

# Application of the State and Federal Antidegradation Policies to Revisions of Beneficial Uses and Water Quality Objectives

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## Quick Summary of Key Points:

- State antidegradation policy (State Water Board Resolution No. 68-16) applies only to actions that may affect “existing high quality” waters of the State.
- State antidegradation policy applies whenever a water board proposes to revise beneficial uses and/or water quality objectives relating to one of these bodies
  - Any change to these waters must be consistent with the maximum benefit to the people of the State, must not unreasonably affect beneficial uses, and cannot result in water quality less than that prescribed in the policies.
- State policy incorporates federal antidegradation requirements when they apply
- Federal antidegradation policy (40 C.F.R. § 131.12) requires changes or revisions to basin plans that involve water quality standards to maintain and protect existing uses of the water body by avoiding specified levels of water quality degradation
- Federal antidegradation policy divides waters into three distinct tiers based on the existing uses and water quality of a particular water body:
  - Tier I describes the absolute floor for water quality in all waters of the United States and requires existing uses be maintained and protected.
  - Tier II waters cover only those water bodies where the quality exceeds the levels necessary for wildlife propagation and human recreation and is better than that required to support in-stream uses.
  - Tier III addresses a limited number of waters that qualify as outstanding national resources and requires said waters be maintained and protected.
- Depending on the tier of the water body, federal antidegradation policy specifies different requirements and factors for demonstrating that revisions to beneficial uses and/or water quality objectives of that body will not violate the policy.
- Federal antidegradation policies cover only surface waters, while state antidegradation policies cover both groundwater and surface water. In addition, both state and federal antidegradation policies apply on a pollutant-by-pollutant basis. The State Water Board is currently in the process of reviewing the implementation of the state policy with regard to groundwater.

## Introduction

This paper provides a brief overview of state and federal antidegradation policies in the context of revisions to water quality standards (i.e., beneficial uses and water quality objectives) in water quality control plans (i.e., Basin Plans). Whether the policies apply in a given case and the level of analysis required depend on the site-specific factors and other facts involved. For example, the state policy applies only to “existing high quality” waters and requires a water

board that proposes to revise its basin plan to consider specific factors.<sup>1</sup> One factor is whether lower water quality is consistent with the maximum benefit to the people of the state. Where the federal antidegradation policy applies, it pertains to *all* waters of the United States.<sup>2</sup> However, the federal policy divides waters into three categories or “tiers” and prescribes different requirements for the different tiers.

Where the federal antidegradation policy (40 C.F.R. § 131.12) applies (i.e., surface waters), Resolution No. 68-16 incorporates the federal requirements to compel the satisfaction of both policies. (*Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition (Sept. 2009) at p. IV-8.00; Memorandum from William R. Attwater, Chief Counsel to State Water Board to Regional Water Board Executive Officers regarding Federal Antidegradation Policy (Oct. 7, 1987) (Attwater Memorandum) at p. 17; see *In the Matter of Amendment of the City of Los Angeles’ Water Right Licenses*, Decision No. 1631 at p. 152.) The water board must consider both policies when considering revisions to beneficial use designations and/or water quality objectives and should develop an appropriate antidegradation analysis to address the factors described below, as applicable.

**A. Requirements of the State Antidegradation Policy (Resolution No. 68-16)**

The State Water Resources Control Board (State Water Board) adopted Resolution No. 68-16 as the state policy for actions that may degrade water quality. Resolution No. 68-16 reads:

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 the 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.

Accordingly, the state-based requirements of Resolution No. 68-16 apply only to actions that may affect “existing high quality” waters. State Water Board guidance explains: “Where the waters contain levels of water quality constituents or characteristics that are better than the established water quality objectives, such waters are considered high quality waters.” (*Questions and Answers, State Water Resources Control Board Resolution No. 68-16* (Questions and Answers) (Feb. 16, 1995) at p. 5.) That is, high quality waters are those where the quality is better than the applicable water quality objectives. The analysis is typically pollutant-specific, so waters may be high quality for some constituents but not for others. (*Ibid.*)

Resolution No. 68-16 applies when a water board proposes to revise beneficial uses and/or water quality objectives in a basin plan. (See e.g., *Amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for Temperature at Deer*

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<sup>1</sup> The state’s policy applies to “waters of the state,” which includes surface waters and groundwaters. (See Cal. Wat. Code, § 13050(e).)

<sup>2</sup> The federal regulations broadly define “waters of the United States” to encompass most surface waters. (See 40 C.F.R. § 122.2.)

*Creek*, Central Valley Regional Water Board (Jan. 2003) (Deer Creek Basin Plan Amendments) at pp. 5-1 to 5-9.) Further, where Resolution 68-16 applies, water quality shall not be changed in manner that would “unreasonably affect present and anticipated beneficial use of such water.” (Resolution 68-16 at p. 1.) Thus, any Basin Plan revision cannot unreasonably affect present and anticipated beneficial uses of the water body in question.

Currently, little guidance exists on how to apply Resolution 68-16 to Basin Plan revisions that include changes in beneficial use designations and/or water quality objectives. However, based on the language of Resolution 68-16 and other policies applicable to beneficial use revisions, it is apparent that any proposed revision must protect both present and anticipated or probable beneficial uses. (See e.g. 40 C.F.R., § 131.10.) Further, when looking to change beneficial uses of surface water, federal law requires existing uses to be maintained without regard to whether the use is actually designated. (40 C.F.R., 131.10(g) .) Existing uses are defined as, “those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.” (40 C.F.R., § 131.3(e).) Similarly, when water quality objectives revisions are contemplated, such revisions must protect present and anticipated beneficial uses.

Additionally, Resolution 68-16 requires any change to water quality be consistent with maximum benefit to the people of the State. What constitutes the “maximum benefit” is a case-by-case decision based on what is reasonable under the site-specific circumstances. (Questions and Answers at p. 5.) Factors to consider are the past, present and probable beneficial uses of the water; economic and social costs versus the benefits of the change; environmental aspects of the change; implementation of feasible alternative treatment or control methods; and any local ordinances that relate to water quality, nuisance or the use of water as a water supply.<sup>3</sup> (See *ibid.*) With regard to economic costs, the water board must consider costs to the discharger and affected public. (*Ibid.*) For social costs, the water board must consider whether reasonable means exist to abate the lowering of water quality (e.g., appropriate treatment facilities and their optimal operation). (*Ibid.*)

## **B. Requirements of the Federal Antidegradation Policy (40 C.F.R. § 131.12)**

Revisions to beneficial uses and water quality objectives for waters of the United States (i.e. most surface waters) trigger the federal antidegradation policy (40 C.F.R. § 131.12). (See

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<sup>3</sup> As part of the maximum benefit determination with regard to revising water quality objectives, the water board may want to consider the factors that apply when it sets or revises water quality objectives:

Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:

- (a) Past, present, and probable future beneficial uses of water.
- (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.
- (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.
- (d) Economic considerations.
- (e) The need for developing housing within the region.
- (f) The need to develop and use recycled water. (Wat. Code, § 13241.)

Letter to Gerard Thibeault, Executive Officer of the Santa Ana Regional Water Quality Control Board from Ms. Catherine Kuhlman, Acting Deputy Director, Water Management Division, Region IX, US EPA (October 21, 1992) (Letter to Gerard Thibeault); see also Attwater Memorandum at pp. 7-9.) Unlike Resolution No. 68-16, the federal policy applies to *any* lowering of water quality – not merely a lowering in “existing high quality” waters. (*In the Matter of the Petitions of Napa Sanitation District, et al.*, Order No. WQ 2001-16 at p. 20.) As with Resolution 68-16, the first step in a federal antidegradation analysis with respect to revisions to beneficial uses and/or water quality objectives is to protect existing beneficial uses. Specifically, Tier I of the federal antidegradation policy requires that “existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.” (40 C.F.R., § 131.12; see also Letter to Gerard Thibeault at p. 1.) In other words, any change or revision to the Basin Plan that involves water quality standards may not degrade water quality to a level that would no longer maintain or protect existing uses of the water body.

According to U.S. EPA, “[i]f it is demonstrated that beneficial uses are and will be maintained and protected, then Tier II [protection] is invoked.” (Letter to Gerard Thibeault at p. 2.) Tier Two provides:

(2) Where the quality of 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 [BMPs] for nonpoint source control.

Like the state’s policy, the federal antidegradation policy applies on a pollutant-by-pollutant basis. (See Order No. WQ 2001-16, *supra*, at pp. 21, 36, 46.)

The federal antidegradation policy also includes provisions for waters that are considered to be outstanding national resources, otherwise referred to as “Tier Three” waters. Although discussed briefly below, it is unlikely that the Basin Plan revisions anticipated by CV-Salts would apply to any waters considered to be in Tier Three.

### **1. Antidegradation Requirements for Tier One**

Tier One prescribes the “absolute floor” for water quality in all waters of the United States. (48 Fed.Reg. 51,400 (Nov. 8, 1983); *In the Matter of the Petition of Citizens for a Better Environment, et al.*, Order No. WQ 90-5 at p. 72 n.25.) Under Tier One, the state must maintain and protect all “existing” uses in the receiving waters and downstream and the water quality necessary for the uses. (Order No. WQ 90-5, *supra*, at p. 72 n.25.) Tier One does not allow any

activity that could *partially or completely* eliminate an existing use. (*PUD No. 1 v. Washington Dept. of Ecology* (1994) 511 U.S. 700, 718; *Water Quality Standards Handbook* (2nd ed.), EPA 823-B-94-005a, (WQS Handbook) § 4.4.2 (June 2007).) As noted above, “[e]xisting uses” are “those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.” (40 C.F.R. § 131.3(e).) While the federal antidegradation policy requires existing uses to be maintained and protected, it does not apply to potential uses. (See APU 90-004, appen. I-4 at p. 6.)

Thus, if the subject water body is Tier One and the beneficial uses at issue did not exist and were not suitable to exist since November 28, 1975, findings (and evidence in the record) to that effect satisfy the federal antidegradation policy. If the use was an existing use, the water board should consider whether “physical problems” (e.g., flow issues relevant to the subject designated use) would prevent the use. Moreover, federal guidance provides that for existing aquatic life protection uses, “[w]ater quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species. Any lowering of water quality below this full level of protection is not allowed.” (WQS Handbook, *supra*, § 4.4.2.)

A relaxation of beneficial uses and water quality objectives does not necessarily trigger the federal antidegradation policy if there is no actual lowering of water quality. (APU 90-004, appen. I-4 at p. 8.) For example, “if a water quality objective adopted in 1975 has never been achieved, and a new standard is proposed based upon the highest level of water quality actually achieved since 1975, the federal antidegradation policy would not apply.” (*Ibid.*) This is because “[n]o actual reduction in water quality would be authorized.” (*Ibid.*) In the context of permit issuance, performance-based mass limits that maintain the status quo and prevent degradation of downstream waters are appropriate to implement Tier One. (Order No. WQ 2001-16, *supra*, at pp. 21, 36.) To the extent a revised beneficial use and/or water quality objective and/or implementation plan would maintain the status quo and prevent downstream degradation, arguably the federal antidegradation policy does not apply. However, the proponent of the revision(s) should be certain that the Regional Board has adequate data and information in the record to support such a supposition.

## **2. Antidegradation Requirements for Tier Two**

Tier Two waters include only those where the quality exceeds the levels necessary for fish, shellfish and wildlife to propagate and humans to recreate. (40 C.F.R. § 131.12(a)(2).) Tier Two waters are “waters whose quality is better than that required to support instream uses.” (Order No. WQ 2001-16, *supra*, at pp. 20-21.) The quality of such waters may degrade where the: (1) water board satisfies the state’s inter-governmental coordination and public participation requirements; (2) lower water quality is necessary to accommodate important economic or social development in the area; (3) water quality remains adequate to protect existing uses *fully*; and (4) water board assures the achievement of the highest statutory and regulatory requirements for all new and existing point sources and cost-effective and reasonable BMPs for nonpoint source control. (40 C.F.R. § 131.12(a)(2).)

While these factors are fairly straightforward, the second warrants further explanation. The water board has discretion to determine what constitutes “important economic or social

development” that justifies water quality changes. (Attwater Memorandum at p. 13.) However, the degree to which development must be important to justify a change in water quality depends on the extent to which the action will lower water quality. (*Ibid.*) The greater the impact on water quality, the greater the justification required. (*Id.* at p. 12.) Federal guidance suggests the use of a two-step process to demonstrate that economic or social development is important.

The first step is to describe and analyze the current state of economic and social development in the affected area as the baseline against which to judge the effect of the water quality downgrade. (APU 90-004, appen. I-5 at p. 7.) The baseline analysis should describe the area’s use or dependence upon the water resource affected by the proposed action. (*Ibid.*) The analysis typically addresses: population, area employment, area income, the manufacturing profile (types, value, employment, and trends), and the government fiscal base (revenues by source – e.g., employment and sales taxes.). (*Ibid.*) The analysis should also address the cumulative impacts of all previous and proposed actions and reasonably foreseeable actions that would lower water quality. (*Id.* at p. 5.) A more detailed water quality and economic impact analysis is necessary where the cumulative impact of actions significantly degrade water quality. (*Id.* at p. 5.)

The second step is to demonstrate the extent to which the level of water quality desired would incrementally increase the rate of economic or social development and why the increase is necessary. (APU 90-004, appen. I-5 at p. 8.) A finding of necessity should establish the following:

- Economic and social development will occur;
- The economic and social development requires the lowering of water quality that cannot be mitigated through reasonable means; and
- The lower water quality does not result from inadequate wastewater treatment facilities or failure to implement or comply with methodologies to reduce or eliminate nonpoint source pollution. (*Id.* at p. 5.)

The requirements for such an analysis are site-specific and depend on factors such as data availability, conditions specific to the relevant water body, the area of impact, etc. (See APU 90-004, appen. I-4 at pp. 12-14.) The locale in determining the importance of economic and social development is the general area or community—not just a small segment of the local population. (*Id.* at p. 12.) For example, consideration of the development at locations far away from the affected waters may be appropriate if the water quality change is necessary to accommodate that development. (*Id.* at pp. 12-13.)

### **3. Antidegradation Requirements for Tier Three**

Tier Three requires that the water quality of waters that qualify as outstanding national resources be maintained and protected. (40 C.F.R. § 131.12(a)(3).) Such waters include those of national and state parks and wildlife refuges and those of exceptional recreational or ecological significance. (40 C.F.R. § 131.12(a)(3).) Such waters may further include any other “[w]ater bodies which are important, unique or sensitive ecologically, but whose water quality as measured by traditional parameters (dissolved oxygen, pH, etc.) may not be particularly high or

whose character cannot be adequately described by these parameters.” (*In the Matter of Amendment of the City of Los Angeles’ Water Right Licenses*, Decision No. 1631 at p. 151, quoting 48 Fed.Reg. 51,400.) Waters in California that may qualify as Tier Three waters include, but are not limited to, Lake Tahoe, Mono Lake, the Pacific Ocean, and any waters designated as wild and scenic rivers. (Order No. WQ 2001-16, *supra*, at p. 21; Attwater Memorandum at p. 14.)

Tier Three has only limited applicability, but is very restrictive where it applies. (Attwater Memorandum at p. 14.) Water quality may not lower (permanently or long-term) in Tier Three waters. (*Ibid*; Order No. WQ 2001-16, *supra*, at p. 21.)

### **C. Summary of Analysis Required By the Antidegradation Policies**

Based on the information provided above, any proposed revision to the Basin Plan that would arguably lower water quality must comply with state and federal antidegradation policies, as applicable. For Basin Plan revisions that would apply only to groundwater, the proposed revisions must satisfy Resolution 68-16. For surface waters, the proposed revisions must comply with both Resolution 68-16 and the federal antidegradation policies.

In general, an antidegradation analysis associated with Basin Plan revisions must first determine if the proposed changes will impact existing or anticipated beneficial uses. If the proposed revisions include de-designating or refining categories of beneficial uses for surface waters, such a de-designation or use refinement must comply with the use attainability analysis provisions of the federal regulations. Further, existing uses in surface waters may not be de-designated. If the proposed revisions include de-designating beneficial uses for groundwaters, the use proposed for de-designation may not reasonably be expected to be an existing or anticipated future use. Changes to water quality objectives are subject to the same analysis, i.e., the change will not impact existing or anticipated potential beneficial uses. Also, if the proposed revisions would lower existing high quality water, the analysis must determine if the changes are to the maximum benefit to the people of the state and/or are necessary to accommodate important economic or social development in the area where the waters are located.

For example, if CV-SALTS recommended removal of municipal and domestic drinking water beneficial use designations (MUN) from some groundwater basins, the analysis would have to demonstrate that MUN is not a present use or an anticipated use of the groundwater basin in question. In another example, if CV-SALTS recommended adoption of numeric water quality objectives for salinity that are higher than existing numeric objectives, or higher than numeric criteria currently used to interpret narrative objectives, the Regional Water Board would need to find, prior to adoption, that the proposed water quality objectives, although higher in concentration, will not impact beneficial uses in the water. Further, the Regional Board would need to find, based on the record, that the higher numeric objective is necessary for the maximum benefit to the people of the state and/or are necessary to accommodate important economic or social development in the area.