



Fact Sheet: Implementing Nevada's Antidegradation Program

Antidegradation is an important component of water quality standards and is used to protect high-quality surface waters from degradation due to permitted discharges. Across Nevada, there are many waters generally recognized as having excellent quality that may lack sufficient data to quantify the water quality. Although many of these waters are not likely to be subject to a point-source discharge, the Nevada Division of Environmental Protection (NDEP) is required to protect these waters from degradation.

Existing statutory requirements and federal regulations

Nevada Revised Statutes (NRS) 445A.305, 445A.520, and 445A.565 contain Nevada's requirements to maintain surface water quality and to protect high-quality waters. These statutes were enacted by the Nevada Legislature to fulfill Federal Clean Water Act (CWA) requirements of establishing water quality standards to protect and maintain designated uses of waterbodies and to prevent degradation of water quality. The CWA regulations (40 CFR 131.12) require that states have an antidegradation program, along with procedures for implementing that program. Historically, despite the State not having antidegradation regulations in place, NDEP has implemented the antidegradation program by setting Requirements to Maintain Existing Higher Quality (RMHQs) on a parameter-by-parameter basis when sufficient data were available. RMHQs are adopted into water quality standards through the rule-making process.

Federal regulations also require a state's antidegradation program to adopt categories of protection based on water quality. Within Nevada, **Tier 1** protects water quality for beneficial uses of the water on a parameter-by-parameter basis. **Tier 2** protects high-quality waters where data show the quality is better than levels needed to protect beneficial uses. Absent data, a waterbody is assumed to merit **Tier 2** protection, as data are collected to confirm whether this level of antidegradation protection is warranted.

Tier 2.5 and **Tier 3** protect water quality and the special characteristics of waterbodies with the designated beneficial use of "extraordinary ecological, aesthetic, or recreational value" (NAC 445A.122). New discharges that

are non-degrading are allowed in Tier 2.5 waters whereas Tier 3 prohibits new discharges.



Why is NDEP pursuing a change to the current approach to antidegradation?

The historical approach used five years of quarterly data to calculate a RMHQ for each parameter in a waterbody when ambient conditions were better than water quality standards. RMHQs have been established primarily for parameters in the main river systems in Nevada; however, many high-quality waters across the state have limited or no water quality data to develop RMHQs. If the historical process of developing RMHQs is used for antidegradation, the time required to collect sufficient water chemistry data (along with formally adopting these values through the rule-making process) could delay projects proposing a permitted discharge to waters for which limited or no data are available to establish RMHQs.

NDEP is proposing State antidegradation regulations that are consistent with but more flexible and comprehensive than the historical RMHQ approach. The Division is proposing that when a discharge is proposed

to a waterbody for which an RMHQ does not exist, the baseline water quality be assessed at a representative location based on five years of data. If data is not already available, the proposed discharger would be responsible for implementing an approved sampling and analysis plan to collect the data needed to establish baseline. After two years of quarterly data are collected (i.e., eight samples), an interim baseline values (IBVs) could be used for permitting purposes until baseline water quality can be calculated and, if demonstrated to be higher quality, put forward for formal adoption as an RMHQ.

This approach will provide the flexibility to allow permitting of a project to proceed based on the IBVs, while working toward collecting five years of quarterly data to establish RMHQs. However, permittees should understand that the five-year baseline water quality could be higher or lower than the IBVs. Under the proposed approach, the current system of establishing and adopting antidegradation standards (i.e., RMHQs) on a parameter-by-parameter basis would be retained by incorporating a monitoring requirement in the permit to collect the necessary data to formally develop RMHQs for waters exhibiting higher quality at the end of five years of monitoring. The details of the antidegradation review are found in *Nevada's Antidegradation Permit Writers' Guidance* (NDEP 2021).

What changes to the regulations and implementation program are being proposed?

Proposed changes to Nevada's antidegradation regulations include adoption of a tier designation to classify level of water quality protection for a receiving water. Antidegradation review of proposed discharge permits is outlined in the *Draft Antidegradation Implementation Procedures* (AIP). This implementation document describes how the Division's antidegradation program would be applied. Available water column chemistry data would be used to identify the protection tier for the receiving water. Absent sufficient data, the waterbody would be assumed to merit **Tier 2** protection. Permitting for parameters with total maximum daily loads (TMDLs) or existing RMHQs would not change under the proposed revisions.

If the receiving water for a proposed discharge was determined to merit **Tier 1** protection, the permit effluent limits would be set at the water quality standards needed to protect the designated beneficial uses of the waterbody, unless RMHQs existed for any parameters. Where established, RMHQs would be used as the permit limit. If some or all of the parameters in the waterbody are identified for **Tier 2** protection, permit limits would be set to prevent degradation of the higher water quality. Some waters may have Tier 1 protection for some parameters and Tier 2 protection for other parameters (**Tier 1/Tier 2** protections).

The flow chart on the next page shows the process that would be followed when evaluating a discharge permit application (Figure 1). For a water with **Tier 2.5** protection, the permit limits would be set to prevent any degradation of the water quality or special characteristics of the water. No new discharges would be permitted into a water with **Tier 3** protection.

Nevada's water quality standards are contained in NAC 445A.11704 to 445A.2234

Division Contacts for this Fact Sheet:

Jason Kuchnicki
Division of Environmental Protection
Bureau of Water Quality Planning
901 South Stewart Street, Suite 4001
Carson City, NV 89701
775-687-9450
kuchnicki@ndep.nv.gov



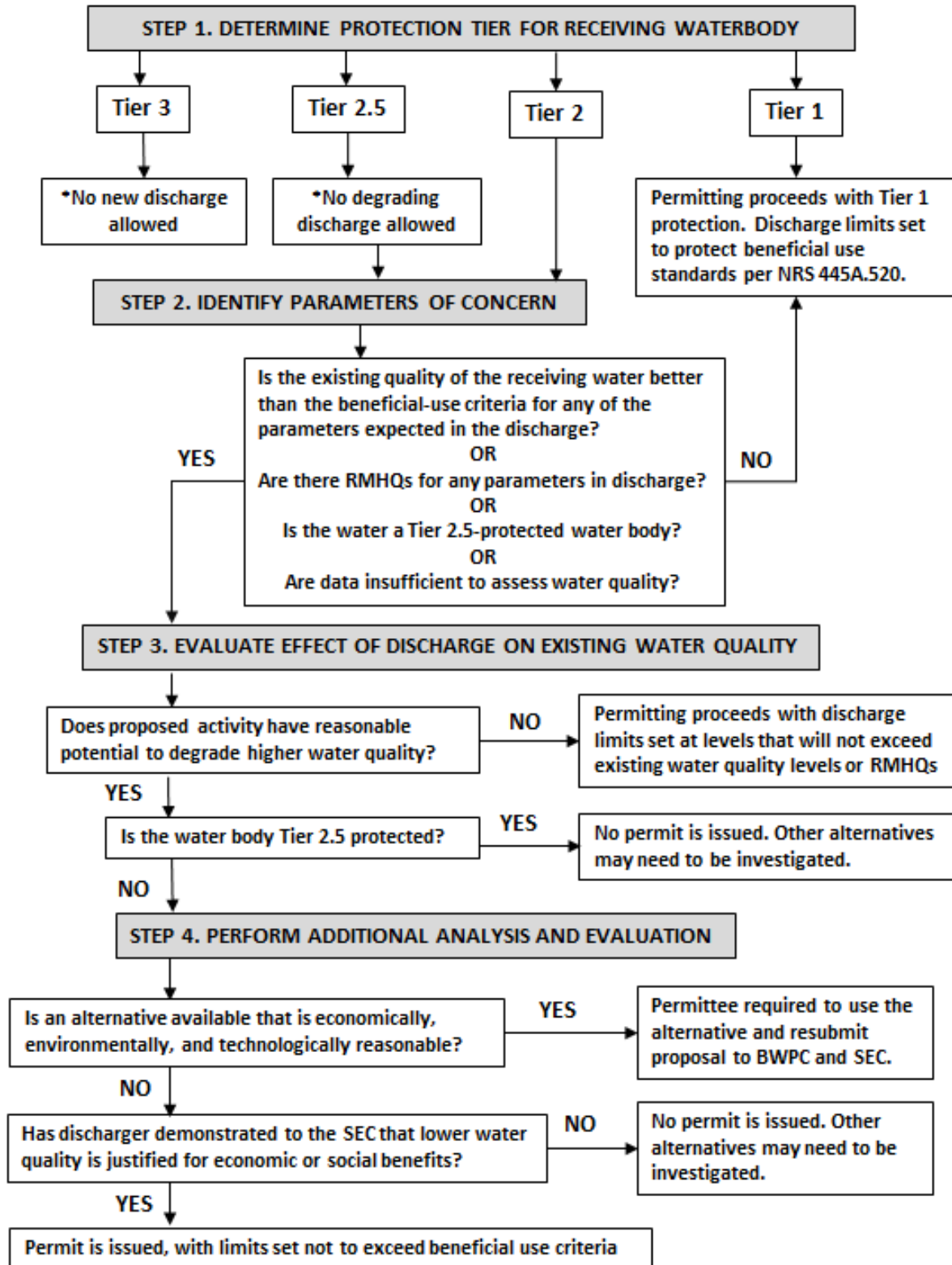
NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**



Nevada Department of
**CONSERVATION &
NATURAL RESOURCES**

Connect with us:   

ANTIDEGREDATION REVIEW FLOWCHART



NRS = Nevada Revised Statutes

RMHQ = Requirement to Maintain Higher Quality

SEC = State Environmental Commission

*Existing discharges "grandfathered in" absent modification

Final Federal Rule: 40 CFR 131.12 - Antidegradation policy and implementation methods

§ 131.12 Antidegradation policy and implementation methods

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

(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 water body-by-water body basis. Where the State identifies waters for antidegradation protection on a water body-by-water body 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.

[48 FR 51405, Nov. 8, 1983, as amended at 80 FR 51047, Aug. 21, 2015]