Nevada 2024 Surface Water Quality Triennial Review: Response to Comments
Hearing Date: December 16, 2024

Verbal comments received at hearing

None.

Written comments received

Comment 1

Comment:
"By far, the primary source of problems facing Nevada's streams, and therefore all aquatic life that depends on them, is habitat degradation. Yet the current framework makes it essentially impossible to list streams for obvious habitat degradation. There is a wide array of monitoring methods such as MIM and other state and federal protocols for determining riparian/aquatic habitat condition but DEP needs to provide a clear framework on how the data from current methods can be used for listing determinations. This is especially acute for ESA listed species such as Lahontan Cutthroat.

PFC has been in use by the BLM for nearly 30 years. Clearly, anything rated Non-Functional or Functional-at-Risk would unquestionably not be meeting aquatic or fisheries beneficial uses. Here is the chart from the PFC manual: (Figure 3. Succession for stream recovery.)

MIM plugs into PFC to use the quantified data collected by MIM to rate for PFC.

Both the Forest Service and BLM have fisheries habitat protocols that also could be used. The Nevada Department of Wildlife, likewise has methods they use.

All of these could be integrated into the 303d process.

I would very much like to take part in further discussions and implementation with state and federal partners."

NDEP Response:

The NDEP appreciates the opportunity to work with partners to continue its history of continually improving Nevada's surface water quality standards and assessment methodology to restore and maintain surface waters of the State while complying with State and Federal laws.

To comply with 40 CFR 130.7(b)(5), the NDEP considers all readily available surface water quality information submitted in accordance with the data solicitation call for Integrated Report assessments. The data solicitation for the 2024 Integrated Report cycle can be found on the NDEP website: https://ndep.nv.gov/water/rivers-streams-lakes/water-quality-standards/303d-305b-water-quality-integrated-report

Neither Proper Functioning Condition (PFC) nor Multiple Indicator Monitoring (MIM) information was submitted to the NDEP in response to the data solicitation for the 2024

Integrated Report Cycle. Centralized repositories do not exist for PFC and MIM information in Nevada, therefore the NDEP does not consider this information to be readily available.

The NDEP is in the process of expanding our database infrastructure to house and evaluate an expanded suite of biological information, including physical habitat assessments, and is hopeful to use this information to more thoroughly inform assessments in future Integrated Reporting cycles.

Comment 2

Comment:
"NAC 445A.121 1. Waters must be free from substances attributable to domestic or industrial waste or other controllable sources that will settle to form sludge or bottom deposits in amounts sufficient to be unsightly, putrescent or odorous or in amounts sufficient to interfere with any beneficial use of the water.

This general standard is way too crude of a standard to protect any of the beneficial uses except perhaps livestock. By the time it gets to this level of degradation it is way past supporting beneficial uses. The additional "or in amounts…." Is a small step in the right direction but is also a very crude standard.

We know the habitat needs of, for instance, native trout species. Would fine sediment in spawning gravels >20% from a standard method like McNeil sediment core sampling or Wolman pebble count be sufficient for listing?"

NDEP response:

The water quality standards found in NAC 445A.121(1-8) apply to all surface waters of the State. NAC 445A.121(1) is a stringent narrative standard which prohibits controllable sources from introducing substances to waters that will settle to form sludge or bottom deposits in amounts sufficient to interfere with any beneficial use of the water (including aquatic life). This narrative standard requires that beneficial uses (including aquatic life) must be maintained. Per NAC 445A.122(c), the water must be suitable as a habitat for fish and other aquatic life existing in a body of water. In addition, designated waters have additional criteria to protect beneficial uses defined in NAC 445A11704-2234, inclusive.

The NDEP considers all readily available surface water quality information submitted in accordance with the data solicitation call for Integrated Report assessments. The data solicitation for the 2024 Integrated Report cycle can be found on the NDEP website: https://ndep.nv.gov/water/rivers-streams-lakes/water-quality-standards/303d-305b-water-quality-integrated-report

Comment 3

Comment:
"Other states, such as Idaho have done a pretty good job dealing with sediment impacts to fisheries and aquatic species. The simplest approach is simply adopt what Idaho has done. California, Washington and Oregon may have done similar processes. But in any case, the DEP needs to correct this failure in the Triennial Review process."

NDEP response:

Comment noted. The NDEP considers all readily available surface water quality information submitted in accordance with the data solicitation call for Integrated Report assessments. Information or data indicating that specific fisheries and aquatic species are impaired by benthic sediments have not been submitted to the NDEP in response to data solicitations for Nevada Water Quality Integrated Reports.

A centralized repository of water bodies in Nevada that are not supporting the aquatic life beneficial use due to benthic sediments impact does not exist, therefore the NDEP does not consider this information to be readily available. Select designated waters in NAC 445A.11704-2234 contain Total Suspended Solids criteria to protect the Aquatic Life beneficial use. The Total Suspended Solids criteria were set at concentrations intended to minimize the impacts of sediment deposition on aquatic life, such as burial and suffocation of eggs and larvae. The NDEP will consider this comment when reviewing its criterion for sediment impacts in the future.

Comment 4

Comment:
"'In Nevada's analysis for all parameters with a single-value criterion (including non-acute or nonchronic toxic materials, 24-hour toxic materials and not-to-exceed criteria), a standard was considered to not be met (that is, the null hypothesis was rejected) if the "true" exceedance percentage was greater than 10 percent at a 90 percent confidence level. Table A-2 provides the minimum number of exceedances for sample sizes from 3 to 500."

There needs to be a sliding scale. Take, for instance, e. coli. If you have a single sample value of, say, 4,000 CFU (10 times the SV Standard) the idea that it did not exceed the 400 CFU SV Standard is rationally untenable.

In fact, requiring implementation of Table A-2 essentially violates state statute, because all the SV standards in the statute are rendered void.

If there is a SV standard in the statute, it needs to be implemented.

The DEP is proposing to increase the minimum samples to determine compliance with the single value standard from 3 to 8.

This is exactly the opposite direction that DEP needs to take.

It is fine to require the standard 5 samples in a 30 day period for the geomean standard but a single sample standard must be determined by a single value."

NDEP response:

The NDEP uses the binomial method rather than a raw-score approach for making impairment determinations for some surface water quality standards. A raw-score method does not allow for any adjustments to account for the larger uncertainties associated with small sample sizes. In contrast, the binomial method is a statistical approach that accounts for sample size to achieve an assigned level of confidence. The binomial method is a test of statistical significance that

answers a yes/no question. The use of the binomial method allows impairment determinations to be made on data sets of varying sizes with a consistent confidence rating.

Use of the binomial method for considering numeric surface water quality information is recognized as a robust and defensible method for making impairment determinations on single value criteria. For more information, please see the Consolidated Assessment and Listing Methodology (Appendix C and Appendix D). This guidance published by EPA is the framework for states to use in the documentation of the decision-making process for the attainment of water quality standards. https://www.epa.gov/sites/default/files/2015-09/documents/consolidated_assessment_and_listing_methodology_calm.pdf

For the forthcoming 2024 Integrated Report, the NDEP is increasing the minimum amount of data considered for impairment determinations on most parameters to 8 discrete samples within an assessment unit to increase the confidence in impairment determinations and to more closely align with national recommendations.

For more information, please see the Assessment Methodology used for the EPA approved 2022 Integrated Report. Discussion in the methodology in the forthcoming 2024 Integrated Report has been expanded to further explain the use of the binomial method.

https://ndep.nv.gov/water/rivers-streams-lakes/water-quality-standards/303d-305b-water-quality-integrated-report

Seth Alm
Standards, Assessment, and Monitoring Branch, Bureau of Water Quality Planning
Nevada Division of Environmental Protection
Department of Conservation and Natural Resources
901 S. Stewart Street, Suite 4001
Carson City, NV 89701
salm@ndep.nv.gov
(O) 775-687-9457 | (F) 775-687-9561