonstrate that non-target macroinvertebrate populations have been fully restored. Fully restored means that the structure and function of non-target macroinvertebrate communities have returned to conditions that reflect pre-project conditions. Function will be judged by metrics and indices related to trophic levels (e.g., functional feeding groups) and productivity (e.g., abundance/biomass). Structure will be judged based on metrics and indices related to richness and diversity (e.g., taxa richness, multivariate O/E (observed/expected) model predictions, multivariate ordinations) and presence of sensitive and rare taxa. This definition of "fully restored" shall be provided to the peer reviewers prior to peer review of the monitoring and reporting plan, with instructions to determine whether the monitoring design is capable of determining whether full restoration has been achieved.

Within two years of the last treatment for a specific project, a qualified biologist(s) from the DFG or USFWS must assess the restoration of non-target aquatic life and benthic communities within the treated waters, and if, based on the monitoring data, the evidence demonstrates, certify in writing that all affected non-target biological communities have been fully restored. The certification shall be accompanied by a report detailing the pre-project and post-project monitoring, including detailed explanation of the assessment methods used and the rationale for the certification. Macroinvertebrates shall be identified and classified, and data provided in electronic formats using conventions acceptable to the Regional Board. A project will be considered complete only upon written acceptance by the Regional Board of such report and certification.

If non-target biological communities are not fully restored after two years, the project proponent must conduct continued annual monitoring and implement the proposed mitigation measures until the Regional Board accepts the certification.

The Regional Board acknowledges that projects may occur where the non-target communities do not fully recover to pre-project levels. After five years of annual post-project monitoring, the project proponent may petition the Regional Board to release it from annual monitoring and reporting and mitigation obligations. Such petitions must include: (1) results of mitigation efforts, (2) monitoring trends demonstrating maturity of an asymptotic recovery, and (3) evidence that the ability to attain full recovery has been significantly affected by natural environmental factors (e.g., fires, floods, drought) or catastrophic events (e.g., chemical spills) during the years of monitoring. Annual monitoring shall continue unless and until the Regional Board rescinds the monitoring requirements.

~~The Regional Board recognizes that allowing rotenone use may have unavoidable adverse impacts. Some of these impacts could be mitigated in the long term through the discovery or development of formulations whose "inert" ingredients (i.e., carriers, solvents, dispersants, and emulsifiers) have less objectionable properties, and which are free of objectionable contaminants. The DFG shall: (1) make every reasonable effort to encourage the development of such formulations, and (2) provide annual updates to the Regional Board (by December 31 of each calendar year) detailing DFG's progress and obstacles encountered during reformulation efforts.~~

² The Regional Board can exempt DFG or the USFWS for the requirement of the monitoring & reporting program and mitigation program being externally peer-reviewed.

Recommended Future Actions for Rotenone Use

1. In cooperation with the DFG or the USFWS, monitor projects involving the discharge of fish toxicants to determine impacts on water quality and beneficial uses.
2. In cooperation with the DFG or the USFWS, modify rotenone application, detoxification, and monitoring procedures, whenever measures are identified that will provide greater protection for water quality and beneficial uses.
3. In cooperation with other state and federal agencies, and private entities, encourage the rapid development of rotenone formulations which pose the lowest possible environmental hazards to target species while still achieving project goals. ~~containing less objectionable compounds.~~

Sensitive Species and Biological Communities

Because of its great topographic, geologic and climatic diversity, and because of environmental changes over time which have created ecological islands which facilitate evolutionary change, the Lahontan Region supports a wide variety of plant and animal species and many biological community types. Numerous plant and animal species in the Region are listed as threatened or endangered under the federal Endangered Species Act and/or the California Endangered Species Act (CESA), or are candidates for such listing. Examples include the Lahontan and Paiute cutthroat trout, several kinds of desert pupfish, the Lake Tahoe shorezone plant Tahoe yellowcress, and springsnails which are restricted to a few springs in the Owens River watershed. These and many other sensitive species depend directly on aquatic or wetland habitats for survival. The Lahontan Region also includes water bodies which support rare or unique combinations of species (biological communities). Examples include the Grass Lake sphagnum bog in the Lake Tahoe Basin, the Mono Lake ecosystem, and the springs and wetlands in the Amargosa River watershed. In some cases, these communities have been given special recognition and protection, as U.S. Forest Service Research Natural Areas or Special Interest Areas, U.S. Bureau of Land Management Areas of Critical Environmental Concern, etc. Detailed information on sensitive species and communities in the Lahontan Region can be found in the Department of Fish and Game's (DFG's) Natural Diversity Database, which is updated on an ongoing basis. The Regional Board's Geospatial Waterbody System (GeoWBS) database can also provide information on the presence of sensitive species and communities in association with specific water bodies.

Aquatic and wetland habitats for many sensitive species have been degraded, impaired, or threatened by water diversions and/or the nonpoint source problems (mining, silviculture, livestock grazing, etc.) discussed elsewhere in this Chapter. ~~For example, nonpoint source pollution has contributed to the decreasing clarity of Lake Tahoe and this decreased clarity is believed to be a threat to its unique deepwater macrophyte communities.~~ The human introduction of nonnative predator and competitor species or species capable of hybridizing with sensitive plants and animals is also a problem. Because little chemical or biological monitoring has been done for most water bodies in the Lahontan Region, the habitat requirements of many sensitive species are not well known.

Control Measures for Sensitive Species and Biological Communities

1. The U.S. Fish and Wildlife Service and the California Department of Fish and Game (through the Fish and Game Commission) are responsible for "listing" threatened and endangered species, defining critical habitats, and preparing and implementing recovery plans. These agencies review proposed projects which could affect sensitive species or critical habitats. Under the CESA, state agencies which are lead agencies under the California Environmental Quality Act must consult with the California Department of Fish and Game (DFG) before approving projects with potential impacts on state-listed species. If the DFG issues a determination of "jeopardy," the lead agency must provide for DFG-approved mitigation in order to approve the project. The Regional Board consults with DFG under CESA regarding potential impacts of its Basin Plan amendments, policy changes, and the development projects for which it occasionally takes lead agency responsibility.
2. The Regional Board has recognized existing or potential habitats for sensitive species and biological communities through the "RARE" and "BIOL" beneficial use designations in Chapter 2 of this Plan. Additional water bodies will be so designated as new species are listed or new information about

species distribution becomes available. In 1990, The Regional Board amended its narrative ~~regionwide objective for pesticides to may~~ allow the use of rotenone and other piscicides in treatment of water bodies prior to the reintroduction of threatened or endangered fish species provided these projects (i.e. fish toxicant treatments) comply with the criteria described in Chapter 4 under the section entitled "Exemption Criteria for Aquatic Pesticide Use" under the sub-section titled "Exemption Criteria for Fisheries Management." (see the sections on pesticides and rotenone elsewhere in this Chapter). During future revisions of water quality objectives for specific water bodies, the habitat needs of sensitive species will receive special consideration.

Chapter 4.9, p. 4.9-27

Control Measures for Lake/Reservoir Restoration

3. Herbicidal and algicidal chemicals have been associated with major adverse impacts on lake systems, none of which are considered restorative. These impacts include nutrient releases to the water after plant death, dissolved oxygen depletion following plant decay, toxic effects on nontarget organisms at recommended doses, rapid regrowth of plants following treatment, as well as conflicting and unresolved issues regarding the mutagenic and carcinogenic effects of some of the chemicals. Thus, the use of herbicides and algicides for lake/reservoir restoration purposes is strongly discouraged. The Regional Board's regionwide prohibition for pesticides and control measures for pesticides, discussed in Chapter 4, is applicable to the use of herbicides and algicides for lake/reservoir restoration. The Regional Board may grant prohibition exemptions to allow the use of aquatic pesticides for lake/reservoir restoration projects only if the pesticide application project is proposed for the circumstances described in Chapter 4 under the section entitled "Circumstances Eligible for Prohibition Exemption" and according to the criteria under the section entitled "Exemption Criteria for Aquatic Pesticide Use." Any proposals for such uses will be carefully reviewed and regulated by the Regional Board if necessary to ensure that water quality standards will not be violated. The narrative objective of "no detectable pesticides" (see Chapter 3) essentially precludes the use of aquatic herbicides (also see discussion of "Agricultural Chemicals" in the "Agriculture" section of this Chapter).

Chapter 4.10, pp. 4.10-4 and 4.10-5

Vector Control and Weed Control

Agricultural chemicals are often employed for non-agricultural uses. For instance, aquatic herbicides are sometimes used for the control of aquatic weeds to improve vehicle access, to enhance recreational opportunities, or for aesthetic reasons. The use of terrestrial herbicides may be proposed for forest management, landscaping, fire control, golf course maintenance, or for other similar purposes. Pesticides are also used by public agencies for vector control (i.e., to eliminate pests and disease-carrying organisms such as mosquitoes).

The Regional Board has asked to be notified by public agencies of any large-scale applications of such chemicals within their jurisdiction. For example, the U.S. Forest Service is expected to notify the Regional Board of plans for chemical applications associated with timber harvest or other forest management activities. The California Department of Food and Agriculture, which is currently responsible for certain pest control programs such as that for the gypsy moth, has been asked to notify the Regional Board of plans for pesticide applications in this Region. The U.S. Bureau of Land Management, in implementing its Noxious Weed Control Program, has been asked to notify the Regional Board of aerial herbicide applications and of any spills in, or near, surface waters. Upon such notification, the Regional Board is able to become involved in the environmental consultation process required by the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). In this way, the Regional Board can ascertain whether potential water quality impacts from such activities will be mitigated.

For smaller-scale applications, such as the use of herbicides for golf courses or other turf areas, the Regional Board has adopted waste discharge requirements which include control measures for herbicide use. The Regional Board may wish to have staff review projects on a case-by-case basis, in order to determine whether there is any potential for water quality impacts and if waste discharge requirements are necessary.

In some instances, use of these substances will have unavoidable water quality impacts, particularly in situations where the chemicals are applied directly into or near surface water (such as aquatic weed control or vector control). In these cases, the use of such chemicals can result in the violation of water quality objectives for pesticides and toxic substances, as well as in the violation of waste discharge prohibitions. Federal regulations (40 CFR § 131.13) allow the Regional Board to grant conditional variances to water quality objectives under certain circumstances. Additionally, the Regional Board may allow the use of pesticides for purposes of vector control provided the project is conducted under the circumstances described in Chapter 4 under the section entitled "Circumstances Eligible for Prohibition Exemption" under the subsection entitled "Vector Control" and according to the criteria described in Chapter 4 under the section entitled "Exemption Criteria for Aquatic Pesticide Use" under the subsection entitled "Exemption Criteria for Vector Control." Furthermore, pursuant to Section 13269 of the California Water Code, the Regional Board may waive the need for waste discharge requirements and reports of waste discharge, for specific types of discharge, where such a waiver is in the public interest. Such actions nevertheless must conform to State and federal nondegradation requirements. Although these policies do allow limited decline in water quality when the State finds that an overriding public benefit will result, both the federal and State policies require that water quality be maintained at a level sufficient to protect existing beneficial uses. USEPA guidance on variances from water quality standards is summarized in Chapter 3 of this Basin Plan under "General Direction Regarding Compliance With Objectives."

Chapter 4.10 , p. 4.10-5 ***Control Measures for Agricultural Chemicals***

Regional Board Control Actions

~~Chapter 4 includes a prohibition against discharges of pesticides to surface or ground waters. The Regional Board may grant an exemption to the pesticide prohibition for projects that propose to apply aquatic pesticides for purposes of protecting public health (e.g., vector control) or natural resources (e.g., fisheries management, control of aquatic invasive species infestations) provided the project is proposed under the circumstances and according to the criteria detailed in Chapter 4. Chapter 3 of this Basin Plan includes a narrative water quality objective for pesticides which states that pesticide concentrations in waters of the Region shall not exceed the lowest detectable levels, using the most recent detection procedures available. (This objective was amended in 1990 to provide limited exemptions for the use of rotenone by the California Department of Fish & Game.)~~

The use of agricultural chemicals shall be further regulated by ~~implementing~~ relevant provisions of the State Board's Nonpoint Source Management Program Plan, and, ~~once adopted, the plan which guides~~ implementation of the State Board's 1991 MOU with the Department of Pesticide Regulation. Some pesticides are also included in the California Department of Health Services' Proposition 65 list of carcinogens which should not be present above "action levels" in sources of drinking water. (Proposition 65 is discussed in the "Spills, Leaks, Complaint Investigations and Cleanups" section of this Chapter.)

~~The narrative water quality objective for pesticides pesticide waste discharge prohibition and the applicable exemption criteria that must be satisfied to grant a prohibition exemption, and nondegradation objectives for water quality and aquatic communities and populations, are important considerations in the Regional Board's regulation of discharges which may include of pesticides. These objectives essentially precludes the use of aquatic pesticides or the direct discharge of pesticides to surface waters.~~

Chapter 4.10, pp. 4.10-6

Recommended Future Actions for Agricultural Chemicals

In cooperation with other appropriate local, state, and federal agencies, and private landowners, the Regional Board should:

- Encourage the State Board to develop a monitoring program to detect water quality trends related to agricultural chemicals, identify problem areas, and determine the needed levels of action.
- Review proposals for weed control and vector control projects and invasive species control on a case-by-case basis and consider ~~adopting Basin Plan policies and/or waivers to allow~~ allowing qualified projects to proceed by granting an exemption to the pesticide prohibition.