

**Application for Exemption to the Basin Plan Prohibition on the Use
of Pesticides for the Tahoe Keys West Lagoon Integrated Control
Methods Test**

Appendix H

Antidegradation Analysis

Antidegradation Analysis for Pesticide Use to Control Aquatic Invasive Species

**Tahoe Keys Property Owners Association
June 2017**

Introduction

In October of 1968, the State Water Resources Control Board (SWRCB) adopted Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California (Antidegradation Policy). Like other Regional Water Boards in California, the Lahontan Regional Water Quality Control Board (LRWQCB) incorporated the SWRCB's Antidegradation Policy into its Basin Plan.

Generally, the Antidegradation Policy prohibits degradation of high-quality water unless the degradation is to the maximum benefit to the people of the state, will not unreasonably affect current and future beneficial uses, and the discharge(s) will not cause long-term exceedances of water quality objectives. Antidegradation requirements are triggered when there is a proposed discharge to a high-quality water. "High-quality waters" are those waters where water quality is better than the applicable water quality objectives. In addition, individuals who discharge to high-quality water must implement "Best Practicable Treatment or Control" (BPTC) to avoid pollution and to maintain the highest water quality consistent with the maximum benefit to the people of the state.

The antidegradation analysis that follows demonstrates that any short term degradation in existing high quality water in the receiving water of the Tahoe Keys lagoons during and after the pesticide test applications proposed by the Tahoe Keys Property Owners Association (TKPOA) and within the treatment areas upon completion of the treatment events are consistent with the requirements of the state and federal antidegradation requirements.

Compliance will be achieved by meeting the specific criteria set out in the Basin Plan exemption application criteria and National Pollutant Discharge Elimination System (NPDES) general permit for pesticide applications to water. The exemption criteria and NPDES permit requirements ensure that an aquatic pesticide application does not adversely affect beneficial uses of water by requiring that all applicable water quality objectives are ultimately achieved. Furthermore, the exemption criteria that TKPOA is required to meet to receive an exemption ensure that any project approved is consistent with the provisions of federal and state antidegradation regulations as discussed below.

Antidegradation Policies

The state and federal antidegradation policies are similar and complimentary. The State Antidegradation Policy has been deemed to be consistent with the the Federal Antidegradation Policy "where applicable." Both policies are discussed in the following sections.

Federal Antidegradation Policy

The federal Antidegradation Policy was adopted as part of the Federal Water Pollution Control Act, which is more commonly known as the Clean Water Act (CWA). The federal Antidegradation Policy was enacted to compel the states to enact policies to fully protect existing instream water uses. The federal Antidegradation Policy, as promulgated in 40 CFR §131.12, states:

(a) The State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:

(1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

(2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

(3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

(4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.

Thus, the federal Antidegradation Policy establishes three tiers or types of waterbodies to guide an antidegradation analysis. Tier 1 maintains and protects existing uses and water quality conditions to support such uses. Tier 1 requirements apply to all surface waters. Tier 2 applies to "High Quality Waters," which have higher water quality than those required to support

designated uses. Tier 3 is comprised of Outstanding National Resource Waters (ONRWs). No permanent degradation of water quality is allowed in Tier 3 waterbodies.¹

California has two waterbodies designated as ONRWs: Lake Tahoe and Mono Lake. The proposed test project area's waterbodies (which are part of the Tahoe Keys lagoons, not Lake Tahoe) are not designated as an ONRW, so water degradation is permitted provided that specific requirements are met. The project area's waterbodies are classified as Tier 2 waterbodies per the federal Antidegradation Policy.

Where the federal antidegradation policy applies, it does not absolutely prohibit any changes in water quality. The federal antidegradation regulations establish a three-part test for determining when adverse changes in surface water quality may be permitted. The antidegradation analysis below provides justification to demonstrate that the proposed project complies with the federal antidegradation regulations.

Tier Two – The Tahoe Keys lagoons are water bodies where existing water quality conditions related to pesticides are better than necessary to protect beneficial uses, but are currently impaired by exotic/non-native Aquatic Invasive Species (AIS). Temporary reductions in water quality in high-quality waters to reduce the impairment by AIS are justified and necessary to accommodate important social and economic development, and to protect existing beneficial uses.

Aquatic pesticide application projects are in the public interest when, as here, such projects are conducted for public resource protection purposes, and in a manner that protects public safety, insures the long-term protection of the environment, and does not have long-term impacts on beneficial uses of water. The SWRCB, the California Legislature, and the United States Environmental Protection Agency (USEPA) have recognized the need for these types of projects, and found that implementation of such projects is consistent with the maximum benefit to the public.

For example, in the SWRCB's Statewide General NPDES Permit for Aquatic Weed Control (General Permit No. CAG990005), findings were made that aquatic pesticides projects were occasionally needed in order to protect beneficial uses, such as municipal and agricultural water supply, recreation, and human health, and that these projects are in the best interest of the people of the State (*See* General NPDES Permit for Aquatic Weed Control at Finding 24, pg. 4).

The USEPA has recognized the importance of certain aquatic pesticide applications to the public interest. A relevant example is found in a 2001 USEPA letter granting approval of a categorical exception under the California Toxics Rule (CTR),² stating:

¹ As recognized in the Lahontan Basin Plan, "no permanent or long-term degradation is allowed in water designated as an Outstanding National Resource Water (ONRW)," such as Lake Tahoe, as required by the federal Clean Water Act and implementing regulations.

² *See* May 1, 2001 letter from Alexis Strauss, USEPA, Director - Water Division, to Edward C. Anton, Acting Executive Director, SWRCB, which granted approval of the "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California" (SIP). The SIP implements priority pollutant criteria for toxic pollutants contained in the California Toxics Rule (40 C.F.R. §131.38) and authorizes "categorical

“We recognize the important public interest and statutory impetus associated with the listed resource management measures, and the potential need to use these measures to protect certain beneficial uses. We also recognize the inherent tension created, from time to time, by the need to carry out such measures in the absence of feasible alternatives and the measures’ potential impact on aspects of the beneficial uses. The categorical exception is a reasonable exercise of the state’s regulatory discretion to address these interests and needs while protecting beneficial uses of the receiving water as a whole.”

In this same 2001 letter to the SWRCB, USEPA recognized that any lowering of water quality associated with aquatic pesticides is temporary and will be restored upon project completion at which time beneficial uses are again protected, and may be better protected with eradication of non-native AIS. USEPA states:

“We interpret the exception as in essence allowing for the allocation of a temporal zone of impact – determinable through mechanisms such as the mandatory discharge and receiving water monitoring program – within which there may be a temporary exceedance of a specific criterion but the resulting impact is of such transient nature as to allow for full restoration of the pre-project water quality and thus protection of beneficial uses upon project completion.

Careful compliance with the restrictions attached to the exception, coupled with successful implementation of properly designed monitoring and restoration programs, should work to limit the application of this exception to appropriate situations and protect the overall beneficial uses of the receiving water.”

Because of the similarities between the exception provisions of the SIP and the Lahontan Basin Plan’s waste discharge prohibition exemption criteria, and the USEPA’s endorsement of this exception approach for public interest balancing, the temporary lowering of water quality as proposed in TKPOA’s test project is consistent with Tier Two of the antidegradation analysis.

The NPDES general permit requires that a treatment event does not result in an exceedance of water quality objectives in the receiving water. The receiving water includes anywhere outside of the treatment areas at any time, and anywhere inside the treatment areas after completion of the treatment events. Requiring aquatic pesticide applications to comply with these limitations provides assurance that beneficial uses will be protected in and around the treatment areas.

Post treatment compliance with water quality objectives and receiving water limitations will be determined through post-treatment monitoring, which will commence after the application events. The water quality in post-treatment samples is required to comply with water quality objectives and receiving water limits and will assure that any lowering of water quality is short-term, temporary in nature, and of sufficient quality to maintain existing beneficial uses.

exceptions” for resource or pest management, pest eradication, or fishery management activities. These are the same types of projects that may qualify for the waste discharge prohibition exemptions proposed by TKPOA.

Tier Three - New discharges to waters designated as ONRWs that would result in lower water quality in the ONRW are prohibited. The only exception to this prohibition is for activities that result in short-term and temporary changes in the water quality of the ONRW. USEPA guidance does not define temporary and short-term specifically, but these terms are generally considered to limit water quality degradation to days, weeks, or months, but not years, with the intent of limiting degradation to the shortest possible time.

Under the federal Antidegradation Policy (40 CFR §131.12 (a)(3)), ONRWs are provided the highest level of protection. This federal regulation requires that water quality be maintained and protected, though States are given flexibility to permit limited activities that temporarily lower the ONRW's existing high quality water. Such activities must not permanently degrade water quality or result in water quality lower than that necessary to protect the existing uses in the ONRW. Additionally, all practical means of minimizing water quality degradation shall be implemented so any lowering of water quality is limited to the shortest time feasible.

In the Lahontan region, Lake Tahoe is designated as an ONRW. Although TKPOA's test project is not proposed in an ONRW, aquatic pesticides are proposed for use in waters adjacent and tributary to Lake Tahoe. Therefore, the project must satisfy all applicable antidegradation criteria, which include compliance with water quality objectives specific to the affected waterbody. Permits that are issued to regulate the aquatic pesticide discharges incorporate numeric receiving water limitations where State or USEPA-based water quality objectives or criteria are available. Additionally, the exemption criteria require implementation of control measures to limit the spatial extent and the temporal impact of the discharge.

The project includes many redundant protections to assure no impact and, therefore, no degradation to Lake Tahoe. The project will be conducted in dead-end channels of the Tahoe Keys lagoons and will employ turbidity control measures and dye tracers to ensure that the applied pesticides do not travel outside the designated treatment zones. In addition, a barrier will be placed at the Tahoe Keys Lagoon connection to Lake Tahoe to prevent any transport of pesticide residue into the lake. In addition, the time of year selected for this test project occurs when the predominant flow is from the lake into the lagoon. The efficacy of these barriers and other measures will be confirmed through the proposed monitoring and reporting program. Compliance with these limitations assures that water quality outside of the limited treatment areas, and within Lake Tahoe, is always sufficient to support beneficial uses and complies with federal antidegradation requirements.

State of California Antidegradation Policy

The SWRCB's Antidegradation Policy, which was adopted to prevent degradation of surface water and groundwater in California, states, in pertinent part:

1. Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect

present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

2. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or purposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that
 - (a) a pollution or nuisance will not occur and
 - (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The SWRCB's Administrative Procedures Update 90-004, Antidegradation Policy Implementation for NPDES Permitting (July 1990), provides step-by-step guidance for regional water boards in implementing the Antidegradation Policy. In addition, the court in *Asociación de Gente Unida por el Agua v. Central Valley Regional Water Quality Control Board* (2012) 210 Cal.App.4th 1255 (*AGUA*) also described a framework for applying the Antidegradation Policy.

Broken down into pieces, SWRCB Resolution 68-16 establishes a two-step process to determine whether a discharge complies with the state's Antidegradation Policy.

Step One: Whenever the existing quality of water is better than the quality established in policies, such existing high quality will be maintained until it has been demonstrated to the State that any change:

- will be consistent with maximum benefit to the people of the State;
- will not unreasonably affect present and anticipated beneficial use of such water, and;
- will not result in water quality less than that prescribed in the policies.

Step Two: Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that:

- a pollution or nuisance will not occur, and;
- the highest water quality consistent with maximum benefit to people of the State will be maintained.

The proposed discharges of aquatic pesticides, which are associated with protection of public safety and preservation of ecological integrity, may result in a temporary lowering of the existing high quality of a water body. Thus, these discharges may only be allowed if the proposed application of aquatic pesticides is consistent with state antidegradation requirements.

Baseline

The baseline for any antidegradation analysis is the best water quality that has existed since 1968, the year in which the Antidegradation Policy was promulgated. Any permitted degradation would only be from the baseline of high quality waters.

Substantial water quality data are available to determine this baseline and, for aquatic pesticides, the water quality of the Tahoe Keys lagoons are “high quality,” meaning no detectable levels of herbicides or residues in the waters (although this level likely varies as individual homeowners have apparently used herbicides to control AIS in the lagoon near their property and docks at times).

The Proposed Project Complies with STEP ONE of State Antidegradation Policy

Project Consistent with the Maximum Benefit to the People of the State

One required finding is that the public interest will be served by the aquatic pesticide application. The proposed test project will be carried out as the first step in a process to determine the best long term strategy for maintaining essential public services (e.g., maintenance of navigation and recreation in lagoon channels by reducing or eradicating AIS), and protecting Lake Tahoe, an ONRW, from invasive species that could harm its beneficial uses. Therefore, this project is consistent with the maximum benefit to people of California and justifies a temporary increase in pollutant levels and the attendant temporary water quality degradation. A potential temporary lowering of water quality is also justified for projects that involve aquatic invasive species control because implementation of this project protects environmental resources of important economic and social value (e.g., Lake Tahoe) consistent with the maximum benefit to people of the State (e.g., protection of valuable fisheries resources and aquatic habitat).

In a memorandum from the SWRCB’s former Chief Counsel, William Atwater, to regional water board Executive Officers, Mr. Atwater acknowledge the State’s flexibility in determining what impacts constitute “important economic or social development” justifying changes in water quality. (*See* Memorandum from W. Atwater, Chief Counsel to Regional Water Quality Control Board Executive Officers, October 7, 1987 at pg. 13.) Environmental protection was included as one example that may constitute important social development, justifying a change in water quality even if no other social or economic benefits to the community are demonstrated. Activities to support existing development, water recreation, and navigation improvement projects are also considered acceptable examples of actions that accommodate social and economic development and justify a lowering of water quality.

In considering the maximum benefit to the people of the State, the LRWQCB must consider the costs to the affected public, such as costs to remediate Lake Tahoe if AIS infiltrate more and more areas, as well as discharger costs to implement the project. As a result, the affected public should not generally have to incur increased costs to treating more areas of the lake if AIS can be contained and removed through projects like the one proposed by TKPOA. The best interest of the public is to avoid the spread of AIS, but where AIS have already become established, the best interest of the public is to act quickly to stop the further spread, particularly where an ONRW is concerned. Allowing this short-term test project is a reasonable step as part of a phased approach to creation of a long term AIS control program, which is also consistent with the maximum benefit to the people of the State.

Project Creates No Unreasonable Impacts to Beneficial Uses

By their nature, aquatic pesticide applications cause detectable concentrations of aquatic pesticides in order to be effective in controlling or eliminating the target organism (e.g., AIS) within the defined treatment areas. For aquatic pesticide applications to work, a lethal dose to the target species must be applied, which may have impacts to other beneficial uses. However, one could argue that because the Ninth and Sixth Circuit appellate courts have found that the portion of a chemical pesticide intentionally applied to water is not the discharge of a pollutant³ under the CWA, it is not necessary to conduct an antidegradation analysis for the treatment areas during the treatment events. For purposes of the antidegradation analysis, it is only necessary to consider the residue of the pesticide, which is subject to the NPDES permitting requirements.

TKPOA acknowledges that the Courts' interpretation that application of a pesticide product to water for an intended purpose does not constitute a discharge of waste may not, in and of itself, negate the need for an antidegradation analysis. Therefore, out of an abundance of caution, TKPOA has analyzed the temporary lowering of water quality that occurs within the treatment areas during the treatment events as part of its analysis of the project's consistency with antidegradation policies.

The discharges of aquatic pesticides allowed under this proposed project will not unreasonably affect present and anticipated beneficial uses of the treated waterbody, and will hopefully improve those uses by removing AIS. All aquatic pesticide uses allowed under this project will comply with label instructions. As verified by USEPA and DPR, aquatic pesticides used in accordance with label requirements should not cause harm or adverse effect to non-target organisms.

Once the project is approved through both waste discharge prohibition exceptions and NPDES permit coverage, the LRWQCB will have ensured that permitted aquatic pesticide discharges incorporate control measures to limit water quality degradation and impacts to beneficial uses to the shortest time and within the smallest area necessary for project success. Although the project may result in a temporary lowering of water quality, California Water Code section 13241 recognizes that it is possible for the quality of water to be degraded to some degree without unreasonably affecting beneficial uses. Water affected by the pesticide discharge will likely be of lesser quality than exceptional pre-project background water quality, but only temporarily while accomplishing the greater good of working to eradicate aquatic pests.

³ When an aquatic pesticide is applied to the water to perform a particular useful purpose, such as eradication of AIS, the pesticide is not considered a discharge of a chemical waste, and therefore not a pollutant within the meaning of section 502(6) of the CWA. As both the Ninth and Sixth Circuit courts have recognized, that portion of a chemical pesticide intentionally applied to water is not the discharge of a pollutant under the CWA. *See Fairhurst v. Hagener*, 422 F.3d 1146 (9th Cir. 2005) (held that a pesticide applied to a river pursuant to an intentional scheme aimed at eliminating pestilent fish species is not a "pollutant" for the purposes of the CWA); *The National Cotton Council of America v. U.S EPA*, 553 F.3d 927, 936 (6th Cir. 2009) (concluding that so long as the chemical pesticide is intentionally applied to the water to perform a particular useful purpose and leaves no excess portions after performing its intended purpose it is not a "chemical waste," and does not require an NPDES permit).

Project Consistent with Water Quality Policies

While the presence of aquatic pesticides may temporarily degrade water quality, control measures built into the approval of the project (including CEQA review and satisfaction of exemption criteria and permit requirements) will limit the temporal and spatial extent of water quality degradation.

As such, water quality is maintained at levels that comply with applicable water quality objectives and at levels capable of supporting beneficial uses outside the treatment areas. During a treatment event, adverse effects to non-target organisms within the treatment area may result from the lowering of water quality caused by the application of aquatic pesticides. However, the lowering of water quality resulting from the application of pesticides to water is expected to be limited and short-term. Lowering of water quality is so temporary in nature that it allows for full restoration to pre-project water quality and thus protection of beneficial uses upon project completion. Post-project monitoring, commenced soon after the pesticide application, will verify that water quality returns to levels protective of pre-project beneficial uses. Reasonable compliance times will be assigned based on the duration of the treatment events and will be included in the LRWQCB's resolution to grant TKPOA's exemption request. The exact duration of the treatment events will be determined by whether the pesticide in use is a fast-acting chemical or a slow-release systemic compound and by considering site-specific conditions (flow, target species, water chemistry). Since this is a test of three different herbicides, there will be a mixture of both types of compounds.

The Proposed Project Complies with STEP TWO of State Antidegradation Policy

Project Creates No Pollution or Nuisance

Pollution and nuisance are defined terms under the California Water Code. "Pollution" means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following:

- (A) The waters for beneficial uses.
- (B) Facilities which serve those beneficial uses.

Further, pollution may include "contamination." Cal. Water Code §13050(l). "Contamination" is defined as an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease, and includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected. Cal. Water Code §13050(k). Finally, "nuisance" is defined as anything that meets all of the following requirements:

- (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
- (2) Affects at the same time an entire community, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon the individuals may be unequal.
- (3) Occurs during, or as a result of, the treatment or disposal of wastes.

Cal. Water Code §13050(m).

The proposed project does not meet any of these definitions. First, as discussed above, the pesticides applied are a product, not a waste. Second, the project will not unreasonably affect beneficial uses or facilities serving beneficial uses. In fact, the project will probably beneficially affect aquatic habitat and the recreational and navigational uses of the Tahoe Keys lagoons and the facilities supporting those uses within the Tahoe Keys. Therefore, there is no pollution.

The project will not create a hazard to public health because the aquatic herbicides proposed are not known to cause human health impacts, and will be applied according to label instructions to avoid impacts to non-target organisms. The project will not cause the spread of any disease. Therefore, the project does not cause contamination.

Finally, the project does not cause a nuisance since, when applied as directed by the label instructions, the project is not injurious to health, not indecent or offensive to the senses, not an obstruction to the free use of property, and will not interfere with the comfortable enjoyment of life or property. In fact, the mitigation measures put in place to protect against harm, such as the barrier to Lake Tahoe will likely provide more public consternation than the pesticide test project itself because the barrier will halt boat traffic temporarily. However, the homeowners in the TKPOA understand the importance of the project and the need for the temporary barrier. The project will not affect an entire community since not all of TKPOA is on the lagoon areas being treated. Any land within the community near the project will not be affected as the project will occur in the water. Finally, the pesticides are not wastes, and are not being treated or disposed of, so the final prong for nuisance cannot be met, and the project does not qualify as a nuisance.

Project Implements Best Practicable Treatment and Control (BPTC)

The LRWQCB must ensure that the project is implementing BPTC to avoid pollution or nuisance and to maintain the highest water quality consistent with the maximum benefit to the people of the State. Furthermore, if the discharge does not meet relevant water quality objectives, then the LRWQCB must also require a time schedule to meet water quality objectives. The court found in the *AGUA* case that the Antidegradation Policy does not require immediate implementation of BPTC and determined that a phased approach or time schedule for meeting antidegradation requirements was reasonable.

As described above, the proposed project is intended to be an interim short-term test of several aquatic herbicides as part of a phased approach to controlling AIS and the project includes a time schedule to meet water quality objectives (e.g., soon after application within the treatment areas). TKPOA will implement management practices and conduct monitoring and reporting, to ensure water quality objectives are met per these time restrictions. Although the LRWQCB cannot dictate the manner of compliance with water quality orders (Wat. Code, §13360), and no single suite of management practices is appropriate for every pesticide application, the LRWQCB will ensure that the suite of practices proposed will be protective. TKPOA plans to implement BPTC through a combination of practices that will ensure that discharges ultimately meet all water quality objectives and eliminate any unreasonable degradation.

BPTC determinations may consider relative benefits of proposed treatment or control methods to proven technologies; performance data; alternative methods of treatment or control; methods used by similarly situated dischargers; and/or promulgated Best Available Technology (BAT) or other technology-based standards. The court in *AGUA* stated that costs of treatment or control should also be considered. TKPOA in its alternatives analysis has reviewed and weighed the cost and feasibility of other options and alternatives and concluded that the suite of practices and measures selected constitutes BPTC to maintain the highest water quality consistent with maximum benefit to people of the State.

Summary of Antidegradation Analysis

During scheduled aquatic herbicide treatment events, such as those in the proposed test project, a lethal concentration of chemicals is intentionally applied to water to control aquatic invasive species. The proposed test project's application of aquatic pesticides will result in a spatially localized impacts and short-term lowering of water quality that may temporarily, but not unreasonably, affect beneficial uses within the treatment areas. The aquatic pesticide application will temporarily impact the continued beneficial use (e.g., cold freshwater habitat) supported within the treatment areas, but this impact is limited with respect to the entire waterbody, and even more limited with respect to Lake Tahoe. During the treatment events, the lowering of water quality and the subsequent effects to beneficial uses will be confined to the treatment areas.

Precluding the use of aquatic herbicides due to short-term and transient impacts within the treatment areas would be non-sensible considering the holistic benefit to the waterbody and the important public interests and maximum benefit to the people of the State achieved by such aquatic pesticide use.

At all times during and after the pesticide application, beneficial uses and the water quality to support those uses will be maintained within other portions of the waterbody outside of the delineated treatment areas (i.e., receiving waters). Upon completion of the treatment events, the water quality within the treatment areas will be restored to pre-project conditions capable of fully supporting beneficial uses. To protect against pollution and nuisance, TKPOA will implement measures constituting BPTC before, during, and after the treatment events.

With respect to monitoring, *AGUA* held that if an order finds that long-term degradation will not occur, the order must include appropriate monitoring capable of verifying that finding. Monitoring and reporting is necessary to prevent and detect any degradation to high quality waters. The monitoring will include evaluating the lateral extent and duration of the pesticide applications, and will confirm that the discharges are effectively controlled by management practices to ensure compliance with exception criteria and NPDES permit requirements.

The short-term water quality modification allowed will authorize the test project to cause a temporary diminishment of some designated beneficial uses while briefly altering the water body to remove aquatic noxious weeds. Any activities conducted under the test project are unlikely to exceed the applicable water quality standards within the treatment areas for more than hours or days.

Short-term impacts may occur from the pesticide applications allowed under this test project, but regulatory oversight and the implementation of best management practices (i.e., BPTC) will help minimize or avoid reductions of water quality. Overall, the treatment of aquatic invasive macrophytes will promote the long-term maintenance and restoration of beneficial uses and the waterbody as a whole. To this end, temporary reductions in water quality are acceptable, since the intent of the pesticide applications considered under this project is to test appropriate long term methods to restore and maintain the biological integrity of the waterbody, which is consistent with the spirit and goals of the CWA.

An exemption to the pesticide waste discharge prohibition is justified for TKPOA's test project because the short-term lowering of existing water quality will not unreasonably affect beneficial uses and the LRWQCB should find that this project is consistent with the maximum benefit to the people of the State and will assist in protecting public safety and important ecological resources in the long-term.

Federal and state antidegradation assessments support findings that the temporary degradation of water quality associated with this test project is permissible. The effects on water quality associated with discharges of aquatic pesticides under this project will be mitigated through BPTC, including compliance with FIFRA label requirements; NPDES permit conditions; application of control measures; and compliance monitoring. The above evaluation and discussion supports LRWQCB findings that the anticipated changes in water quality associated with the test project are consistent with antidegradation requirements by ensuring that the project provides the maximum benefit to people of the State and will not unreasonably affect present and anticipated beneficial uses of the affected waters.

Antidegradation Principles will be Ensured through Regulatory Mechanisms

As noted above, the use of aquatic pesticides for resource protection and aquatic pest management will be allowed only if the conditions of the Basin Plan discharge prohibition exemption criteria and NPDES general permit conditions and requirements are met. These conditions spell out the requirements and steps needed to ensure beneficial uses are protected and that lowering of water quality is limited to the shortest time feasible.

Discharge Prohibition Exception

Pesticide application project proponents, such as TKPOA, must satisfy exemption criteria before the LRWQCB may grant an exemption to allow pesticide use in the Lahontan region. The exemption criteria represent requirements and measures intended to minimize the spatial and temporal lowering of water quality that may result from the use of aquatic pesticides. The exemption criteria apply throughout the project duration and TKPOA intends to implement the measures and methods set forth in its exemption application to meet the specified exemption criteria and to ensure protection of beneficial uses. The criteria also ensure that aquatic pesticide applications comply with antidegradation policies in that water quality objectives protective of beneficial uses are maintained within receiving waters affected by the pesticide application. The exemption approval also ensures that TKPOA will implement an appropriate suite of control

measures and adhere to pesticide labels for appropriate dosages, use conditions, and application measures.

Coverage by Statewide General NPDES Aquatic Pesticides Permit

If a proposed aquatic pesticide project receives an exemption to the Basin Plan's pesticide prohibition, the discharge will also be regulated by a general NPDES permit issued by the SWRCB. That permit include provisions for enforcement should TKPOA violate permit conditions, which include requirements to comply with project descriptions and other application submittals.

The Statewide General Aquatic Pesticide Permit is available for qualified projects, such as TKPOA's, which are necessary for protecting public health or resources. Examples of permitted activities include aquatic weed and algae control to protect navigation, water conveyances, or public water supplies, and the use of aquatic pesticides for fishery management. The Statewide General Aquatic Pesticides permit requires that discharges meet all applicable water quality objectives, effluent limits, and receiving water limitations in the receiving water during and after the project, and in the designated treatment areas no more than one-week following the initial pesticide application or upon project completion as determined by the discharger, and accepted by the Water Boards.

The Statewide General Aquatic Pesticides Permit contains narrative effluent limits that require implementation of best management practices (BMPs), which include compliance with pesticide label requirements and other measures to minimize the areal extent and duration of impacts caused by the discharge of aquatic pesticides in the treatment areas. The areal extent of the treatment areas is defined by the discharger, and varies from project to project, but has been defined by TKPOA in its Basin Plan exemption application. The Statewide General Aquatic Pesticides Permit also requires dischargers to develop and implement a monitoring and reporting program to assess the effectiveness of BMPs and compliance with receiving water limitations.

Permit conditions require that receiving water limitations be met outside the treatment area at all times during and after the project and in the treatment area upon project completion. Receiving waters must meet all applicable receiving water limitations, which include water quality objectives (narrative and numeric) for which an exemption is not received. The Statewide General Aquatic Pesticides Permit prescribes numeric objectives for waters affected by pesticide discharges at the most restrictive limit for the protection of human and/or aquatic health and include Maximum Contaminant Levels (MCLs), criteria in the CTR for priority pollutants (e.g., acrolein and copper), and criteria developed for the protection of freshwater and saltwater aquatic life.⁴

⁴ The Statewide General Permit for aquatic weed control allows dischargers to apply for and receive a short-term, seasonal exception from meeting the CTR priority pollutant criteria for copper and acrolein. (Copper-based aquatic pesticides are commonly used to control algal and aquatic plant growth, and acrolein-based aquatic pesticides are used to control submerged and floating vegetation.) Entities that qualify for an exception must submit specific information in accordance with the SIP. The proposed project does not require a SIP exception because no priority pollutants are anticipated to be discharged as part of the test project.

The Statewide Aquatic Pesticides permit does not require the duration of the treatment events be discretely outlined in the permits, but the temporal extent of the pesticide application is intended to be short-term. The Statewide General Aquatic Pesticides Permit requires post-treatment sampling of water to begin not more than a week from the time of aquatic pesticide application (or after project completion as determined by the discharger, and accepted by the Water Boards, for time-release aquatic pesticides). The goal of the post-treatment monitoring is to determine compliance with the receiving water limitations, which indicates whether water quality is sufficient to maintain beneficial uses.

As demonstrated herein, the proposed test project is compliant with antidegradation requirements. Compliance with the Basin Plan exception criteria and NPDES permit requirements will be the mechanisms that will ensure compliance with federal and state antidegradation policies.