

CHAPTER 2: THE MODEL ANTIDEGRADATION IMPLEMENTATION PROCEDURE¹

PART I. INTRODUCTION

These antidegradation procedures provide detailed methods and guidance to be followed by the Water Quality Board (the Board) and the Water Quality Division (the Division) in implementing the state antidegradation policy found at [insert appropriate citation]. In all cases, applicable technology and water quality-based requirements are to be implemented in combination with the antidegradation requirements described in this document.

Implementation of state and federal antidegradation requirements serves to promote the maintenance and protection of existing surface water quality. Under this program, all “waters of the state” are provided one of four different levels of antidegradation protection. The level of protection that is provided to a specific segment depends upon a number of factors discussed in detail below. At a minimum, all waters are subject to a base level of protection (known as tier 1 or existing use protection); some waters may qualify only for this level of protection. Antidegradation requirements are triggered whenever a *regulated activity* is proposed that may have some effect on surface water quality. Such activities are reviewed to determine, based on the level of antidegradation protection afforded to the affected waterbody segment, whether the proposed activity should be authorized.

Antidegradation requirements are triggered whenever a regulated activity is proposed that may have some effect on surface water quality.

This guidance has three principal components. First, key terms are defined. Second, the procedures to be followed in completing an antidegradation review are presented. Finally, a number of questions and answers are included to further illustrate how these antidegradation implementation procedures will be applied. A copy of the antidegradation worksheet that the Division will use to document review findings is attached.

¹ This chapter of the guidance is intended to provide a recommended example of an antidegradation implementation procedure. It includes examples of each of the types of provisions that EPA Region VIII considers essential. Adoption (with or without modification) of this model procedure is recommended by the Region.

PART II. DEFINITIONS

An **Antidegradation Review** is the process by which the state determines that antidegradation requirements are satisfied for a given regulated activity that may have some effect on surface water quality.

Assimilative capacity is the increment of water quality (in terms of concentration), during the appropriate critical condition(s), that is better than the applicable numeric criterion.

Bioaccumulative toxic substances are defined as substances with bioconcentration factors (BCFs) greater than 250.

Bioconcentration Factor (BCF) is the ratio of a substance's concentration in tissue versus its concentration in water, in situations where the food chain is not exposed or contaminated. For nonmetabolized substances, it represents equilibrium partitioning between water and organisms.

Designated use means a use that is specified in water quality standards as a goal for the waterbody segment, whether or not it is currently being attained.

Existing use means a use that is actually attained in the waterbody on or after November 28, 1975, whether or not it is included in the water quality standards.

High quality water means a waterbody that meets the state's test of "high quality," which is discussed in paragraphs VI(A)(2) and (3) of this guidance. In general, waters whose existing quality is better than necessary to support fishable/swimmable uses will be considered "high quality."

Outstanding National Resource Water (ONRW) is a waterbody that has been identified as possessing outstanding ecological or recreational attributes, and has been designated as an ONRW in the state water quality standards.

Outstanding State Resource Water (OSRW) is a waterbody that has been identified as possessing outstanding ecological or recreational attributes and has been designated as an OSRW in the state water quality standards.

Reasonable Alternatives shall be identified based on case-specific information. Generally speaking, non-degrading or less-degrading pollution-control alternatives shall be considered reasonable where the costs of such alternatives are less than 110 % of the costs of the pollution control measures associated with the proposed activity.



Regulated activity includes any activity that requires a permit or a water quality certification pursuant to state or federal law (e.g., CWA § 402 NPDES permits, CWA § 404 dredge and fill permits, any activity requiring a CWA § 401 certification), any activity subject to nonpoint source control requirements or regulations, and any activity which is otherwise subject to state regulations¹ that specify that the antidegradation review process is applicable. For purposes of this implementation procedure, the term “proposed activity” means a proposed activity that is also a regulated activity.

Trading means establishing upstream controls to compensate for new or increased downstream sources, resulting in maintained or improved water quality at all points, at all times, and for all parameters. Trading may involve point sources, nonpoint sources, or a combination of point and nonpoint sources.

PART III. THE ANTI-DEGRADATION REVIEW PROCESS

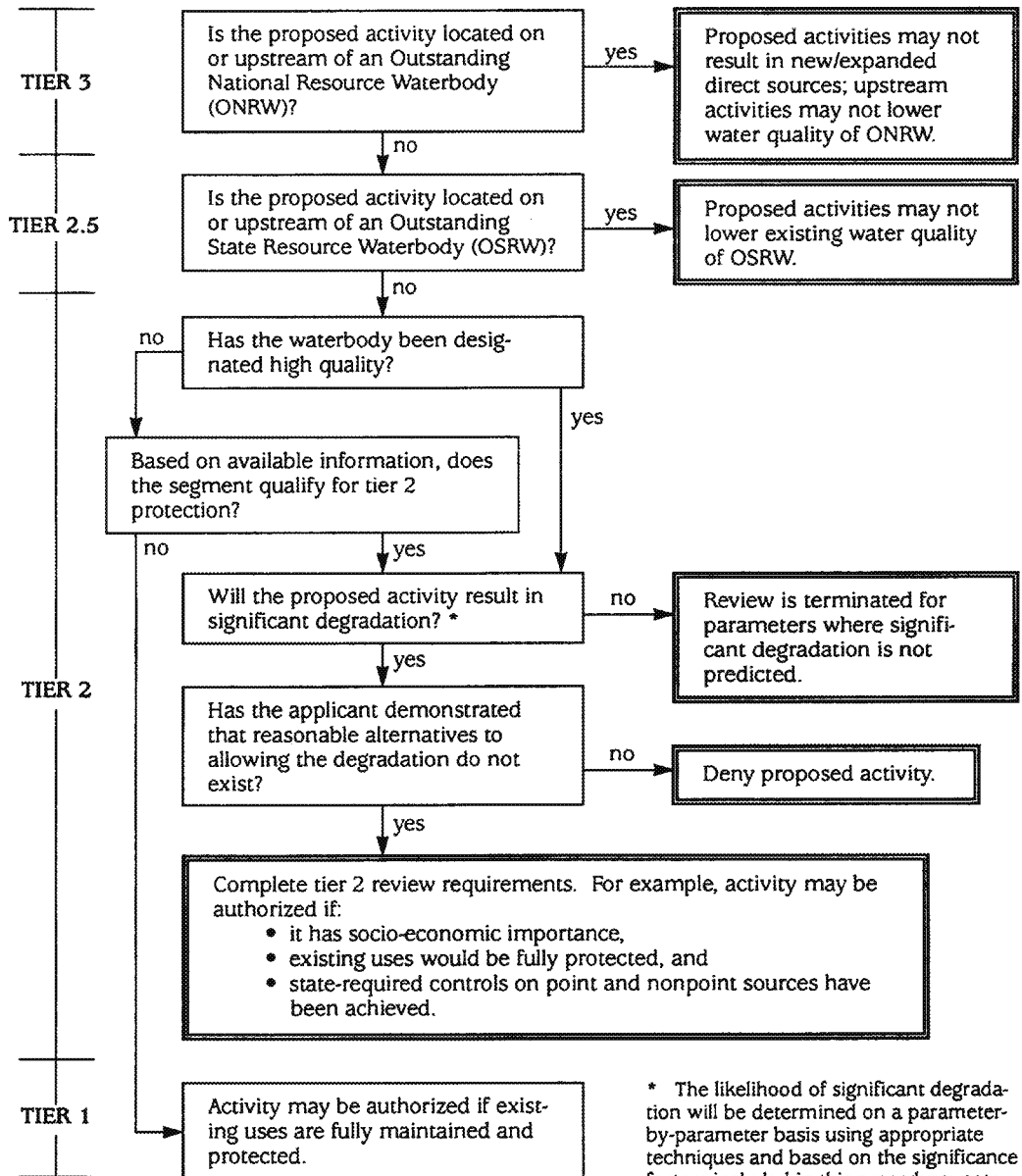
The Division will conduct some level of antidegradation review for all regulated activities that have the potential to affect existing water quality. The specifics of the review will depend upon the waterbody segment that would be affected, the tier of antidegradation applicable to that waterbody segment, and the extent to which existing water quality would be degraded.

The sequence of steps to be completed by the Division in conducting an antidegradation review is presented in Figure 1. Only major antidegradation program requirements are represented in Figure 1. In conducting an antidegradation review, the first task that will be addressed by the Division is to determine which tier of antidegradation applies. This is accomplished, as described in detail below, based either on the antidegradation designation which has been assigned to the waterbody (i.e. where such a designation has been made) or on whether the existing quality of the segment is better than necessary to support “fishable/swimmable” uses.

Once the correct tier of requirements is identified, the Division determines whether authorizing the proposed activity would be consistent

¹ Such regulations can include the antidegradation policy included in a state’s water quality standards. Using this approach, an antidegradation review may be required for any and all activities that may affect water quality (i.e., including those activities not otherwise subject to control regulations/requirements). For the sake of clarity, EPA recommends that the activities requiring an antidegradation review be discussed in the antidegradation policy or implementation procedure. Antidegradation procedures should specifically state whether, and to what extent, activities which would not otherwise be regulated are subject to antidegradation review requirements (see the discussion of this topic in Chapter 4 and Appendix 3).

FIGURE 1
ANTIDegradation IMPLEMENTATION FLOW CHART



* The likelihood of significant degradation will be determined on a parameter-by-parameter basis using appropriate techniques and based on the significance factors included in this procedure; note that the significance test may be bypassed where reasonable less-degrading alternatives are clearly available.

with state antidegradation requirements. The major conclusions of the Division's review are documented using an antidegradation review worksheet, a copy of which is attached to this implementation procedure. Based upon the review findings, a preliminary decision is made by the Division and subjected to intergovernmental coordination and public participation. Public participation occurs regardless of the outcome of the preliminary decision (i.e., whether the proposed activity would be authorized or denied).

The Division then considers public comments and reaches a final decision regarding whether to authorize the proposed activity pursuant to the state antidegradation requirements. The substance and basis of the final decision by the Division are documented in the administrative record. Below, the procedures to be followed by the Division in reaching a preliminary decision under each tier of antidegradation are described in detail.

PART IV. TIER 3 PROCEDURES

A. Waters Qualifying for ONRW Protection

(1) Qualification Criteria

Segments will be subject to tier 3 protection requirements only where an ONRW designation has been assigned by the Board through the state rulemaking procedures. The factors to be considered in determining whether to assign an ONRW designation may include the following: (a) location (e.g., on federal lands such as national parks, national wilderness areas, or national wildlife refuges), (b) previous special designations (e.g., wild and scenic river), (c) existing water quality (e.g., pristine or naturally-occurring), (d) ecological value¹ (e.g., presence of threatened or endangered species during one or more life stages), (e) recreational or aesthetic value (e.g., presence of an outstanding recreational fishery), and (f) other factors that indicate outstanding ecological or recreational resource value (e.g., rare or valuable wildlife habitat). Where determined appropriate, the ONRW designation may be applied to an entire category of waters (e.g., a wilderness area or areas).

(2) Water Quality Requirements

Outstanding water quality is not a prerequisite for ONRW designation. The only requirement is that the segment have outstanding value as an aquatic resource, which may derive from the presence of exceptional scenic or recreational attributes, or from the presence of

¹ States should consider ONRW or OSRW designations for segments selected as reference sites (e.g., to define biological/ecological integrity for a particular ecoregion).



**EPA REGION VIII
ANTIDEGRADATION
GUIDANCE**

unique or sensitive ecosystems that have naturally low water quality (i.e., as measured by conventional parameters).

(3). Public Nomination

The public may nominate any state water for ONRW protection at any time by sending a written request to the following address: [insert appropriate address]. The written request should explain why an ONRW designation is warranted based on one or more of the factors identified above.

B. Direct Sources to ONRWs

(1) Prohibition on New or Expanded Sources

Any proposed activity that would result in a permanent new or expanded direct source of pollutants to any segment which has been designated as an ONRW is prohibited. This prohibition applies to new sources, expansion of existing sources in which treatment levels are maintained, and expansion of existing sources in which treatment levels are increased to maintain existing pollutant loading levels. Regardless of effluent quality, any new or expanded direct source is prohibited.

Any proposed activity that would result in a permanent new or expanded direct source of pollutants to any segment which has been designated as an ONRW is prohibited.

C. Sources Upstream from ONRWs

(1) No Change in Water Quality Allowed

Any proposed activity that would result in a permanent new or expanded indirect source of pollutants (i.e., an upstream source) to an ONRW segment is prohibited except where such source would have no effect on the existing quality of the downstream ONRW segment. Effects on ONRW water quality resulting from upstream sources will be determined based on appropriate techniques and best professional judgment. Factors that may be considered in judging whether ONRW quality would be affected include: (a) percent change in ambient concentrations predicted at the appropriate critical condition(s), (b) percent change in loadings (i.e., the new or expanded loadings compared to total existing loadings to the segment), (c) percent reduction in available assimilative capacity, (d) nature, persistence, and potential effects of the parameter, (e) potential for cumulative effects, and (f) degree of confidence in the various components of any modeling technique utilized (e.g., degree of confidence associated with the predicted effluent variability).

(2) Trading

A proposed activity that will result in a new or expanded upstream source may be allowed where the applicant agrees to implement or



finance upstream controls of point or nonpoint sources sufficient to offset the water quality effects of the proposed activity. Where such trading occurs upstream of an ONRW segment, tier 3 requirements will be considered satisfied where the applicant can show that water quality at all points within the study area will be either maintained or improved. The Division will document the basis for the trade through a Total Maximum Daily Load (TMDL) pursuant to CWA § 303(d) requirements. Such TMDLs will include an appropriate margin of safety. Such a margin of safety will address, in particular, the uncertainties associated with any proposed nonpoint source controls, as well as variability in effluent quality for point sources. See definition of trading in Part II.

(3) Information Requirements

The applicant may be required to provide information sufficient to evaluate the potential effects of the proposed activity on downstream ONRWs. The information that will be required in a given situation will be identified on a case-by-case basis by the Division.

D. Temporary and Limited Effects

(1) Guidelines

A direct or upstream source that would result in a temporary *and* limited effect on ONRW water quality may be authorized. The decision regarding whether effects will be temporary and limited will be handled on a case-by-case basis. As a *non-binding* rule of thumb, activities with durations less than one month *and* resulting in less than a 5% change in ambient concentration will be deemed to have temporary and limited effects. Decisions on individual proposed activities may be based on the following factors: (a) length of time during which water quality will be lowered, (b) percent change in ambient concentrations, (c) parameters affected, (d) likelihood for long-term water quality benefits to the segment (e.g., as may result from dredging of contaminated sediments), (e) degree to which achieving applicable water quality standards during the proposed activity may be at risk, and (f) potential for any residual long-term influences on existing uses.

PART V. TIER 2.5 PROCEDURES

A. Waters Qualifying for OSRW Protection

(1) Qualification Criteria

Segments will be subject to tier 2.5 protection requirements only where an OSRW designation has been assigned by the Board through the state rulemaking procedures. The factors to be consid-

**EPA REGION VIII
ANTIDEGRADATION
GUIDANCE**

ered in determining whether to assign an OSRW designation may include the following: (a) location (e.g., on federal lands such as national parks, national wilderness areas, or national wildlife refuges), (b) previous special designations (e.g., wild and scenic river), (c) existing water quality (e.g., pristine or naturally-occurring), (d) ecological value (e.g., presence of threatened or endangered species during one or more life stages), (e) recreational or aesthetic value (e.g., presence of an outstanding recreational fishery), and (f) other factors that indicate outstanding ecological or recreational resource value (e.g., rare or valuable wildlife habitat). Where determined appropriate, the OSRW designation may be applied to an entire category of waters (e.g., all waters located within a state or national park).

The public may nominate any state water for OSRW protection at any time via a written request that explains why such a designation is warranted.

(2) Water Quality Requirements

Outstanding water quality is not a prerequisite for OSRW designation. The only requirement is that the segment have outstanding value as an aquatic resource, which may derive from the presence of exceptional scenic or recreational attributes, or from the presence of unique or sensitive ecosystems that have naturally low water quality (i.e., as measured by conventional parameters).

(3) Public Nomination

The public may nominate any state water for OSRW protection at any time by sending a written request to the following address: [insert appropriate address]. The written request should explain why an OSRW designation is warranted based on one or more of the factors identified above.

B. Direct and Indirect Sources to OSRWs

(1) No Change in Water Quality Allowed

Except as noted below, any proposed activity that would result in a permanent lowering in OSRW water quality is prohibited. This procedure applies to direct and indirect (i.e., upstream) sources of pollutants to OSRWs. The prohibition applies to new sources and expansion of existing sources in which treatment levels are maintained. Proposed expansions that would also upgrade treatment levels such that existing loading levels will be maintained may be authorized. However, decisions regarding whether to allow new or expanded sources will be made on a case-by-case basis using appropriate techniques and best professional judgment. Factors that may be considered in judging whether OSRW quality would be lowered include: (a) percent change in ambient concentrations predicted at the appropriate critical condition(s), (b) percent change in loadings (i.e., the new

or expanded loadings compared to total existing loadings to the segment), (c) percent reduction in available assimilative capacity, (d) nature, persistence, and potential effects of the parameter, (e) potential for cumulative effects, and (f) degree of confidence in the various components of any modeling technique utilized (e.g., degree of confidence associated with the predicted effluent variability).

(2) Trading

A proposed activity that will result in a new or expanded source may also be allowed where the applicant agrees to implement or finance upstream controls of point or nonpoint sources sufficient to offset the water quality effects of the proposed activity. Where such trading occurs on or upstream of an OSRW segment, tier 2.5 requirements will be considered satisfied where the applicant can show that water quality at all points within the study area will be either maintained or improved. The Division will document the basis for the trade through a TMDL pursuant to CWA § 303(d) requirements. Such TMDLs will include an appropriate margin of safety. Such a margin of safety will address, in particular, the uncertainties associated with any proposed nonpoint source controls, as well as variability in effluent quality for point sources. See definition of trading in Part II.

(3) Information Requirements

The applicant may be required to provide information sufficient to evaluate the potential effects on downstream OSRWs. The information that will be required in a given situation will be identified on a case-by-case basis.

(4) Exceptions

An exception may be made for permanent new or expanded sources that, overall, serve to maintain or enhance the value, quality, or use of the OSRW. Prior to allowing exceptions, the Division shall work with the project applicant to identify the least-degrading alternative. For example, a new or expanded source of water treatment facility effluent associated with a visitor center may be authorized where reasonable non-degrading or less-degrading treatment alternatives to allowing a new or expanded source are not available. The Division shall utilize the procedures included in Part VI(C) to evaluate alternatives. Exceptions will be granted on a case-by-case basis; in general, exceptions will be granted only where uses will be fully protected and effects on existing water quality will be minimal.

C. Temporary and Limited Effects

(1) Guidelines

Activities that would result in a temporary *and* limited effect on OSRW water quality may be authorized. The decision regarding whether effects will be temporary and limited will be handled on a

case-by-case basis. As a *non-binding* rule of thumb, activities with durations less than one month and resulting in less than a 5 % change in ambient concentration will be deemed to have temporary and limited effects. Decisions on individual proposed activities may be based on the following factors: (a) length of time during which water quality will be lowered, (b) percent change in ambient concentrations, (c) parameter affected, (d) likelihood for long-term water quality benefits to the segment resulting from the proposed activity (e.g., as may result from dredging of contaminated sediments), (e) degree to which achieving applicable water quality standards during the proposed activity may be at risk, (f) potential for any residual long-term influences on existing uses, and (g) public use benefits resulting from the proposed activity (e.g., enhancement or expansion of public access, maintenance of the resource).

PART VI. TIER 2 PROCEDURES

A. Waters Qualifying for Tier 2 Protection

(1) Two Qualification Mechanisms

Segments may be afforded tier 2 protection by the state in one of two ways. The first way is for the Board to assign tier 2 protection through a rulemaking action. Where this occurs, a high quality use designation will be added to the state standards for the segment. The sole implication of a high quality designation in the state water quality control program is that it *mandates* application of the tier 2 review requirements described below. The second way to afford tier 2 protection is for the Division to make a determination that this level of protection is warranted during the antidegradation review of a proposed activity. Such decisions will be based on all relevant information including any ambient water quality (i.e., physical, chemical, biological) data submitted by the applicant. The criteria that will be used in identifying high quality tier 2 waters are described below. The same criteria for making the high quality decision apply regardless of whether the decision is made by rulemaking or during the Division's antidegradation review. Regardless of how the high quality decision is made, the same level of protection and the same procedures are applied.

(2) Qualification Factors

Decisions regarding whether a waterbody is high quality and subject to tier 2 protection requirements will be based on a best professional judgment of the overall quality and value of the segment. In general, waters with existing quality that is better than necessary to support fishable/swimmable uses will be considered high quality and subject to tier 2 requirements. The factors that may be considered in determining whether a segment satisfies the high quality test include the

following: (a) existing aquatic life uses, (b) existing recreational or aesthetic uses, (c) existing water quality for all parameters (i.e., subject to the availability of monitoring data or other information for the segment, upstream segments, or for comparable segments), and (d) the overall value of the segment from an ecological and public use perspective. Note that attainment of *both* aquatic life (fishable) and recreational (swimmable) uses is *not* required in order to qualify as a high quality segment.

(3) Presumptive Applicability

In general, it is presumed that a very large majority of state waters qualify for tier 2 protection. However, there are some waters in the state where neither of the CWA fishable/swimmable goal uses are attained. It is the intent of these procedures to apply only existing use (tier 1) protection to such waters. There also may be waters in the state where one or both of the fishable/swimmable uses are attained, but existing water quality is not “better than necessary” to support the goal uses (i.e., assimilative capacity does not exist for a number of parameters). It is the intent of these procedures to apply only existing use (tier 1) protection to such waters provided that there is no assimilative capacity for *each* of the parameters to be affected by the proposed activity.

In general, it is presumed that a very large majority of state waters qualify for tier 2 protection.

(4) Criteria Exceedences

A difficult question that must be addressed by these procedures is whether occasional exceedences of one or more narrative or numeric water quality criteria constitute nonattainment sufficient to preclude tier 2 protection. In waters where exceedences have occurred and continue to occur for one or more parameters, a judgment will be made based on the factors identified above and in consideration of information submitted by the applicant and by the public. As a general operating rule, tier 2 protection will be applied even where the criteria for some parameters are not always satisfied.

(5) Information Requirements

The applicant may be required to provide monitoring data or other information about the affected waterbody to help determine the applicability of tier 2 requirements based on the high quality test. The information that will be required in a given situation will be identified on a case-by-case basis. Because these procedures presume that tier 2 protection requirements will be applied, such information will typically be required of the applicant only where this presumption is in dispute. Such information may include recent ambient chemical, physical, and biological monitoring data sufficient to characterize, during the appropriate critical condition(s), the existing uses and the spatial and temporal variability of existing quality of the segment for the parameters that would be affected by the proposed activity.

**EPA REGION VIII
ANTIDEGRADATION
GUIDANCE**

(6) Characterizing Existing Quality

The Division will follow the state procedures used to characterize existing background quality that are used for purposes of developing Total Maximum Daily Loads (TMDLs). The characterization of existing background water quality should appropriately consider spatial and temporal variability. However, where background water column data are limited, the Division may conclude that a segment is high quality and subject to tier 2 protection based on ancillary data such as land use information, population and demographics, geology, presence of point or nonpoint sources, climatological data, or the health of the aquatic community.

(7) Public Nomination

The public may nominate any state water for a high quality designation at any time by sending a written request to the following address: [insert appropriate address]. The written request should explain why a high quality designation is warranted based on the factors identified and discussed in paragraph (2) and (3).

The Division will identify and eliminate from further review only those proposed activities that present insignificant threats to water quality. Proposed activities will be considered significant and subject to tier 2 requirements where significant degradation is projected for one or more water quality parameters.

B. Significant Degradation

(1) Overview

Once it is determined that tier 2 protection applies to a waterbody via one of the two decision mechanisms described above, the next step in the review process is to determine whether the degradation that will result from the proposed activity is significant enough to warrant further review (such as evaluation of alternatives). The factors to be addressed in judging the significance of the proposed activity are identified in paragraph (2) below. Where the significance of the degradation associated with a proposed activity is in dispute, the factors identified in paragraph (2) should also

be the focal point of opposing views by the applicant or the public.

(2) Significance Factors

The likelihood that a proposed activity will pose significant degradation will be judged by the Division for all water quality parameters that would be affected by the proposed activity. Such significance judgments will be made on a parameter-by-parameter basis. The Division will identify and eliminate from further review only those proposed activities that present insignificant threats to water quality. Proposed activities will be considered significant and subject to tier 2 requirements where significant degradation is projected for one or more water quality parameters. Because determinations of significant degradation are most appropriately made based on case-specific information, these procedures do not provide rigid decision crite-

ria for judging significant changes in water quality. Rather, significant degradation may be demonstrated with respect to any one (or a combination) of the following factors: (a) percent change in ambient concentrations predicted at the appropriate critical condition(s), (b) the difference, if any, between existing ambient quality and ambient quality that would exist if all point sources were discharging at permitted loading rates, (c) percent change in loadings (i.e., the new or expanded loadings compared to total existing loadings to the segment or, for existing facilities only, the proposed permitted loadings compared to the existing permitted loadings), (d) percent reduction in available assimilative capacity, (e) nature, persistence, and potential effects of the parameter, (f) potential for cumulative effects,[†] (g) predicted impacts to aquatic biota, (h) degree of confidence in any modeling techniques utilized, and (i) the difference, if any, between permitted and existing effluent quality.

- (i) Required Analyses. Based on one or more of the significance factors identified above, the Division may make determinations of significant degradation based on appropriate modeling techniques coupled with detailed characterization of the existing background water quality. However, determinations of significance need not be complicated, data-intensive, or resource-intensive. It is not the intent of these procedures to require detailed analyses to address each of the factors identified above. Where appropriate, determinations of significance may be based on simple analyses. For example, proposed activities may be judged as insignificant where: (a) available dilution exceeds 100:1, (b) the proposed activity would not result in a significant increase of loadings for any parameter, or (c) there is substantial potential for the proposed activity to result in a net long-term water quality benefit to the segment. Likewise, a significant increase in loadings for any given parameter may be the basis for concluding that significant degradation will occur.
- (ii) Persistent Toxics. The significance of proposed new or expanded sources of bioaccumulative or other persistent toxic substances will be judged depending upon, for example, existing loadings of the substances to the segment from all sources. The Division's interpretation of monitoring data or other information

[†] It is anticipated that most antidegradation reviews will be limited to single sources; however, where multiple new or expanded sources are likely to be proposed within a short time period (e.g., one permit cycle), the Division may base a determination of significance on the cumulative effect of all the proposed sources. Where available, a Total Maximum Daily Load (TMDL) analysis will be used as the basis for the significance determination. Where multiple sources are deemed significant in a cumulative sense, each individual proposed source shall be subject to further tier 2 review. Likewise, where multiple loading increases for a single source occur over time, the cumulative effects of the sum total increase in loading may be the basis for requiring further tier 2 review.

indicating fish tissue or sediment accumulation in the watershed will be considered with respect to judging the significance of new or expanded sources of persistent toxic substances.

(3) General Guidelines

As a non-binding rule-of-thumb, proposed activities that would lower the ambient quality of any parameter by more than 5%, reduce the available assimilative capacity by more than 5%, or increase pollutant loadings to a segment by more than 5% will be presumed to pose significant degradation. The intent of this guideline is to establish a de minimis test of significance and to eliminate from further review only those proposed activities that will result in truly minor changes in water quality.

(4) By-passing the Significance Test

Where available information clearly indicates that reasonable non-degrading or less-degrading alternatives to lowering existing water quality exist, the Division may by-pass the significant degradation requirements and direct the applicant to demonstrate the necessity of the degradation pursuant to Part VI(C) below.[†]

(5) Trading

The Division may also conclude that a proposed activity will not pose significant degradation based upon the specifics of any upstream/downstream trading that has been agreed to by the project applicant. The Division will document the basis for the trade through a TMDL pursuant to CWA § 303(d) requirements. Such TMDLs will include an appropriate margin of safety. Such a margin of safety will address, in particular, the uncertainties associated with any proposed nonpoint source controls, as well as variability in effluent quality for point sources. See definition of trading in Part II.

(6) Information Requirements

The applicant may be required to provide monitoring data or other information about the affected waterbody and/or proposed activity to help determine the significance of the proposed degradation for specific parameters. The information that will be required in a given situation will be identified on a case-by-case basis. Because these procedures establish a fairly low threshold of significance, in many cases a large data base will not be necessary to determine that a proposed activity will result in significant degradation. The information required may include recent ambient chemical, physical, or biological monitoring data sufficient to characterize, during the appropriate critical condition(s), the spatial and temporal variability of existing

[†] By-passing the significance test is an appropriate means of maintaining and protecting existing water quality even where proposed effects on water quality may/will be minor.

background quality of the segment for the parameters that would be affected by the proposed activity, as well as the water quality that would result if the proposed activity were authorized. State TMDL procedures for characterizing existing water quality and projecting future water quality will be the basis for identifying needed information and interpreting available data.

(7) Determine Significance of Proposed Activity

Activities determined to be significant by the Division shall be subject to the tier 2 review requirements described below. If the Division determines that an activity will not pose significant degradation for any parameter, no further antidegradation tier 2 requirements shall apply; however, such activities must still meet all technology and/or water quality based control requirements or conditions of the permit or the water quality certification.

C. Evaluation of Alternatives to Lowering Water Quality

(1) Role of the Division

The primary emphasis of the Division's tier 2 antidegradation reviews will be to determine whether reasonable non-degrading or less-degrading alternatives to allowing the proposed degradation are available. The Division will first evaluate any alternatives analysis submitted by the applicant for consistency with the minimum requirements described below. If an acceptable analysis of alternatives was completed and submitted to the Division as part of the initial project proposal, no further evaluation of alternatives will be required of the applicant. If an acceptable alternatives analysis has not been completed, the Division will work with the project applicant to ensure that an acceptable alternatives analysis is developed.

The primary emphasis of the Division's tier 2 antidegradation reviews will be to determine whether reasonable non-degrading or less-degrading alternatives to allowing the proposed degradation are available.

(2) Role of the Applicant

The applicant of any proposed activity that would significantly lower water quality in a high quality segment is required to prepare an evaluation of alternatives. The evaluation is required, at a minimum, to provide substantive information pertaining to the costs *and* environmental impacts associated with the following alternatives: (a) pollution prevention measures¹ (e.g., substitution of less toxic substances), (b) reduction in scale of the project, (c) water recycle or reuse, (d) process changes, (e) innovative treatment technology

¹ For NPDES permits, completing a pollution prevention audit will be considered an acceptable evaluation of pollution prevention alternatives.

(e.g., land application of wastewater), (f) advanced treatment technology, (g) seasonal or controlled discharge options to avoid critical water quality periods, (h) improved operation and maintenance of existing treatment systems, and (i) alternative discharge locations.

(3) Preliminary Determination

Once the Division has determined that feasible alternatives to allowing the degradation have been adequately evaluated, the Division shall make a preliminary determination regarding whether reasonable non-degrading or less-degrading alternatives are available. This determination will be based primarily on the alternatives analysis developed by the project applicant, but may be supplemented with other information or data. As a *non-binding* rule of thumb, non-degrading or less-degrading pollution control alternatives with costs that are less than 110 % of the costs of the pollution control measures associated with the proposed activity shall be considered reasonable.¹ If the Division determines that reasonable alternatives to allowing the degradation do not exist, the Division shall continue with the tier 2 review and document the substance and basis for that preliminary determination using the antidegradation review worksheet.

(4) If Reasonable Alternatives Exist

If the Division makes a preliminary determination that one or more reasonable alternatives to allowing the degradation exist, the Division will work with the project applicant to revise the project design. If a mutually-acceptable resolution cannot be reached, the Division will document the alternatives analysis findings and public notice a preliminary decision, based on antidegradation tier 2 requirements, to deny the activity.

(5) Role of Public

Based upon comments and information received during the public comment period, the Division may reverse its preliminary determination regarding the availability of reasonable alternatives to allowing the degradation.

D. Determination of Socio-Economic Importance

(1) Role of the Applicant

The applicant is required to demonstrate the social and economic importance of the proposed activity. The factors to be addressed in such a demonstration may include, but are not limited to, the follow-

¹ In evaluating the applicant's evaluation of alternatives, the Division may rely, in part, on guidance or assistance from EPA Headquarters on the use of economics in the water quality standards program.

ing: (a) employment (i.e., increasing, maintaining, or avoiding a reduction in employment), (b) increased production, (c) improved community tax base, (d) housing, and (e) correction of an environmental or public health problem.

(2) Role of the Division

Prior to authorizing any proposed activity that would significantly lower the water quality of a tier 2 water, the Division shall ensure that the proposed activity will provide important social or economic development in the area in which the waters are located. In making a preliminary determination, the Division will rely primarily on the demonstration made by the applicant. However, the Division may weigh the applicant's demonstration against counterbalancing socio-economic costs associated with the proposed activity, such as projected negative socio-economic effects on the community and the projected environmental effects (i.e., those determined in the significance and/or alternatives analysis decision processes).

(3) Additional Information Requirements

Information available to the Division is not sufficient to make a preliminary determination regarding the socio-economic costs or benefits associated with the proposed activity, the Division may require the project applicant to submit specific items of information needed to support a determination of importance. The types of information required of the applicant will be determined on a case-by-case basis, but may include: (a) information pertaining to current aquatic life, recreational, or other waterbody uses, (b) information necessary to determine the environmental impacts that may result from the proposed activity, (c) facts pertaining to the current state of economic development in the area (e.g., population, area employment, area income, major employers, types of businesses), (d) government fiscal base, and (e) land use in the areas surrounding the proposed activity.

(4) Mitigation

The applicant may voluntarily submit a proposal to mitigate the adverse environmental effects of the proposed activity (e.g., in-stream habitat improvement, bank stabilization/upgraded riparian vegetation). Such mitigation plans should describe the proposed mitigation measures and the costs of such mitigation. Such a mitigation plan will not release the Division from its obligation to require any reasonable non-degrading or less-degrading alternatives under Part VI(C) of this procedure, nor will

It is anticipated that an effective mitigation plan may, in some cases, allow the state to conclude "importance" and to authorize proposed activities that could otherwise not be authorized pursuant to state antidegradation requirements. Mitigation plans should include criteria for determining success of the mitigation, legal commitment for follow-up monitoring and additional work (if necessary), and where practicable, a commitment to implement the mitigation before the project and water quality degradation are allowed.

such plans have any effect on the effluent limitations to be included in any NPDES permit (except possibly where a previously-completed mitigation project has resulted in an improvement in background water quality that affects the water quality-based limit). Such mitigation plans will be developed and implemented by the applicant as a means to further minimize the environmental effects of the proposed activity and to increase its socio-economic importance. It is anticipated that an effective mitigation plan may, in some cases, allow the state to conclude "importance" and to authorize proposed activities that could otherwise not be authorized pursuant to state antidegradation requirements. Mitigation plans should include criteria for determining success of the mitigation, legal commitment for follow-up monitoring and additional work (if necessary), and where practicable, a commitment to implement the mitigation before the project and water quality degradation are allowed.

(5) Preliminary Determination

Once the Division has reviewed available information pertaining to the socio-economic importance of the proposed activity, the Division shall make a preliminary determination regarding importance.¹ If the Division determines that the proposed activity has social or economic importance in the area in which the affected waters are located, the Division shall continue with the tier 2 review and document the substance and basis for that preliminary determination using the antidegradation review worksheet.

(6) If Importance is Found Lacking

If the Division makes a preliminary determination that the proposed activity does not have social or economic importance in the area in which the affected waters are located, the Division will document that antidegradation review finding and public notice a preliminary decision, based upon antidegradation tier 2 requirements, to deny the proposed activity.

(7) Role of Public

Because the socio-economic importance of a proposed activity is a question best addressed by local interests, the Division will give particular weight to the comments submitted by local governments, land use planning authorities, and other local interests in determining whether the balancing of benefits and costs that was the basis for the Division's preliminary decision was appropriate. Based upon comments and information received during the public comment period, the Division may reverse its preliminary determination regarding the social or economic importance of a proposed activity.

¹ In evaluating the applicant's demonstration of socio-economic importance, the Division may rely, in part, on guidance or assistance from EPA Headquarters on the use of economics in the water quality standards program.

E. Ensure Full Protection of Existing Uses

(1) See Part VII Tier 1 Procedures

Prior to authorizing any proposed activity that would significantly degrade a tier 2 water, the Division shall ensure that existing uses will be fully protected consistent with the tier 1 implementation procedures provided below.

F. Ensure Implementation of State-Required Point and Nonpoint Source Controls

(1) Role Of the Division

Prior to authorizing any proposed activity that would significantly degrade a tier 2 water, the Division shall determine that compliance with state-required controls on all point and nonpoint sources in the zone of influence¹ has been assured. The Division may conclude that such compliance has not been assured where facilities are in noncompliance with their NPDES permit limits. However, the existence of schedules of compliance for purposes of NPDES permit requirements will be taken into consideration in such cases. Where there are nonpoint sources that are regulated activities, the Division shall determine that any *state-required* controls or best management practices have been achieved or that a plan that assures such compliance has been developed.

(2) Preliminary Determination

Based upon available data or other information, the Division will make a preliminary determination regarding whether compliance with state-required controls on point and nonpoint sources in the zone of influence has been assured. If the preliminary determination is that such compliance has been assured, the Division shall continue with the tier 2 review and document the substance and basis for that preliminary determination using the antidegradation review worksheet.

(3) If Controls have not been Achieved

If the Division makes a preliminary determination that compliance with state-required point and nonpoint source controls has *not* been assured, the Division shall document that antidegradation review finding and public notice a preliminary decision, based upon tier 2 requirements, to deny the proposed activity.

¹ The zone of influence extends upstream and downstream as appropriate for the parameter/waterbody under consideration. Another acceptable approach would be to limit application to those point/nonpoint sources located on the segment.

(4) Role of Public

Based upon comments and information received during the public comment period, the Division may reverse its preliminary finding regarding the degree to which compliance with state-required point and nonpoint source controls has been assured.

PART VII. TIER 1 PROCEDURES

A. Waters Qualifying for Tier 1 Protection

(1) Waters Subject to Tier 1 Requirements

All waters are subject to tier 1 protection. Those which are *only* subject to tier 1 protection are those waters that have not been assigned an ONRW, OSRW, or high quality antidegradation designation by the Board and that do not currently possess the overall water quality or value necessary to meet the high quality test (see Section VI(A) of this implementation guidance). In general, tier 1-only waters are those segments where fishable/swimmable goal uses are not attained, or where assimilative capacity does not exist for any of the parameters that would be affected by the proposed activity.

B. Two-Part Requirement

(1) Protect Water Quality and Uses

The state antidegradation policy requires that existing uses, and the water quality necessary to protect existing uses, shall be maintained and protected. This requirement contains two parts: (1) protection of existing uses, and (2) protection of the water quality necessary to maintain and protect existing uses.

C. Ensure Water Quality Necessary to Maintain and Protect Existing Uses

(1) Confirm that Designated Uses Address Existing Uses

Prior to authorizing any proposed activity, the Division shall ensure that water quality sufficient to protect existing uses fully will be achieved. An important decision that must be made by the Division is whether the waterbody currently supports, or has supported since November 28, 1975, an existing use that has more stringent water quality requirements than the currently designated uses. In making this decision, the Division will focus on whether a higher designated use (i.e., based on the state use designations) should be assigned to the waterbody to reflect an existing use. Where the Division determines that the currently designated uses appropriately reflect the existing waterbody uses, the Division shall document that prelimi-

nary determination using the antidegradation review worksheet (see page 35). In such cases, the water quality control requirements necessary to protect designated uses will be presumed to also fully protect existing uses.

(2) Where Designated Uses do not Address Existing Uses

The procedure outlined in paragraph (1) above presumes that designated uses appropriately address existing uses pursuant to state and federal requirements. Where this is not the case, a revision to state standards may be needed because, pursuant to the state and federal water quality standards regulations, designated uses are required to reflect, at a minimum, all attainable (including currently attained, or existing) uses. Where existing uses with more stringent protection requirements than currently designated uses are identified, the Division will ensure levels of water quality necessary to protect existing uses fully and, at the earliest opportunity, propose that appropriate revisions to the designated uses be adopted into the state water quality standards. However, the Division will not delay tier 1 protection pending the reclassification action.

(3) Require Water Quality Necessary to Protect Existing Uses

Where the Division determines that the waterbody currently supports, or has supported since November 28, 1975, an existing use that has more stringent water quality requirements than the currently designated uses, the Division shall identify the level of water quality necessary to protect existing uses fully for the parameters in question. The Division's estimate of the level of water quality required will be based on numeric state water quality criteria, narrative state criteria, and/or federal criteria guidance. In general, water quality sufficient to maintain and protect existing uses for the parameters in question will be assured using the same procedures that would have been followed had the water quality standards (i.e., uses and criteria) been appropriately assigned to begin with. The preliminary findings regarding existing uses and the level of water quality necessary to protect existing uses will be documented using the antidegradation review worksheet.

(4) Trading

A proposed activity that will result in a new or expanded source may also be allowed where the applicant agrees to implement or finance upstream controls of point or nonpoint sources sufficient to offset the water quality effects of the proposed activity. Where such trading occurs, tier 1 requirements will be considered satisfied where the

Where existing uses with more stringent protection requirements than currently designated uses are identified, the Division will ensure levels of water quality necessary to protect existing uses fully and, at the earliest opportunity, propose that appropriate revisions to the designated uses be adopted into the state water quality standards.



applicant can show that the level of water quality necessary to protect existing uses fully will be achieved. The Division will document the basis for the trade through a TMDL pursuant to CWA § 303(d) requirements. Such TMDLs will include an appropriate margin of safety. Such a margin of safety will address, in particular, the uncertainties associated with any proposed nonpoint source controls, as well as variability in effluent quality for point sources. See definition of trading in Part II.

(5) Additional Information Requirements

The applicant may be required to provide monitoring data or other information about the affected waterbody to help determine whether designated uses also reflect existing waterbody uses or the level of water quality necessary to protect existing uses fully. The information that will be required in a given situation will be identified on a case-by-case basis. Because these procedures presume that designated uses reflect existing uses, such information will typically be required only where this presumption is in doubt, based on the information available to the Division. Where this presumption is in doubt, the applicant may be required to provide physical, chemical, or biological monitoring data or other information needed by the Division to identify and protect existing uses.

D. Ensure Full Protection of Existing Uses

(1) Presume that Applicable Criteria Will Protect Existing Uses

The procedure just discussed presumes that implementation of the water quality criteria established to protect *designated* uses will also incidentally protect *existing* uses. However, situations may arise where a proposed (regulated) activity will impair or eliminate an existing use for reasons which cannot be tied to any applicable water quality criterion (e.g., impacts to aquatic life habitat that may result from the discharge of “clean” sediment).

(2) Where Applicable Criteria Will Not Protect Existing Uses

Where the Division concludes that existing uses will be impaired by a regulated activity for reasons which cannot be tied to the applicable criteria, the Division will work with the project applicant to revise the project design such that existing uses will be maintained and protected. If a mutually-acceptable resolution cannot be achieved, the Division will document the basis for its preliminary determination regarding the loss or impairment of existing uses that will occur using the antidegradation review worksheet, identify appropriate control requirements, up to and including denial of the proposed activity, and public notice its preliminary decision.¹ Where possible,

¹ Note that only regulated activities are addressed by these procedures (e.g., discharge of a pollutant that may have a physical effect not addressed by water quality criteria).

such effects will be predicted based upon quantitative methods. In predicting effects, the Division will use all information submitted by the applicant, available modeling techniques, and best professional judgment based upon experience with similar types of projects, as appropriate.

(4) Where Loss or Impairment of Existing Uses is Not Predicted

Where the Division determines that implementation of the applicable water quality criteria will fully protect the existing uses, that finding will be documented using the antidegradation review worksheet.

PART VIII. DOCUMENTATION, PUBLIC REVIEW, AND INTERGOVERNMENTAL COORDINATION PROCEDURES

A. Documentation of Antidegradation Review Findings

(1) Antidegradation Worksheet

The Division will complete an antidegradation review For all proposed regulated activities that may have some effect on surface water quality. The findings of all antidegradation reviews will be documented using an antidegradation worksheet, a copy of which is attached to this guidance (see page 35).

B. Public Review Procedures

(1) Follow State Requirements

The antidegradation review findings will be subjected to the state public participation requirements found at [insert appropriate reference]. A separate public notice for purposes of antidegradation need not be issued. For example, the antidegradation preliminary findings may be included in the public notice issued for purposes of an NPDES permit/§ 401 certification.

(2) Content of Public Notice

In preparing a public notice, the Division will, at a minimum: (a) outline the substance and basis of the state's antidegradation review conclusions, including the preliminary finding regarding whether to authorize the proposed activity, (b) request public input on particular aspects of the antidegradation review that might be improved based on public input (e.g., existing uses of the waterbody by the public, the preliminary determination on socio-economic importance), (c) provide notice of the availability of the antidegradation review worksheet, (d) provide notice of the availability of any introductory public information regarding the state antidegradation program, and (e) include a reference to the state antidegradation policy.

C. Intergovernmental Coordination Procedures

(1) Follow State CPP

The Division shall conduct all antidegradation reviews consistent with the intergovernmental coordination procedures included in the state's continuing planning process.

(2) Minimum Process

At a minimum, the Division will provide copies of the completed antidegradation review worksheet and/or the public notice to appropriate state and federal government agencies along with a written request to provide comments by the public comment deadline.

PART IX. QUESTIONS AND ANSWERS

The following questions and answers are intended to provide additional explanation regarding how the Board and the Division will implement the state antidegradation policy.

Tier 3 Questions



A proposed expansion of a municipal point source discharge is located 20 miles upstream of an ONRW segment boundary. Under what circumstances would the expanded discharge be allowed?



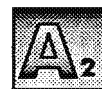
Pursuant to tier 3 requirements, a new or expanded upstream source may be allowed only where it would have no effect on the water quality of the downstream ONRW segment. The Division would predict effects on the water quality of the downstream ONRW segment for appropriate parameters using appropriate techniques. Where necessary, the applicant may be required to provide monitoring data to support model development, calibration, and/or validation. Unless the expanded portion of the discharge is expected to contain persistent toxics, it is possible that the discharge can be allowed because of dilution, fate, and transport processes that would occur within the 20 stream miles. If the proposed discharge would not affect the quality of the ONRW, the proposed activity would still be subject to tier 2 or tier 1 requirements applicable to the receiving water segment.

Tier 2.5 Questions



A proposed expansion of an industrial point source discharge would discharge directly into an OSRW segment. The effluent is expected to contain bioaccumulative toxics. Can the expanded discharge be allowed?

Yes, under certain circumstances. Pursuant to tier 2.5 requirements, a new or expanded source may be allowed provided that it would have *no effect* on the water quality of the OSRW (i.e., effluent quality at or better than background quality). The Division would predict effects on the water quality of the OSRW segment for appropriate parameters using appropriate techniques. Since the discharge would increase mass loadings of bioaccumulative toxics, an important consideration is the extent of any existing accumulation of such toxics in fish tissue and sediment.



Construction of a state park visitor's center has been proposed adjacent to an OSRW segment. The center would provide Park visitors with information and a parking lot. A small treatment facility is proposed to handle the wastewater effluent that would result from the visitors center. Effluent from the treatment facility would be discharged directly into the OSRW segment. Can the discharge be allowed?



The antidegradation tier 2.5 procedure includes a prohibition of any permanent new source of pollutants that would lower the quality of an OSRW segment. However, pursuant to Part V(B)(4) of the implementation procedure, the Division may allow exceptions to this prohibition where the proposed activity would serve to "maintain or enhance the value, quality, or use" of the OSRW segment. Because a visitor's center certainly would enhance public access and use, the Division would first work with the project applicant to determine if there are reasonable alternatives to establishing a new point source discharge. Depending on the specific circumstances, it is possible that such a discharge could be allowed.



Tier 2 Questions

A new point source discharge is proposed to a segment which meets the high quality test. The NPDES permit would include only technology-based limits which, it has been determined, will be adequate to achieve all water quality criteria and protect the designated uses. Is an antidegradation review required?



Yes. Under the antidegradation procedure, an antidegradation review is required for all "regulated activities" which includes, for example, activities requiring an NPDES permit. The fact that water quality-based limits are not required is irrelevant. The antidegradation review is required to ensure that, for example, the availability of any reasonable nondegrading or less-degrading alternatives is evaluated. Whenever an NPDES permit is issued, an antidegradation review worksheet must be completed by the Division to document



**EPA REGION VIII
ANTIDEGRADATION
GUIDANCE**

the fact that antidegradation requirements were determined to be satisfied.



A proposed discharge would significantly degrade existing water quality for dissolved oxygen and ammonia. Background concentrations of dissolved oxygen and ammonia are currently better than the applicable aquatic life criteria for these parameters. Although an aquatic life designated use has been assigned to the receiving water segment, historical mining practices have resulted in high ambient levels of copper, zinc and cadmium. These heavy metals would not be included in the proposed discharge. However, as a result of these high metals concentrations, the biological health of the receiving segment is very severely limited such that “fishable” conditions are not currently achieved. Is the segment a high quality water subject to tier 2 requirements?



No. The state will not apply tier 2 requirements to segments where water quality is not better than necessary to support fishable/swimmable uses. Even though assimilative capacity exists for the parameters in question, the historical pollution sources are currently precluding attainment of a fishable aquatic life use. Although the state presumes that most waters are high quality and subject to tier 2 protection, in this case the overall quality and value of the segment is not sufficient to warrant application of tier 2. However, a proposed municipal discharge to the same segment could be subject to tier 2 requirements (for purposes of bacteriological quality requirements) if existing water quality is better than necessary to support “swimmable” uses.



A new point source discharge is proposed on a segment for which very little ambient monitoring data is currently available. Based on limited upstream monitoring data, land use information, absence of other known point sources, and the magnitude of the proposed discharge, the Division believes that the segment meets the high quality test described in Part VI(A) of these procedures and that significant degradation of existing water quality will result. Accordingly, the Division asks the project applicant to evaluate alternatives to lowering water quality. However, the project applicant believes that the segment is not a high quality water and asks the Division the following question: “What do we have to do to show you that the segment is not a high quality water?”



Consistent with Part VI(A) of these procedures, the applicant must show either that: (1) neither of the CWA fishable/swimmable goal uses are attained, or (2) fishable/swimmable uses are attained, but there is no assimilative capacity for any of the parameters to be affected by the proposed discharge (i.e., water quality is not “better

than necessary” to support fishable/swimmable uses). One of these showings must be made with appropriate physical, chemical and/or biological data, taking into account spatial and temporal variability. The amount of sampling and locations for sampling would be determined on a case-by-case basis. Sampling should be conducted to characterize, during the appropriate critical condition(s), the existing uses and existing water quality of the segment. In general, the monitoring plan should be clearly defined by the applicant in consultation with the Division prior to any field work. The applicant would be responsible for the costs of field monitoring and laboratory analysis.

A proposed activity would increase the ambient concentrations for several metals in a high quality segment. A number of upstream point sources are discharging only a fraction of the total loadings for these same metals that their permits authorize. How would the Division go about determining whether the proposed degradation is significant enough to warrant further tier 2 review?

The Division’s analysis might look at several considerations. In all likelihood, the Division would examine the extent to which available assimilative capacity would be reduced. Typically, assimilative capacity is defined as the difference between the water quality criteria and the existing ambient background quality for the parameters in question. In this case, however, the Division would look at assimilative capacity as the difference between the water quality criteria and the ambient quality that would exist if all point sources were discharging at their permitted loading rates. Establishing such a baseline is necessary in order to get a true picture of the remaining assimilative capacity in the segment.

Where an existing facility’s effluent quality is better than the NPDES permit requires, and the permit comes up for renewal, should reissuing the same permit be considered significant degradation?

Yes, in some cases. One of the factors included in the state’s implementation procedure to help determine significant degradation is: “the difference, if any, between permitted and existing effluent quality.” This factor has been included to address situations where a facility’s existing effluent quality is substantially better than what the permit authorizes. In such situations, and particularly where the parameters in question are of concern (such as may be the case for persistent toxic substances that have accumulated in fish or sediments), it may be necessary to subject such re-issued permits to further antidegradation reviews, including an evaluation of alternatives. The result of such review may be a re-issued permit with limits that reflect existing effluent quality. Such review may also reveal that rea-



**EPA REGION VIII
ANTIDEGRADATION
GUIDANCE**

sonable pollution-prevention alternatives are available that would result in complete elimination of the parameters of concern from the facility's effluent. Thus, there will be situations where reissuing the same permit will be considered significant degradation and subjected to further antidegradation review.



A proposed activity would result in a significant new source of pollutants to a high quality segment. The effluent quality for the proposed source would satisfy all technology and water quality (criteria)-based effluent requirements. However, the alternatives analysis demonstrates that a reasonable non-degrading alternative is available. Does antidegradation require that the non-degrading alternative be implemented?



Yes. The proposed activity could only be authorized if it were modified to implement the non-degrading alternative. In this case, simply satisfying the technology and water quality-based effluent requirements is not adequate because a reasonable alternative is available that will better maintain and protect existing water quality.



Because of a lack of background water quality data, it is unclear to what extent a proposed activity on a high quality segment would change ambient concentrations of several parameters. However, the Division believes that a less-degrading alternative is clearly available. How would the Division proceed?



In this case, predicting the effect of the proposed activity on ambient water quality may not be critical from an antidegradation perspective. Because the primary function of the tier 2 procedures is to require any reasonable non-degrading or less-degrading alternatives, and such an alternative is clearly available in this case, the Division would likely "by-pass" the significance finding (consistent with Section VI(B)(4) of this implementation guidance) and proceed to the necessity of degradation finding. Although quantifying background concentrations of the parameters in question would be needed to derive a water quality based effluent limit (WQBEL) or Total Maximum Daily Load (TMDL), it may not be critical from an antidegradation perspective. Where additional ambient data is needed for purposes of WQBEL calculation (or perhaps to support a finding of importance), the Division would likely require the project applicant to provide the needed data. In general, the water quality data and procedures used to establish a Total Maximum Daily Load (TMDL) will be adequate to answer pertinent antidegradation questions.

Tier 1 Questions

A project has been proposed that requires a CWA § 404 dredge and fill permit. The project would result in fill material being placed in a wetland which is protected as a surface water of the state, eliminating the existing uses in the filled area. Considering the state anti-degradation requirements under tier 1, can a CWA § 404 permit and a state § 401 water quality certification be issued?



EPA guidance states that, since a literal interpretation of the anti-degradation policy could result in preventing the issuance of any wetland fill permit under CWA § 404, and it is logical to assume that Congress intended some such permits to be granted within the framework of the Act, existing uses will be deemed protected with regard to fills in wetlands if the discharge would not result in “significant degradation” to the aquatic ecosystem as defined under § 230.10(c) of the § 404(b)(1) guidelines.¹ The state intends to apply this EPA guidance in most cases. However, EPA guidance does not affect the state’s authority, pursuant to CWA § 401 and state anti-degradation requirements, to condition or deny water quality certifications where a wetland fill project would result in loss or impairment of existing uses. Although state certifications for § 404 permits have been and will continue to be issued where appropriate, the state is not bound by EPA guidance with respect to interpretation of state existing use protection requirements. Further, EPA has encouraged states to utilize the CWA § 401 certification process and state anti-degradation requirements as a valuable tool for influencing CWA § 404 permit decisions.²

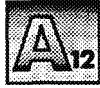


A new industrial discharge is proposed to a waterbody which only qualifies for tier 1 protection. Although the segment has not been assigned any aquatic life designated uses, a citizens group has submitted information indicating that the segment supports a community of certain nongame Fish species and a variety of pollution-sensitive macroinvertebrate species. Does anti-degradation require that the proposed discharge maintain water quality necessary to support the existing aquatic life use, even though no aquatic life use is designated?



¹ See *Questions and Answers on: Antidegradation*. U.S. Environmental Protection Agency, August, 1986.

² See *Wetlands and 401 Certification, Opportunities and Guidelines for States and Eligible Indian Tribes*. U.S. Environmental Protection Agency, April, 1989.

**EPA REGION VIII
ANTIDEGRADATION
GUIDANCE**

Yes. The Division would examine the information submitted by the citizens group, any other available information such as data that the applicant has been required to submit, and make a determination regarding the existing aquatic life use and the level of water quality necessary to support that aquatic life use. If an existing aquatic life use is identified, and prior to authorizing the new discharge, the Division is required under antidegradation requirements to ensure that the point source control requirements will fully protect the identified aquatic life use, regardless of whether that use has been designated. A change in the state water quality standards, to upgrade the designated use, is not required to protect the existing use. However, at the earliest opportunity the state would initiate a rulemaking to appropriately revise the designated uses for the segment.



ANTIDEGRADATION REVIEW WORKSHEET

1. Name of Reviewer: _____
 Name of Receiving Water: _____
 Basin: _____
 Segment No.: _____
 Stream Classification: _____
 Other: _____

2. Brief description of Proposed Activity:

ID Number, if any: _____

3. Which tier(s) of antidegradation apply?

- Tier 3 - go to question 4
 Tier 2.5 - go to question 7
 Tier 2 - go to question 10
 Tier 1 - go to question 16

Tier 3 Questions

4. Will the proposed activity result in a permanent new or expanded source of pollutants directly to an ONRW segment?
- yes - recommend denial of proposed activity.
 no

**EPA REGION VIII
ANTIDEGRADATION
GUIDANCE**

5. If the proposed activity will result in a permanent new or expanded source of pollutants to a segment upstream from an ONRW segment, will the proposed activity affect ONRW water quality (see IV(C)(1) of the implementation procedure)?

yes - recommend denial of proposed activity

no

Basis for conclusion:

6. If the proposed activity will result in a non-permanent new or expanded source of pollutants to an ONRW segment or a segment upstream from an ONRW segment, will the proposed activity result in "temporary and limited" effects on ONRW water quality (see IV(D)(1) of the implementation procedure)?

Yes

no - recommend denial of proposed activity

Basis for conclusion:

Tier 2.5 Questions

7. If the proposed activity will result in a permanent new or expanded source of pollutants directly to an OSRW segment or a segment upstream from an OSRW segment, will the proposed activity affect OSRW water quality (see V(B)(1) of the implementation procedure)?

yes - recommend denial of proposed activity.

no

Basis for conclusion:



8. Should the new or expanded permanent source of pollutants that will affect water quality be authorized because, overall, it will serve to maintain or enhance the value, quality, or use of the OSRW (see V(B)(4) of the implementation procedure)?

yes

no - recommend denial of proposed activity

Basis for conclusion:

9. If the proposed activity will result in a non-permanent new or expanded source of loadings to an OSRW segment or a segment upstream from an OSRW segment, will the proposed activity result in "temporary and limited" effects on OSRW water quality (see V(C)(1) of the implementation procedure)?

yes

no - recommend denial of proposed activity

Basis for conclusion:

Tier 2 Questions

10. Does the waterbody qualify for tier 2 protection as a result of a High Quality use designation by the Board (see VI(A) of the implementation procedure)?

yes

no

If no, basis for conclusion that tier 2 applies:

**EPA REGION VIII
ANTIDEGRADATION
GUIDANCE**

11. Will the proposed activity result in significant degradation (see VI(B) of the implementation procedure)?

- yes
- no - recommend approval of the proposed activity
- significance test by-passed due to availability of a reasonable less degrading alternative

If significance test not by-passed, basis for conclusion:

12. Has the applicant completed an adequate evaluation of alternatives and demonstrated that there are not reasonable alternatives to allowing the degradation (see VI(C) of the implementation procedure)?

- yes
- no - recommend denial of the proposed activity

If no, basis for conclusion:

13. Has the applicant demonstrated that the proposed activity will provide important socio-economic development in the area in which the affected waters are located (see VI(D) of the implementation procedure)?

- yes
- no - recommend denial of the proposed activity

If no, basis for conclusion:

14. Will existing uses be fully protected consistent with the Tier 1 procedures outlined by questions 17-19 below (questions 17-19 must be completed)?

- yes
- no - recommend denial of the proposed activity

15. Have all state-required controls on point and nonpoint sources to the segment been achieved (see VI(F) of the implementation procedure)?

yes

no - recommend denial of the proposed activity

Basis for conclusion:

Tier 1 Questions

16. The basis for concluding that tier 2 requirements do not apply is as follows (see VII(A)(l) of the implementation procedure):

17. Are there uses that exist or have existed since November 28, 1975 that have more stringent water quality protection requirements than the currently designated uses (see VII(C) of the implementation procedure)?

yes

no

If yes, basis for conclusion:

18. If the answer to question 17 was yes, what water quality criteria requirements will ensure protection of such existing uses (see VII(C) of the implementation procedure)?
(Indicate parameters and applicable water quality criteria.)

**EPA REGION VIII
ANTIDEGRADATION
GUIDANCE**

19. Will existing uses be fully maintained and protected (see VII(D) of the implementation procedure)?

yes

no - recommend denial of the proposed activity

If no, basis for conclusion:

Preliminary Decision

20. Based on the above, can the proposed activity be authorized pursuant to the state antidegradation policy?

yes

no

Basis for conclusion:

Signature: _____

Date: _____