State of California

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Memorandum

To : Regional Board Executive Officers
Jim Baetge
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From : STATE WATER RESOURCES CONTROL BOARD

Subject: FEDERAL ANTIDEGRADATION POLICY

This memorandum is intended to provide guidance on the application of the federal antidegradation policy to actions by the State Water Resources Control Board (State Board) and the California Regional Water Quality Control Boards (Regional Boards).

OVERVIEW

Environmental Protection Agency (EPA) Water Quality Standards regulations require that each state have an "antidegradation policy." 40 C.F.R. §§131.6(d), 131.12. Each state's policy must, at a minimum, be consistent with the principles set forth in 40 C.F.R. §131.12 (hereinafter referred to as the "federal antidegradation policy"). This regulation establishes a three-part test for determining when increases in pollutant loadings or other adverse changes in surface water quality may be permitted:

> "(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. Furtner, 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." 40 C.F.R. §131.12(a).

State Board Resolution No. 68-16, the "Statement of Policy with Respect to Maintaining High Quality of Waters in California", satisfies the requirement that the State have a policy which, at a minimum, is consistent with the federal antidegradation policy. The State Board has interpreted State Board Resolution No. 68-16 to incorporate the federal antidegradation policy in situations where the federal antidegradation policy is applicable. State Board Order No. WQ 86-17 at 16-19. State Board Resolution No. 68-16 is part of state policy for water quality control, which guides the regulatory programs for the State and Regional Boards and is binding on all state agencies. See Cal. Water Code §13140 et seq.

The State Board has interpreted State Board Resolution No. 68-16 to incorporate the federal antidegradation policy in order to ensure consistency with federal Clean Water Act requirements. See State Board Order No. WQ 86-17 at 17-18.

Attached are copies of EPA's Questions and Answers on: Antidegradation and EPA Region 9's Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12. These documents can be used as guidance in applying the federal antidegradation policy.

Also attached is a copy of State Board Order No. WQ 86-17. The order discusses the federal antidegradation policy at pages 16-24. EPA provided comments on the proposed order, stating that EPA concurred in the State Board's analysis.

As indicated by the attached material, application of the federal antidegradation policy often will hinge on the specific facts of the case. Thus, it is not possible to provide a definitive exposition as to how the policy should be applied.

The federal antidegradation policy serves as a "catchall" water quality standard, to be applied where other water quality standards are not specific enough for a particular water body or portion of that water body, or where other water quality standards do not address a particular pollutant. The test also serves to provide guidance for standard setting and for other regulatory decisions, to determine when additional control measures should be required to maintain instream beneficial uses or to maintain high quality waters.

The federal antidegradation policy emphasizes protection of instream beneficial uses, especially protection of aquatic organisms. In most cases, where instream beneficial uses will not be impaired and no outstanding National

resource waters will be affected, the federal antidegradation policy is not an absolute bar to reductions in water quality. Rather, the policy requires that reductions in water quality be justified as necessary to accommodate important social and economic development. The outcome will often depend upon a balancing of competing interests, the decision resting in the sound judgment of the State and Regional Boards.

This memorandum provides general guidance as to where the federal antidegradation policy applies, and how the three-part test established by the antidegradation policy should be applied.

I. Applicability of the Federal Antidegradation Policy

The three-part test set forth in the federal antidegradation policy is triggered by reduction in surface water quality. The first step in analyzing the requirements of the federal antidegradation policy as applied to a particular activity is to determine if the activity will lower surface water quality; only if there is reduction in water quality must the three-part test be applied to determine if the activity may be permitted. See EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 4.

A. Waters of the United States

The federal antidegradation policy is part of EPA's Water Quality Standards regulations. Each State's water quality standards must include a policy consistent with the federal antidegradation policy. 40 C.F.R. §131.6(d). Thus, the State and Regional Boards must apply the federal antidegradation policy to all "waters of the United States" within the State of California. See generally Clean Water Act §§303(e)(3), 502(7), 33 U.S.C. §1313(e)(3), 1362(7); Kentucky v. Train, 9 E.R.C. 1281 (E.D. Ky. 1976).

The term "waters of the United States" is broadly defined, to include essentially all surface waters. See, e.g., Quivara Mining Co. v. United States Environmental Protection Agency, 765 F.2d 126 (10th Cir. 1985) cert. denied ___ U.S. ___, 106 S.Ct. 761 (1986). "Waters of the United States" do not include ground waters. See Exxon v. Train, 554 F.2d 1310 (5th Cir. 1977). Where only ground waters are affected, State Board Resolution No. 68-16 still applies, but does not incorporate the federal antidegradation policy; the State and Regional Boards must apply the general policies set for the State Board Resolution No. 68-16 to changes in ground water quality, but need not address the specific, three-part test established by the federal antidegradation policy. See State Board Order No. WQ 86-17 at 19.

The boundaries of the State of California extend three miles seaward from the coast line. People v. Weeren, 26 Cal.3d 654, 660-61, 607 P.2d 1279, 1281-82, 163 Cal.Rptr. 255, 257-258, cert. denied 440

U.S. 839, 101 S.Ct. 115 (1980); see id. at 622, 607 P.2d 1282-83, 183 Cal.Rptr. at 258-59 (coast line is defined as the ordinary low water mark or the seaward limit of inland waters). See generally United States v. California, 381 U.S. 139, 164, 169-70, 85 S.Ct. 1401, 1415, 1418 (1965) (establishing test for identifying inland waters, a test satisfied by Monterey Bay but not by the Santa Barbara Channel, Santa Monica Bay, or San Pedro Bay); 44 Ops.Cal.Atty.Gen. 135 (1966). Compare Cal. Water Code §13200 with Clean Water Act §502, 33 U.S.C.A. §1362 ("boundaries of the state," for purposes of defining those areas for which water quality standards are required under the Porter-Cologne Water Quality Control Act, include the waters of the "territorial sea," as defined in the Clean Water Act, but do not include waters beyond the three-mile limit, defined as waters of the "contiguous zone" and the "ocean" under the Clean Water Act).

The State may exercise authority over activities beyond its boundaries in order to protect the State's legitimate interests. People v. Weeren, 26 Cal.3d at 666, 607 P.2d at 1285, 163 Cal.Rptr. at 261; see Cal. Water Code §13260(a)(2). But the State's water quality standards, including the state policy incorporating the federal antidegradation policy, extend only to waters within the boundaries of the State. See Clean Water Act §§303(e)(3), 507(7), 507(8), 33 U.S.C. §§1313(e)(3), 1367(7), 1367(8); Cal. Water Code §§13050(e); 13200.

Thus, for offshore discharges, application of the federal antidegradation policy by the State and Regional Boards is triggered only by changes in water quality within the three-mile limit. If there is a change within the three-mile limit triggering application of the federal antidegradation policy by the State and Regional Boards, however, the State and Regional Boards should take into consideration changes in water quality beyond the three-mile limit as part of the public interest balancing required to determine if the three-part test established by the federal antidegradation policy has been satisfied. Cf. State Board Resolution No. 68-16 (requiring that changes in water quality be consistent with the "maximum benefit to the people of the State." In determining what constitutes the maximum benefit to the people of the State, when regulating activities within their jurisdiction, the State and Regional Boards may take into consideration associated impacts on water quality outside the State's boundaries, and how those changes in water quality may affect the legitimate interests of the State.)

Of course, EPA may apply the federal antidegradation policy to offshore discharges, even where there is no change in water quality within the State's boundaries triggering application of the federal antidegradation policy by the State and Regional Boards. See generally Clean Water Act §402(a), 33 U.S.C. §1342(a). When EPA issues a permit for a discharge to the contiguous zone or ocean waters, the permit must apply "the same terms, conditions, and

requirements as apply to a State permit program and permits issued thereunder...." Id. §402(a)(3), 33 U.S.C. §1342(a)(3). States assuming responsibility for the National Pollutant Discharge Elimination System (NPDES) permit program must have and apply a policy consistent with the federal antidegradation policy. See 40 C.F.R. §§122.44(d), 123.25(b), 130.5(b)(1), 130.5(b)(6), 131.6(d). Accordingly, EPA should apply the federal antidegradation policy to any change in surface water quality resulting from any EPA issued NPDES permit.

B. Changes in Water Quality

Application of the federal antidegradation policy is triggered by a lowering of surface water quality. The critical issue in determining whether the three-part test established by the policy must be applied is not the level of treatment provided, but whether receiving waters will be affected.

Thus, the federal antidegradation policy ordinarily is triggered by new discharges or expansion of existing facilities, "[s]ince such activities would presumably lower water quality." EPA, Questions & Answers on: Antidegradation, 6. But an increase in the volume of discharge would not trigger application of the federal antidegradation policy where the increased volume is offset by an increase in the level of treatment, so that there is no lowering of receiving water quality.

Similarly, application of the federal antidegradation policy would be triggered by a reduction in the level of treatment of an existing discharge. See State Board Order No. WQ 86-17 at 20-21.

Substantial relocation of an existing outfall would also trigger application of the federal antidegradation policy since, like a new discharge, water quality presumably will be lowered in the vicinity of the new outfall. See EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 3.

The requirement that the federal antidegradation policy be applied does not depend upon identification of any discernible impact on beneficial uses. It may be most convenient to think in terms of mass emissions. A substantial increase in mass emissions of a pollutant ordinarily triggers application of the federal antidegradation policy, even if there is no other indication that the waters are polluted. See State Board Order No. WQ 86-17 at 21.

The federal antidegradation policy was promulgated on November 28, 1975. It does not apply to reductions in water quality which occurred before that date. Thus, the federal antidegradation policy ordinarily does not apply to continuation of existing discharges, even if exceptions or variances from other applicable water quality

objectives or effluent guidelines are required to permit the discharge to continue.

The federal antidegradation policy is applicable to changes in water quality resulting from either point source or nonpoint source discharges. EPA, Questions & Answers on: Antidegradation 6.

In general, the federal antidegradation policy will also apply to changes in water quality resulting from water diversions. See id. at 11; EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 4. EPA guidance suggests that in the case of an irreconcilable conflict between a State's water quantity allocations and the federal antidegradation policy, the State's water rights law would prevail. But the two should be reconciled where possible. EPA, Questions & Answers on: Antidegradation 11. For example, it may be possible to offset decreases in water quality resulting from decreases in instream flows by imposing stricter controls on other factors affecting water quality. Id.

Under California water rights law, flow requirements for insteam beneficial uses and effects on water quality are considered as part of water right decisions. See Cal. Water Code §§174, 1243, 1243.5. See generally United States v. State Water Resources Control Board, 182 Cal.App.3d 82, 227 Cal.Rptr. 161 (1986). In particular, the federal antidegradation policy, which has been incorporated into the State's water quality objectives, should be considered as part of water right decisions. See Cal. Water Code §1258; State Board Order No. WQ 86-17 at 17-18 (State Board Resolution No. 68-16, which incorporates federal antidegradation policy, has been adopted as a water quality objective in all sixteen regional water quality control plans.) The public trust doctrine, with its emphasis on protection of instream beneficial uses and public interest balancing, also requires consideration of factors like those set forth in the federal antidegradation policy. See generally National Audubon Society v. Superior Court, 33 Cal.3d 419, 658 P.2d 709, 189 Cal.Rptr. 346, cert. denied, 464 U.S. 977, 104 S.Ct. 413 (1983). In some respects, the public trust doctrine may require even greater protection of instream beneficial uses than would be required to satisfy the federal antidegradation policy. The federal antidegradation policy does not apply to changes in water quality which occurred before the policy took effect in 1975; such changes in water quality can be considered in applying the public trust doctrine.

Thus, it should be possible to harmonize California water rights law and the federal antidegradation policy. State water rights law would prevail if achieving the requirements of the federal antidegradation policy would require a waste or unreasonable use of water. Cf. United States v. State Water Resources Control Board, 182 Cal.App.3d 82, 143-44, 227 Cal.Rptr. 161, 197 (1986) (State Board need not set

standards to maintain the water quality of a water body at a level sufficient for existing offstream use where substitute water supply is provided and maintaining that level of water quality in the water body would require a waste of water.) See generally Cal. Const. Art. X, §2. But California water rights law assigns a high value to protection of water quality and instream beneficial uses. See Cal. Water Code §§243, 1243.5, 1258. Indeed, a diversion may itself be unreasonable, in violation of constitutional prohibition of waste, unreasonable use, or unreasonable method of diversion, if it results in an impairment of instream beneficial uses. See Environmental Defense Fund v. East Bay Municipal Utility District, 26 Cal.3d 183, 605 P.2d 1, 161 Cal.Rptr. 466 (1983). The social and economic benefits of water development may be taken into account as part of the balancing of interests contemplated by the federal antidegradation policy. See 40 C.F.R. §130.12(a)(2).

A conflict between the federal antidegradation policy and the State's proscription of waste or unreasonable use, or between the federal policy and other requirements of California water rights law, appears unlikely. The State Board should apply the federal antidegradation policy as part of its water right decisions.

In summary, the applicability of the federal antidegradation test depends upon whether there is a change in surface water quality. If there is a lowering of water quality, the antidegradation policy applies to all factors which are affecting that water quality. On the other hand, the federal antidegradation policy has no applicability, no matter how degraded a body of water may be, absent some lowering of water quality after the effective date of the policy.

C. Proceedings

The federal antidegradation policy has the potential to be applied to virtually every kind of proceeding where water quality standards are established or where activities which affect receiving water quality are permitted. The policy may apply to either planning activities or to actions on permits for individual discharges. See EPA, Questions & Answers on: Antidegradation 4-5. The federal antidegradation policy is intended to serve both as a guideline for the preparation of water quality standards and as a general water quality standard applicable to other regulatory decisions. See State Board Order No. WQ 86-17 at 19.

1. Planning

The State and Regional Boards have followed the federal antidegradation policy in establishing water quality objectives as part of adoption or approval of water quality control plans. See, e.g., State Board, Lake Tahoe Basin Water Quality Control Plan 37 (1980).

Because the federal antidegradation policy focuses on changes in water quality, applicability of the test may not necessarily be triggered by a proposed relaxation of water quality objectives. 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. No actual reduction in water quality would be authorized.

On the other hand, if water quality has declined since 1975, and a new water quality objective is based upon the existing, lower level of water quality, the federal antidegradation policy would be applicable. Applicability of the federal antidegradation policy does not depend upon the type of proceeding involved, and therefore does not depend upon whether changes in water quality are authorized beforehand or accepted after the fact.

Basin planning decisions may trigger the applicability of the federal antidegradation policy, even if no change in water quality objectives is proposed. For example, changes in discnarge prohibitions or other changes in implementation measures may cause a reduction in water quality. EPA guidance on the federal antidegradation policy indicates that the requirements of the policy must be satisfied if changes in wasteload allocations would result in a lowering of water quality. EPA, Questions & Answers on: Antidegradation 8.

EPA regulations do not specify the precise method by which a state must implement the federal antidegradation policy. See 40 C.F.R. §131.12(a). The State should seek to integrate the policy into its own procedures. In California, where state law emphasizes comprehensive planning and coordination of all factors that affect water quality, the federal antidegradation policy should be considered as part of planning decisions to the extent possible. See generally, Recommended Changes in Water Quality Control, Final Report of the Study Panel to the California State Water Resources Control Board, Study Project, Water Quality Control Program 4-5 (1969). In many cases, however, it would not be possible to apply the federal antidegradation policy, except as the most general guidance, as part of basin planning decisions.

Water quality control plans must establish water quality objectives which are generally applicable to a body of water or to segments of that body of water. For large bodies of water such as the waters of the Pacific Ocean within the boundaries of the State, or for streams with numerous tributaries, it is not possible to identify, as part of water quality planning, all

areas where existing water quality may be higher than a proposed water quality objective. Moveover, the potential social and economic benefits of discharges which might reduce water quality often will be too speculative to be given consideration as part of water quality planning for large areas. The State and Regional Boards can and should focus their attention on establishing objectives for those situations where objectives are most needed to assure protection of beneficial uses, postponing until later site-specific approvals the determination whether discharges in a particular area should be allowed to reduce water quality to the level set by these objectives. For example, new objectives could be adopted for toxic pollutants that apply throughout a region, or even statewide, even though many areas will have better water quality than that required by those objectives. The new objectives would establish a floor, but water quality would not be permitted to be reduced to the level set by the new objectives without a site-specific application of the federal antidegradation policy.

If the State and Regional Boards are aware that a change in water quality standards or implementation measures would permit specific projects, the applicability of the federal antidegradation policy to the changes in water quality caused by those projects should be considered. The State and Regional Boards should pay particularly close attention to the requirements of the federal antidegradation policy when water quality control plan amendments are sought in order to permit a particular discharge, a reduced level of treatment, or development within a particular area.

2. Permitting

The federal antidegradation policy will most frequently be applied in individual permitting decisions, including issuance of waste discharge requirements and NPDES permits. A proposed waiver of waste discharge requirements would also be subject to the federal antidegradation policy if the waiver would result in a lowering of surface water quality.

For example, waste discharge requirements for new discharges or expansion of existing discharges ordinarily will require preparation of an anlysis applying the federal antidegradation policy. EPA, Questions & Answers on: Antidegradation 6. Of course, if the issures have already been analyzed in detail as part of a water quality control plan amendment, it will not be necessary to prepare a new analysis for issuance of waste discharge requirements.

The federal antidegradation policy will also apply to some cleanup and abatement orders and remedial action plans. Where

cleanup order is issued in response to changes in surface water quality, which occurred after the 1975 effective date of the federal antidegradation policy, but the board issuing the order decides not to require a return to the preexisting water quality, the decision to allow lower cleanup levels should be justified in accordance with the federal antidegradation policy. Where a cleanup order is directed towards immediate or short-term cleanup operations, postponing until later any determination of the ultimate cleanup level required, application of the federal antidegradation policy may also be postponed.

The federal antidegradation policy should also be addressed in water right proceedings, including issuance of water right permits, if the result of those proceedings would be to allow a lowering of surface water quality which existed after the 1975 effective date of the federal antidegradation policy. See EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 4.

3. Waivers and Exceptions

The federal antidegradation policy is also applicable to special proceedings concerning proposed waivers or exceptions from otherwise applicable water quality objectives or control measures. Examples include proposed Ocean Plan exceptions. See generally, State Board, Water Quality Control Plan, Ocean Waters of California 11 (1983).

Ordinarily, provisions of the Clean Water Act which allow for variances of treatment requirements should not be interpreted to exempt the discharge from the federal antidegradation policy See, e.g., State Board Order No. WQ 86-17 at 19-20; EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 2. The only exception is for waivers of effluent limitations for thermal discharges, pursuant to Section 316(a) of the Clean Water Act. 33 U.S.C. §1326(a). EPA guidance indicates that limitations developed under Section 316 of the Clean Water Act take precedence over any requirements of the federal antidegradation policy that would otherwise apply. EPA, Questions & Answers on: Antidegradation 11; see 40 C.F.R. §131.12(a)(4).

II. The Three-Part Test

Where the federal antidegradation policy applies, it does not absolutely prohibit any changes in water quality. The policy requires that any reductions in water quality be justified consistent with the three-part test established by the policy. State Board Order No. WQ 86-17 at 20.

Whether reductions in receiving water quality may be permitted consistent with the federal antidegradation policy often will depend upon the conditions existing in the specific waters affected, and the benefits of the proposed discharge. This site-specific balancing is consistent with the scheme established under the Porter-Cologne Water Quality Control Act for setting water quality objectives in issuing waste discharge requirements, or setting cleanup levels in cleanup and abatement orders. See Cal. Water Code §§13263, 13304. "Judicious action by the regional boards, based on the facts of different cases and different areas, is the key to establishment of water quality objectives and waste discharge requirements." Recommended Changes in Water Quality Control, Final Report of the Study Panel to the California State Water Resources Control Board, Study Project, Water Quality Control Program, Appendix A at 30. Similar considerations govern when pollution is established and hence govern determination of appropriate cleanup levels. See id. (note on definition of "pollution").

A. Instream Uses

The first part of the test established by 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(a)(1). This part of the test is intended to establish an "absolute requirement that uses attained must be maintained." 48 Fed. Reg. 51409 (Nov. 8, 1983).

EPA has provided more guidance on the requirement for protection of instream beneficial uses than on any other aspect of the federal antidegradation policy. See EPA, Questions & Answers on: Antidegradation 2-7. In large measure, this part of the federal antidegradation policy serves to reinforce the requirements of other applicable EPA Water Quality Standards regulations. See 40 C.F.R. §§131.2, 131.10, 131.11.

In general, the State must assure full protection of existing instream beneficial uses, including the health and diversity of aquatic life. Reductions in water quality should not be permitted if the change in water quality would seriously harm any species found in the water, other than a species whose presence is aberrational. EPA, Questions & Answers on: Antidegradation 3.

In general, the requirement that existing instream uses be protected is not satisfied if existing instream beneficial uses will be impaired, even for a portion of a water body. Id. at 5. EPA recognizes an exception for fill operations, which necessarily will preclude continued use of the filled area by aquatic species. The other two parts of the three-part test established by the federal antidegradation policy still apply to fill operations. Id. Similar considerations may require some flexibility in applying the federal antidegradation policy to areas flooded by new reservoirs. While it may be possible to protect a cold water fishery in a portion of the

reservoir, maintaining conditions for a cold water fishery throughout the reservoir, including its shallowest waters, may not be feasible. The water quality necessary to fully protect instream beneficial uses should still be protected in other portions of the waterway downstream of the reservoir.

B. Public Interest Balancing

Where water quality is higher than necessary to protect existing instream beneficial uses, the second part of the test applies. This part of the test allows reductions in water quality, so long as existing instream uses are protected, if the State finds "that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located." 40 C.F.R. §131.12(a)(2).

EPA has provided relatively little guidance on how this part of the test should be applied, except to indicate that the meaning of the test "will evolve through case-by-case application" by the State. EPA, Questions & Answers on: Antidegradation 8.

This part of the federal antidegradation policy may best be viewed as a balancing test. The greater the impact on water quality, the greater the justification in terms of economic or social development necessary to justify the change. The burden of proof, to demonstrate that the change in water quality is justified, should be on the project proponent. See State Board Resolution No. 68-16; EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. §131.12 at 9.

The requirement that the change be justified based upon "important economic or social development in the area" is intended to convey the level of justification required. EPA, Questions & Answers on: Antidegradation 8. Cost savings to the discharger, standing alone, absent a demonstration of how these savings are necessary to accommodate important social and economic development, are not adequate justification. State Board Order No. WQ 86-17 at 22 n. 10.

The requirement that the development accommodated by a change in water quality be important "in the area in which the waters are located" is intended to assure that development be important within the general area, not just to a small segment of the local population. The analysis used to determine whether the change in water quality is justified therefore should focus on impacts on the community; if the justification offered for a change in water quality is that it makes a particular development proposal feasible, the importance of that development within the general area should also be analyzed. The reference to economic development "in the area" should not be read to preclude consideration of important development at locations that are far away from the affected waters, so long as it

is demonstrated that the change in water quality is in fact necessary to accommodate that development.

The State has some flexibility to determine what kinds of impacts constitute "important economic or social development" that may justify changes in water quality. For example:

- Accommodating existing development may be used as a justification for changes in water quality. If major employer within the community could not afford to keep its plant in operation without a relaxation of treatment requirements, that may justify a lowering of receiving water quality.

- Important water development and water conservation projects may be considered to be important social and economic development that justify a lowering of water quality. See generally Cal. Water Code §13000.

- Environmental protection may constitute important social development, justifying a change in water quality, even if no other social or economic benefits to the community are demonstrated. If a discharge point is moved to less sensitive waters, the improvement in water quality at the original discharge point may justify the reduction in water quality at the new discharge point.

Of course, the degree to which development must be important in order to justify a change in water quality will depend on the extent to which water quality will be lowered. Thus, even where a new, expanded or relocated discharge is clearly justified, the balancing required by the second part of the federal antidegradation policy's three-part test may require a higher level of treatment than would otherwise be required by applicable Clean Water Act requirements. Conversely, relatively small changes in water quality should not require the level of justification needed for greater changes. EPA intends that the federal antidegradation policy be applied so as to require that development have a relatively high level of importance in order to justify a lowering of water quality. But the policy should not be interpreted to require that a project provide a major source of new housing or employment if only a very small discharge or a minor increase in an existing discharge is proposed.

Obviously, the information needed to apply this part of the federal antidegradation policy will vary according to the particular case. See EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12 at 10. Detailed water quality and economic analyses should be required only if the degree of water quality change is significant. Id. at 6. EPA Region 9 has issued guidance indicating the information it expects to be provided in cases requiring detailed analyses, but the information requirements

will vary according to the type of project, receiving water impacts, and the nature of the social or economic development made possible by the project. Id. at 9-11. The analyses should include consideration of alternatives that would reduce water quality impacts. Id. at 10. Ordinarily, the information necessary to apply the federal antidegradation policy will be provided as part of the environmental documentation prepared for a project. See generally 14 Cal. Admin. Code §§ 15064, 15125, 15126, 15252. Where the State and Regional Boards participate in determining the scope of environmental documentation, and the federal antidegradation policy applies to a project, the Boards should seek to ensure that the requirements of the federal antidegradation policy will be analyzed. See, e.g., id. §15082(b)(1). Where changes in water quality are proposed to accommodate changes in land use, the State and Regional Boards should take into consideration the policies established under the appliable general plan, prepared by the local city or county pursuant to the State Planning and Zoning Law, Cal. Gov't Code §65000 et seq., and the plans of any regional, state or interstate agency with responsibility for land use planning in the area.

The federal antidegradation policy specifies that reductions in water quality may be permitted only after compliance with all applicable requirements for public participation and intergovernmental coordination. 40 C.F.R. §131.12(a)(2). The policy also specifies that all other applicable Clean Water Act requirements for point source discharges, and "all cost-effective and reasonable best management practices for nonpoint source control" shall be achieved. Id. These requirements are implicit in the requirement that changes in water quality must be "necessary to accommodate important economic or social development." Id. The necessity for a change in water quality has not been demonstrated to the extent that other applicable Clean Water Act requirements have not been followed. Nor has the necessity for a change in water quality been demonstrated to the extent that reductions in water quality could be avoided by reasonable and cost-effective control measures.

C. Outstanding National Resource Waters

The third part of the test established by the federal antidegradation policy requires that the water quality of waters which constitute an outstanding National resource be maintained and protected. 40 C.F.R. §131.12(a)(3). This part of the test has only limited applicability, but where it is applicable, it is very restrictive. No permanent or long-term reduction in water quality is allowable in areas given special protection as outstanding National resource waters. 48 Fed. Reg. 51402 (Nov. 8, 1983).

To date, only a small number of water bodies have been formally designated as outstanding National resource waters. The only California water so designated is Lake Tahoe. But other California waters almost certainly qualify.

Outstanding National resource waters are "waters of exceptional recreational or ecological significance." Id. The category may include waters of exceptionally high quality. 48 Fed. Reg. 51402 (Nov. 8, 1983). Outstanding National resource waters may also include:

> "water 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." Id.

The most obvious candidates for designation as outstanding National resource waters are Pacific Ocean waters designated as areas of special biological significance. The Ocean Plan already sets requirements for protection of these areas that are consistent with the strict requirements for protection of outstanding National resource waters. See State Board, Water Quality Control Plan, Ocean Waters of California 9 (1983).

Other possible candidates for designation as outstanding National resource waters include state and federally designated wild and scenic rivers, and the waters of state and federal wilderness areas, parks, and wildlife refuges. Waters are not necessarily outstanding National resource waters simply because they are in one of these categories. Nor should waters outside these areas be excluded from consideration. But waters in these areas should be given special consideration to determine whether they should be designated as outstanding National resource waters.

Outstanding National resource waters may be designated as part of adoption or amendment of water quality control plans. See, e.g., State Board, Lake Tahoe Basin Water Quality Plan 37. See generally Cal. Water Code §13241(b).

Even if no formal designation has been made, individual permit decisions should not allow any lowering of water quality for waters which, because of the exceptional recreational and ecological significance, should be given the special protection assigned to outstanding National resource waters. See generally id. §13263(a) (water quality standards may be set when waste discharge requirements are issued, so long as those standards are no less stringent than any standards set by the applicable water quality control plan). Accordingly, the State and Regional Boards should consider, as part

of individual permit decisions, whether the affected waters should be designated as outstanding National resource waters.

III. Related Doctrines

The federal antidegradation policy applies in addition to any other applicable requirements of state and federal law. Even where a lower level of treatment would be consistent with the federal antidegradation policy, all other applicable regulatory requirements still must be satisfied. See, EPA, Questions & Answers on: Antidegradation 7-9.

In particular, the anti-backsliding requirements of the federal Clean Water Act often will apply in cases where the federal antidegradation policy is applicable.

State Board Resolution No. 68-16, which incorporates the federal antidegradation policy, may provide the basis for additional requirements in specific cases.

A. Anti-backsliding

"Backsliding" refers to reductions in treatment levels required by NPDES permits. EPA regulations limit the circumstances under which modified or reissued permits may set less stringent effluent limitations than required by previous permits. 40 C.F.R. §§122.44(l), 122.62. The Water Quality Act of 1987 includes provisions intended to clarify the Clean Water Act's anti-backsliding requirements. See Clean Water Act §402(o), 33 U.S.C. §1342(o).

The new anti-backsliding provisions generally prohibit relaxation of effluent limitations previously established on the basis of best professional judgment. Id. §402(o)(1), 33 U.S.C. §1342(o)(1). But the prohibition does not apply if any of five listed exceptions is applicable. Id. §402(o)(2), 33 U.S.C. §1342(o)(2).

The anti-backsliding requirements of the Clean Water Act are triggered by changes in the effluent limitations required by the discharger's NPDES permit, not by changes in the level of treatment actually achieved or by changes in receiving water quality. For example, an industrial discharger who failed to install and operate treatment systems required by the discharger's NPDES permit ordinarily could not obtain a relaxation of effluent limitations, even though the federal antidegradation policy would not apply. See id. §402(o)(2)(E), 33 U.S.C. §1342(o)(2)(E). On the other hand, new or expanded discharges ordinarily will not be subject to the anti-backsliding provisions.

The new anti-backsliding provisions also specify limitations on when water quality based effluent limitations may be relaxed. See id. §402(o), 33 U.S.C. §1342(o). If applicable water standards are not being achieved, a relaxation of water quality based effluent

limitations may be permitted if the new effluent limitations are consistent with a revised waste load allocation which will achieve water quality standards. See id. §303(d)(4)(A), 33 U.S.C. §1313(d)(4)(A). If all other applicable water quality standards are being achieved, water quality based effluent limitations may be relaxed if the relaxation is consistent with the federal antidegradation policy. Id. §303(d)(4)(B), 33 U.S.C. §1313(d)(4)(B).

B. State Board Resolution No. 68-16.

State Board Resolution No. 68-16 establishes similar requirements to the federal antidegradation policy. The State Board adopted Resolution No. 68-16, as part of state policy for water quality control, in response to a 1968 Department of Interior directive calling for adoption of state policies. See generally Zener, The Federal Law of Water Pollution Control, published in E. Dolgin & T. Guilbert, Federal Environmental Law 721-23 (1974). That Interior Department directive later became the basis of the federal antidegradation policy promulgated by EPA in 1975. EPA, Questions & Answers on: Antidegradation 1.

Like the federal antidegradation policy, State Board Resolution No. 68-16 is triggered by changes in water quality. But the state policy has broader applicability. It applies to all waters of the State, not just waters of the United States. See State Board Resolution No. 68-16; State Board Order No. WQ 86-8. State Board Resolution No. 68-16 also applies to changes in water quality which occurred after its 1968 adoption date, not just to changes which occurred after the federal antidegradation policy took effect in 1975.

Where the federal antidegradation policy does not apply, the requirements of State Board Order No. 68-16 are less specific than the three-part test set by the federal antidegradation policy. See State Board Order No. WQ 86-17 at 19.

Where the federal antidegradation policy does apply, both the three-part test established by the federal antidegradation policy and the express requirements of State Board Resolution No. 68-16 should be considered. Id. at 23 n. 11. In some cases, application of the three-part test established by the federal policy may not fully satisfy the requirements of State Board Resolution No. 68-16. For example, the State's policy expressly provides for reasonable protection of potential beneficial uses; the federal antidegradation policy does not. See State Board Resolution No. 68-16; EPA, Questions & Answers on: Antidegradation 12. But cf. 40 C.F.R. §131.10(j) (requirement, independent of the federal antidegradation policy, for analysis of the attainability of instream beneficial uses). In all cases where the federal antidegradation policy is applicable, State Board Resolution No. 68-16 requires that, at a minimum, the three-part test established by the federal

antidegradation policy must be satisfied. State Board Order No. WQ 86-17 at 17-18.

Attachments

cc: Fresno, Redding and Victorville
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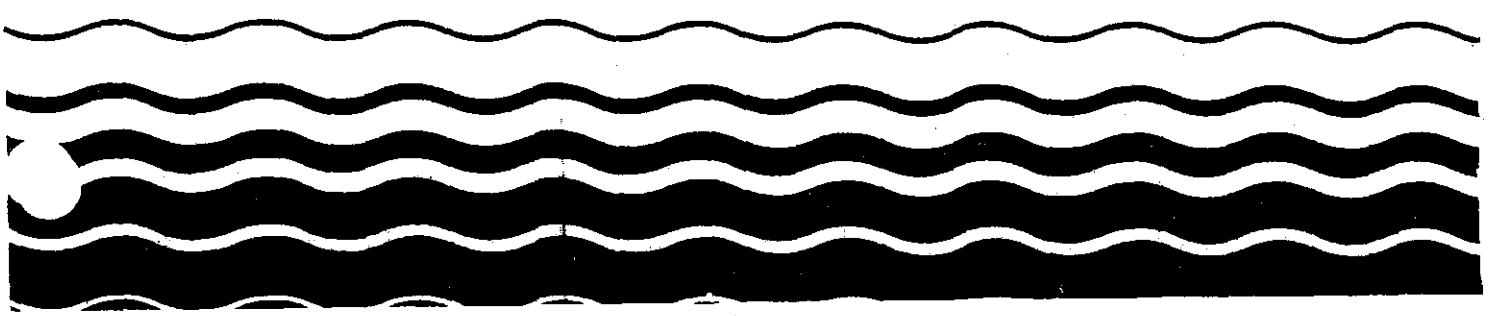
Questions & Answers on: Antidegradation



QUESTIONS AND ANSWERS ON ANTIDEGRADATION

INTRODUCTION

This document provides guidance on the antidegradation policy component of water quality standards and its application. The document begins with the text of the policy as stated in the water quality standards regulation, 40 CFR 131.12 (40 FR 51400, November 8, 1983), the portion of the Preamble discussing the antidegradation policy, and the response to comments generated during the public comment period on the regulation.

The document then uses a question and answer format to present information about the origin of the policy, the meaning of various terms, and its application in both general terms and in specific examples. A number of the questions and answers are closely related; the reader is advised to consider the document in its entirety, for a maximum understanding of the policy, rather than to focus on particular answers in isolation. While this document obviously does not address every question which could arise concerning the policy, we hope that the principles it sets out will aid the reader in applying the policy in other situations. Additional guidance will be developed concerning the application of the antidegradation policy as it affects pollution from nonpoint sources. Since Congress is actively considering amending the Clean Water Act to provide additional programs for the control of nonpoint sources, EPA will await the outcome of congressional action before proceeding further.

EPA also has available, for public information, a summary of each State's antidegradation policy. For historical interest, limited copies are available of a Compendium of Department of the Interior Statements on Non-Degradation of Interstate Waters, August, 1968. Information on any aspect of the water quality standards program and copies of these documents may be obtained from:

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James M. Conlon, Acting Director
Office of Water Regulations
and Standards

§ 131.12 Antidegradation policy.

(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.

Antidegradation Policy

The preamble to the proposed rule discussed three options for changing the existing antidegradation policy. Option 1, the proposed option, provided simply that uses attained would be maintained. Option 2 stated that not only would uses attained be maintained but that high quality waters, i.e. waters with quality better than that needed to protect fish and wildlife, would be maintained (that is, the existing antidegradation policy minus the "outstanding natural resource waters" provision). Option 3 would have allowed changes in an existing use if maintaining that use would effectively prevent any future growth in the community or if the benefits of *maintaining the use do not bear a* reasonable relationship to the costs.

Although there was support for Option 2, there was greater support for retaining the full existing policy, including the provision on outstanding National resource waters. Therefore, EPA has retained the existing antidegradation policy (Section 131.12) because it more accurately reflects the degree of water quality protection desired by the public, and is consistent with the goals and purposes of the Act.

In retaining the policy EPA made four changes. First, the provisions on maintaining and protecting existing instream uses and high quality waters *were retained, but the sentences* stating that no further water quality degradation which would interfere with or becom[illegible] injurious to existing instream uses if [illegible]owed were deleted. The delet[illegible]s were made because the terms "int[illegible]ere" and "injurious" *were subject* to [illegible]sinterpretation as precluding any [illegible]vity which might even momentarily add pollutants to the water. Moreover, we believe the deleted sentence was intended merely as a restatement of the basic policy. Since the rewritten provision, with the addition of a phrase on water quality described in the next sentence, stands alone as expressing the basic thrust and intent of the antidegradation policy, we deleted the confusing phrases. Second, in § 131.12(a)(1) a phrase was added requiring that the level of water quality necessary to protect an existing use be maintained and protected. The previous policy required only that an existing use be maintained. In § 131.12(a)(2) a phrase was added that "In allowing such *degradation or lower water quality*, the State shall assure water quality adequate to protect existing uses fully". This means that the full use must continue to exist even if some change in water quality may be permitted. Third, in the first sentence of § 131.12(a)(2) the wording was changed from ". . . significant economic or social development . . ." to ". . . important economic or social development. . . ." In the context of t[illegible] antidegradation policy the word "important" strengthens the intent of protecting higher quality waters. Although common usage of the words may imply otherwise, the correct definitions of the two terms indicate that the greater degree of environmental protection is afforded by the word "important."

Fourth, § 131.12(a)(3) dealing with the designation of outstanding National resource waters (ONRW) was changed to *provide a limited exception to the* absolute "no degradation" requirement. EPA was concerned that waters which properly could have been designated as ONRW were not being so designated because of the flat no degradation provision, and therefore were not being given special protection. The no degradation provision was sometimes interpreted as prohibiting *any* activity (including temporary or short-term) from being conducted. States may allow some limited activities which result in temporary and short-term changes in water quality. Such activities are considered to be consistent with the intent and purpose of an ONRW. *Therefore*, EPA has rewritten the provision to read ". . . that water quality shall be maintained and protected," and removed the phrase "No degradation shall be allowed. . . ."

In its entirety, the antidegradation policy represents a three-tiered approach to maintaining and protecting various levels of water quality and uses. At its base (Section 131.12(a)(1)), all existing uses and the level of water quality necessary to protect those uses must be maintained and protected. This provision establishes the absolute floor of water quality in all waters of the United States. The second level (Section 131.12(a)(2)) provides protection of actual water quality in areas where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water ("fishable/swimmable"). There are provisions contained in this subsection to allow some limited water quality degradation after extensive public involvement, as long as the water quality remains adequate to be "fishable/swimmable." Finally § 131.23(a)(3) provides special protection of waters for which the ordinary use classifications and water quality criteria do not suffice, denoted "outstanding National resource water." *Ordinarily most people view this* subsection as protecting and maintaining the highest quality waters of the United States; that is clearly the thrust of the provision. It does, however, also offer special protection for waters of "ecological significance." *These are* water bodies which are important, unique, or sensitive ecologically, but whose water quality as measured by the traditional parameters (dissolved oxygen, pH, etc.) may not be particularly high or whose character cannot be adequately described by these parameters.

Antidegradation Policy

EPA's proposal, which would have limited the antidegradation policy to the maintenance of existing uses, plus three alternative policy statements described in the preamble to the proposal notice, generated extensive public comment. EPA's response is described in the Preamble to this final rule and includes a response to both the substantive and philosophical comments offered. Public comments overwhelmingly supported retention of the existing policy and EPA did so in the final rule.

EPA's response to several comments dealing with the antidegradation policy, which were not discussed in the Preamble are discussed below.

Option three contained in the Agency's proposal would have allowed the possibility of exceptions to maintaining existing uses. This option was either criticized for being illegal or was supported because it provided additional flexibility for economic growth. The latter commenters believed that allowances should be made for carefully defined exceptions to the absolute requirement that uses attained must be maintained. EPA rejects this contention as being totally inconsistent with the spirit and intent of both the Clean Water Act and the underlying philosophy of the antidegradation policy. Moreover, although the Agency specifically asked for examples of where the existing antidegradation policy had precluded growth, no examples were provided. Therefore, wholly apart from technical legal concerns, there appears to be no justification for adopting Option 3.

Most critics of the proposed antidegradation policy objected to removing the public's ability to affect decisions on high quality waters and outstanding national resource waters. In attempting to explain how the proposed antidegradation policy would be implemented, the Preamble to the proposed rule stated that no public participation would be necessary in certain instances because no change

was being made in a State's water quality standard. Although that statement was technically accurate, it left the mistaken impression that all public participation was removed from the discussions on high quality waters and that is not correct. A NPDES permit would have to be issued or a 208 plan amended for any deterioration in water quality to be "allowed". Both actions require notice and an opportunity for public comment. However, EPA retained the existing policy so this issue is moot. Other changes in the policy affecting ONRW are discussed in the Preamble.

QUESTIONS AND ANSWERS ON ANTIDEGRADATION

1. WHAT IS THE ORIGIN OF THE ANTIDEGRADATION POLICY?

The basic policy was established on February 8, 1968, by the Secretary of the U.S. Department of the Interior. It was included in EPA's first water quality standards regulation 40 CFR 130.17, 40 FR 55340-41, November 28, 1975. It was slightly refined and repromulgated as part of the current program regulation published on November 8, 1983 (48 FR 51400, 40 CFR §131.12). An antidegradation policy is one of the minimum elements required to be included in a State's water quality standards.

2. WHERE IN THE CLEAN WATER ACT (CWA) IS THERE A REQUIREMENT FOR AN ANTIDEGRADATION POLICY OR SUCH A POLICY EXPRESSED?

There is no explicit requirement for such a policy in the Act. However, the policy is consistent with the spirit, intent, and goals of the Act, especially the clause "... restore and maintain the chemical, physical and biological integrity of the Nation's waters" (§101(a)) and arguably is covered by the provision of 303(a) which made water quality standard requirements under prior law the "starting point" for CWA water quality requirements.

3. CAN A STATE JUSTIFY NOT HAVING AN ANTIDEGRADATION POLICY IN ITS WATER QUALITY STANDARDS?

EPA's water quality standards regulation requires each State to adopt an antidegradation policy and specifies the minimum requirements for a policy. If not included in the standards regulation of a State, the policy must be specifically referenced in the water quality standards so that the functional relationship between the policy and the standards is clear. Regardless of the location of the policy, it must meet all applicable requirements.

4. WHAT HAPPENS IF A STATE'S ANTIDEGRADATION POLICY DOES NOT MEET THE REGULATORY REQUIREMENTS?

If this occurs either through State action to revise its policy or through revised Federal requirements, the State would be given an opportunity to make its policy consistent with the regulation. If this is not done, EPA has the authority to promulgate the policy for the State pursuant to Section 303(c)(4) of the Clean Water Act.

5. WHAT COULD HAPPEN IF A STATE FAILED TO IMPLEMENT ITS ANTI-DEGRADATION POLICY PROPERLY?

If a State issues an NPDES permit which violates the required antidegradation policy, it would be subject to a discretionary EPA veto under Section 402(d) or to a citizen challenge. In addition to actions on permits, any wasteload allocations and total maximum daily loads violating the antidegradation policy are subject to EPA disapproval and EPA promulgation of a new wasteload allocation/total maximum daily load under Section 303(d) of the Act. If a significant pattern of violation was evident, EPA could constrain the award of grants or possibly revoke any Federal permitting capability that had been delegated to the State. If the State issues a §401 certification (for an EPA-issued NPDES permit) which fails to reflect the requirements of the antidegradation policy, EPA will, on its own initiative, add any additional or more stringent effluent limitations required to ensure compliance with Section 301(b)(1)(C). If the faulty §401 certification related to permits issued by other Federal agencies (e.g. a Corp of Engineers Section 404 permit), EPA could comment unfavorably upon permit issuance. The public, of course, could bring pressure upon the permit issuing agency.

6. WILL THE APPLICATION OF THE ANTIDEGRADATION POLICY ADVERSELY IMPACT ECONOMIC DEVELOPMENT?

This concern has been raised since the inception of the antidegradation policy. The answer remains the same. The policy has been carefully structured to minimize adverse effects on economic development while protecting the water quality goals of the Act. As Secretary Udall put it in 1968, the policy serves "...the dual purpose of carrying out the letter and spirit of the Act without interfering unduly with further economic development" (Secretary Udall, February 8, 1968). Application of the policy could affect the levels and/or kinds of waste treatment necessary or result in the use of alternate sites where the environmental impact would be less damaging. These effects could have economic implications as do all other environmental controls.

7. WHAT IS THE PROPER INTERPRETATION OF THE TERM "AN EXISTING USE"?

An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur (unless there are physical problems which prevent the use regardless of water quality). An example of the latter is an area where shellfish are propagating and surviving in a biologically suitable habitat and are available and suitable for harvesting. Such facts clearly establish that shellfish harvesting is an "existing" use, not one dependent on improvements in water quality. To argue otherwise would be to say that

the only time an aquatic protection use "exists" is if someone succeeds in catching fish.

8. THE WATER QUALITY STANDARDS REGULATION STATES THAT "EXISTING USES AND THE LEVEL OF WATER QUALITY NECESSARY TO PROTECT THE EXISTING USES SHALL BE MAINTAINED AND PROTECTED." HOW FULLY AND AT WHAT LEVEL OF PROTECTION IS AN EXISTING USE TO BE PROTECTED IN ORDER TO SATISFY THE ABOVE REQUIREMENT?

No activity is allowable under the antidegradation policy which would partially or completely eliminate any existing use whether or not that use is designated in a State's water quality standards. The aquatic protection use is a broad category requiring further explanation. Species that are in the water body and which are consistent with the designated use (i.e., not aberrational) must be protected, even if not prevalent in number or importance. Nor can activity be allowed which would render the species unfit for maintaining the use. Water quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species. (See Question 16 for situation where an aberrant sensitive species may exist.) Any lowering of water quality below this full level of protection is not allowed. A State may develop subcategories of aquatic protection uses but cannot choose different levels of protection for like uses. The fact that sport or commercial fish are not present does not mean that the water may not be supporting an aquatic life protection function. An existing aquatic community composed entirely of invertebrates and plants, such as may be found in a pristine alpine tributary stream, should still be protected whether or not such a stream supports a fishery. Even though the shorthand expression "fishable/swimmable" is often used, the actual objective of the act is to "restore and maintain the chemical, physical, and biological integrity of our Nation's waters (section 101(a)).1/ The term "aquatic life" would more accurately reflect the protection of the aquatic community that was intended in Section 101(a)(2) of the Act.

9. IS THERE ANY SITUATION WHERE AN EXISTING USE CAN BE REMOVED?

In general, no. Water quality may sometimes be affected, but an existing use, and the level of water quality to protect it must be maintained (§131.12(a)(1) and (2) of the regulation). However, the State may limit or not designate such a use if the reason for such action is non-water quality related. For example, a State may wish to impose a temporary shellfishing ban to prevent overharvesting and ensure an abundant population over the long run, or may wish to restrict swimming from heavily trafficked areas. If the State chooses,

1/ Note: "Fishable/swimmable" is a term of convenience used in the standards program in lieu of constantly repeating the entire text of Section 101(a)(2) goal of the Clean Water Act. As a short-hand expression it is potentially misleading.

for non-water quality reasons, to limit use designations, it must still adopt criteria to protect the use if there is a reasonable likelihood it will actually occur (e.g. swimming in a prohibited water). However, if the State's action is based on a recognition that water quality is likely to be lowered to the point that it no longer is sufficient to protect and maintain an existing use, then such action is inconsistent with the antidegradation policy.

10. HOW DOES THE REQUIREMENT THAT THE LEVEL OF WATER QUALITY NECESSARY TO PROTECT THE EXISTING USE(S) BE MAINTAINED AND PROTECTED, WHICH APPEARS IN §131.12(a)(1),(2), AND (3) OF THE WATER QUALITY STANDARDS REGULATION, ACTUALLY WORK?

Section 131.12(a)(1), as described in the Preamble to the regulation, provides the absolute floor of water quality in all waters of the United States. This paragraph applies a minimum level of protection to all waters. However, it is most pertinent to waters having beneficial uses that are less than the Section 101(a)(2) goals of the Act. If it can be proven, in that situation, that water quality exceeds that necessary to fully protect the existing use(s) and exceeds water quality standards but is not of sufficient quality to cause a better use to be achieved, then that water quality may be lowered to the level required to fully protect the existing use as long as existing water quality standards and downstream water quality standards are not affected. If this does not involve a change in standards, no public hearing would be required under Section 303(c). However, public participation would still be provided in connection with the issuance of a NPDES permit or amendment of a 208 plan. If, however, analysis indicates that the higher water quality does result in a better use, even if not up to the Section 101(a)(2) goals, then the water quality standards must be upgraded to reflect the uses presently being attained (§131.10(i)).

Section 131.12(a)(2) applies to waters whose quality exceeds that necessary to protect the Section 101(a)(2) goals of the Act. In this case, water quality may not be lowered to less than the level necessary to fully protect the "fishable /swimmable" uses and other existing uses and may be lowered even to those levels only after following all the provisions described in §131.12(a)(2). This requirement applies to individual water quality parameters.

Section 131.12(a)(3) applies to so-called outstanding National Resource (ONRW) waters where the ordinary use classifications and supporting criteria are not appropriate. As described in the Preamble to the water quality standards regulation "States may allow some limited activities which result in temporary and short-term changes in water quality," but such changes in water quality should not alter the essential character or special use which makes the water an ONRW. (See also pages 2-14,-15 of the Water Quality Standards Handbook.)

Any one or a combination of several activities may trigger the antidegradation policy analysis as discussed above. Such activities include a scheduled water quality standards review,

the establishment of new or revised wasteload allocations NPDES permits, the demonstration of need for advanced treatment or request by private or public agencies or individuals for a special study of the water body.

11. WILL AN ACTIVITY WHICH WILL DEGRADE WATER QUALITY, AND PRECLUDE AN EXISTING USE IN ONLY A PORTION OF A WATER BODY (BUT ALLOW IT TO REMAIN IN OTHER PARTS OF THE WATER BODY) SATISFY THE ANTIDEGRADATION REQUIREMENT THAT EXISTING USES SHALL BE MAINTAINED AND PROTECTED?

No. Existing uses must be maintained in all parts of the water body segment in question other than in restricted mixing zones. For example, an activity which lowers water quality such that a buffer zone must be established within a previous shellfish harvesting area is inconsistent with the antidegradation policy. (However, a slightly different approach is taken for fills in wetlands, as explained in Question 13.)

12. DOES ANTIDEGRADATION APPLY TO POTENTIAL USES?

No. The focus of the antidegradation policy is on protecting existing uses. Of course, insofar as existing uses and water quality are protected and maintained by the policy the eventual improvement of water quality and attainment of new uses may be facilitated. The use attainability requirements of §131.10 also help ensure that attainable potential uses are actually attained. (See also questions 7 and 10.)

13. FILL OPERATIONS IN WETLANDS AUTOMATICALLY ELIMINATE ANY EXISTING USE IN THE FILLED AREA. HOW IS THE ANTIDEGRADATION POLICY APPLIED IN THAT SITUATION?

Since a literal interpretation of the antidegradation policy could result in preventing the issuance of any wetland fill permit under Section 404 of the Clean Water Act, and it is logical to assume that Congress intended some such permits to be granted within the framework of the Act, EPA interprets §131.12 (a)(1) of the antidegradation policy to be satisfied with regard to fills in wetlands if the discharge did not result in "significant degradation" to the aquatic ecosystem as defined under Section 230.10(c) of the Section 404(b)(1) guidelines. If any wetlands were found to have better water quality than "fishable/ swimmable", the State would be allowed to lower water quality to the no significant degradation level as long as the requirements of Section 131.12(a)(2) were followed. As for the ONRW provision of antidegradation (131.(a)(2)(3)), there is no difference in the way it applies to wetlands and other water bodies.

14. IS POLLUTION RESULTING FROM NONPOINT SOURCE ACTIVITIES SUBJECT TO PROVISIONS OF THE ANTIDEGRADATION POLICY?

Nonpoint source activities are not exempt from the provisions of the antidegradation policy. The language of Section 131.12 (a)(2) of the regulation: "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 mangement practices for nonpoint source control" reflects statutory provisions of the Clean Water Act. While it is true that the Act does not establish a regulatory program for nonpoint sources, it clearly intends that the BMPs developed and approved under sections 205(j), 208 and 303(e) be agressively implemented by the States. As indicated in the introduction, EPA will be developing additional guidance in this area.

15. IN HIGH QUALITY WATERS, ARE NEW DISCHARGERS OR EXPANSION OF EXISTING FACILITIES SUBJECT TO THE PROVISIONS OF ANTIDEGRADATION?

Yes. Since such activities would presumably lower water quality, they would not be permissible unless the State finds that it is necessary to accommodate important economic or social development (Section 131.12(a)(2). In addition the minimum technology based requirements must be met, including new source performance standards. This standard would be implemented through the waste-load and NPDES permit process for such new or expanded sources.

16. A STREAM, DESIGNATED AS A WARM WATER FISHERY, HAS BEEN FOUND TO CONTAIN A SMALL, APPARENTLY NATURALLY OCCURRING POPULATION OF A COLD-WATER GAME FISH. THESE FISH APPEAR TO HAVE ADAPTED TO THE NATURAL WARM WATER TEMPERATURES OF THE STREAM WHICH WOULD NOT NORMALLY ALLOW THEIR GROWTH AND REPRODUCTION. WHAT IS THE EXISTING USE WHICH MUST BE PROTECTED UNDER SECTION 131.12(a)(1)?

Section 131.12(a)(1) states that "Existing instream water uses and level of water quality necessary to protect the existing uses shall be maintained and protected." While sustaining a small cold-water fish population, the stream does not support an existing use of a "cold-water fishery." The existing stream temperatures are unsuitable for a thriving cold-water fishery. The small marginal population is an artifact and should not be employed to mandate a more stringent use (true cold-water fishery) where natural conditions are not suitable for that use.

A use attainability analysis or other scientific assessment should be used to determine whether the aquatic life population is in fact an artifact or is a stable population requiring

water quality protection. Where species appear in areas not normally expected, some adaptation may have occurred and site-specific criteria may be appropriately developed. Should the cold-water fish population consist of a threatened or endangered species, it may require protection under the Endangered Species Act. Otherwise the stream need only be protected as a warm water fishery.

17. HOW DOES EPA'S ANTIDEGRADATION POLICY APPLY TO A WATERBODY WHERE A CHANGE IN MAN'S ACTIVITIES IN OR AROUND THAT WATERBODY WILL PRECLUDE AN EXISTING USE FROM BEING FULLY MAINTAINED?

If a planned activity will forseeably lower water quality to the extent that it no longer is sufficient to protect and maintain the existing uses in that waterbody, such an activity is inconsistent with EPA's antidegradation policy which requires that existing uses are to be maintained. In such a circumstance the planned activity must be avoided or adequate mitigation or preventive measures must be taken to ensure that the existing uses and the water quality to protect them will be maintained.

In addition, in "high quality waters", under §131.12(a)(2), before any lowering of water quality occurs, there must be: 1) a finding that it is necessary in order to accommodate important economical or social development in the area in which the waters are located, (2) full satisfaction of all intergovernmental coordination and public participation provisions and (3) assurance that the highest statutory and regulatory requirements and best management practices for pollutant controls are achieved. This provision can normally be satisfied by the completion of Water Quality Management Plan updates or by a similar process that allows for public participation and intergovernmental coordination. This provision is intended to provide relief only in a few extra-ordinary circumstances where the economic and social <u>need</u> for the activity clearly outweighs the benefit of maintaining water quality above that required for "fishable/swimmable" water, and the two cannot both be achieved. The burden of demonstration on the individual proposing such activity will be very high. In any case, moreover, the existing use must be maintained and the activity shall not preclude the maintenance of a "fishable/swimmable" level of water quality protection.

18. WHAT DOES EPA MEAN BY "...THE STATE SHALL ENSURE 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 NON-POINT SOURCE CONTROL" (§131.12(a)(2)?

This requirement ensures that the limited provision for lowering water quality of high quality waters down to "fishable /swimmable" levels will not be used to undercut the Clean Water Act requirements for point source and non-point source pollution control. Furthermore, by ensuring compliance

with such statutory and regulatory controls, there is less chance that a lowering of water quality will be sought in order to accommodate new economic and social development.

19. WHAT DOES EPA MEAN BY "...IMPORTANT ECONOMIC OR SOCIAL DEVELOPMENT IN THE AREA IN WHICH THE WATERS ARE LOCATED" IN 131.1 2(a)(2)?

This phrase is simply intended to convey a general concept regarding what level of social and economic development could be used to justify a change in high quality waters. Any more exact meaning will evolve through case-by-case application under the State's continuing planning process. Although EPA has issued suggestions on what might be considered in determining economic or social impacts, the Agency has no predetermined level of activity that is defined as "important".

20. IF A WATER BODY WITH A PUBLIC WATER SUPPLY DESIGNATED USE IS, FOR NON-WATER QUALITY REASONS, NO LONGER USED FOR DRINKING WATER MUST THE STATE RETAIN THE PUBLIC WATER SUPPLY USE AND CRITERIA IN ITS STANDARDS?

Under 40 CFR 131.10(h)(1), the State may delete the public water supply use designation and criteria if the State adds or retains other use designations for the waterbodies which have more stringent criteria. The State may also delete the use and criteria if the public water supply is not an "existing use" as defined in 131.3 (i.e., achieved on or after November 1975), as long as one of the §131.10(g) justifications for removal is met.

Otherwise, the State must maintain the criteria even if it restricts the actual use on non-water quality grounds, as long as there is any possibility the water could actually be used for drinking. (This is analogous to the swimming example in the preamble.)

21. WHAT IS THE RELATIONSHIP BETWEEN WASTELOAD ALLOCATIONS, TOTAL MAXIMUM DAILY LOADS, AND THE ANTIDEGRADATION POLICY?

Wasteload allocations distribute the allowable pollutant loadings to a stream between dischargers. Such allocations also consider the contribution to pollutant loadings from non-point sources. Wasteload allocations must reflect applicable State water quality standards including the antidegradation policy. No wasteload allocation can be develped or NPDES permit issued that would result in standard being violated, or, in the case of waters whose quality exceeds that necessary for the Section 101(a)(2) goals of the Act, can result a lowering of water quality unless the applicable public participation, intergovernmental review and baseline control requirements of the antidegradation policy have been met.

22. DO THE INTERGOVERNMENTAL COORDINATION AND PUBLIC PARTICIPATION REQUIREMENTS WHICH ESTABLISH THE PROCEDURES FOR DETERMINING THAT WATER QUALITY WHICH EXCEEDS THAT NECESSARY TO SUPPORT THE SECTION 101(a)(2) GOAL OF THE ACT MAY BE LOWERED APPLY TO CONSIDERING ADJUSTMENTS TO THE WASTELOAD ALLOCATIONS DEVELOPED FOR THE DISCHARGERS IN THE AREA?

Yes. Section 131.12(a)(2) of the water quality standards regulation is directed towards changes in water quality per se, not just towards changes in standards. The intent is to ensure that no activity which will cause water quality to decline in existing high quality waters is undertaken without adequate public review. Therefore, if a change in wasteload allocation could alter water quality in high quality waters, the public participation and coordination requirements apply.

23. IS THE ANSWER TO THE ABOVE QUESTION DIFFERENT IF THE WATER QUALITY IS LESS THAN THAT NEEDED TO SUPPORT "FISHABLE/SWIMMABLE" USES?

Yes. Nothing in either the water quality standards or the wasteload allocation regulations requires the same degree of public participation or intergovernmental coordination for such waters as is required for high quality waters. However, as discussed in question 10, public participation would still be provided in connection with the issuance of a NPDES permit or amendment of a 208 plan. Also, if the action which causes reconsideration of the existing wasteloads (such as dischargers withdrawing from the area) will result in an improvement in water quality which makes a better use attainable, even if not up to the "fishable/swimmable" goal, then the water quality standards must be upgraded and full public review is required for any action affecting changes in standards. Although not specifically required by the standards regulation between the triennial reviews, we recommend that the State conduct a use attainability analysis to determine if water quality improvement will result in attaining higher uses than currently designated in situations where significant changes in wasteloads are expected (see question 10).

24. SEVERAL FACILITIES ON A STREAM SEGMENT DISCHARGE PHOSPHORUS-CONTAINING WASTES. AMBIENT PHOSPHORUS CONCENTRATIONS MEET CLASS B STANDARDS, BUT BARELY. THREE DISCHARGERS ACHIEVE ELIMINATION OF DISCHARGE BY DEVELOPING A LAND TREATMENT SYSTEM. AS A RESULT, ACTUAL WATER QUALITY IMPROVES (I.E., PHOSPHORUS LEVELS DECLINE) BUT NOT QUITE TO THE LEVEL NEEDED TO MEET CLASS A (FISHABLE/SWIMMABLE) STANDARDS. CAN THE THREE REMAINING DISCHARGERS NOW INCREASE THEIR PHOSPHORUS DISCHARGE WITH THE RESULT THAT WATER QUALITY DECLINES (PHOSPHORUS LEVELS INCREASE) TO PREVIOUS LEVELS?

Nothing in the water quality standards regulation explicitly prohibits this (see answer to questions 10 and 23). Of course, changes in their NPDES permit limits may be subject to non-water quality constraints, such as BPT or BAT, which may restrict this.

25. SUPPOSE IN THE ABOVE SITUATION WATER QUALITY IMPROVES TO THE POINT THAT ACTUAL WATER QUALITY NOW MEETS CLASS A REQUIREMENTS. IS THE ANSWER DIFFERENT?

Yes. The standards must be upgraded (see answer to question 10).

26. AS AN ALTERNATIVE CASE, SUPPOSE PHOSPHORUS LOADINGS GO DOWN AND WATER QUALITY IMPROVES BECAUSE OF A CHANGE IN FARMING PRACTICES, E.G., INITIATION OF A SUCCESSFUL NON-POINT PROGRAM. ARE THE ABOVE ANSWERS THE SAME?

Yes. Whether the improvement results from a change in point or nonpoint source activity is immaterial to how any aspect of the standards regulation operates. Section 131.10(d) clearly indicates that uses are deemed attainable if they can be achieved by "... cost-effective and reasonable best management practices for nonpoint source control". Section 131.12(a)(2) of the anti-degradation policy contains essentially the same wording.

27. WHEN A POLLUTANT DISCHARGE CEASES FOR ANY REASON, MAY THE WASTELOAD ALLOCATIONS FOR THE OTHER DISCHARGES IN THE AREA BE ADJUSTED TO REFLECT THE ADDITIONAL LOADING AVAILABLE?

This may be done consistent with the antidegradation policy only under two circumstances: (1) In "high quality waters" where after the full satisfaction of all public participation and intergovernmental review requirements, such adjustments are considered necessary to accomodate important economic or social development, and the "threshold" level requirements are met; or (2) in less than "high quality waters", when the expected improvement in water quality will not cause a better use to be achieved, the adjusted loads still meet water quality standards, and the new wasteload allocations are at least as stringent as technology-based limitations. Of course, all applicable requirements of the Section 402 permit regulations would have to be satisfied before a permittee could increase its discharge.

28. HOW MAY THE PUBLIC PARTICIPATION REQUIREMENTS BE SATISFIED?

This requirement may be satisfied in several ways. The State may obviously hold a public hearing or hearings. The State may also satisfy the requirement by providing the opportunity for the public to request a hearing. Activities which may affect several water bodies in a river basin or sub-basin may be considered in a single hearing. To ease the resource burden on both the State and public, standards issues may be combined with hearings on environmental impact statements, water management plans, or permits. However, if this is done, the public must be clearly informed that possible changes in water quality standards are being considered along with other activities. In other words, it is inconsistent with the water quality standards regulation to "back-door" changes in standards through actions on EIS's, wasteload allocations, plans, or permits.

29. WHAT IS MEANT BY THE REQUIREMENT THAT, WHERE A THERMAL DISCHARGE IS INCLUDED, THE ANTIDEGRADATION POLICY SHALL BE CONSISTENT WITH SECTION 316 OF THE ACT?

This requirement is contained in Section 131.12 (a)(4) of the regulation and is intended to coordinate the requirements and procedures of the antidegadation policy with those established in the Act for setting thermal discharge limitations. Regulations implementing Section 316 may be found at 40 CFR 124.66. The statutory scheme and legislative history indicate that limitations developed under Section 316 take precedence over other requirements of the Act.

30. WHAT IS THE RELATIONSHIP BETWEEN THE ANTIDEGRADATION POLICY, STATE WATER RIGHTS USE LAWS AND SECTION 101(g) OF THE CLEAN WATER ACT WHICH DEALS WITH STATE AUTHORITY TO ALLOCATE WATER QUANTITIES?

The exact limitations imposed by section 101(g) are unclear; however, the legislative history and the courts interpreting it do indicate that it does not nullify water quality measures authorized by CWA (such as water quality standards and their upgrading, and NPDES and 402 permits) even if such measures incidentally affect individual water rights; those authorities also indicate that if there is a way to reconcile water quality needs and water quantity allocations, such accomodation should be be pursued. In other words, where there are alternate ways to meet the water quality requirements of the Act, the one with least disruption to water quantity allocations should be chosen. Where a planned diversion would lead to a violation of water quality standards (either the antidegradation policy or a criterion), a 404 permit associated with the diversion should be suitably conditioned if possible and/or additional nonpoint and/or point source controls should be imposed to compensate.

31. AFTER READING THE REGULATION, THE PREAMBLE, AND ALL THESE QUESTIONS AND ANSWERS, I STILL DON'T UNDERSTAND ANTIDEGRADATION. WHOM CAN I TALK TO?

Call the Standards Branch at: (202) 245-3042. You can also call the water quality standards coordinators in each of our EPA Regional offices.

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region 9

Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12

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Date

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PURPOSE

This document provides general program guidance for the States of Region 9 on the development of procedures for implementing State antidegradation policies. The focus of this guidance is on 40 CFR 131.12 of the water quality standards regulation (promulgated in 48 FR 51407, dated November 8, 1983) which sets out requirements to be met before any action is taken that would lower the quality of the Nation's waters.

BACKGROUND

Section 101(a) of the Clean Water Act defines the national goal of restoring and maintaining the chemical, physical and biological integrity of the Nation's waters. Section 303(a)(4) of the Clean Water Act explicitly refers to satisfaction of the antidegradation requirements of 40 CFR 131.12 prior to taking various actions which would lower water quality. 40 CFR 131.12 requires that antidegradation provisions at least as stringent as those specified in that regulation be adopted by States as part of their water quality standards.

This guidance identifies the tasks to be performed by States to implement Section 131.12 of the water quality standards regulation. Those tasks that need the development of decision criteria by the States are identified. Such criteria are necessary to define those actions which require detailed economic or water quality impact analyses. The Agency expects States to develop and document these criteria in their antidegradation implementation procedures, for review and approval by EPA regional offices. The Agency's objective is to achieve the goals of the Act through an integrated approach to eliminating water pollution which includes the consistent application of State antidegradation policies. Figure 1 lays out the decision making process of an antidegradation analysis.

Many of the procedures identified herein are already performed by States as part of their regulatory programs. Consequently, this document primarily serves to delineate, in a consistent manner, the criteria EPA Region 9 will be using to evaluate both State and EPA decisions, for compliance with 40 CFR 131.12.

TIER III WATERS - Outstanding National Resource Waters

40 CFR 131.12(a)(3) prohibits any action which would lower water quality in waters designated as Outstanding National Resource Waters (ONRWs). Examples of such waters include, but are not limited to, waters of National and State parks and wildlife refuges, and waters of exceptional recreational or ecological significance.

TIER I WATERS

40 CFR 131.12(a)(1) prohibits any action which would lower water quality below that necessary to maintain and protect existing uses. In cases where water quality is just adequate to support the propagation of fish, shell fish and wildlife and recreation in and on the water, such water quality must be maintained and protected. In cases where water quality is lower than necessary to support these uses, the requirements in Section 303(d) of the Act, 40 CFR 131.10 and other pertinent regulations must be satisfied. Guidance concerning actions affecting these waters has been published elsewhere and will not be repeated here.

TIER II WATERS - High Quality Waters

Applicability

40 CFR 131.12 establishes certain minimum requirements for States to adopt regulating actions which would lower water quality in high quality waters. These waters are defined as those in which water quality exceeds that necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water. Any action which would result in, or which would permit, a lowering of water quality must be addressed in State implementation procedures. Actions covered by antidegradation provisions include, but are not limited to the following:

Permit Actions

1. Issuance/Re-issuance/Modification of NPDES permits

2. Issuance of variances (e.g. 301(h), 301(m), etc.)

3. Issuance of permits for urban runoff

4. Issuance of Section 404 permits

5. Adoption of or alteration of mixing zones

6. Relocation of discharge

7. Commencement of discharge from a new source

8. Increases in the discharge of pollutants from point sources due to:

   a. Industrial production increases

   b. Municipal growth

   c. New sources

   d. Etc.

Standards/Load Allocation Actions

1. Water quality standards revisions

2. Revision of wasteload allocations

3. Reallocation of abandoned loads

4. Section 401 certifications (for example; concerning FERC licenses, Corps' actions, etc.)

5. Section 208 or Section 303(e) approvals

6. WQM plan approvals

"Non-point Source" Actions

1. Changes in BMPs

2. Resource management plan approvals

3. Land Management (e.g. Forest) plan adoptions, certifications or approvals

4. Changes in regulated agricultural activities

5. Changes in regulated silvicultural activities

6. Changes in regulated mining activities

7. Construction and operation of roads, dams, etc.

Other Actions

1. RCRA/CERCLA actions

2. Construction grant activities

3. Other "major Federal actions" (pursuant to NEPA and the Endangered Species Act)

4. Water quantity/water rights actions which affect water quality

5. Federal actions regulated by Section 313 of the Clean Water Act

*Prior to proceeding with a detailed analysis of these or similar actions, the affected water body should be assessed to determine whether or not it falls into either Tier I or Tier III. If so, actions which would lower water quality in such waters are prohibited. Otherwise, the water body should be assessed to determine the adequacy of the beneficial uses and water quality criteria designated for that water body. Adequate water quality standards must be adopted and approved for an affected water body, pursuant to 40 CFR 131 prior to allowing any action to proceed which would lower water quality in that water body.

The first step in any antidegradation analysis is to determine whether or not the proposed action will lower water quality (see Figure 1). If the action will not lower water quality, no further analysis is needed and EPA considers 40 CFR 131.12 to be satisfied. If the action could or will lower water quality, and the affected water is not a Tier I or Tier III water, then the steps to be followed to determine whether or not 40 CFR 131.12 is satisfied are described in the following sections of this guidance.

Both point and non-point sources of pollution are subject to antidegradation requirements. While point sources are generally well regulated, procedures for controlling non-point source pollution have not been as extensively defined. Cost-effective and reasonable best management practices for non-point source controls must be designed to meet water quality standards. EPA policy, first issued as SAM-32 on November 14, 1978, states that where applicable water quality standards are not met, revised or additional best management practices (BMPs) should be applied in an iterative process to improve water quality to the point that standards are attained, and that designated uses are maintained and protected. In Region 9, States generally have broad authority to regulate non-point sources. As part of their implementation methodologies, States must adopt procedures which adequately assure that non-point sources of water pollution will comply with the antidegradation requirements of 40 CFR 131.12.

Implementation Procedures

Four basic elements should be included in State implementation procedures to ensure that actions affecting water quality are consistent with the provisions of 40 CFR 131.12. They are:

- Task A - Identify Actions that Require Detailed Water Quality and Economic Impact Analyses
- Task B - Determine that Lower Water Quality Will Fully Protect Designated Uses
- Task C - Determine That Lower Water Quality is Necessary to Accommodate Important Economic or Social Development in the Area in which the Waters are Located
- Task D - Complete Intergovernmental Coordination and Public Participation

Task A - Identify Actions that Require Detailed Water Quality and Economic Impact Analyses

This task established the types of analyses required for all actions that lower water quality in Tier II waters and decision criteria that define the degree of water quality and economic analysis required.

State procedures should include three parts. First, the State should develop procedures to document the degree to which water quality exceeds that necessary to protect the uses. Ambient monitoring data can be used to provide this documentation. States must adopt procedures to assure that, where little or no data exists, adequate information will be available to determine the existing quality of the water body or bodies, which could be adversely affected by the proposed action. Such procedures should include both an assessment of existing water quality and a determination of which water quality parameters and beneficial uses are likely to be affected. These assessments and determinations could be performed either by the State or the party proposing the action in question.

Second, the State should develop procedures that quantify the extent to which water quality will be lowered as a result of the proposed action. Simple mass balance calculations or more detailed mathematic modelling, such as that contained in waste-load allocations, can provide this information. Third, the State should develop decision criteria to define the degree of water quality change that warrants detailed water quality and economic impact analyses. Decision criteria could be based on direct measures, such as an absolute or percent change in ambient concentrations of the affected parameter or indirect measures such as changes in primary productivity caused by nutrients or changes in diurnal dissolved oxygen fluctuations.

Repeated or multiple small changes in water quality (such as those resulting from actions which do not require detailed analyses) can result in significant water quality degradation. To prevent such cumulative adverse impacts, a baseline of water quality must be established for each potentially affected water body, prior to allowing any action which would lower the quality of that water. This baseline should remain fixed unless some action improves water quality. At such time, the baseline should be adjusted accordingly.

Proposed actions to lower water quality should then be evaluated with respect to the baseline and the resultant water quality change should be determined. This determination should include the cumulative impacts of all previous and proposed actions and reasonably foreseeable actions which would lower water quality below the established baseline. Should the cumulative impact of actions significantly degrade water quality, more

detailed water quality and economic impact analyses would be necessary.

In any case, whether or not water quality is significantly lowered (thus leading to an economic analysis), the State must find that any action which would lower water quality is necessary to accommodate important economic and social development. Such a finding must include, at a minimum, the following determinations:

1. That economic and social development will occur, e.g. there will be new or increased production of goods or services by the party proposing the change, population will grow in the service area of a sewage treatment plant, etc.

2. That this economic or social development requires the lowering of water quality which cannot be mitigated through reasonable means.

3. That the lower water quality does not result from inadequate wastewater treatment facilities, less-than-optimal operation of adequate treatment facilities, or failure to implement or comply with methodologies to reduce or eliminate non-point source pollution.

Task B - Determine that Lower Water Quality Will Fully Maintain and Protect Designated Uses

All actions that could lower water quality in Tier II waters require a determination that existing uses will be fully maintained and protected. States should develop methodologies for making this determination.

Tier II waters, by definition, are those in which the water quality is better than necessary to support and maintain the biota and beneficial uses of the water. In most cases, specific numerical standards do not exist to protect these uses. Where such standards do exist, they are generally established to provide the minimum acceptable quality to protect the beneficial uses of the water. Often, such standards are established on a statewide or drainage basin-wide basis and thus may not adequately protect the biota or the uses of specific reaches. Consequently, comparing existing or projected water quality with adopted standards may not adequately define whether or not beneficial uses will be fully maintained and protected.

Water quality must also meet any applicable public health standards as well as maintain and protect the existing growth and reproduction of resident species. The water quality criteria guidance developed by EPA per §304(a) of the Clean Water Act provides a basis for this assessment. However, national water quality criteria (such as those contained in the "Gold Book") may not fully protect resident species. The criteria may not protect locally occurring species that either may not have been tested, or that have been tested, but require greater protection than the criteria provide. This determination involves a comparison of the species upon which biological testing has been completed in the criteria development documents with the species resident to the water body where water quality may be lowered. If the resident species are not adequately represented in the database, additional testing should be completed before lower water quality is allowed. Implementation methods should include procedures for making this comparison and define the circumstances (e.g., in terms of water quality change or extent of the biological testing database) that would require additional biological testing before water quality can be lowered.

Water quality criteria for dissolved oxygen or conventional and non-conventional pollutants may be subject to the same limitations and should be considered in the same way. For parameters for which no criteria guidance has been developed, biological testing or acceptable site specific criteria may be used to determine that lower water quality will fully maintain and protect designated uses.

The lowering of water quality through the discharge of conservative or persistent pollutants merits more intensive consideration by States, due to the bioacculumative potential of these pollutants. These pollutants, particularly carcinogens, which are considered to have no safe "threshold" concentration, should have more stringent antidegradation requirements established for their analysis.

Other methods of determining whether or not beneficial uses are being maintained and protected include biological assessments, such as the aquatic ecoregions procedure, or ambient toxicity testing using standardized species. In some cases, assessing the quality of water bodies on a pollutant-specific basis could prove costly, particularly for waters in which a number of

discharges are located or for complex effluents. EPA's recently developed acute and chronic toxicity methodologies for assessing the toxicity of effluents or receiving waters could provide a more comprehensive and affordable alternative.

Task C - Determine that Lower Water Quality is Necessary to Accommodate Important Economic or Social Development

Actions which the State determines in Task A to significantly lower water quality require a determination that such actions are necessary for important economic or social development. 40 CFR 131.12(a)(2) and the August 1985 "Questions and Answers on Antidegradation", give general guidance on how to make this determination. Explicit criteria defining "important economic or social development" have purposely not been developed by EPA Headquarters, because of the varying environmental, economic and social conditions of localities throughout the country. Further explication of EPA Region 9's expectation concerning these determinations is appropriate and is presented below.

The fundamental requirement of this task is to establish a strong tie between the proposed lower water quality level and "important" economic or social development. If the party seeking the change in water quality cannot demonstrate the relationship between such development and water quality, then the proposed action is prohibited.

Demonstration of important economic or social development entails two steps. First, the party should describe and analyze the current state of economic and social development in the area that would be affected. The purpose of this step is to determine the "baseline" economic and social status of the affected community, i.e., the measure against which the effect of the water quality downgrade is judged. The area's use or dependence upon the water resource affected by the proposed action should be described in the analysis. The following factors should normally be included in the baseline analysis:

- Population
- Area employment (numbers employed, earnings, major employers);
- Area income (earnings from employment and transfer payments, if known);

- ° Manufacturing profile: types, value, employment, trends;

- ° Government fiscal base: revenues by source (employment and sales taxes, etc.)

Second, the party seeking the change in water quality should then demonstrate the extent to which the sought-for level of water quality would create an incremental increase in the rate of economic or social development and why the change in water quality is necessary to achieve such development. The party should provide analysis, along with the supporting data used in its preparation, showing the extent to which the factors listed above will benefit from the change in water quality requested. The analysis should demonstrate why such economic and social development requires the lower water quality. Other alternatives or changes in the project or other mitigation measures which would prevent degradation of water quality should be identified in this analysis. The following factors may be included in the analysis of incremental effects expected to result from the degradation in water quality:

- ° Expected plant expansion;

- ° Employment growth;

- ° Direct and indirect income effects;

- ° Increases in the community tax base

Other components of this analysis could include an assessment of the overall environmental benefits to be achieved by the proposed action and the tradeoffs to be considered among the various media. The relative costs of various alternatives to the proposed action could also be analyzed.

The requirements for a given analysis will be site-specific, depending upon factors such as data availability, conditions specific to the relevant water body, the area of impact (city, county, State-wide), etc. The economic analysis may include estimation of the treatment costs necessary to maintain existing water quality; e.g. land treatment or advanced treatment. Staff of the EPA Regional office are available to assist States in determining the exact requirements of an analysis of

specific proposals to lower water quality. In addition, the Economic Analysis Branch in EPA Headquarters' Office of Water can assist State and Regional staff, when necessary.

Task D - Complete Intergovernmental Coordination and Public Participation

Public notification pursuant to 40 CFR 131.12 is required for all actions that lower water quality in Tier II waters. EPA requires that proposed actions which degrade water quality be reviewed by other appropriate agencies and that the public be given an opportunity to comment.

Documentation and public notification under antidegradation need not be a lengthy process in many cases and can be combined with other actions that require public notification. The public participation requirement may be met by holding a public hearing, e.g., as part of the adoption of an NPDES permit, as long as proper notice of a standards action is provided to the public (see WQS Handbook). Intergovernmental coordination consists of requests for review of proposed actions by affected local, State and Federal agencies, such as area-wide planning agencies, fish and wildlife agencies, etc.

The following is a summary of the public notification required to comply with the antidegradation provisions of the WQS regulation:

- A statement that the action must comply with the State's antidegradation policy and a description of the policy.
- A determination that existing uses will be maintained and protected. This will require an assessment and documentation for public review of (a) the amount the water quality currently exceeds that necessary to protect the existing and designated uses, and (b) the amount that water quality will be lowered as a result of the proposed action (see Task A).
- A summary of other actions, if any, that have lowered water quality and a determination of any cumulative impacts.
- A determination that lower water quality is necessary to

accommodate important economic or social development. This will require a detailed analysis or the rationale used to determine that a detailed analysis is not required (see Tasks A and C).

- A description of the intergovernmental coordination that has taken place.

- A determination that there has been achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for non-point sources.

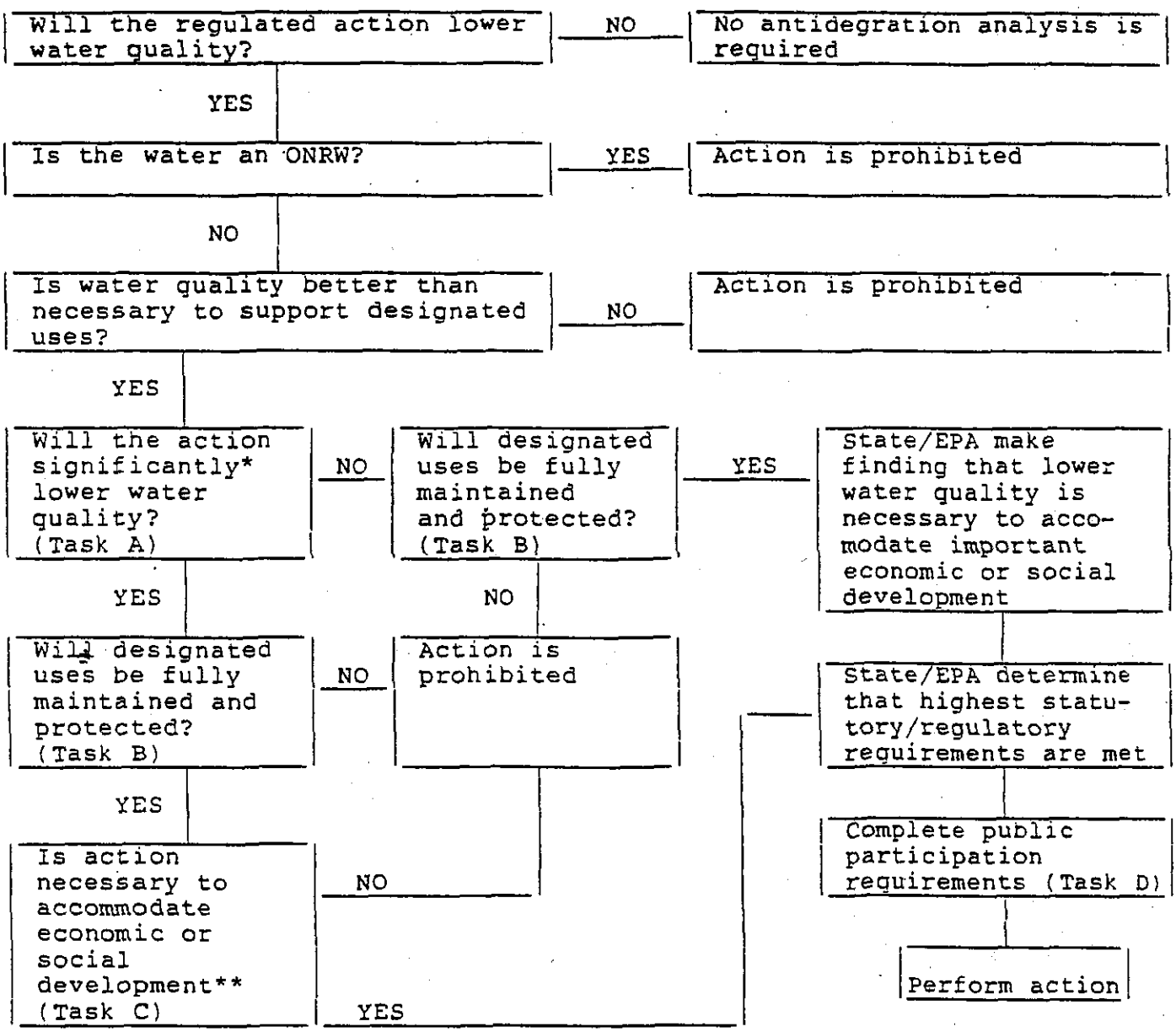
OTHER CONSIDERATIONS

1. The decision criteria for determining that detailed water quality and economic analyses are needed may vary with the types of chemical pollutants. Some chemicals are believed to elicit an effect at a certain concentration (i.e., threshold chemicals). Other chemicals (i.e., non-threshold chemicals) have no safe level. Non-threshold chemicals include carcinogens, mutagens and teratogens. States are urged to apply more stringent review procedures to non-threshold chemicals.

2. NPDES permits do not routinely contain numerical limits for all of the substances found in a discharger's effluent. Nevertheless, all substances are subject to antidegradation policy implementation, whether or not they are specifically limited in the permit. To apply antidegradation to substances not currently limited in the permit, the State can utilize the notification procedures specified in 40 CFR 122.42, requiring dischargers to notify the State pollution control agency of any actual or anticipated change in effluent characteristics, as compared with those existing at the time the permit was issued.

FIGURE 1

Antidegradation Flow Chart



*Significance level and effect of cumulative impacts as defined by State

**Based on criteria defined by State