



April 17, 2020

Ms. Joro Walker, General Counsel  
Western Resource Advocates and Nevada Conservation League Education Fund  
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**Subject: Responses to Comments on the Draft Nevada 2016-2018 Integrated Report**

Ms. Walker:

The Bureau of Water Quality Planning (BWQP) appreciates the time you spent reviewing Nevada's 2016-2018 Water Quality Integrated Report (2018 IR), on behalf of Western Resource Advocates and the Nevada Conservation League Education Fund. BWQP has provided a synopsis and organized your comments into the seven main topics you discussed and has responded to each below. BWQP has revised the Final 2018 IR report to address all comments as appropriate.

**1. Prioritizing Impaired Waters and Developing Plans to Improve Water Quality**

*This comment questions how BWQP prioritizes impaired waters to develop plans for improving water quality. The comment also discusses the Nevada Nonpoint Source Management Plan and compliance of Federal agencies to the requirements of the Clean Water Act.*

**BWQP Response:** BWQP understands that prioritization is a necessary element within the Integrated Report; however, during the 2016-2018 assessment cycle, we had to prioritize the process of rebuilding databases that were no longer functional. BWQP invested a great deal of time and funding in creating, refining, and populating our new databases to be able to assess the data. BWQP anticipates focusing on the prioritization, visioning, and alternatives to TMDLs during preparation of the 2020 Integrated Report. In response to several comments regarding prioritization, BWQP has revised Attachment 3, the 303(d) list, to prioritize several waterbodies/waterbody segments in the Carson and Walker River basins.

The Standards Branch is in the process of enacting a prioritization strategy and has been updating the 2015 "Prioritization Framework for TMDLs or Alternatives and Its Application for 2016-2022." Evaluating the listings in the 2012, 2014, and 2016-2018 Water Quality Integrated Reports, BWQP have determined that prioritization based upon a selected set of pollutants would best serve the water quality management programs in Nevada. For the 2016-2022 Vision Prioritization, the current plan is to focus on impairments due

to nutrients (primarily, phosphorus), temperature, sediment (turbidity and total suspended solids), and bacteria (*E. coli* and fecal coliform). All other impairments will be assigned a low priority.

The Nonpoint Source (NPS) Branch, prepares the Nevada Nonpoint Source Management Plan, which is currently being updated. The NPS Branch works with stakeholder groups and the Standards, Assessment and Monitoring (Standards) branch to implement watershed management projects across the State. The NPS branch actively funds and manages projects throughout the State to improve water quality. BWQP also realizes that education is paramount to establish a base knowledge of the causes of pollution and actively participates in school programs to teach students about the benefits of protecting our environment.

Because some streams may require restoration to help reduce nonpoint sources of pollution, the Standards Branch is currently working with the NPS Branch and has selected several segments of the Carson River to implement restoration projects that focus on sediment, nutrients and temperature. Implementing best management practices (BMPs), such as installing fencing to limit access of livestock to streams, will eventually restore the riparian vegetation. Implementation of such BMPs help to reduce nutrients, temperature, TSS, turbidity, and bacteria in a water body. Other focused restoration projects along the Carson River, that are in the initial phases of development, will involve a combination of bio-engineering and structural streambank stabilization work to minimize sediment and nutrient deposition into the river from erosion of the unstable streambanks.

Other Vision projects being considered include the development of a statewide TMDL for bacteria. Several states (Connecticut, Maine, Michigan, Rhode Island, Vermont, etc.) have developed statewide TMDLs for bacteria. NDEP will be evaluating these states' plans to assess the feasibility of developing such a statewide plan for Nevada. BWQP is also in the process of evaluating the potential for a special monitoring project on the East Fork of the Walker River, to better understand phosphorus loading and stream temperature as a result of former ranching activities.

The *2016-2018 Water Quality Integrated Report* has been modified to expand the discussion on Plans for Improving Water Quality (Section 3.5). The TMDL priority has also been modified from low on several segments along the Carson and Walker rivers to standard, moderate, or high priority (Attachment 3).

## 2. Protecting High-Quality Waters

*This comment deals with implementation of Nevada's antidegradation policy and attainment of water quality standards to protect beneficial uses with regard to antidegradation requirements.*

**BWQP Response:** The assessment performed for the integrated report does not evaluate whether water quality is meeting antidegradation provisions, because the goal of the assessment is to determine if beneficial uses are supported, not whether waters are retaining existing water quality. The concept of "impairment" is that a water is said to be "impaired" if the beneficial uses are not supported; this is separate from the concept of antidegradation. For purposes of the assessment as to whether beneficial uses are being supported, antidegradation is not evaluated, because a water is only considered "impaired" if one or more beneficial uses are not supported.

BWQP is currently developing an antidegradation policy and implementation procedures that would be applicable to all waters in the state. Meetings with stakeholders have helped guide development of the

document. BWQP is planning to include language on nominating “Outstanding Nevada Waters” (ONWs). The current revision being drafted includes language that describes the attributes of an ONW, as well as the process for nominating a water as an ONW which would be subject to Tier 3 protection.

BWQP’s tentative plan for the Antidegradation Implementation Procedure is to reach out to stakeholders in May and hopefully hold meetings to discuss the procedure. Following the stakeholder meetings will be public workshops in June, with a final draft being submitted to the Legislative Counsel Bureau before June 30. The draft antidegradation implementation procedure and related documents will be posted for public comment on NDEP’s website and sent out to our BWQP listserv.

Historically, Nevada has handled antidegradation on a parameter-by-parameter basis, calculating numeric values for parameters that are found at levels that are better than water quality standards. (EPA allows antidegradation procedures to be implemented on a “waterbody-by-waterbody” basis or a “parameter-by-parameter” basis). The requirements to maintain existing higher quality (RMHQs) have historically been calculated using five years of quarterly data. Few waterbodies outside of main-stem waters have sufficient data to calculate RMHQs.

RMHQs are implemented during the permitting process. If RMHQs are present in the water quality standard tables, permit writers in the Bureau of Water Pollution Control (BWPC) use the values of the RMHQs in setting discharge limits. As noted above, the purpose of the integrated report is to assess whether beneficial uses are supported, not whether antidegradation provisions are met.

### **3. Enforcing Nevada’s Narrative Standard.**

*This comment seeks to understand how the narrative standards are applied to waters in Nevada.*

**BWQP Response:** All waters in Nevada are covered under the narrative standards. Narrative standards provide guidance to the permit writers in BWPC to permit discharges by interpreting the narrative water quality standards, supplemented with other relevant information, which may include EPA’s Water Quality Standards Handbook, October 1983; risk assessment data, exposure data, and information about the pollutant from the Food and Drug Administration; and current EPA criteria documents. During the permitting process, all applicable standards are specified in the discharge permit.

As stated in the 2018 IR, assessment based solely on the narrative standards is considered insufficient evidence for assessment purposes to categorize the quality of a given water.

### **4. Assessing and Protecting Waters of the State**

*This comment is related to the assessment of waters of the State as opposed to waters of the U.S.*

**BWQP Response:** The water quality assessment reported in the 2018 IR includes waters that are covered under the Clean Water Act, as required by EPA. Please note that all “waters of the state” are protected by state standards and are assessed if data are available; however, BWQP has not pursued producing a report for state waters, because such waters are few. For assessment purposes, we consider all waters to be

covered under the Clean Water Act unless there is a jurisdictional determination by the U.S. Army Corps of Engineers (Corps) or EPA that a specific water is not covered.

Setting water quality standards and assessing the quality of Nevada's surface waterbodies is the purview of BWQP. The comment correctly notes that the 2018 IR evaluated just over 40% of Nevada's perennial streams, along with about 70% of lakes and reservoirs and about 40% of wetlands. In an ideal world, complete water quality data sets would be available for all of Nevada's surface waterbodies (perennial, intermittent, and ephemeral). The arid conditions of Nevada mean that even main-stem rivers may cease flowing or flow may not be adequate for sampling during certain years and certain seasons. Many of the smaller streams cease flowing on a regular basis during a dry year or even a typical year.

With only six full-time staff in the Standards Branch, the number of samples that can be collected from across Nevada is limited. Sampling Nevada's waterbodies often involves travel on poor-quality roads in mountainous terrain, such that a 12-hour day may result in only two samples collected. The reality is that BWQP does all it can with the time and staff available. A combination of limited resources and environmental conditions dictate the amount of data that is available to assess; however, BWQP is re-evaluating its sampling program to determine if the sampling frequency of main-stem rivers can be reduced to free up resources to sample additional smaller waterbodies.

Information on the water quality of all waters in Nevada is always available by contacting our office. BWQP assesses all waters as part of the water quality assessment but does not include state-only waters in the integrated reports. All of BWQP's water quality data are shared with the public online at <https://ndep.nv.gov/water/rivers-streams-lakes/water-quality-monitoring/water-quality-data-warehouse-viewer>.

## 5. Making Beneficial Use Assessments

*This comment questions the methods used in assessing the beneficial uses.*

**BWQP Response:** BWQP can only make assessment decisions based on whatever data are available. If data are available for only one or several parameters, the assessment is based on those results. BWQP feels this is a better option than not performing assessments unless sufficient data (typically, n=3 as a minimum) are available for all parameters with standards. If BWQP were to choose this latter option, a much lower percentage of Nevada's waterbodies would be evaluated. Waters are listed or delisted based on the data available.

## 6. Using Biological Data

*This comment suggests BWQP use bio-assessment data in our assessment.*

**BWQP Response:** BWQP is currently pursuing funding to develop a database capable of calculating metrics and scores for biological taxonomic data and physical habitat. Other states use biological data in their assessments, and it is BWQP's goal to incorporate the biological data into our data network to use as a line of evidence in future assessments.

## 7. Addressing Other Impairments.

*This comment wonders about impairments for mercury and arsenic, and if these are a priority.*

**BWQP Response: Mercury.** Your comment correctly notes that the 2016-2018 Water Quality Integrated Report identifies that nearly half of Nevada's assessed lakes and reservoirs are impaired for "mercury in fish tissue," and that this is the result of "legacy pollution from historical mining operations." In fact, Nevada's only Superfund Site (Carson River Mercury Superfund Site) is the result of such legacy pollution. Unfortunately, due to the complex biogeochemistry of mercury and its wide distribution in certain Nevada waterbodies, it will likely take decades and hundreds of millions of dollars for remediation specialists to clean up legacy mercury pollution in Nevada's lakes and reservoirs.

**Arsenic.** The geochemical behavior of arsenic (and other oxyanion-forming metals) means that weathering of natural sources of arsenic can lead to naturally high concentrations of arsenic in Nevada's terminal lakes. Geothermal waters are also a common source of arsenic. Arsenic is released to surface (and ground) water via the process of weathering of arsenic-bearing minerals. The transport of arsenic oxyanions under alkaline-oxidizing conditions, and the evaporative concentration of arsenic lead to high concentrations of arsenic in some of Nevada's terminal lakes and playas. Under arid conditions, desorption of the anions and oxyanions is a key process for mobilizing arsenic, and evaporative concentration results in elevated concentrations of arsenic in soil, groundwater, and surface waters within Nevada's closed basins.

Due to the widespread nature and geochemical behavior of constituents like mercury and arsenic in Nevada, it is difficult to expend resources on them when the problem is so widespread. BWQP agrees that removing these from the 303d list would encompass a lot of waters, but the cost to do such is not feasible. At this time BWQP feels that resources would be better served on water quality impairments that can be easier and less expensive to either develop Alternatives or TMDLs.

If you have any questions, please do not hesitate to contact me at (775) 687-9548.

Sincerely,



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Bureau of Water Quality Planning

cc: Greg Lovato, Administrator, NDEP  
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