DRAFT Nevada's Antidegradation Implementation Procedures

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Jarbidge River above Jarbidge (2003) – A Waterbody with Tier 2 Protection

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Acronyms and Abbreviations

BMP	Best management practice
CFR	Code of Federal Regulations
Commission	State Environmental Commission (as used in regulations)
Division	Nevada Division of Environmental Protection (as used in regulations)
DO	Dissolved oxygen
EAW	Ecological and Aesthetic Water
EPA	U.S. Environmental Protection Agency
IBV	Interim baseline value
mg/L	Milligrams per liter
MS4	Municipal separate storm sewer system
NAC	Nevada Administrative Code
NDEP	Nevada Division of Environmental Protection
NEPA	National Environmental Policy Act
NRS	Nevada Revised Statutes
ONRW	Outstanding National Resource Water
RMHQ	Requirement to maintain existing higher quality
SEC	State Environmental Commission
TDS	Total dissolved solids
TMDL	Total maximum daily load
U.S.C.	U.S. Code

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Executive Summary

An antidegradation policy to protect high-quality waters and maintain existing water quality constitutes an important component of state water quality programs. The goal of antidegradation is to protect existing in-stream water quality and preserve the unique attributes and in-stream conditions of high-quality waters that may be impossible to fully restore if degradation is allowed to occur. An antidegradation policy, along with beneficial use designations and numeric or narrative criteria to protect those uses, provides the fundamental structure of a state's water quality standards program.

The Nevada Division of Environmental Protection (Division) has developed an antidegradation policy with procedural guidance to be applied on a statewide basis. This policy meets the statutory requirements of Nevada's water pollution control regulations, and parallels federal antidegradation policy found at Title 40 Code of Federal Regulations (CFR) 131.12. Nevada's antidegradation implementation procedures describe the structure of the antidegradation policy and provide guidance for maintaining the existing quality of all surface waters.

The Division's antidegradation policy follows a parameter-by parameter approach and designates one of four levels of protection to waterbodies: Tier 1, Tier 2, Tier 2.5, and Tier 3 levels of protection. Some waterbodies may be protected under a combination of Tier 1 and Tier 2 protections under a parameter-by-parameter approach. Each tier of protection has its own requirements for protecting existing water quality or characteristics. The Division will use available water chemistry data from its statewide water quality monitoring program—as well as quality data available from other agencies and organizations—to the greatest extent possible to determine the level of antidegradation protection appropriate for a waterbody. Biological and other data may also be used to assist in determining the most appropriate level of protection. For permitting purposes, if background water quality data are limited or non-existent, all parameters in the receiving water will be assumed subject to Tier 2 protection until ambient water quality levels can be ascertained.

Provisions of the antidegradation policy are mainly implemented during the permitting process. When reviewing a permit application, water quality in the receiving water is evaluated on a parameter-by-parameter basis, following the method historically used in Nevada in establishing requirements to maintain existing higher quality (RMHQs). A similar methodology is proposed to calculate the baseline values for the parameters in the receiving water that could be affected by the discharge or activity, but for which data are limited. For more information on permitting, see *Nevada's Antidegradation Permit Writers' Guidance* (Nevada Division of Environmental Protection [NDEP] 2020)

The implementation procedures, described within this document, are designed to accomplish the following:

- Describe how each aspect of the Division's antidegradation policy would be implemented.
- Provide a framework for evaluating how activities that may affect water quality are authorized consistent with the policy.
- Address how the decision-making process would be documented and made available for public review and input.
- Describe the levels of protection to maintain and protect Nevada's waters, and provide a process for Nevada's citizens and other Nevada stakeholders to nominate waterbodies or waterbody segments as ecologic and aesthetic waters (EAWs).

In Nevada, EAWs may be protected at a Tier 2.5 or a Tier 3 level, depending on the unique circumstances and characteristics of each waterbody nominated as an EAW. A Tier 3 level is taken as the highest level of protection for an EAW, and has historically meant the prohibition of any discharge, except a temporary discharge that does not alter water chemistry, such as described for Lake Tahoe.

The process for nominating a waterbody as an EAW and the information that would be evaluated and factors considered by the State Environmental Commission (Commission or SEC) in a public hearing are provided here in Attachment 2 to these implementation procedures. The antidegradation level of protection (Tier 3 or 2.5) that would be applied to maintain and protect the EAW, would be determined during the SEC's public hearing.

Nevada's Antidegradation Implementation Procedures

1.0 Introduction

An antidegradation policy to protect high-quality waters and maintain existing water quality constitutes an important component of state water quality programs. The goal of antidegradation is to protect existing in-stream water quality and preserve the unique attributes and in-stream conditions of high-quality waters that may be impossible to fully restore if degradation is allowed to occur. An antidegradation policy, along with beneficial use designations and numeric or narrative criteria to protect those uses, provides the fundamental structure of a state's water quality standards program.

The Nevada Division of Environmental Protection (Division or NDEP) has developed an antidegradation policy with procedural guidance to be applied on a statewide basis. This policy meets the statutory requirements of Nevada's water pollution control regulations and parallels federal antidegradation policy found at Title 40 in the Code of Federal Regulations (CFR) 131.12 (Appendix A). Nevada's antidegradation implementation procedures describe the structure of the antidegradation policy and provide guidance for maintaining the existing quality of all surface waters in the State.

The Division has developed regulatory language to include the antidegradation provisions in the Nevada Administrative Code (NAC), as well as a guidance document to assist in implementing the policy. This document, *Nevada's Antidegradation Implementation Procedures*, describes the decision framework and the sequence of steps the Division would follow to protect existing higher water quality conditions, support designated beneficial uses of surface waters, and ensure that waters with exceptional ecological or aesthetic qualities are not degraded.

Maintaining water quality that is better than water quality standards is a primary objective of both state and federal regulations. The goal of antidegradation is to protect existing in-stream water quality, and preserve the unique attributes and in-stream conditions of high-quality waters that may be impossible to fully restore if degradation is allowed to occur. The implementation procedures, described herein, are designed to accomplish the following:

- Describe how each aspect of the Division's antidegradation policy would be implemented.
- Provide a framework for evaluating how activities that may affect water quality are authorized consistent with the policy
- Describe the levels of protection afforded to Nevada's waters, and provide a mechanism for citizens and other stakeholders to nominate waters as ecologic or aesthetic waters (EAWs).

- Address how the decision-making process would be documented and made available for public review and input.

2.0 State of Nevada Requirements for Antidegradation

In addition to federal requirements, the State of Nevada has regulatory requirements pertaining to antidegradation of the State's waters. The following paragraphs describe the State's statutory requirements.

2.1 Statutory Requirements

Nevada Revised Statutes (NRS) 445A.305(2), 445A.520(1) and (2) and 445A.565 contain the State's requirements to maintain water quality in Nevada surface waters and protect higher-quality waters. NRS 445A.305 specifies that it is the policy of the State and intent of Nevada Water Pollution Control Law to maintain the quality of waters of the State for public health and enjoyment, the propagation and protection of terrestrial and aquatic life, the operation of existing industries, the pursuit of agriculture, and the economic development of the State. To protect and ensure that the existing and designated beneficial uses of a surface water are maintained, NRS 445A.520 requires that water quality standards be established that numerically or descriptively define the conditions necessary to maintain the beneficial uses. The protection of surface waters of higher quality is provided for in NRS 445A.565, which states:

> *Any surface waters of the state whose quality is higher than the applicable standards of water quality as of the date when those standards became effective must be maintained in their higher quality. No discharges of waste may be made which will result in lowering the quality of these waters unless it has been demonstrated to the State Environmental Commission*[1] *that the lower quality is justifiable because of economic or social considerations*.

The implementation procedures outlined in this document incorporate statutory requirements—in particular NRS 445A.520 and 445A.565—as components of the statewide antidegradation policy. Federal guidance suggests higher-quality waters be protected from degradation using a "parameter-by-parameter" approach or a "waterbody-by-waterbody" approach. This means antidegradation requirements may be described for specific chemical parameters within a waterbody, or entire waterbodies may be specified for antidegradation protection. To be consistent with the State's historical approach to antidegradation, the Division has elected to follow a parameter-by-parameter approach, which creates a waterbody/parameter combination for each parameter in each waterbody.

[1] State Environmental Commission

2.2 Historical Policy for Antidegradation in Nevada

Historically, when sufficient water chemistry data were available, the Division developed "requirements to maintain existing higher quality" (RMHQs) to fulfill antidegradation requirements on a parameter-by-parameter basis. The RMHQ value for a parameter reflects an existing level of water quality that is better than that needed to support the designated beneficial uses. Generally, RMHQs are proposed in conjunction with the beneficial-use standard for the same parameter during the standards adoption process. NRS 445A.565 is a statutory mandate clearly requiring known conditions of higher quality to be maintained; however, NRS 445A.565 does not specifically require that an RMHQ be established, nor does NRS 445A.520. The approach used to implement these antidegradation requirements is specified in this *Antidegradation Implementation Procedures* document.

It has been Division policy to establish RMHQs when monitoring data showed that existing water quality for individual parameters was significantly better than the standard necessary to protect the beneficial uses. RMHQs have been set for routine parameters such as temperature, pH, phosphorus, nitrogen, chloride, sulfate, total suspended solids, total dissolved solids (TDS), and fecal coliform, among others, primarily on the major river systems in the State. As noted in Nevada's last *Continuing Planning Process* (2002) approved by the U.S. Environmental Protection Agency (EPA), for parameters that have relatively high concentrations for beneficial use standards such as TDS, chloride and sulfate, RMHQs are usually not established at values less than 10% of the standard. For example, the sulfate standard is 250 milligrams per liter (mg/L); therefore, the lowest RMHQ that will be established is 25 mg/L.

During the RMHQ review process, staff may identify the need to either relax or tighten the existing RMHQs. Before RMHQs can be relaxed, certain conditions must be met, as discussed in the following section. Tightening of RMHQs may be appropriate if there have been significant changes to the system, such as the removal of a major point-source discharge, construction of a dam, or other major alteration. In general, if the percent improvement between the 95th percentile and the existing RMHQ is greater than 25%, the RMHQ may be revised. If the improvement is less than 25%, no changes to the existing RMHQ are typically proposed.

Parameters such as total dissolved solids, chloride and sulfate are associated with relatively high concentrations that still support a beneficial use. For parameters such as these, RMHQs are usually not established at values less than 10% of the standard. For example, if the sulfate standard is 250 mg/L, the lowest RMHQ that will be established is 25 mg/L. (Note: In the past, RMHQs were established at 95th percentile values regardless of how small those values were. The Division is not proposing to revise existing RMHQs that may be lower than 10% of such standards). In general, the following applies:

- RMHQs generally established at 95th percentile of data.
- RMHQs once established are not revised, unless there is greater than 25% improvement in water quality.

- An RMHQ is not established at values less than 10% of the most-restrictive water quality standard for a waterbody/parameter pairing.

Long-term routine monitoring of major river systems (e.g., Truckee River, Carson River, Humboldt River, etc.) has been done by the Division since the 1970s and provides a large data set to support development of RMHQs, which are calculated using five years of quarterly data. Other waters across the State have not been sampled for as long or as frequently as the major river systems. Consequently, a significant number of waters across the State, including many that would be considered high quality, do not have sufficient data to establish numerical limits for parameters based on Nevada's historical approach of developing RMHQs to provide antidegradation protection. Although the Division's statewide monitoring program has collected water chemistry data from more than 700 waterbodies (or waterbody segments) across the state, the additional resources required to conduct intensive monitoring and sampling to develop RMHQs for all of these waters is not feasible.

Although the Division has relied on the RMHQ approach to satisfy antidegradation requirements of the Clean Water Act, a more flexible approach is needed when discharges are proposed to waters that are known or suspected to have quality better than applicable water quality standards, but that do not have RMHQs. This flexible alternative approach is needed in order to fulfill state statutory requirements to protect and maintain the higher-quality conditions of these waters. The policy described herein will provide a level of antidegradation protection to all waters of the state by accomplishing the following:

- Evaluate proposed activities and discharges for their effect on the water quality in receiving waters.
- Ensure existing uses of the waterbody are maintained and protected.
- Prevent degradation of the high-quality conditions to the fullest extent possible.
- Determine whether a discharge or activity that may lower water quality conditions is necessary and justified, before authorizing it.

Nevada's antidegradation statutes allow degradation of existing water quality only after the SEC finds that such degradation is justified to accommodate important economic or social development. In allowing such degradation, the Commission will assure that water quality is adequate to protect existing uses. Specifically, an RMHQ can be relaxed, but a beneficial use standard cannot be relaxed to accommodate economic or social development. This provision is intended to provide relief only in extraordinary circumstances where the economic and social need for the activity clearly outweighs the benefit of maintaining the existing high water quality above that required to protect the beneficial use. The burden of proof that degradation is necessary for economic or social development falls on the person/entity proposing to degrade the higher quality water.

Table 1. Summary of Waters with Requirements to Maintain Existing Higher Quality (RMHQs)

Stream	Parameters
Snake River Basin	
Goose Creek	Temp, pH, NO_3, TDS, Cl
Salmon Falls Creek	Temp, pH, NO_3, TDS, Cl, Fecal
Shoshone Creek	Temp, pH, NO_3, TDS, Cl
EF Jarbidge River	Temp, pH, NO_3, TDS, Cl, Fecal
Jarbidge River	Temp, pH, TP, NO_3, TDS, Cl, Fecal
Bruneau River	Temp, pH, NO_3, TDS, Cl, Fecal
Owyhee River	Temp, pH, NO_3, TDS, Cl, Fecal
SF Owyhee River	Temp, pH, NO_3, TDS, Cl
Humboldt River Basin	
Humboldt River	Temp, pH, TN, color, TDS, Cl, Fecal
Truckee River Basin	
Lake Tahoe Tributaries	pH, TP, TN, TSS, turb, color, TDS, Cl
Truckee River	Temp, pH, TP, OP, TN, TSS, turb, color, TDS, Cl, SO_4, SAR, Fecal
Carson River Basin	
WF Carson River	Temp, pH, TP, TN, TSS, turb, color, TDS, Cl, SO_4, SAR, Fecal
Bryant Creek	Temp, TP, TN, color, TDS, Cl, SAR, Fecal
EF Carson River	Temp, pH, TP, TN, turb, color, TDS, Cl, SO_4, SAR, Fecal
Carson River	Temp, pH, TN, turb, color, TDS, Cl, SO_4, SAR, Fecal
Walker River Basin	
West Walker River	Temp, TP, TN, TSS, color, TDS, Cl, SO_4
Topaz Lake	Temp, TN, TSS, turb, color, TDS, Cl, SO_4
Sweetwater Creek	Temp, NO_3, TSS, TDS, Cl
East Walker River	Temp, TN, TSS, TDS, Cl, SO_4, SAR
Walker Lake	TIN
Desert Creek	Temp, TP, NO_3, TDS, Cl
Central Region	
Chiatovich Creek	Temp, TP, TN, TDS, Cl, SO_4, Fecal
Indian Creek	Temp, TP, NO_3, TDS, Cl, Fecal
Leidy Creek	Temp, TP, NO_3, TDS, Cl, Fecal
Great Salt Lake Region	
Snake Creek	Temp, TP, NO_3, TDS, Cl, Fecal
Colorado River Basin	
Colorado River	Temp, TP, NO_3, TN, Fecal
Lake Mead	Temp, pH, TIN, Chl-a, turb, color, TDS, Cl, SO_4
Las Vegas Wash	Temp, TIN, TDS
Virgin River	Temp, TP, TN, Fecal
Muddy River	Temp, TN, Fecal
Meadow Valley Wash	Temp, TN
Beaver Dam Wash	Temp, TP, NO_3

Temp =	Temperature	TSS =	Total Suspended Solids
TP =	Total Phosphorus	turb =	Turbidity
OP =	Orthophosphate	TDS =	Total Dissolved Solids
TN =	Total Nitrogen	Cl =	Chloride
NO_3 =	Nitrate	SO_4 =	Sulfate
TIN =	Total Inorganic Nitrogen	SAR =	Sodium Adsorption Ratio
Chl-a =	Chlorophyll-a	Fecal =	Fecal Coliform

3.0 Tiered Protection Levels

The Division's antidegradation policy designates one of four levels of protection to waterbodies, although some waterbodies may be protected under a combination of Tier 1 and Tier 2 protections. Each tier of protection has its own requirements for protecting existing water quality, as described below:

- **Tier 3** – Tier 3 protection provides the highest level of protection by prohibiting the degradation of existing water quality. No discharge is allowed into waters with Tier 3 protection. The Division's policy is to maintain and protect waters of extremely high quality or exceptional ecological or aesthetic significance. Tier 3 protection is typically associated with waters characterized as "Outstanding Natural Resource Waters" (ONRWs). Although not explicitly stated in the regulations, Lake Tahoe is currently recognized as Nevada's only waterbody with Tier 3 protection, with a beneficial use of "Water of Extraordinary Ecological or Aesthetic Value," and is categorized as an EAW, which provides a level of protection similar to an ONRW.

  The tributary rule (NAC 445A.1239) carries Lake Tahoe standards upstream for tributary waters that do not have their own standards. Other surface waters in the State that have exceptional ecological, aesthetic or recreational significance and have attributes associated with an EAW, as outlined in Nevada's antidegradation regulations (Attachment 1), could also warrant Tier 2.5 or Tier 3 protection. At this time, however, no other waterbodies have been designated as an EAW.

  Waterbodies nominated as EAWs would, upon acceptance by the SEC, be provided Tier 2.5 or Tier 3 protection. The antidegradation level of protection (Tier 3 or 2.5) that would be applied to maintain and protect the EAW, would be determined during the SEC public hearing. Existing land uses within the vicinity of the EAW are allowed to continue, although best management practices (BMPs) are encouraged. Funding is available through programs to help landowners and existing users implement BMPs. Existing permitted discharges shall be allowed to continue, provided there are no increases in discharge or changes in the composition of the discharge after designation of the water as an EAW.

  In addition, the Division may allow some degradation to an EAW if it determines that the proposed activities that may result in temporary or limited lowering of the water quality are necessary for long-term ecological or water quality benefit, or to accommodate public health and safety. Such activities shall be non-recurring and necessary controls will be implemented to minimize impacts to water quality and water quality values.

- **Tier 2.5** – This tier of protection applies to EAWs and affords additional protection of the characteristics or attributes that make the water of ecological, aesthetic, or recreational importance. This tier of protection does not preclude new or expanded point-source discharges where such sources would have no effect on the existing water quality or exceptional characteristics of the EAW. A Tier 2.5 level of protection may be applied to an EAW with exceptional characteristics, even though the EAW may not have pristine water quality for all parameters.

- **Tier 2** – This tier of protection applies to parameters in high-quality surface waters (i.e., waters where existing quality is better than applicable water quality standards). Tier 2 protection status requires protecting and maintaining existing high-quality conditions, unless a review of reasonable alternatives and social or economic considerations justifies a lowering of water quality. However, in no case may water quality be allowed to degrade to the point where it fails to meet water quality standards.

  The Division will consider Tier 2 the default protection level for all parameters in all waters that have limited available water chemistry data, until new information or data demonstrates that ambient water quality is not considered high quality. Nevada's waters would be afforded Tier 2 protection for those parameters identified as being present at levels better than the water quality standard, as outlined in NRS 445A.565.

- **Tier 1** – This level applies to all surface waters as a minimum level of protection. Tier 1 requires that the level of water quality necessary for existing and designated beneficial uses be maintained and protected (i.e., water quality standards must be achieved). Tier 1 protection prohibits further degradation of existing water quality for any parameter of concern that does not meet applicable water quality standards.

  The policy for waterbodies with Tier 1 protection is to maintain and protect existing and designated uses for a waterbody, as well as to specify the water quality criteria needed to protect such uses. Under Tier 1 protection, no discharges that cause impairment of the water with respect to beneficial-use criteria (i.e., water quality standards) are allowed (NRS 445A.520).

The State's antidegradation regulation (see Attachment 1) incorporates these four tiers of protection to control discharges or activities that may degrade waters of the State. Procedural steps, as described in the remainder of this document, detail methods and guidance to be followed by the Division to implement the State's antidegradation policy, which is consistent with both state and federal regulations for antidegradation protection. The antidegradation regulation (Attachment 1) will be included in the NAC to provide the regulatory authority for a statewide antidegradation policy.

Federal guidance on antidegradation requires states to "…*provide an opportunity for public involvement during the development and any subsequent revisions of the implementation methods, and shall make the methods available to the public.*" Because the antidegradation implementation procedures are included by reference in the antidegradation regulation, the Division construes that procedures are also subject to public review and input during the rulemaking process. Any subsequent revisions made to the implementation procedures would be public-noticed for discussion, review, and comment.

3.1 Implementation of a Tiered Approach in Nevada

The Division will conduct some level of antidegradation review for all new and expanded discharges or activities to evaluate the potential impact to existing quality of surface water. Implementation of the proposed tiered approach is structured to be forward-looking and will apply to new or expanded activities regulated through discharge permits and other activities that require a state water quality certification.

Permit renewals with the same discharge limitations, requirements, and conditions as the previous permit will be viewed as not causing further degradation of water quality; such renewals will not be subject to additional antidegradation review. This limitation acknowledges the public and private infrastructure investments and land-use commitments made based on effluent limits authorized in the original permits. However, if the permit renewal involves a modification for increased effluent flow, new parameters in the discharge, relocated outfall, or a new or larger mixing zone, then the Division would conduct an antidegradation review. The specifics of the antidegradation review will depend on the tier of protection assigned to the receiving waterbody; these specific requirements are discussed in more detail in Section 4.0, "Antidegradation Review Procedures," as well as in *Nevada's Antidegradation Permit Writers' Guidance* developed by the Nevada Division of Environmental Protection (NDEP 2020).

Developing and adopting RMHQs to protect higher water-quality conditions is a time-consuming process, requiring five years of quarterly water quality data. Rather than requiring this work be completed before a permit can be issued, the Division will conduct an antidegradation review when a permit application for a new or a renewal for a significantly modified activity or discharge is submitted to the Division. The process to develop new RMHQs, or interim baseline values (IBVs), during the permitting process is described in Section 4.2.

Public review is an important part of the permit review process, particularly if degradation is to be allowed in a waterbody that is assigned Tier 2 protection. The antidegradation review, as well as decisions regarding authorizing a proposed discharge, will be open to public comment as part of the Division's permitting process. The Division must provide public notice and a 30-day public comment period for each draft permit in accordance with NAC 445A.234 and 40 CFR 124.10. The antidegradation review will determine the appropriate permit limits or conditions that must be set to satisfy antidegradation requirements.

3.2 Activities Not Subject to Review

Activities or discharges associated with restoration projects and implementation of nonpoint source pollution control measures will not be subject to antidegradation review. The Division recognizes that some short-term degradation of water-quality conditions may be necessary to return a waterbody to its natural or original condition. Additionally, although the rules regarding antidegradation protection do not address emergency situations, short-term reductions in water quality may be necessary when emergency actions are required to mitigate situations that pose a significant threat to life or property.

3.3 Thermal Discharges

Thermal discharges into surface waters have not been a notable issue in the State. However, the proposed antidegradation approach and implementation would apply to prevent potential water-quality impairments associated with thermal discharges, as required by Section 316 of the Clean Water Act.

4.0 Antidegradation Review Procedures

The following discussion provides an overview of how the proposed antidegradation procedures would be implemented during review of a discharge permit application. This review would determine whether a proposed discharge to waterbody whose quality is better than the levels necessary to support the existing and designated beneficial uses, would result in a significant degradation of the higher-quality conditions of that waterbody. The antidegradation review comes into play when a new discharge or other permitted activity (e.g., 401 certification) is proposed. *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020) provides more details on performing permit reviews.

4.1 Introduction

The focus of an antidegradation review is to determine whether a proposed discharge (or related activity) to a waterbody whose quality is better than the levels necessary to support the existing and designated beneficial uses, has a reasonable potential to degrade water quality. The basis of the decision(s) made by the Division, as to whether authorizing the proposed discharge or activity is consistent with the state's antidegradation requirements, will be documented in the administrative record for the discharge permit. The antidegradation review would be initiated at the time that a permit application is submitted, or activity is proposed. For a waterbody where Tier 2 protection would apply, the review process would determine the potential to lower the higher-quality conditions. For Tier 2 waters, if the degradation was deemed unavoidable, additional analysis and evaluation that would need to be completed. The sequence of steps the Division would follow in conducting an antidegradation review is discussed in this section.

4.2 Characterizing Receiving Waters to Determine Appropriate Level of Antidegradation Protection

The Division will use available water chemistry data from its statewide water quality monitoring program—as well as quality data available from other agencies and organizations—to the greatest extent possible to determine the level of antidegradation protection appropriate for a waterbody. In general, waters with existing quality that is better than the water quality standards will be considered "high quality" and subject to Tier 2 protection. Other waters may be recognized as EAWs and designated as having Tier 2.5 protection, wherein a discharge is possible, as long as water quality and characteristics integral to the EAW are not degraded. Water quality will be evaluated on a parameter-by-parameter basis. A methodology similar to that used historically to set RMHQs will be followed to calculate the baseline values for the parameters in the receiving water that could be affected by the discharge or activity. Ideally, there would be adequate water chemistry data available, representative of various flow regimes, from which to calculate the 95th percentile as the baseline value for a particular parameter. This statistical approach is similar to how RMHQ values are calculated.

If background water quality data are limited or non-existent, the receiving water will be assumed subject to Tier 2 protection until ambient water quality levels can be ascertained. This may require the permit applicant to collect and provide monitoring data or other information about the receiving waterbody to characterize ambient water quality conditions. In these situations where data are insufficient to establish a statistical valid baseline value, the Division will work with the applicant in developing a sampling and analysis plan to acquire the representative water quality data needed to estimate baseline water quality. A strategy that may be applicable when water quality data are limited or unavailable for a water with Tier 2 or Tier 2.5 protection, would be to determine an IBV for each parameter of concern. The IBV would be set at the extrapolated 95th-percentile value calculated using chemical data from three independent and representative samples collected just upstream of the proposed point of discharge.[2]

A minimum of three independent and representative samples must be collected during periods of non-extreme flow conditions to calculate an IBV. The terms, "independent" and "representative" have specific meaning in a statistical sense. Independent samples are not strongly auto-correlated (also known as serial correlation). What this means is if there is too short a time lag between sampling events, the true variability of the population may be poorly estimated because the samples are not sufficiently independent. As an example, if one were to collect one sample per quarter for four quarters, versus collecting one sample per day on four consecutive days, there would likely be more variability in the quarterly samples than in the daily samples, even though both sets represent "four samples per year." For this reason, the Division recommends a minimum interval of collecting samples no more than monthly.

[2] The "extrapolated 95th percentile is calculated using the =PERCENTILE.INC(ARRAY,0.95) function in Excel. For example, using three results (10, 10, 20 mg/L) yields an extrapolated 95th percentile of 19.0 mg/L

Representative samples provide a reasonable approximation of the characteristics of a population. In this case, the sample typifies ("represents") in space and time, the chemical conditions of the waterbody that is under consideration. For example, to characterize the average chemistry of a stream, it would be best to sample the water in the flowpath instead of in a backwater pool. Ideally, a representative sample is an unbiased reflection of the chemical conditions in a waterbody. Sample sites should be selected to provide a better estimate of well-mixed waters. To better ensure that independent and representative samples are collected, NDEP recommends that a sampling and analysis plan be prepared and submitted for review. This plan need not be lengthy, and may cite the Division's *Quality Assurance Program Plan for Surface Water Sampling* (NDEP 2020) for sampling procedures and analytical methods. A map of proposed sampling sites and proposed discharge point(s) would be helpful. Contact NDEP's Bureau of Water Quality Planning (BWQP) with questions regarding what must be included in a sampling and analysis plan.

As more water chemistry samples are collected from the waterbody (as a permit monitoring condition) to better characterize the spatial and temporal variability of the ambient water quality, baseline values would be better defined and, depending on the ecological significance or other attributes of the waterbody, RMHQs could subsequently be developed. Under this strategy, a permittee or project proponent would acknowledge that effluent limits could be adjusted, as necessary, as more representative water quality data are collected. Historically, Nevada has used data from a minimum of 20 samples (e.g., five years of quarterly data) collected during non-extreme flow conditions to calculate the 95th percentile as the RMHQ value.

As noted above, flow is an important factor to be considered when establishing baseline water quality for waters that qualify for Tier 2 or Tier 2.5 protection. Extreme conditions of high or low flow can markedly affect parameter concentrations and other characteristics. Rather than just focusing on water quality levels during critical low-flow conditions, a variety of flow regimes and flow metrics should be examined to provide a more complete picture of background quality of any waterbody that has Tier 2 or Tier 2.5 protection.

For those waters that have RMHQs adopted for certain parameters, baseline water quality will be set at the RMHQ values. For lakes and reservoirs, the Division will consider seasonal impacts, water-level fluctuations, or other factors deemed important to establish the baseline water quality. Critical water levels of lakes and reservoirs will be determined on a case-by-case basis.

In summary, characterization of the existing quality of the receiving waterbody is necessary to determine the appropriate level of antidegradation protection that would apply when a new or expanded discharge or activity is proposed that has the potential to impact the waterbody. Steps taken to conduct an antidegradation review during the permitting process are described below, in Section 4.3. More details are provided in *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020)

4.3 Steps of an Antidegradation Review

The general steps taken to complete an antidegradation review are as follows:

- STEP 1 – Determine the level(s) of tier protection that applies, on a parameter basis, to the receiving water (see Figure 1).
- STEP 2 – Identify the parameters of concern (i.e., pollutants of concern) in the proposed discharge.
- STEP 3 – Compare levels of parameters in the proposed discharge to levels of those parameters in the receiving waterbody and determine if higher water quality conditions will be maintained.
- STEP 4 – Perform additional analysis of alternatives and evaluation of socio-economic importance factors, if required.

4.3.1 STEP 1. Determine the Tier Protection Level Applicable to the Receiving Water

The characterization of the chemistry of the receiving waterbody, as discussed in Section 4.2, will provide insight of the appropriate protection tier(s) to be used during the review. Details of the tier protection levels are described in the following paragraphs, and the decision flowchart for determining protection levels is shown in **Figure 1**.

Tier 3 Protection. This tier of protection prohibits any new or expanded direct point-source discharge and requires that any new or expanded point-source discharge upstream not lower the existing water quality in the EAW. Any proposed activity that could impact the existing quality of a Tier-3 protected water will be prohibited by the Division. However, there are some situations under which Tier 3 protection requirements will not apply, including (1) discharges of direct sources authorized by the Division before the water was classified as an EAW, and (2) discharges that may cause a temporary or limited lowering of the water quality, but that the Division has determined to be necessary for long-term ecological or water quality benefit, or to accommodate public health and safety. Such activities shall be non-recurring and necessary controls will be implemented to minimize impacts to water quality and water quality values.

The goal of Tier 3 protection is that existing water quality be maintained and protected in a surface water or segment thereof that has been classified as an EAW. In the case of existing discharges that predate the EAW classification, the Division encourages the use of best management practices to reduce or eliminate any degradation.

Tier 2.5 Protection. Some waters classified as EAWs may be designated for Tier 2.5 protection. Existing water quality or the exceptional ecological, aesthetic or recreational value will be maintained and protected in a surface water classified as an EAW that is assigned Tier 2.5 protection. This tier of protection does not preclude new or expanded point-source discharges where such sources, with or without treatment or controls, would have no adverse effect on the existing water quality or value of the EAW.

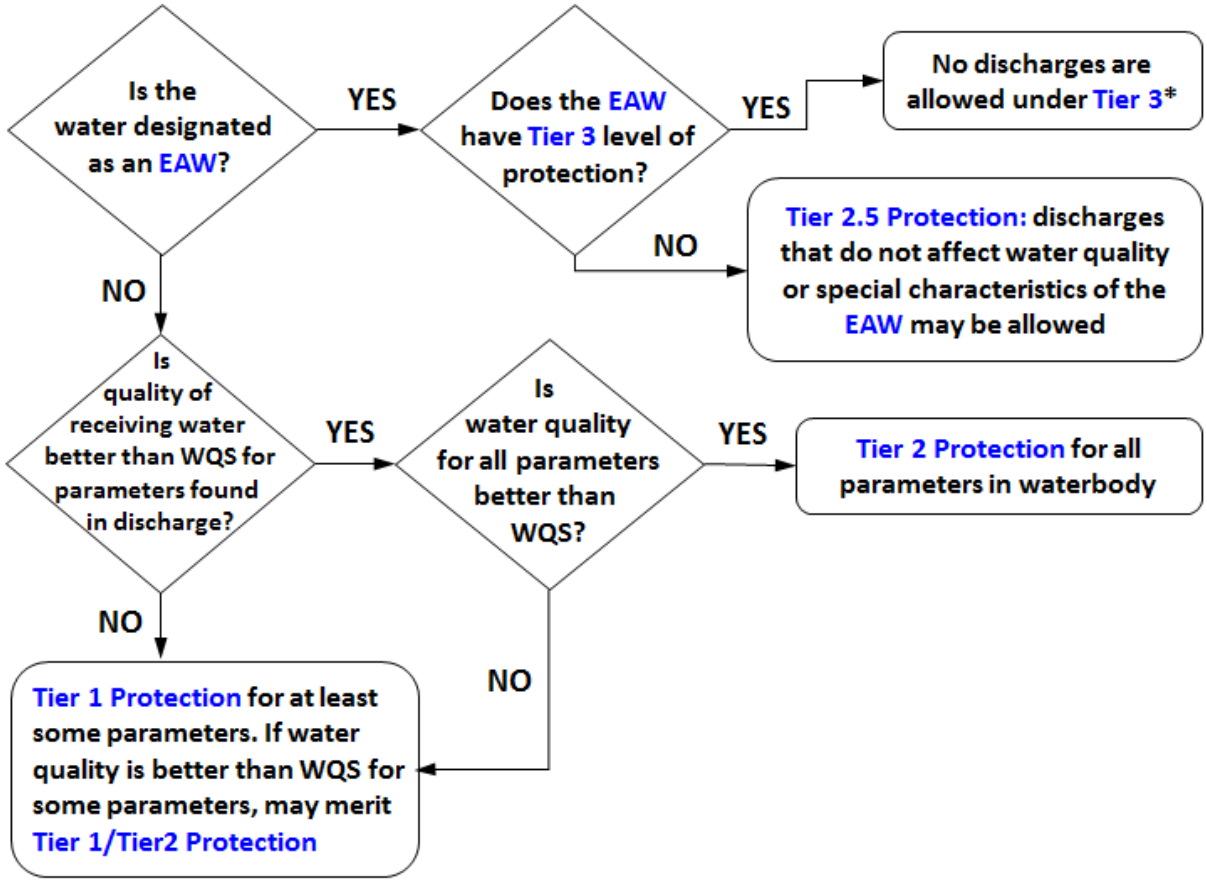
Tier 2.5 protection requirements will not apply to the following situations: (1) discharges of direct sources authorized by the Division before the water was classified as an EAW, and (2) discharges that may cause a temporary or limited lowering of the water quality, but that the Division has determined to be necessary for long-term ecological or water quality benefit, or to accommodate public health and safety. Such activities shall be non-recurring and necessary controls will be implemented to minimize impacts to water quality and water quality values. At present, there are no EAWs in Nevada that are designated as having Tier 2.5 protection.

Tier 2 Protection. Where the existing quality in a surface water is better than the applicable water quality standards to support the designated and existing beneficial uses, the better water quality shall be maintained and protected. Water quality data and other data—such as physical, biological and other information regarding the water body—will be used by the Division to evaluate whether a receiving waterbody is high quality and subject to Tier 2 protection requirements. If data are lacking or insufficient, the water will be assumed to merit Tier 2 protection until demonstrated otherwise. In general, waters with existing quality better than that needed to support all beneficial uses (i.e., better than water quality standards) will be considered high quality and subject to Tier 2 antidegradation review.

The Division will evaluate on a parameter-by-parameter basis whether a proposed discharge or activity will negatively impact the better water quality conditions in the receiving water.

Ancillary data such as land-use information, presence of point or nonpoint-source pollution and the health of the aquatic community may be used by the Division to categorize the waterbody as a high-quality water. Other factors that may be considered in determining whether the waterbody would be considered a high-quality water include existing aquatic life uses, existing recreational or aesthetic uses, and other sensitive uses such as drinking water source, flow conditions, and the overall value of the waterbody from an ecological and public-use perspective. A waterbody cannot be excluded from Tier 2 protection solely because water quality for some parameters does not meet levels necessary to support beneficial uses. In such cases, Tier 1 protection would apply for the impaired parameter(s) while the other parameters could be subject to Tier 2 protection.

Figure 1. STEP 1 - Determining the Tier of Protection for Waterbody/Parameter Combinations



Notes: WQS = water quality standards. *An Ecological or Aesthetic Water (EAW) means a water recognized to have exceptional ecological, aesthetic, or recreational significance. EAWs are protected at a Tier 2.5 or Tier 3 level of protection. Lake Tahoe is currently Nevada's only EAW, and is classified for Tier 3 protection.

Tier 1 Protection. The level of water quality necessary to maintain and protect designated and existing beneficial uses shall be maintained and protected in all surface waters of the state. When a proposed activity involves a receiving water that does not possess the overall water quality or value necessary to be considered high quality, Tier 1 antidegradation protection would apply. The Tier 1 review conducted by the Division would ensure that the discharge would not cause a violation of the surface water quality standards, as required by NRS 445A.520, or exceed waste load allocations for waters with approved total maximum daily load (TMDL) values. Where a surface water is listed on the state's §303(d) impaired waters list for one or more parameters, Tier 1 protection would apply to the parameters not meeting water quality standards.

Some waters may have water quality better than levels necessary to support the designated beneficial uses for a limited number of parameters. These waters would have Tier 1 and Tier 2 protection on a parameter-by-parameter basis.

4.3.2 STEP 2. Identify Parameters of Concern (i.e., Pollutants of Concern)

Once it is determined that Tier 2 or Tier 2.5 protection applies to a waterbody, the next step in the review process is to determine, based on the chemistry of the proposed discharge, whether the high-quality conditions of parameters in the receiving waterbody would be degraded and require further review steps (**Figure 2**). Before assessing reasonable potential for the discharge to affect water quality of the receiving water, the parameters expected in the proposed discharge, as well as their corresponding levels in the receiving water, must be determined.

The applicant or project proponent will be required to supply information and data related to the chemistry of the discharge. Based on the chemistry of the proposed discharge, the Division will identify the parameters of concern and based on their background level in the receiving water, determine whether Tier 2 antidegradation review is required. Any discharge estimated to have a reasonable potential to degrade water quality would not be allowed in an EAW with Tier 2.5 protection. As described in Section 4.3.4 of this document, some degradation of a water with Tier 2 protection for some or all parameters may be allowed, based on results of an alternatives analysis or if there is justification of social and economic benefits. Sections 7.2 and 7.3 of *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020) provide more details on evaluating alternatives and social or economic benefits.

Under Nevada's antidegradation policy, the potential for degradation of ambient water quality for each parameter or pollutant of concern will be evaluated based on the existing levels of each parameter in the receiving water. Thus, a high-quality water could have Tier 2 protection for most of the parameters expected in a discharge, but certain parameters may only warrant Tier 1 protection. Decisions regarding whether a waterbody is high quality will be based on best professional judgment of the overall quality and value of the receiving water, and additional criteria as discussed in Step 1, *Determine the Applicable Tier Protection Level*.

Although a waterbody may be preliminarily categorized as having Tier 2 protection, if background level of a parameter is not demonstrably better than the water quality standard, Tier 1 protection will be assigned to that parameter. For those waterbodies with RMHQs, the parameters of concern in the discharge will be compared to the RMHQs to evaluate whether their levels in the discharge are higher than the RMHQs and further antidegradation review is required. Tier 2 protection is not applicable for a particular parameter if an approved TMDL has been developed for the receiving waterbody and a load allocation exists for the parameter of concern. In such instances, the waste load allocation of the TMDL would regulate the concentration of the parameter of concern in the discharge.

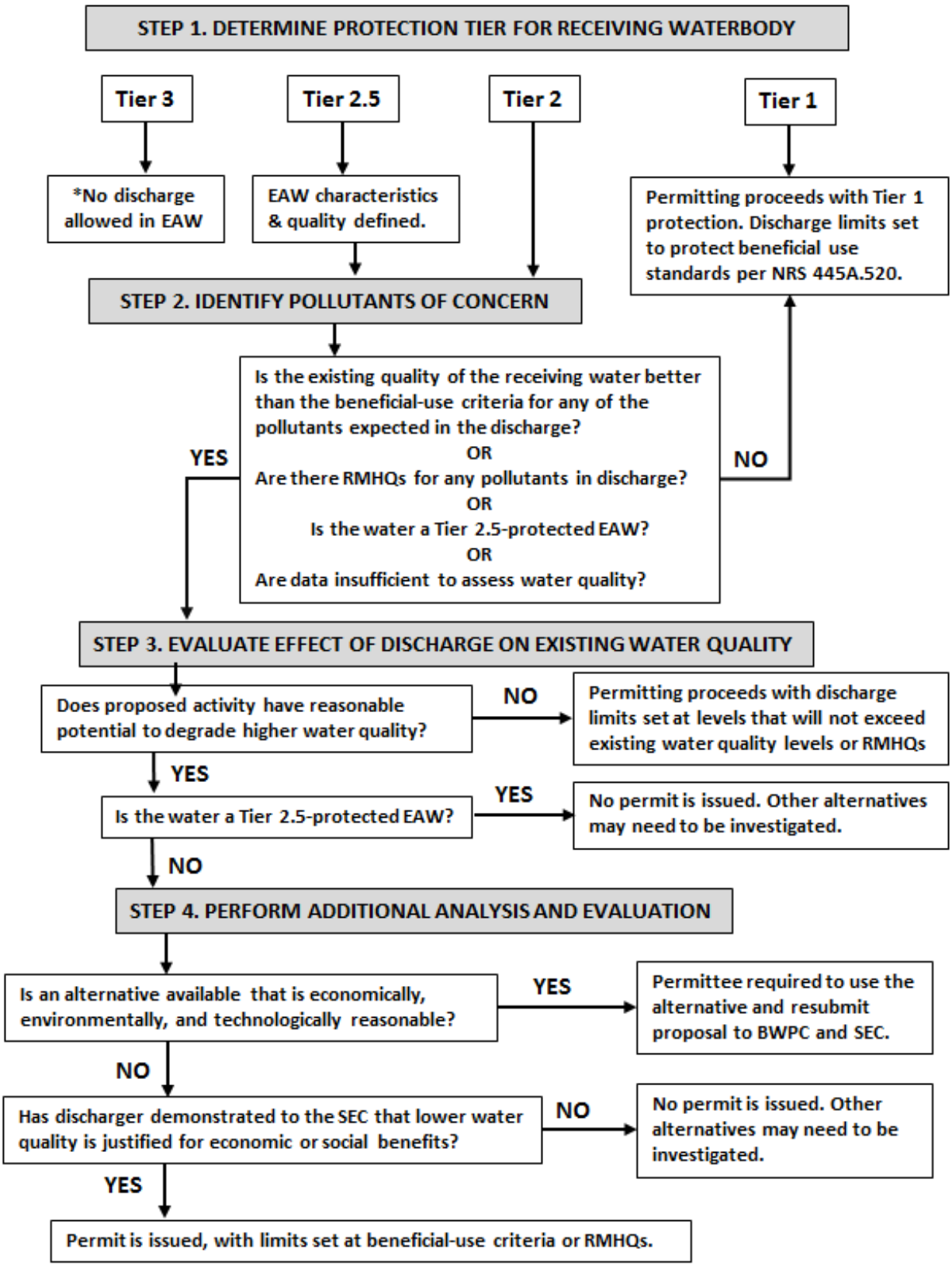


Figure 2. STEPS 1 through 4 to Follow when Evaluating a Discharge Permit Application

If the waterbody being evaluated does not have assigned water quality standards, the Division will rely on the "tributary rule" (NAC 445A.1239) for determining appropriate water quality levels to support beneficial uses that would be assigned to the waterbody, as well as other available guidance and information, as appropriate. Available water chemistry data that may exist in the Division's water quality monitoring database or which has been collected by the permittee will be used to establish baseline water quality conditions and determine whether existing water quality conditions warrant Tier 2 protection.

After identifying the parameters of concern in the proposed discharge or activity and determining baseline levels in the receiving water are demonstrably better than the corresponding water quality standards or RMHQs have been adopted, the next step of the Tier 2 antidegradation review will be conducted. Step 3 of the antidegradation review involves the Division evaluating whether high water quality conditions will be maintained or RMHQs met if the proposed discharge or activity is permitted.

4.3.3 STEP 3. Evaluate the Effect of Discharge or Activity on Existing Water Quality

Antidegradation policies developed by other states that have been approved by the EPA allow for "insignificant" or "de minimis" water quality degradation as acceptable under the Tier 2 review process. This de minimis provision allows the states to differentiate between actions that will have an insignificant impact on existing quality from those that will have a significant impact. These categorical Tier 2 exemptions are based on EPA policy that a discharge will have an insignificant effect on the receiving waterbody if the decrease in water quality is no more than 10%. The 10% increase is evaluated on the basis of the discharge using up more than 10% of the assimilative capacity for a pollutant in a waterbody or causing a 10% increase of the existing concentration of a pollutant in the receiving water.

The Division has elected to forego implementing a percentage reduction in the assimilative capacity of a pollutant or an increase of a certain percentage above baseline water quality levels in evaluating whether a proposed discharge or activity will cause significant degradation. State regulations (NRS 445A.565) do not address any amount of degradation as "insignificant." Instead, the Tier 2 evaluation will focus on whether the existing Tier 2 levels will be maintained at the point of discharge approved by the Division, if a discharge or activity is authorized.

Step 3 of the antidegradation review process would be conducted during the review process for a discharge permit application. This step would focus on evaluating whether existing water quality levels for the Tier 2 parameters of concern in the receiving water would be maintained and protected if the discharge or activity is authorized. A regulated discharge would not cause degradation of higher water quality conditions if the levels of the parameters of concern at the point of discharge are at or below the corresponding baseline water quality or RMHQs in the receiving waterbody. In the case of an EAW with Tier 2.5 protection, the water quality and critical characteristics of the EAW cannot be degraded, although nondegrading discharges are allowable.

The Division will conduct this evaluation on a parameter-by-parameter basis. The Tier 2 review is predicated on evaluating whether each parameter (i.e., pollutant) anticipated in a discharge to a receiving waterbody will measurably increase the in-stream concentration (i.e., lower the existing water quality) of the parameter.[3] Tier 2 review applies only to the parameters of concern that have background levels better than the corresponding water quality standard. If the level of the parameter in the receiving water is not consistently better than the water quality standard, that parameter would be exempt from Tier 2 review and the discharge permit limit for the parameter would be set based on the numeric value of the water quality standard. A more detailed discussion of the procedural steps and supplemental information that will need to accompany the permit application to analyze the potential impact of discharge pollutants on the existing higher water quality in a receiving waterbody is contained in *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020).

A proposed discharge or activity that contains concentrations of the parameters of concern would satisfy antidegradation requirements for Tier 2 protection. Effluent permit limits for the parameters of concern would be set at the respective baseline water-quality levels in the receiving water, or at the RMHQ values. The results from this analysis would be documented in the permit fact sheet, and no further antidegradation requirements for Tier 2 protection would apply. For waterbodies where IBVs have been set, a similar review would be conducted to evaluate whether the IBVs would be met. The discharge permit limits would be set at the IBVs, but as previously discussed, the IBVs could possibly change based on collection of additional water chemistry data, and the eventual establishment of RMHQs. The IBV functions as a "temporary" RMHQ for the purposes of permitting. Section 5.2 of *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020) describes RMHQs and IBVs in more detail.

Where baseline water quality for a Tier 2 parameter of concern was based on an IBV, the collection of quarterly data over a 5-year period will be used to calculate an RMHQ. The RMHQ for the parameter of concern may be higher or lower than the original IBV. If the RMHQ is more stringent, and a permittee is unable to achieve consistent compliance, a permit writer may either:

- Include a less stringent effluent limitation(s) if, after performing the additional analysis and evaluation specified Section 7.0 of *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020), it is determined that a lowering of water quality with respect to the parameter is necessary to accommodate important economic or social development, or

- Include the more stringent effluent limitation(s) and establish a compliance schedule.

[3] For certain parameters, such as dissolved oxygen (DO) and alkalinity, increasing concentrations is generally an improvement to water quality. In addition, acceptable values of pH lie within a range of values, so increases or decreases may be degrading.

If the Step 3 evaluation indicates that the proposed discharge or activity will cause degradation of the higher water-quality conditions in the receiving water, this does not mean that the discharge or activity will not be allowed. Rather, the applicant or proponent seeking authorization for the discharge will need to provide additional information, as outlined in the next step of the antidegradation review process. This additional information will allow a decision as to whether lower water quality is necessary to accommodate important economic or social development in the area of the Tier 2-protected water. This will require the party proposing the action to complete a socio-economic analysis, including an evaluation of practicable and reasonable alternatives that would prevent or cause less degradation than the proposed activity.

4.3.4 STEP 4. Additional Analysis and Evaluation

This next step in the antidegradation review process would only be conducted if a proposed project or activity is predicted to lower the water quality in a Tier-2 protected water and the project proponent desires to pursue an exemption from meeting the effluent limits that would prevent degradation of the water quality levels. The Division will work with the applicant to evaluate alternatives to reduce degradation. If lowering of existing water quality levels cannot be reasonably avoided, the applicant may present a justification that the proposed activity is necessary to accommodate important economic or social benefits in the area where the proposed project will be located. This step of the antidegradation review determines whether the socioeconomic benefit to be gained from the proposed activity justifies degradation of the higher water quality.

NRS 445A.565 allows lowering of existing water quality in a Tier-2 protected water only after important social and economic benefits have been demonstrated by the applicant, and the SEC has agreed that lowering the quality of the receiving waterbody is necessary for economic and social benefits. Here, the SEC must weigh the balance between degradation and economic improvement to make a determination. In allowing such degradation, the SEC will ensure that the quality of the receiving waterbody is not reduced below levels necessary to protect existing beneficial uses. Sections 7.1 through 7.3 of *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020) provide more details on evaluating alternatives and justifying social and economic benefits.

4.3.4.1 Alternative Analysis

Before the Division continues with review of a permit application that is predicted to cause degradation of water quality, the project proponent or permit applicant will be required to evaluate whether any less-degrading alternatives are available. This alternative analysis focuses on alternatives directly related to protecting water quality that are economically, environmentally, and technologically reasonable. Alternative pollution-reduction strategies, such as different treatment techniques, different discharge locations, or process changes that

would improve discharge quality, would need to be evaluated. The overall goal of this analysis is to identify whether a less-degrading alternative, based on the above, could be reasonably and economically implemented to reduce the levels of the parameters of concern in the discharge to corresponding levels in any receiving waterbody with Tier 2 protection. Section 7.2 of *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020) provides details on conducting an alternatives analysis.

Additional treatment steps to discharge less pollution are usually going to cost more and therefore raise the question of whether it is reasonable for a project proponent to be required to implement more costly pollution-control alternatives. The analysis may result in identification of multiple reasonable alternatives. As noted in Section 7.2 of *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020), alternatives may include, but are not limited to, the following:

- Pollution prevention.
- Improved operation and maintenance of the existing treatment system.
- Treatment process changes, including advanced or innovative biological, physical, and/or chemical treatment.
- Collection system improvements.
- Recycling/reusing wastewater.
- Land application.
- Regionalization.
- Groundwater recharge.
- Seasonal or controlled discharges to avoid critical periods.
- Relocation or reconfiguration of the outfall or diffuser.
- Reduction in the scope of the proposed activity.

The alternative analysis should be comprehensive and consider the following in evaluating less-degrading alternatives, specified in the sections of *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020) referenced parenthetically below:

- Amount of degradation reduced (Section 7.2.2).
- Cost-effectiveness of pollutant removal (Section 7.2.3).
- Cost of pollution reduction versus overall environmental gain (Section 7.2.4).
- Affordability of alternatives (Section 7.2.5).

If the alternative analysis indicates that a more reasonable alternative could be implemented rather than allowing the degradation to occur, the Division would work with the project proponent to revise the permit application based on the revised project design. If a reasonable alternative is identified but would still cause degradation, or if an alternative does not exist, the Division shall continue with the Tier 2 review and document the basis for this decision and the findings of the alternative analysis.

The alternative analysis requirement of Step 4 of the antidegradation review is not intended to place an additional burden placed on the project proponent or permittee. Whenever a new project is being planned, alternative analysis is standard engineering practice during project design. Projects that require a CWA 404 permit are already subject to U.S. Army Corps of Engineers and EPA requirements to consider alternatives. If a project is subject to federal National Environmental Policy Act (NEPA) requirements, a detailed alternative analysis evaluation is conducted during the NEPA process. Any alternative analysis completed as a requirement of other permitting activities would be acceptable to the Division for antidegradation review purposes.

4.3.4.2 Justification of Social or Economic Importance

If the evaluation of alternatives indicates degradation of the receiving water is unavoidable and changing project design is not feasible, the permit applicant/project proponent will be required to demonstrate that the degradation is necessary to accommodate important social or economic development in the area where the waterbody is located. The social or economic justification must show that the social or economic benefits that will result from an activity are important to the affected community. Section 7.3 of *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020) provides additional details of what factors may be considered to develop a justification.

The following steps are recommended in EPA guidance and reference documents to show social or economic justification; sections referenced from *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020):

- Identify the affected community (Section 7.3.1).
- Describe the important social or economic development that will result from the project or activity (Section 7.3.2).
- Determine the overall environmental, social, and economic benefits in comparison to the degradation of water quality that will result (Section 7.3.3).

A project that is socially justified is one that is important to the social development of the local community in at least one aspect (e.g., population growth or job growth), or results in improvements of important community service needs (e.g., construction of new wastewater treatment plant, public water supply project, or improved transportation infrastructure). An economically justified project will promote economic development of the local community. A more in-depth analysis would be required to show the economic importance than a social justification and would cover how the costs associated with water quality degradation are offset by benefits to the community. A simplified cost-benefit analysis may be required.

The Division will evaluate the submitted information to determine whether the proposed project or activity is important from an economic or social perspective to justify continuing with the permitting process. When information provided in the applicant's justification is not sufficient to determine the social or economic benefits or environmental impacts associated with the proposed activity, the permit writer may request additional information. If the Division determines the social and economic justification of the proposed activity has not been demonstrated, the permit writer should deny the proposed activity and provide the applicant with a written explanation of the deficiencies in the evaluation.

During this evaluation, the Division will give precedence to any land-use determinations made by local governments or land-use planning authorities that may contradict the land use associated with the project or activity. The evaluation will also take into account any information and comments submitted during the public notification period by the public or affected stakeholders that are contrary to the social and economic justification submitted by the project proponent. In cases where SEC approval is required for an activity projected to cause degradation, public comments on the proposed action will be considered during the SEC hearing. Additional public input may be solicited at other points in the permit development process, if deemed appropriate by the Division.

4.3.4.3 Documentation of Antidegradation Review Findings and Public Input Process

The new federal rules on antidegradation (40 CFR 131.12(a)(2)(i)) specify that states must involve the public in any decisions pertaining to when Tier 2 protection is (or is not) provided, and the factors considered in the decision. This requirement is to be met by including an antidegradation discussion in the fact sheet issued for each discharge permit for which public input is solicited. If the discharge is determined not to cause a significant degradation of a water with Tier 2 protection, sufficient evidence will be presented in the fact sheet to support the finding. In cases where Commission approval of an activity projected to cause degradation, public comments on the proposed action will be considered during the Commission hearing. Additional public input may be solicited at other points in the process, if deemed appropriate by the Division.

4.3.4.4 State Environmental Commission Hearing

A public hearing before the Commission is required for any permit is issued for a proposed activity that will result in lowering the high water quality conditions in a Tier 2-protected waterbody. During the hearing, the Commission will consider whether less restrictive permits limits, which would lower existing water quality levels, are justifiable because of economic or social considerations, and if an analysis of alternatives has been conducted to evaluate reasonable and practicable alternatives that would prevent degradation or result in less degradation. Pursuant to NRS 445A.520, the lower limits that the Commission would approve would, at a minimum, be set at water quality standards to protect the beneficial uses of the

waterbody. In the case of a Tier 2.5 EAW, no degradation of water quality or the critical characteristics of the EAW would be allowed.

5.0 Antidegradation Policy: General Permits, Stormwater and MS4 Permits and 401 Certifications

The antidegradation strategy proposed in this procedural guidance would be implemented during permitting of a new or significantly modified activity or discharge. This strategy provides a framework for antidegradation reviews that are performed at the time the new or modified discharge is proposed. Specific details for performing antidegradation reviews are provided in the *Nevada's Antidegradation Permit Writers' Guide* (NDEP 2020).

5.1 General Permits

General permits are issued to address a class of discharges where standardized permit conditions and limitations ensure that the permitted discharges will meet water quality standards. General permits require BMPs be implemented to protect water quality. Compliance with terms of the general permits is required to maintain authorization to discharge under these permits. However, for discharges to waters with Tier 2 protection that are covered under a general permit, the Division may require the Permittee to undertake additional control measures such as additional monitoring, more frequent site visits and more rapid stabilization of exposed areas to minimize degradation, or may require the Permittee to obtain an individual permit. When a general permit is renewed, the Division will evaluate whether the general permit (1) adequately addresses antidegradation and (2) provides reasonable assurance that activities covered under the general permit comply with the antidegradation policy. Section 8.1 of *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020) discusses more on general permits.

5.2 Stormwater General Permits

The general permits for stormwater discharges address a different situation than a typical surface-water discharge permit, and require a different approach to ensure degradation of water quality is avoided. Compliance with terms of the general permits—in particular, the implementation of stormwater runoff controls to minimize stormwater effects on the water quality of receiving waters—is required to maintain authorization to discharge under the general permit. During reissuance of these General Permits, new and innovative control measures that have demonstrated to be effective in removing contaminants from stormwater runoff may be incorporated into the permits as BMPs to protect water quality. Section 8 in *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020) discusses permits, including stormwater and general permits.

5.3 MS4 Permits

An individual stormwater permit for a municipal separate storm sewer system (MS4) meets antidegradation requirements if the permittee complies with all permit conditions, including development of a stormwater management plan outlining the controls to be implemented to reduce the level of parameters in stormwater discharges to the maximum extent practicable. The MS4 Permits are designed to (1) reduce and eliminate stormwater pollution and (2) incorporate a systematic process for continually improving management policies and practices to minimize discharge of pollutants to the MS4 through the installation, implementation, and maintenance of stormwater control measures. Section 8.2 of *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2020) discusses more on MS4 permits.

5.4 401 Certifications

The Division issues 401 Water Quality Certifications for Federal Dredge and Fill 404 Permits. For 401 Certifications, the permittee submits the 404 permit application, site maps, and a list of the BMPs to be used in the project. The 404 application includes an alternative analysis. BMPs are an integral part of the project to protect water quality conditions during project work. If the proposed project involves a Tier 2-protected water, the Division will evaluate if the project will cause significant degradation of water quality conditions. The 401 certification may include additional conditions to ensure that degradation is either temporary or insignificant.

6.0 References

NDEP, 2020. *Nevada's Antidegradation Permit Writers' Guidance*. Bureau of Water Pollution Control. June.

Attachment 1

Proposed Antidegradation Language for the Nevada Administrative Code

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Section 1. Chapter 445A of NAC is hereby amended by adding thereto a new section to read as follows:

Extraordinary Ecological or Aesthetic Waters

1. A surface water or a portion of a surface water of the state that has unique ecological or aesthetic value may be classified as an Ecological or Aesthetic Water (EAW), based on the water having some or all of the following essential attributes:
   a. The water or a segment thereof has higher water quality conditions, unique water quality characteristic, or has ecological or aesthetic significance relative to other surface waters of the state;
   b. The water has recreational or historical significance, scenic or wilderness value, and classification as an EAW would be beneficial to the state of Nevada;
   c. An endangered or threatened species is associated with the water and the existing water quality is essential to the maintenance and propagation of the species, or the surface water provides critical habitat for the species; or
   d. The waterbody has an essential character or special use that makes the water an EAW.

2. A surface water or a segment of a surface water of the state may be nominated by any Nevadan for classification as an EAW by filing Form #1 with the Commission, per NAC 445B.886. The additional information that must accompany Form #1 to nominate a water as an EAW shall include the following:

   a. A map of the surface water of the state, including the proposed upstream and downstream boundaries.
   b. A written statement and supporting evidence to justify the nomination including specific reference to the applicable attribute(s) for an EAW classification prescribed in subsection 1 .
   c. Water quality data and information to demonstrate higher water quality conditions, unique water quality characteristic, or important ecological, aesthetic, or recreational value.
   d. Any additional information or data, as deemed necessary by the Division, to support designation as an EAW.
   e. A discussion of the social and economic benefits and impacts associated with an EAW designation.

3. The following factors will be considered by the Commission during a public hearing when deciding to classify a surface water as an EAW and determining whether the EAW will be protected at Tier 3 or Tier 2.5 under the antidegradation policy in Section 2:

   a. The degree to which the surface water has the exceptional ecological or aesthetic attributes as listed in Section 1.1, inclusive,
   b. Whether there is the ability to manage the surface water to maintain and protect the water quality conditions, special uses, or the ecological or aesthetic value of the water,
   c. The social and economic benefits and impacts associated with an EAW classification,
   d. The public comments in support of, or in opposition to, an EAW classification,
   e. The consistency of an EAW classification with applicable water quality management plans and existing water-use activities, and

f. Preexisting land-use activities, adjacent and within the vicinity, of the nominated surface water.

4. Per NAC 445A.122, the classification of a water as an EAW shall not prohibit the use of the water as authorized under Title 48 of NRS, nor does it entitle an appropriator to require that the source meet his or her particular requirements for water quality.
5. The classification of a water as an EAW shall not prohibit or alter activities, which are authorized under a state or federal permit, related to management and maintenance of structures and devices in and on the water.
6. The following surface waters are classified as EAWs with the associated antidegradation protection level:

Surface Water Name	Region	Water Quality Standards	Antidegradation Tier Protection Level (per Section 2)	Date
Lake Tahoe (State of NV portion)	Truckee Region	NAC 445A.1626	Tier 3	(date approved by SEC)

Section 2. Chapter 445A of NAC is hereby amended by adding thereto a new section to read as follows:
Antidegradation Policy. The following antidegradation policy applies to all surface waters of the State. This policy must not be used to prohibit use of the water as authorized under Title 48 of NRS, nor entitle an appropriator to require that the source meet his or her particular requirements for water quality. A tier of protection, determined on a parameter-by-parameter basis, will be applied to maintain and protect existing water quality conditions.

a. Tier 3 protection. The higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value shall be maintained and protected in a surface water or segment thereof that has been classified as an EAW, as defined in Section 1. This tier of protection prevents any activity or new or expanded point-source discharge, as defined in Section 3.1(b), that would result in new or increased sources of pollution or water quality impacts. Any new or expanded point-source discharge upstream of the EAW will not degrade the higher quality condition, alter or negatively impact the unique water quality characteristic or important ecological, aesthetic, or recreational value of the EAW. Tier 3 protection requirements will not apply to the following situations:
    a. Discharges of point sources authorized by the Division prior to classification as an EAW.
    b. The Division determines activities that may result in temporary or limited lowering of the water quality are necessary for long-term ecological or water quality benefit, or to accommodate public health and safety or other allowable discharges, as determined by the Division. Such activities shall be non-recurring and necessary controls will be implemented to minimize impacts to water quality and water quality values.

b. Tier 2.5 protection. The higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value shall be maintained and protected in a surface water or segment thereof that has been classified as an EAW, as defined in Section 1, that is not subject to Tier 3 protection requirements. This tier of protection does not preclude a new or expanded point-source discharge, as defined in Section 3.1(b), where such sources would have no effect on the higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value of the EAW. Tier 2.5 protection requirements will not apply to the following situations:
    a. Discharge of point sources authorized by the Division prior to classification as an EAW.
    b. The Division determines activities that may result in temporary or limited lowering of the water quality are necessary for long-term ecological or water quality benefit, or to accommodate public health and safety or other allowable discharges, as determined by the Division. Such activities shall be non-recurring and necessary controls will be implemented to minimize impacts to water quality and water quality values.

c. Tier 2 protection. Where the existing quality conditions in a surface water or segment thereof are higher than the applicable water quality standards to support the designated beneficial uses, the higher water quality shall be maintained and protected. Lowering of the existing quality in the surface water may be allowed, by the Commission, based on the following findings:
    a. The lower water quality allowed is necessary to accommodate economic or social benefit in the area where the surface water is located and treatment technology is not economically viable,
    b. Water quality will not be degraded below the applicable water quality standards that protect the designated beneficial uses,
    c. The lower water quality allowed will not cause or contribute to exceedance of water quality standard that has been established for a downstream surface water,
    d. The new or increased source of pollution will not cause further degradation of water quality when existing dischargers are not in compliance with regulatory requirements and permit conditions unless enforcement and/or permit compliance actions have been initiated to achieve compliance. The highest and best degree of pollution prevention, control and treatment available under existing technology and which is cost-effective is applied to new and existing point sources to achieve statutory and regulatory permitting requirements, and
    e. Cost-effective and reasonable best management practices for diffuse source pollution control that are established and required under State authority are implemented when diffuse sources contribute similar pollutants as the new or increased source of pollution.

d. Tier 1 protection. The level of water quality necessary to protect and ensure a continuation of the designated beneficial uses shall be maintained in all surface waters of the state.

Section 3. Chapter 445A of NAC is hereby amended by adding thereto a new section to read as follows:

1. Antidegradation Implementation Procedures: An antidegradation review analysis would need to be provided to the Division when:

a. A new point-source discharge is proposed;

b. At the time of permit renewal or permit modification, if there is a request for an expanded point-source discharge. An expanded point-source discharge would include the following: an increased limit of flow, in gallons per day, of the discharge authorized by the permit, a change in the pollutant composition of the discharge requiring different effluent limitations, or a relocation of the discharge outfall and the relocation represents a significant change based on an evaluation by the Division; or

c. A new, modified or renewed zone of mixing is requested for a receiving water with parameters that have Tier 2 protection, to be evaluated at the discretion of the Division pursuant to NAC 445A.298 to NAC 445A.302, inclusive.

2. Antidegradation review steps:

a. The antidegradation review will be conducted on a parameter-by-parameter basis. The parameters of concern (i.e., pollutants of concern) that are expected to be present in the regulated point-source discharge must be identified.

b. For the identified parameters of concern, the baseline water quality for each parameter in the receiving water must be determined. Available water chemistry data used to characterize baseline water quality conditions must be of a sufficient quality and represent the chemical conditions of the receiving water upstream of the proposed discharge location.

c. When no baseline water quality data exist or there are insufficient data to characterize existing water quality for the identified parameters of concern, the Division may require that baseline water quality data be included with the permit application seeking to discharge to a water of the State, pursuant to NAC 445A.230. Samples used to provide baseline water quality data must be representative and statistically independent, and be collected from a location upstream of the proposed discharge. A sampling plan describing the location, schedule, and method of sampling and analysis must be approved by the Division prior to collecting baseline water quality data.

d. Based on characterization of baseline water quality, the appropriate antidegradation level of tier protection, pursuant to Section 2, will be assigned to each parameter of concern.

e. The antidegradation review analysis to be provided to the Division as part of the permit application or permit renewal will assess the probable impact of a proposed or expanded point-source discharge, as defined in 3.1(b), on the quality of the receiving water by evaluating whether the levels of discharged pollutants will meet or be better than the corresponding tier protection levels in the receiving water, as provided in Section 3.2(d).

f. For purposes of this Section, the term "parameter of concern" means a parameter with either a numeric or narrative water quality standard as contained in NAC 445A.121 to 445A.2234, inclusive.

g. For purposes of this Section, the term "baseline water quality" means the background level of each parameter in the receiving water, defined as the 95th percentile value calculated for each parameter, using chemical data from a minimum of three, statistically independent and representative samples.

3. Tier 3 antidegradation level

   a. The higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value at the time that a receiving water is classified as an EAW and assigned a Tier 3 antidegradation protection level, as described in Section 2, must be maintained and protected.

   b. Existing point-source discharges as authorized by the Division at the time an EAW is approved by the Commission will be exempt from Tier 3 antidegradation protection requirements.

   c. An activity or a new or expanded point-source discharge, as defined in Section 3.1(b), except temporary and limited discharges as listed in Section 2.1(b), that would result in a new or increased source of pollution or water quality impact in an EAW assigned a Tier 3 protection level is not allowed.

   d. When a new or expanded point-source discharge, as defined in 3.1(b), is proposed to a tributary water to an EAW that has been assigned Tier 3 protection, a demonstration must be made to the Division that the higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value in the downstream EAW will be maintained and protected.

4. Tier 2.5 antidegradation level

   a. For EAWs requiring Tier 2.5 protection, as described in Section 2, higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value must be maintained and protected.

   b. New or expanded point-source discharges, as defined in Section 3.1(b), may be authorized by the Division when the antidegradation review analysis shows that such discharges will not alter or negatively impact the higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value of the EAW.

      i. Where the EAW classification is based on higher water quality conditions which may include adopted RMHQs, the antidegradation review analysis will evaluate each parameter of concern in the discharge to determine whether the higher water quality conditions in the Tier 2.5 water would be maintained and protected if the proposed or expanded point-source discharge is authorized.

      ii. Where the EAW classification is based on a unique water quality characteristic, or important ecological, aesthetic, or recreational value, a

demonstration must be made to the Division that the attributes that formed the basis of the EAW classification would be maintained and protected if the new or expanded point-source discharge is authorized.

c. When a new or expanded point-source discharge is proposed in a tributary water to an EAW that has been assigned Tier 2.5 protection, a demonstration must be made to the Division that the higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value in the downstream EAW will be maintained and protected.

5. Tier 2 antidegradation level
   a. Tier 2 protection is provided for parameters of concern when the receiving water baseline water quality for the parameter is better than the applicable water quality standard, or an RMHQ has been promulgated for the parameter in the receiving water.
   b. For each parameter of concern requiring Tier 2 protection, the antidegradation review analysis will evaluate whether the higher water quality conditions in the receiving water would be maintained and protected if the proposed or expanded point-source discharge is authorized.
   c. A point-source discharge would not cause degradation of higher water quality conditions if the concentration of each parameter of concern in the effluent at the point of discharge was at or better than the corresponding baseline water quality condition or RMHQ value in the receiving water. No additional analysis is required, and a permit may be issued by the Division to authorize the point-source discharge.
   d. A point-source discharge could cause degradation of higher water quality conditions if the concentration of a parameter of concern in the effluent is not better than the corresponding baseline water quality condition or RMHQ value in the receiving water. When this occurs, additional analysis and evaluation pursuant to Subsection 6 and 7 is required to be provided to the Division before the point-source discharge can be authorized.
   e. Reissuance of a permit that maintains existing permitted flow, effluent limitations and other conditions and requirements as the initial permit issuance will be viewed as not causing further degradation of water quality as determined by the Division, and will not be subject to a Tier 2 antidegradation review and evaluation, unless a zone of mixing is associated with the permit. For a receiving water with parameters that have Tier 2 protection, the zone of mixing will be evaluated during the permit renewal pursuant to NAC 445A.298 to NAC 445A.302, inclusive, and may be subject to antidegradation review analysis.

5. Tier 1 antidegradation level
   a. Tier 1 protection is provided for a parameter of concern when the receiving water quality level for the parameter is not better than the applicable water quality standard.

b. Tier 1 protection ensures that the discharge does not exceed the applicable water quality standards, cause additional degradation of the receiving water, or exceed waste load allocations for waters with approved total maximum daily load (TMDL) values.
c. If a TMDL has been approved for the receiving water and allocations exist for the parameter of concern, the waste load allocation of the TMDL would regulate the concentration of the parameter of concern in the discharge.
d. If the receiving water is impaired for a parameter of concern and a TMDL has not been developed for the pollutant, the effluent permit limit for the parameter of concern will be based on the applicable water quality standard. When a TMDL is subsequently approved, the effluent limitation may be modified by the Division for cause as provided in NAC 445A.261 .

6. Determining the Necessity of Degradation
   a. When the Tier 2 antidegradation review analysis performed under subsection 4 indicates that the proposed or expanded point-source discharge will result in degradation of water quality for a parameter of concern requiring Tier 2 protection, the project proponent or permit applicant shall provide project justification and an analysis of alternatives to the Commission for the Division to receive authorization to permit the proposed discharge.
   b. The alternatives analysis shall address economic or social considerations and an analysis of the highest and best degree of waste treatment available under existing technology, consistent with the best practice in the particular field under the conditions applicable, and reasonably consistent with the economic capability of the project, that can reduce or eliminate the degrading aspect of the discharge. Alternative pollution-reduction strategies include, but are not limited to, different treatment techniques, different discharge locations, or process changes that would improve discharge quality.
   c. The alternatives analysis should be comprehensive and consider amount of degradation reduced, cost-effectiveness of pollutant removal, cost of pollution reduction versus overall environmental gain and affordability of alternatives. An alternatives analysis completed as requirement of other permitting activities or environmental reviews could be used by the Division for antidegradation review purposes.
   d. The degradation of water quality in a receiving water may be authorized by the Commission if there are no water quality control alternatives identified that would result in no degradation or less degradation or that are determined to be economically or technologically feasible.

7. Before the Commission authorizes the Division to issue a permit for a proposed discharge that would cause degradation of water quality, the project proponent or permit applicant will be required to provide justification of economic and social importance of the proposed activity.
   a. NRS 445A.565 allows lowering of higher water quality conditions only after important economic and social benefits have been demonstrated by the applicant, and the

Commission has agreed that lowering the quality of the receiving water is necessary for economic and social benefits.

b. In allowing such degradation, the Commission will ensure that the level of the parameter of concern in the discharge is not greater than the water quality standard level necessary to protect designated beneficial uses adopted pursuant to NRS 445A.520.
    i. A project that is socially justified is one that is important to the social development of the local community in at least one aspect (e.g., population growth or job growth), or results in improvements of important community service needs (e.g., construction of new wastewater treatment plant, public water supply project, or improved transportation infrastructure).
    ii. An economically justified project will promote economic development of the local community.
    iii. A more in-depth analysis would be required to show the economic importance than a social justification and would cover how the costs associated with water quality degradation are offset by benefits to the community. A simplified cost-benefit analysis may be required.
    iv. A public hearing before the Commission will be required to authorize the Division to issue a permit that will result in degradation of the better water quality conditions for a parameter subject to Tier 2 protection.
    v. Before degradation of high water quality conditions is allowed, the Division will evaluate whether there are existing point-source compliance problems in the waterbody, and if the proposed new or expanded point-source discharge will contribute similar pollutants resulting in further degradation of water quality conditions. The proposed new or expanded point-source would not be allowed to lower quality unless it can be demonstrated that compliance measures are being developed with the appropriate regulatory authority to resolve any existing compliance problems.
    vi. Where diffuse source pollution is known to be contributing to lower water quality in the receiving water with respect to a parameter of concern in the new or expanded point source discharge, the Division will verify that cost-effective and reasonable best management practices (BMPs) or other strategies that are required under the Division's diffuse source pollution control program and regulations are implemented.

8. Antidegradation review of general discharge permits.
    a. The Division shall conduct an antidegradation review of a general permit at the time the permit is issued or renewed.
    b. Permit conditions and requirements will be incorporated in a general permit to ensure the class of facilities covered under the general permit minimize degradation to water quality and comply with antidegradation requirements.
    c. A person seeking authorization to discharge under a general permit will be presumed to be meeting antidegradation requirements if they comply with all of the permit conditions and requirements. If the notice of intent supplied pursuant to NAC

445A.268 indicates the receiving water will be an EAW, a demonstration must be made to the Division that the higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value of the EAW will be maintained and protected. The Division may authorize the discharge to an EAW under a general permit or direct the applicant to apply for an individual permit as provided in NAC 445A.269, as necessary.

9. Antidegradation review of a municipal separate storm sewer system (MS4) stormwater permit.

a. A permittee covered by an MS4 permit will be presumed to be meeting antidegradation requirements if the permittee complies with the permit conditions and requirements, including developing a stormwater management plan containing BMPs, as defined in NAC 445A.306, to prevent, eliminate or control the level of pollutants in stormwater discharges.

b. If the MS4 will discharge to an EAW, a demonstration must be made to the Division that the higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value of the EAW will be maintained and protected.

Section 4. NAC 445A.122 is hereby amended to read as follows:

NAC 445A.122 Standards applicable to beneficial uses. (NRS 445A.425**,** 445A.520**)**

1. The following standards are intended to protect both existing and designated beneficial uses and must not be used to prohibit the use of the water as authorized under title 48 of NRS:

(a) Watering of livestock. The water must be suitable for the watering of livestock without treatment.

(b) Irrigation. The water must be suitable for irrigation without treatment.

(c) Aquatic life. The water must be suitable as a habitat for fish and other aquatic life existing in a body of water. This does not preclude the reestablishment of other fish or aquatic life.

(d) Recreation involving contact with the water. There must be no evidence of man-made pollution, floating debris, sludge accumulation or similar pollutants.

(e) Recreation not involving contact with the water. The water must be free from:

(1) Visible floating, suspended or settled solids arising from human activities;

(2) Sludge banks;

(3) Slime infestation;

(4) Heavy growth of attached plants, blooms or high concentrations of plankton, discoloration or excessive acidity or alkalinity that leads to corrosion of boats and docks;

(5) Surfactants that foam when the water is agitated or aerated; and

(6) Excessive water temperatures.

(f) Municipal or domestic supply. The water must be capable of being treated by conventional methods of water treatment in order to comply with Nevada's drinking water standards.

(g) Industrial supply. The water must be treatable to provide a quality of water which is suitable for the intended use.

(h) Propagation of wildlife. The water must be suitable for the propagation of wildlife and waterfowl without treatment.

(i) Waters of extraordinary ecological or aesthetic value. The unique ecological or aesthetic value of the water must be maintained, pursuant to Section 1.

(j) Enhancement of water quality. The water must support natural enhancement or improvement of water quality in any water which is downstream.

2. This section does not entitle an appropriator to require that the source meet his or her particular requirements for water quality.

Section 5. NAC 445A.123 is hereby amended to read as follows:

NAC 445A.123 Classification and reclassification of waters. (NRS 445A.425**,** 445A.520**)**

1. Stream standards and classifications in NAC 445A.123 to 445A.2234, inclusive, do not preclude the Commission from establishing standards and classifications for additional public waters nor reclassifying the waters covered by those sections.

2. The Commission will consider classification of a body of public water not contained in NAC 445A.123 to 445A.2234, inclusive, upon a request for a permit to discharge into that body of water.

3. The above sections also include the classification and reclassification by the Commission of a body of public water as an Ecological or Aesthetic Water (EAW), pursuant to Section 1.

Section 6. NAC 445A.228 is hereby amended to read as follows:

NAC 445A.228 Requirement; exemptions. (NRS 445A.425**,** 445A.465**)**

1. Except as otherwise provided in subsection 2, a person shall not discharge a pollutant from a point source into any waters of the State without obtaining a permit from the Department. An antidegradation review analysis, pursuant to Section 3, of the point source discharge will be required prior to a permit being issued.

2. Although not exempted from complying with all other applicable laws, rules and regulations regarding pollution, the following are specifically exempted from the requirements to obtain a permit:

(a) Persons utilizing an individual sewage disposal system or other sewage disposal system that uses a soil absorption system for the treatment and disposal of domestic wastes, if the system is approved and is installed, operated and maintained in accordance with the rules and regulations and other requirements of the district health departments, the State Board of Health or the Division or other administrative authority, as authorized by NAC 445A.950 to 445A.9706, inclusive, as applicable. This exemption does not preclude the possibility that health authorities, the Division or other administrative authority will require permits.

(b) Except as otherwise provided in this paragraph, persons discharging pollutants into a publicly owned or privately owned sewerage system, if the owner of such sewerage system has a valid permit from the Department. In such cases, the owner of the sewerage system assumes ultimate responsibility for controlling and treating the pollutants which he or she allows to be discharged into the system. The Department may require an industrial user who discharges pollutants into a publicly owned treatment works which does not have an approved pretreatment program to obtain a permit pursuant to NAC 445A.257.

(c) Discharges of pollutants from agricultural and silvicultural activities, including, without limitation, irrigation return flow and runoff from orchards, cultivated crops, pastures, rangelands and forest lands, except that this exemption does not apply to the following:

(1) Discharges from facilities in which crops, vegetation, forage growth or postharvest residues are not sustained in the normal growing season and that confine animals if the facilities contain, or at any time during the previous 12 months contained, for a total of 30 days or more, any of the following types of animals at or in excess of the number listed for each type of animal:

(I) Cattle, veal calves or a pair consisting of a cow and a calf, 1,000;

(II) Mature dairy cattle (whether milkers or dry cows), 700;

(III) Swine weighing over 55 pounds, 2,500;

(IV) Swine weighing 55 pounds or less, 10,000;

(V) Horses, 500;

(VI) Sheep or lambs, 10,000;

(VII) Turkeys, 55,000;

(VIII) Chickens, if the animal confinement facility has a liquid manure handling system, 30,000;

(IX) Chickens, other than laying hens, if the animal confinement facility does not have a liquid manure handling system, 125,000;

(X) Laying hens, if the animal confinement facility does not have a liquid manure handling system, 82,000;

(XI) Ducks, if the animal confinement facility has a liquid manure handling system, 5,000; or

(XII) Ducks, if the animal confinement facility does not have a liquid manure handling system, 30,000.

(2) Discharges from production facilities for aquatic animals.

(3) Discharges of irrigation return flow, such as tailwater, tile drainage, surfaced groundwater flow or bypass water, operated by public or private organizations or natural persons if the source of water is effluent from a treatment works.

(4) Discharges from any agricultural or silvicultural activity which have been identified by the Administrator or the Director as a significant contributor of pollution.

Section 7. NAC 445A.230 is hereby amended to read as follows:

NAC 445A.230 Application for permit. (NRS 445A.425**,** 445A.465**)**

1. Except as otherwise provided in subsection 2, any person wishing to commence future discharges of pollutants must file a complete permit application on forms provided by the Department, not less than 180 days in advance of the date on which the person desires to commence the discharge of pollutants, unless the Department has granted permission for a later date.

2. The owner of a facility described in subparagraph (4) of paragraph (c) of subsection 2 of NAC 445A.228 must file a complete permit application on forms provided by the Department not later than 90 days after receiving notification of having been identified by the Administrator or the Director as a significant contributor of pollution.

3. The Director:

(a) May require the submission of additional information after a permit application has been filed; and

(b) Shall ensure that if a permit application is incomplete or otherwise deficient, processing of the application is not completed until such time as the applicant has supplied the missing information or otherwise corrected the deficiency.

(c) May require that baseline water quality data be included with the permit application to adequately characterize existing water quality of the receiving water and allow for an antidegradation review analysis to be completed, pursuant to Section 3.

4. If, upon review of an application, the Department determines that a permit is not required, the Department shall notify the applicant in writing of this determination. The notification constitutes final action by the Department on the application.

Section 8. NAC 445A.233 is hereby amended to read as follows:

NAC 445A.233 **Determination of application prior to public notice.**

1. The Department shall formulate and prepare tentative determinations regarding permit applications in advance of public notice of the proposed issuance or denial of the permit. The tentative determinations must include at least the following:

(a) A proposed determination to issue or deny a permit for the discharge described in the application; and

(b) If the determination proposed in paragraph (a) is to issue the permit, the following additional tentative determinations must be made:

(1) The proposed effluent limitations, identified pursuant to NAC 445A.243, for those pollutants proposed to be limited;

(2) A proposed schedule of compliance, including interim dates and requirements, for meeting the proposed effluent limitations, identified pursuant to NAC 445A.244;

(3) A brief description of any other proposed special conditions, apart from those required in NAC 445A.229, 445A.243, 445A.244, 445A.245, 445A.247, 445A.256 to 445A.259, inclusive, and 445A.262, which will have a significant impact upon the discharge described in the application; and

(4) The antidegradation review findings developed in accordance with Section 3 and the determination of the Commission where lowering of higher water quality conditions in a receiving water is proposed.

2. The Director shall organize the tentative determinations prepared pursuant to subsection 1 into a draft permit.

Section 9. NAC 445A.236 is hereby amended to read as follows:

NAC 445A.236 Fact sheets. (NRS 445A.425, 445A.465)

1. For every discharge for which public notice was required pursuant to NAC 445A.234, the Director shall prepare and, following the public notice, shall send upon request to any person a fact sheet with respect to the application described in the public notice. The contents of such fact sheets must include at least the following information:

(a) A sketch or detailed description of the location of the discharge described in the application;

(b) A quantitative description of the discharge described in the application which includes at least the following:

(1) The rate or frequency of the proposed discharge and, if the discharge is continuous, the average daily flow in gallons per day or million gallons per day;

(2) For thermal discharges subject to limitation under the Act, the average summer and winter temperatures in degrees Fahrenheit; and

(3) The average daily discharge in pounds per day of any pollutants which are present in significant quantities or which are subject to limitations or prohibition under § 301, 302, 306 or 307 of the Act, 33 U.S.C. § 1311, 1312, 1316 or 1317, and regulations published thereunder;

(c) The tentative determinations required under NAC 445A.233;

(d) A brief citation, including a brief identification of the uses for which the receiving waters have been classified, of the water quality standards and limitations applied to the proposed discharge; and

(e) A fuller description of the procedures for the formulation of final determinations than that given in the public notice including:

(1) The 30-day comment period required by subsection 3 of NAC 445A.234;

(2) Procedures for requesting a public hearing and the nature thereof; and

(3) Any other procedures by which the public may participate in the formulation of the final determinations.

(f) Documentation of the antidegradation review findings developed, in accordance with Section 3, for the proposed discharge. Where lowering of higher water quality conditions in a receiving water will result, the documentation will include sufficient information and rationale to support the determination of the Commission to allow lower water quality.

2. The Director shall add the name of any person or group upon request to a mailing list to receive copies of fact sheets.

Section 10. NAC 445A.241 is hereby amended to read as follows:

NAC 445A.241 Duration and reissuance of permits. (NRS 445A.425**,** 445A.465**,** 445A.495**)**

1. The duration of permits is fixed and does not exceed 5 years. The expiration date must be recorded on each permit issued. A new application must be filed with the Department to obtain renewal or modification of a permit. Applications for renewal must be filed at least 180 days prior to expiration of the permit.

2. For the reissuance of a permit, the same procedures must be followed as for the initial issuance of a permit. Reissuance of a permit that maintains existing permitted flow, effluent limitations and other conditions and requirements as the initial permit issuance will be exempt from an antidegradation analysis, as described in Section 3.

3. A person who holds an expired permit and who has submitted a timely application for renewal of the permit in the manner set forth in subsection 1 may continue to conduct the permitted activity in accordance with the terms and conditions of the expired permit until the Department takes final action on the application unless:

(a) The Department determines that the permittee is not in substantial compliance with the terms and conditions of the expired permit or with a compliance schedule designed to bring the permittee in compliance with the terms and conditions of the expired permit;

(b) The Department, as a result of an action or the failure to act of the permittee, has been unable to take final action on the application on or before the expiration date of the permit; or

(c) The permittee has submitted an application with major deficiencies or has failed to supplement properly the application in a timely manner after being informed of deficiencies.

Section 11. NAC 445A.243 is hereby amended to read as follows:

NAC 445A.243 Establishment of effluent limitation. (NRS 445A.425**,** 445A.465**,** 445A.500**)** In establishing an effluent limitation to carry out the policy of this State set forth in NRS 445A.305, consideration must be given to, but is not limited by, the following:

1. The effect of the discharge on the receiving waters and its beneficial use.

2. The need for standards that specify by chemical, physical, biological or other characteristics the extent to which pollution by various substances will not be tolerated.

3. Standards for water quality and effluent limitations promulgated from time to time by the United States Environmental Protection Agency, including the following:

(a) Effluent limitations under §§ 301 and 302 of the Act, 33 U.S.C. §§ 1311 and 1312.

(b) Standards of performance for new sources under § 306 of the Act, 33 U.S.C. § 1316.

(c) Effluent standards, effluent prohibitions and pretreatment standards under § 307 of the Act, 33 U.S.C. § 1317.

(d) Any more stringent limitations, including those:

(1) Necessary to meet standards for water quality and treatment or schedules of compliance, established pursuant to any state law or regulation;

(2) Necessary to meet any other federal law or regulation; or

(3) Required to carry out any applicable standards for water quality, and the antidegradation policy as described in Section 2.

Such limitations must include any legally applicable requirements necessary to carry out total maximum daily loads established pursuant to § 303(d) of the Act, 33 U.S.C. § 1303(d), and incorporated in the continuing planning process approved under § 303(e) of the Act, 33 U.S.C. § 1303(e), and any regulations and guidelines issued thereunder.

(e) Any more stringent legally applicable requirements necessary to comply with a plan approved pursuant to § 208(b) of the Act.

4. In the application of water quality standards and limitations and other legally applicable requirements pursuant to subsection 3, the Director shall, for each issued NPDES permit, specify average and maximum daily quantitative limitations for the level of pollutants in the authorized discharge in terms of mass, except quantitative limitations that are not appropriately expressed in terms of mass, including, without limitation, pH, temperature and radiation.

Section 12. NAC 445A.266 is hereby amended to read as follows:

NAC 445A.266 Issuance of permit; notice of intent to engage in activity; location of facility approved to operate under permit; requirements for discharge. (NRS 445A.425**,** 445A.465**,** 445A.475**)**

1. A general permit may be issued for:

(a) A discharge;

(b) The reuse or ultimate disposal of treated wastewater and sludge; or

(c) Rolling stock for work in waters of this State, including, but not limited to, dredging or filling, bank stabilization or restoration, channel clearance, construction of irrigation diversions or pipe crossings, and the clearance of vegetation, debris or temporary obstructions.

(d) An antidegradation review analysis of a general permit, pursuant to Section 3, will be conducted at the time the permit is issued or renewed.

2. The Department will process a notice of intent to engage in an activity for which a general permit has been issued pursuant to this section not later than 60 days after the date on which the Department receives the completed notice of intent and the required fees, unless the Administrator of the Division determines that it is in the public interest to hold a public hearing regarding the notice of intent. Upon making such a determination, the Administrator of the Division shall promptly notify the person who submitted the notice of intent that a public hearing will be held regarding the notice of intent.

3. A facility discharging any pollutant into any waters of this State must be located within:

(a) An area designated for water quality planning;

(b) A sewer district or a sewer authority;

(c) The political boundaries of a city or county;

(d) A state or county highway system; or

(e) Any other division or combination of boundaries deemed appropriate by the Director, to be approved to operate under a general permit.

4. Discharges from a facility described in subsection 3 must:

(a) Involve the same or substantially similar types of operations;

(b) Discharge the same types of pollutants or engage in the same types of use or disposal;

(c) Require the same effluent limitations, operating conditions or standards for reuse or disposal;

(d) Contain storm water;

(e) Require the same or similar monitoring; or

(f) In the opinion of the Director, be more appropriately regulated by a general permit than by an individual permit.

5. If the discharge to be authorized under a general permit will be to an EAW, a demonstration must be made to the Division that the higher water quality condition, unique water quality characteristic, or important ecological, aesthetic, or recreational value of the EAW will be maintained and protected. The Division may authorize the discharge to an EAW under a general permit or direct the applicant to apply for an individual permit as provided in NAC 445A.269, as necessary.

6. A general permit may not include a facility that holds an individual permit.

Section 13. NAC 445A.298 is hereby amended to read as follows:

NAC 445A.298 Establishment by Director. (NRS 445A.425, 445A.465)

1. The Director shall establish a zone of mixing so that the standards for quality of water for individual parameters determined to be appropriate pursuant to subsection 1 of NAC 445A.297 for the receiving water, but in no case including esthetic and acute toxicity values, may be relaxed within the zone of mixing.

2. In determining the size of a zone of mixing, each application must be reviewed on a case-by-case basis taking into consideration the quality of effluent of wastewater discharged and the nature and condition of the receiving water, including the effects of the effluent or wastewater on the designated or actual beneficial uses of the receiving water, standards for quality of water, and the antidegradation review analysis as described in Section 3.

NAC 445A.299 Zone of passage. (NRS 445A.425, 445A.465) Stream-mixing zones in which the standards for water quality may be exceeded must be designed to ensure that a zone of passage is maintained. The allowable stream-mixing zone must be oriented in the stream in a manner which permits the greatest effectiveness of the zone of passage.

[Environmental Comm'n, Water Pollution Control Reg. § 4.1.2 subsec. h par. 6, eff. 5-2-78] — (Substituted in revision for NAC 445.191)

NAC 445A.300 Periodic review. (NRS 445A.425, 445A.465) The Director shall periodically review all zones of mixing and may terminate or modify any such zones for which the conditions of approval of the zone of mixing have changed.

[Environmental Comm'n, Water Pollution Control Reg. § 4.1.2 subsec. h par. 10, eff. 5-2-78; A 7-2-80] — (Substituted in revision for NAC 445.192)

NAC 445A.301 Termination. (NRS 445A.425, 445A.465) The zone of mixing automatically terminates at the expiration of the period in the designation and no rights vest in the designee unless an application for renewal of a zone of mixing has been made.

[Environmental Comm'n, Water Pollution Control Reg. § 4.1.2 subsec. h par. 8, eff. 5-2-78; A 7-2-80] — (Substituted in revision for NAC 445.193)

Section 14. NAC 445A.302 is hereby amended to read as follows:

NAC 445A.302 Renewal. (NRS 445A.425, 445A.465)

1. Any zone of mixing may be granted or renewed for periods not exceeding 5 years.
2. Applications for renewal:

(a) Must be made before the expiration of the period concerning the zone of mixing.

(b) May be granted by the Director if the application for renewal has met all of the conditions specified for the immediately preceding zone of mixing granted pursuant to NAC 445A.295 to 445A.302, inclusive, and satisfies the requirements of the antidegradation review analysis when higher water quality conditions are associated with the zone of mixing.

Appendix A to Attachment 1

40 CFR 131.12

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Appendix A – Federal Antidegradation Policy

40 CFR § 131.12 Antidegradation Policy.

(a) The State shall develop and adopt a statewide antidegradation policy. The antidegradation policy 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 requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

(i) The State may identify waters for the protections described in paragraph (a)(2) of this section on a parameter-by-parameter basis or on a waterbody-by-waterbody basis. Where the State identifies waters for antidegradation protection on a waterbody-by-waterbody basis, the State shall provide an opportunity for public involvement in any decisions about whether the protections described in paragraph (a)(2) of this section will be afforded to a water body, and the factors considered when making those decisions. Further, the State shall not exclude a water body from the protections described in paragraph (a)(2) of this section solely because water quality does not exceed levels necessary to support all of the uses specified in section 101(a)(2) of the Act.

(ii) Before allowing any lowering of high water quality, pursuant to paragraph (a)(2) of this section, the State shall find, after an analysis of alternatives, that such a lowering is necessary to accommodate important economic or social development in the area in which the waters are located. The analysis of alternatives shall evaluate a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the State shall only find that a lowering is necessary if one such alternative is selected for implementation.

(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.

(b) The State shall develop methods for implementing the antidegradation policy that are, at a minimum, consistent with the State's policy and with paragraph (a) of this section. The State shall provide an opportunity for public involvement during the development and any subsequent revisions of the implementation methods, and shall make the methods available to the public.

Attachment 2

Procedure for Nominating an Ecological and Aesthetic Water (EAW)

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Extraordinary Ecological or Aesthetic Waters

Description of a candidate water for nomination as an ecological or aesthetic water (EAW):

1. A surface water or a portion of a surface water of the state that has unique ecological or aesthetic value may be classified as an Ecological or Aesthetic Water (EAW), based on the water having some or all of the following essential attributes:

- *a. The water or a segment thereof has higher water quality conditions, unique water quality characteristic, or has ecological or aesthetic significance relative to other surface waters of the state;*
- *b. The water has recreational or historical significance, scenic or wilderness value, and classification as an EAW would be beneficial to the state of Nevada;*
- *c. An endangered or threatened species is associated with the water and the existing water quality is essential to the maintenance and propagation of the species, or the surface water provides critical habitat for the species; or*
- *d. The waterbody has an essential character or special use that makes the water an EAW.*

Procedures for nominating a waterbody as an EAW:

2. A surface water or a segment of a surface water of the state may be nominated by any Nevadan for classification as an EAW by filing Form #1 with the Commission, per NAC 445B.886. The additional information that must accompany Form #1 to nominate a water as an EAW shall include the following:

- *a. A map of the surface water of the state, including the proposed upstream and downstream boundaries.*
- *b. A written statement and supporting evidence to justify the nomination including specific reference to the applicable attribute(s) for an EAW classification prescribed in subsection 1 .*
- *c. Water quality data and information to demonstrate higher water quality conditions, unique water quality characteristic, or important ecological, aesthetic, or recreational value.*
- *d. Any additional information or data, as deemed necessary by the Division, to support designation as an EAW.*
- *e. A discussion of the social and economic benefits and impacts associated with an EAW designation.*

The current links to the **Nevada State Environmental Commission** (SEC) website are as follows:

https://sec.nv.gov/participate/forms-and-documents/
https://sec.nv.gov/uploads/documents/sec_form1_writable.pdf

ATTACHMENT C

Antidegradation and Outstanding Waters in Other States

States	AIP?	ONRW policy?	Name	Approach	Name
Alabama - AL	Yes	Yes	OAW, ONRW		Outstanding Alabama Water
Alaska - AK	Yes	Yes	ONRW	P-by-P	Outstanding National Resource Waters (ONRWs) identified by the state or tribe (40 CFR 131.12(a)(3)/Tier 3).
Arizona - AZ	Yes	Yes	OAW	P-by-P	Outstanding Arizona Waters (OAW) in 2008
Arkansas - AR	Draft	Draft	ERW		Extraordinary Resource Water - Conservation groups have also long awaited a plan in Arkansas, which is one of only two states without one.
California - CA	Yes	Yes	ONRW	P-by-P	Lake Tahoe, Mono Lake
Colorado - CO	Yes	Yes	OW	WB-by-WB	Outstanding waters
Connecticut - CT	Yes	Yes	ONRW	WB-by-WB	Outstanding national resource waters, antideg review by tiers
Delaware - DE	Yes	Yes	ERES	P-by-P	Waters of Exceptional Recreational or Ecological Significance (ERES).
Florida - FL	Yes	Yes	OFW, ONRW		62-302.700. Special Protection, Outstanding Florida Waters, Outstanding National Resource Waters
Georgia - GA	Yes	Yes	ONRW	WB-by-WB	391-3-6-.03 Water Use Classifications and Water Quality Standards (c) Outstanding National Resource Waters
Hawaii - HI	Draft	Draft	ONRW	P-by-P	Process for Classifying Hawaii Outstanding National Resource Waters Protection Level
Idaho - ID	Yes	Yes	ORW	WB-by-WB	Outstanding Resource Water, Tier III maintains and protects water quality in outstanding resource waters (ORWs).
Illinois - IL	Yes	Yes	ONRW		Outstanding National Resource Water,
Indiana - IN	Yes	Yes	OSRW, ONRW	P-by-P	Outstanding State Resource Waters, Rule 1.3. Antidegradation Standards and Implementation Procedures
Iowa - IA	Yes	Yes	OIW, ONRW	P-by-P	An Outstanding Iowa Water (OIW) is defined as the following: "A surface water that IDNR has classified as an outstanding state resource water in the water quality standards." An OIW receives Tier 2 ½ protection.
Kansas - KS	Yes	Yes	ESW, ONRW		Exceptional State Water Tier 2-1/2 The third tier (Tier 3) provides special protection for Outstanding Resource Waters, such as those waters in National and State Parks, wildlife refuges, outstanding fisheries, and other waters of unique recreational or ecological value.
Kentucky - KY	Yes	Yes	OSRW, ONRW		Special Use Watersaredefined and listed in the Kentucky Administrative Regulations(401 KAR10:026 and 401 KAR 10:030).These special uses include Outstanding State Resource Waters, Outstanding National Resource Waters
Louisiana - LA	Yes	Yes	ONRW		Outstanding Natural Resource Waters - 2014 regulations
Maine - ME	meh	Yes	ONR		In regulations, MRS
Maryland - MD	Yes	Yes	ONRW		In regulations, quite lengthy regs

Massachusetts - MA	Yes	Yes	ORW, SRW		Outstanding Resource Water (ORW) and Special Resource Water (SRW) protection under the Massachusetts Surface Water Quality Standards, 314 CMR 4.00 (WQS). According to 314 CMR 4.04(3).
Michigan - MI	Yes	Yes	OSRW		Outstanding state resource water. AIP is Procedure No. 14 (16 pages)
Minnesota - MN	Yes	Yes	ORVW	P-by-P	EPA approved MNs 2017 revised antidegradation policy and implementation procedures
Mississippi - MS	Yes	Yes	ONRW		https://www.mdeq.ms.gov/wp-content/uploads/2011/02/ONRW_Nomination_Guidance.pdf
Missouri - MO	Yes	Yes	OSRW, ONRW	P-by-P	As defined at 10 CSR 20-7.031(1)(P), Outstanding State Resource Waters are high quality waters with a significant aesthetic, recreational or scientific value which are specifically designated as such by the Clean Water Commission
Montana - MT	Yes	Yes	ORW		Nondegradation. In rules 17.30.617 Outstanding Resource Water
Nebraska - NE	Yes	Yes	OSRW, ONRW		CPP_2001, regs Title 117
Nevada - NV	Draft	Draft	Draft	P-by-P	RMHQs described in CPP
New Hampshire - NH	Yes	Yes	ORW	P-by-P	Outstanding Resource Water
New Jersey - NJ	Yes	Yes	ONRW		Outstanding National Resource Waters(ONRW) which include surface waters classified as FW1 and PL
New Mexico - NM	Yes	Yes	ONRW		An ONRW is proposed for designation by filing a petition with the Water Quality Control Commission (WQCC) in accordance wiht the requirements under 20.6.4.9.B NMAC.
New York - NY	Yes	No	No		1985 rule describes antideg memo for implementation
North Carolina - NC	Yes	Yes	ORW		The 15A NCAC 2H .1000 rules contain the stormwater management requirements associated with the HQW and ORW programs.
North Dakota - ND	Yes	Yes	OSRW		In administrative code appendices
Ohio - OH	Yes	Yes	ONRW, SHQW, SRW		Ohio's antidegradation rule1 (OAC 3745-1-05) absolutely no lowering of water quality in waters listed as Outstanding National Resource Waters.
Oklahoma - OK	Yes	Yes	ORW		Subchapter 13
Oregon - OR	Yes	Yes	ORW	WB-by-WB	Outstanding Resource Waters of Oregon
Pennsylvania - PA	Yes	Yes	EV		"Exceptional Value" waters include ONRWs. Where surface waters of high quality constitute an Outstanding National Resource Water 2003AIP (ONRW), that water quality shall be maintained and protected (Tier 3).
Rhode Island - RI	Yes	Yes	ONRW	P-by-P	http://www.dem.ri.gov/pubs/regs/regs/water/h2oq10.pdf
South Carolina - SC	Yes	Yes	ORW, ONRW	P-by-P	Outstanding Resource Waters (ORW) Regulation 61-68= Tier 2-1/2, ONRW=Tier 3
South Dakota - SD	Yes	Yes	OSRW	P-by-P	1998 AIP, Tier 3 = Outstanding state resource water
Tennessee - TN	Yes	Yes	ETW, ONRW	P-by-P	Exceptional Tennessee Waters & ONRWs, no "tiers" mentioned.
Texas - TX	Yes	Yes	ONRW		(C) Tier 3 reviews apply to all pollution that could cause degradation of outstanding national resource waters. ONRWs are those specifically designated in this chapter

Utah - UT	Yes	Yes	Category 1	P-by-P	Category 1 waters are afforded the highest level of protection
Vermont - VT	Yes	Yes	ORW		Tiers of protection
Virginia - VA	Yes	Yes	ESW		In August 1992 EPA approved Virginia's Exceptional State Waters as being equivalent to ONRWs.
Washington - WA	Yes	Yes	ORW		Tier III is used when a high-quality water is designated as an outstanding resource water. Tier 3(A) or Tier 3(B) protection.
West Virginia - WV	Yes	Yes	ONRW		https://dep.wv.gov/WWE/Programs/wqs/Pages/default.aspx Tier 3 waters
Wisconsin - WI	Yes	Yes	ORW, ERW	Both	Wisconsin has designated many of the state's highest quality waters as Outstanding Resource Waters (ORWs) or Exceptional Resource Waters (ERWs).
Wyoming - WY	Yes	Yes	OAR		Outstanding aquatic resource waters, OAR, are Class 1 waters equivalent to a Tier 3 ONRW

States	AIP?	AIP Year	ONRW policy?	Approach	Name	ONRW in regs	ONRW Year
Alabama - AL	Yes	2002	Yes		OAW, ONRW	335-6-11-Water Use Classifications	2007
Alaska - AK	Yes	2018	Yes	P-by-P	ONRW	18 AAC 70.015(a)(3)] regulations, July 2020	2020
Arizona - AZ	Yes	2008	Yes	P-by-P	"Unique Waters", OAW	R18-11-112(G) OAWs - Tier 3	2008
Arkansas - AR	Draft	2020	Yes		ERW	Reg. 2.203 Extraordinary Resource Waters	2007
California - CA	Yes	1968	Yes	P-by-P	ONRW	Resolution 68-16, §13225. Tahoe, Mono	2000
Colorado - CO	Yes	2001	Yes	WB-by-WB	OW	§25-8-209	2001
Connecticut - CT	Yes	2011	Yes	WB-by-WB	ONRW	§22a-426-1 (50), ONRWs, Tier 3	2013
Delaware - DE	Yes	1999	Yes	P-by-P	ERES (2.5), ONRW (3)	Exceptional Rec or Eco Sig (ERES), ONRWs	1999
Florida - FL	Yes	2016	Yes		OFW, ONRW	62-4.242 OFW, ONRW	2010
Georgia - GA	Yes	2019	Yes	WB-by-WB	ONRW	391-3-6-.03(2)(b)(ii)2, Tier 3, ONRW	2019
Hawaii - HI	Draft	2020	Draft	P-by-P	ONRW	HAR Title 11, Chapter 54	?
Idaho - ID	Yes	2019	Yes	WB-by-WB	ORW	ORWs §39-3620	2012
Illinois - IL	Yes	2002	Yes		ORW	35 Ill. Adm. Code 303.205, 35 Ill. Adm. Code 303.206	2002
Indiana - IN	Yes	2012	Yes	P-by-P	OSRW, ONRW	327 IAC 2-1-9, 327 IAC 2-1-10	2012?
Iowa - IA	Yes	2016	Yes	P-by-P	OIW (2.5), ONRW (3)	IAC 455B.105 and 455B.173	2010
Kansas - KS	Yes	2001	Yes		ESW (2.5), ONRW (3)	K.A.R. 28-16-28c(a)	2001
Kentucky - KY	Yes		Yes	WB?	OSRW, ONRW	401 Ky. Admin. Regs. 10:030 (no "tiers")	2003
Louisiana - LA	Yes	2014	Yes		ONRW	LAC 33:IX.1111.A	2000
Maine - ME	Yes	2015	Yes		ONR	MRS Title 38, §464.	1991
Maryland - MD	Yes		Yes		ONRW		2019?
Massachusetts - MA	Yes	2009	Yes		ORW, SRW	314 CMR 4.00	2006
Michigan - MI	Yes	1999	Yes	WB?	OSRW	R 323.1098 Antidegradation	1999
Minnesota - MN	Yes	2019	Yes	P-by-P?	ORVW	Minn. R. 7050.0335, 7050.0180 ORVW	2008
Mississippi - MS	Yes	2010	Yes	WB?	ONRW	Tier 3	2010
Missouri - MO	Yes	2016	Yes	P-by-P	OSRW, ONRW	Tier 3 - 10 CSR 20-7.031(2)(C)	1980
Montana - MT	Yes	1993	Yes		ORW	§75-5-316(3), rules dated 1995	1995
Nebraska - NE	Yes	2001	Yes		OSRW, ONRW	Neb. Rev. Stat. §§ 81-1501(1) and 81-1505(1)(2)	1988
Nevada - NV	Draft	2020	Draft	P-by-P	Draft - EAW	Draft - EAW	2020
New Hampshire - NH	Yes	2012	Yes		ORW	Update in 2016; Env-Wq 1702.35	2009

New Jersey - NJ	Yes	2012	Yes	WB?	ONRW (Category 1, C1)	N.J.A.C. 7:9B-1.5(d), N.J.A.C. 7:9B	1989
New Mexico - NM	Yes	2019	Yes		ONRW	Rule 20.6.4.9 of NMAC	2004
New York - NY	Yes	1985	No		No	6 NYCRR 701.2 Fresh surface waters	1972
North Carolina - NC	Yes	2019	Yes		ORW	section .0216 - out res water	1989
North Dakota - ND	Yes	2001	Yes	WB?	OSRW	rule 33-16-02.1-02, Appendix IV	2005
Ohio - OH	Yes	2002	Yes		ONRW, SHQW, SRW	OAC 3745-1-05	2002
Oklahoma - OK	Yes	2013	Yes		ORW	OAC 785:45-3-2(a). Tier 3	1996
Oregon - OR	Yes	2001	Yes	WB-by-WB	ORW	Chapter 468B ORS, 2001 AIP	2001
Pennsylvania - PA	Yes	2003	Yes		EV	25 PA. CODE CHS. 93 AND 95	1999
Rhode Island - RI	Yes	2009	Yes	P-by-P	ONRW (3), SRPW (2.5)	250-150-05 R.I. Code R. § 1.20	1997
South Carolina - SC	Yes	1998	Yes	P-by-P	ORW, ONRW		1998
South Dakota - SD	Yes	1998	Yes	P-by-P	OSRW	Rule 74:51:01:39, Rule 340.041.0004	1998
Tennessee - TN	Yes	2019	Yes	P-by-P	ETW, ONRW	CHAPTER 0400-40-03, 0400-40-03-.06	2000
Texas - TX	Yes	2010	Yes		ONRW	307.5(b)(3), no ONRWs designated as of 2010	1997
Utah - UT	Yes	2019	Yes	P-by-P	Category 1	UAC R317-2-3, "Category 1 waters"	2010
Vermont - VT	Yes	2017	Yes		ORW	V.S.A., Title 10, section 1422	1989
Virginia - VA	Yes	2004	Yes		ESW	9 VAC 25-260-30.A.3	1997
Washington - WA	Yes	2011	Yes		ORW	WAC Chapter 173-201A, ORW	2003
West Virginia - WV	Yes	2008	Yes		ONRW	WVCSR 46-l-4.1.g	1989
Wisconsin - WI	Yes	1989	Yes	Both	ORW,ERW Tier 2.5 equiv	OERW - state waters - NR207, no ONRW	1989
Wyoming - WY	Yes	2013	Yes		OAR	Outstanding Aquatic Resource, Class 1	2013

States	Regulations for Water - State Administrative Codes	Antideg/ONRW in regs
Alabama - AL	https://www.law.cornell.edu/regulations/alabama/Ala-Admin-Code-r-335-6-11-01	335-6-11-Water Use Classifications
Alaska - AK	https://www.law.cornell.edu/regulations/alaska/Alaska-Admin-Code-Title-18-sect-70-015	18 AAC 70.015(a)(3)] regulations, July 2020
Arizona - AZ	https://www.law.cornell.edu/regulations/arizona/Ariz-Admin-Code-R18-11-107	R18-11-112(G) OAWs - Tier 3
Arkansas - AR	https://www.law.cornell.edu/regulations/arkansas/agency-014/sub-agency-04/chapter-002/chapter-2	Reg. 2.203 Extraordinary Resource Waters
California - CA	https://www.law.cornell.edu/regulations/california/23-CCR-Sec-2900	Resolution 68-16, §13225. Tahoe, Mono
Colorado - CO	https://www.law.cornell.edu/regulations/colorado	§25-8-209
Connecticut - CT	https://www.law.cornell.edu/regulations/connecticut/Conn-Agencies-Regs-sect-22a-426-8	§22a-426-1 (50), ONRWs, Tier 3
Delaware - DE	https://www.law.cornell.edu/regulations/delaware/7-Del-Admin-Code-SS-7401	Exceptional Rec or Eco Sig (ERES), ONRWs
Florida - FL	https://www.law.cornell.edu/regulations/florida/Fla-Admin-Code-r-62-302-300	62-4.242 OFW, ONRW
Georgia - GA	https://www.law.cornell.edu/regulations/georgia/GA-Reg-391-3-6-03	391-3-6-.03(2)(b)(ii)2, Tier 3, ONRW
Hawaii - HI	https://www.law.cornell.edu/regulations/hawaii/Haw-Code-R-SS11-54-1-1	HAR Title 11, Chapter 54
Idaho - ID	https://www.law.cornell.edu/regulations/idaho/Idaho-Admin-Code-r-58-01-02-051	ORWs §39-3620
Illinois - IL	https://www.law.cornell.edu/regulations/illinois/IL-Admin-Code-35-302-105	35 Ill. Adm. Code 303.205, 35 Ill. Adm. Code 303.206
Indiana - IN	https://www.law.cornell.edu/regulations/indiana/title-327/article-2/327-Ind-Admin-Code-327-IAC-2-1-3	327 IAC 2-1-9, 327 IAC 2-1-10
Iowa - IA	https://www.law.cornell.edu/regulations/iowa	IAC 455B.105 and 455B.173
Kansas - KS	https://www.law.cornell.edu/regulations/kansas/Kan-Admin-Regs-sect-28-16-28c	K.A.R. 28-16-28c(a)
Kentucky - KY	https://www.law.cornell.edu/regulations/kentucky/401-Ky-Admin-Regs-10-030	401 Ky. Admin. Regs. 10:030 (no "tiers")
Louisiana - LA	https://www.law.cornell.edu/regulations/louisiana/La-Admin-Code-tit-33-Part-IX-SS1119	LAC 33:IX.1111.A
Maine - ME	https://www.law.cornell.edu/regulations/maine/06-096-Me-Code-R-Ch-310	MRS Title 38, §464.
Maryland - MD	https://www.law.cornell.edu/regulations/maryland/COMAR-26-08-02-04	
Massachusetts - MA	https://www.law.cornell.edu/regulations/massachusetts/300-399-CMR	314 CMR 4.00
Michigan - MI	https://www.law.cornell.edu/regulations/michigan/Mich-Admin-Code-R-323-1098	R 323.1098 Antidegradation
Minnesota - MN	https://www.law.cornell.edu/regulations/minnesota/Pollution-Control-agency/7050/water-quality-standards-for-protection-of-waters-of-the-state	Minn. R. 7050.0250, 7050.0265, 7050.0270, 7050.0335-ORVW
Mississippi - MS	https://www.law.cornell.edu/regulations/mississippi/Miss-Admin-Code-11-6-2-1	Commission on Env Quality-WaterCriteria
Missouri - MO	https://www.law.cornell.edu/regulations/missouri/10-CSR-20-7-031	Tier 3 - 10 CSR 20-7.031(2)(C)
Montana - MT	https://www.law.cornell.edu/regulations/montana/17/17-30/subchapter-7	§75-5-316(3), rules dated 1995

Nebraska - NE	https://www.law.cornell.edu/regulations/nebraska/environmental-quality-department-of/title-117/CHAPTER-3	Class A Sec 117-3-002, Class B Sec 117-3-003
Nevada - NV	https://www.law.cornell.edu/regulations/nevada/NAC-445A	None in NAC
New Hampshire - NH	https://www.law.cornell.edu/regulations/new-hampshire/env/env-wq/chapter-Env-Wq-1700/part-Env-Wq-1708	Update in 2016; Env-Wq 1702.35
New Jersey - NJ	https://www.law.cornell.edu/regulations/new-jersey/title-7	N.J.A.C. 7:9B-1.5(d), N.J.A.C. 7:9B
New Mexico - NM	https://www.law.cornell.edu/regulations/new-mexico/title-20/chapter-6	Rule 20.6.4.9 of NMAC
New York - NY	https://www.law.cornell.edu/regulations/new-york/title-6	6 NYCRR 701.2 Fresh surface waters
North Carolina - NC	https://www.law.cornell.edu/regulations/north-carolina/15A-NCAC-02B-0201	section .0216 - out res water
North Dakota - ND	https://www.law.cornell.edu/regulations/north-dakota/title-33-1/33-1-16/33-1-16-02-1	rule 33-16-02.1-02, Appendix IV
Ohio - OH	https://www.law.cornell.edu/regulations/ohio/Ohio-Admin-Code-3745-1-05	OAC 3745-1-05
Oklahoma - OK	https://www.law.cornell.edu/regulations/oklahoma/title-785/chapter-45/Subchapter-3	OAC 785:45-3-2(a). Tier 3
Oregon - OR	https://www.law.cornell.edu/regulations/oregon/OR-Admin-Rule-340-041-0004	Chapter 468B ORS, 2001 AIP
Pennsylvania - PA	https://www.law.cornell.edu/regulations/pennsylvania/title-25/part-I/subpart-c/article-II/chapter-93/antidegradation-requirements	25 PA. CODE CHS. 93 AND 95
Rhode Island - RI	https://www.law.cornell.edu/regulations/rhode-island/250-RICR-150-05-1	250-150-05 R.I. Code R. § 1.20
South Carolina - SC	https://www.law.cornell.edu/regulations/south-carolina/S-C-Code-Regs-61-68	
South Dakota - SD	https://www.law.cornell.edu/regulations/south-dakota/74-51/chapter-74-51-01	Rule 74:51:01:39, Rule 340.041.0004
Tennessee - TN	https://www.law.cornell.edu/regulations/tennessee/TN-Rules-and-Regs-0400-40-03-06	CHAPTER 0400-40-03, 0400-40-03-.06
Texas - TX	https://www.law.cornell.edu/regulations/texas/30-Tex-Admin-Code-307-5	307.5(b)(3), no ONRWs designated as of 2010
Utah - UT	https://www.law.cornell.edu/regulations/utah/Utah-Admin-Code-R317-2-3	UAC R317-2-3, "Category 1 waters"
Vermont - VT	https://www.law.cornell.edu/regulations/vermont/Vt-Code-R-12-030-025	V.S.A., Title 10, section 1422
Virginia - VA	https://www.law.cornell.edu/regulations/virginia/9-Va-Admin-Code-SS-25-260-30	9 VAC 25-260-30.A.3
Washington - WA	https://www.law.cornell.edu/regulations/washington/title-173/173-201A/part-III	WAC Chapter 173-201A, ORW
West Virginia - WV	https://www.law.cornell.edu/regulations/west-virginia/title-60/60-05	WVCSR 46-l-4.1.g
Wisconsin - WI	https://www.law.cornell.edu/regulations/wisconsin/department-of-natural-resources/NR-100-199/chapter-NR-102/SUBCHAPTER-I	ORW, ERW, water stds - NR 102.01 - NR 102.14
Wyoming - WY	https://www.law.cornell.edu/regulations/wyoming/Environmental-Quality-Dept-of-Water-Quality-Ch-1-SS-8	Class 1, Outstanding; Class 2, AQL/MDS, etc.