



MEMORANDUM

TO: Environmental Quality Council

FROM: Sarah Starostka, Division Administrator, Planning and Aid Division

DATE: September 22, 2023

SUBJECT: Explanatory Statement for Proposed amendments to Title 117 – Nebraska Surface Water Quality Standards

EXPLANATORY STATEMENT

Attached for your review and approval are the proposed amendments to Title 117 – Nebraska Surface Water Quality Standards.

Title 117 comprises the standards required by the Nebraska Environmental Protection Act (NEPA), in Neb. Rev. Stat. §81-1505(1) and (2). Title 117 also makes up Nebraska's water quality standards required by the Federal Clean Water Act (CWA) and 40 CFR Part 131.

Nebraska Department of Environment and Energy (NDEE) is delegated the authority from EPA to protect and persevere one our most important resource – water. Title 117 is the foundational regulatory means by which the department is administratively responsible and directed by the CWA to maintain certain water quality standards. 40 CFR states “(a) State review. The State shall from time to time, but at least once every 3 years, hold public hearings for the purpose of reviewing applicable water quality standards adopted pursuant to §§ 131.10 through 131.15 and Federally promulgated water quality standards and, as appropriate, modifying and adopting standards. The State shall also re-examine any waterbody segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act every 3 years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards.”

These revisions are proposed as part of the State's triennial review of water quality standards, which is required by Section 303(c) of the CWA. States are required to review their classifications of waters, designations of uses, and adopt EPA recommended criteria developed under Section 304(a) of the CWA or to provide scientific justification for not doing so.

1. A DESCRIPTION OF THE OF THE PROPOSED AMENDMENTS.

Title 117 – Nebraska Surface Water Quality Standards serve as a mechanism to establish water quality goals for the State's surface waters and as the basis for regulatory requirements on dischargers of pollutants to surface waters. They impact regulated dischargers of pollution by providing for water-quality based permit limitations.

Standards also focus on needs for voluntary nonpoint source pollution abatement by providing a benchmark for determining priorities and guiding entities attempting to seek funding for nonpoint source abatement projects. As the benchmark, these standards serve as the foundational determinant factor basis for all programs dealing with the protection of surface water quality to support (EPA and State supported) recognized beneficial uses (fishable and swimmable).

Proposed amendments to Title 117 are as follows:

1. *Revisions to lists and references of key biological species.*

The Nebraska Game and Parks Commission provided information about key species found in Chapters 5, and 7. The most recent information on species present in T117 designated streams indicated the need to remove species that are no longer considered threatened or endangered, and to add newly identified sensitive species, as well as updating scientific names. The Department proposes to include the scientific names of key species in Chapter 5. Scientific nomenclature is necessary to prevent potential miscommunication due to variations in regional common naming conventions. These proposed revisions are in keeping with state agency obligations under the Nebraska Nongame and Endangered Species Conservation Act (Neb. Rev. Stat. §37-807).

2. *Waterbody use designations.*

Section 101(a)(2) of the federal Clean Water Act states that “*wherever attainable, . . . water quality which . . . provides for recreation in and on the water be achieved*”. This means that unless shown through a use attainability analysis (UAA), waterbodies should be assigned a recreational beneficial use. Of the 1558 stream segments designated in Title 117 Chapter 5, 308 are designated for primary contact recreation (PCR) use and 380 have had UAAs performed to demonstrate that PCR is not attainable. The remaining 870 stream segments are proposed to be designated PCR as part of this revision. These proposed revisions occur throughout Chapter 5, Section 004. There currently are 291 municipal or domestic wastewater treatment facilities permitted by the Department under the National Pollutant Discharge Elimination System (NPDES), 132 of which are lagoon facilities that discharge seasonally outside of the recreation season or land apply their effluent; thus, have no disinfection requirements. The remaining 159 facilities are mechanical plants, which discharge year-round. Only 15 of the 159 mechanical facilities do not provide disinfection as part of their treatment. Of these 15, one already has treatment capabilities and two would still not be required to disinfect under current policy if the proposal to designate the additional 870 stream segments as PCR became effective. This means that 12 facilities would need to install disinfection capabilities in order to meet *E. coli* effluent limits with this regulatory update.

3. *New waterbodies.*

There are three perennial stream segments as well as one intermittent stream segment that the Department has identified since the last triennial review that should be listed in Title 117. The Department proposes adding these segments to Chapter 5. There are two regulated facilities that discharge to one of these proposed stream segments. The dischargers are not expected to be impacted by designating uses on the stream segment as they are already permitted to protect downstream beneficial uses. If listed, the Department would need to report on each stream segment’s water quality in the Integrated Report (required by CWA) to the extent that we have data on these waterbodies to assess. In addition, these stream segments would be eligible for projects under our CWA §319 Nonpoint Source Program.

Proposed stream segments and their designated uses:

Elm Creek (MP2-20300) – recreation, warmwater B, agriculture A, aesthetics
Buffalo Creek (MP2-20310) – recreation, warmwater B, agriculture A, aesthetics
Buffalo Creek (MP2-20320) – recreation, warmwater B, agriculture A, aesthetics
French Creek (MP2-20321) – recreation, warmwater B, agriculture A, aesthetics

There are eight lakes and reservoirs that have been identified since the last triennial review. They are proposed to be added to Chapter 6. Since there are no regulated discharges to these lakes and reservoirs, the regulated community will be unaffected by their listing. If listed, the Department would need to report on their water quality in our Integrated Report (required by CWA) to the extent that we have data on these waterbodies to assess. In addition, these lakes and reservoirs would be eligible for projects under our CWA §319 Nonpoint Source program.

Proposed lakes and their designated uses:

Sock Lake (LO1-L0055) – recreation, warmwater A, agriculture A, aesthetics, western lake
Beem Lake (LO3-L0065) – recreation, warmwater A, agriculture A, aesthetics, sandhill lake
Central City Lake (MP1-L0025) – recreation, warmwater A, agriculture A, aesthetics, western lake
Dogwood Lake West (MP2-0465) – recreation, warmwater A, agriculture A, aesthetics, western lake
Shadow Lake (MT1-L0011) - recreation, warmwater A, agriculture A, aesthetics, eastern lake
Midland Lake (MT1-L0012) - recreation, warmwater A, agriculture A, aesthetics, eastern lake
Kramer Park Lake (MT1-L0021) - recreation, warmwater A, agriculture A, aesthetics, eastern lake
Lincoln Park Lake (RE2-L0015) - recreation, warmwater A, agriculture A, aesthetics, western lake

4. *Removal of waterbodies*

One reservoir is proposed to be removed from Title 117. In March 2019 the Spencer Hydro Dam failed due to record-setting flooding and ice jams on the Niobrara River. Spencer Hydro Dam Lake (NI2-L0070) no longer exists, and the Niobrara River (NI2-10000) continues to flow unimpeded. This action is not expected to impact the regulated community. The dam and reservoir behind it no longer exist, therefore the Department proposes to remove Spencer Hydro Dam Lake (NI2-L0070) from Chapter 5.

5. *Errata Correction*

The Department proposes to update footnote numbers 2, 3, & 4 in the selenium criterion table, and the narrative explanation found in Chapter 4, section 003.01C3, and Chapter 7, section 004.01C3. In August 2021, the EPA published “2021 Revision Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater 2016” that states that “EPA identified that the following text was missing from the second sentence in footnote 4 in the criterion table: “When selenium inputs are increasing.” Corrected footnote 4 now states: “4. Water column values are based on dissolved total selenium in water and are derived from fish tissue values via bioaccumulation modeling. When selenium inputs are increasing, water column values are the applicable criterion element in the absence of steady-state condition fish tissue data.” Footnotes 2 and 3 also reflect that footnote 4 was corrected.” The change is not likely to result in significant changes in any effluent limitations in NPDES permits.

6. *Proposed housekeeping changes*

There are a few housekeeping changes that involve updating the Department name to reflect the merging with the Nebraska Energy Office in 2019 to the Department of Environment and Energy, correcting misspellings and typographical errors, and changing stream and lake names and Water Body Identification (WBID) numbers to conform to Title 117 naming standards. These changes are found in Chapters 5 and 6.

Additionally, EPA has reserved action since 2003 on site specific chloride criteria found in

Chapter 4, Section 003.02B2 for several stream segments and one lake found in the Salt Creek basin. Site specific criteria were adopted in this basin due to high levels of naturally occurring chloride. EPA previously deferred action because the WQS did not have a protocol for determining naturally occurring background concentrations of chloride (implementation procedure). In June 2023, the Department submitted an implementation procedure to determine naturally occurring background concentrations. In August 2023 EPA approved the site-specific chloride criteria. The Department is proposing to add language to Chapter 4, Section 003.02B2a that indicates that the implementation procedure can be found in the Nebraska Continuing Planning Process Document No. 3.7.

Rationale for Proposing Adoption

In order to meet the Federal CWA goal “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,” Congress tasked EPA and the states to cooperatively establish water quality standards. EPA has primary authority to develop water quality criteria guidelines. States, in turn, are given authority, subject to EPA approval, to classify their waters according to various designated intended uses (e.g. public drinking water supplies, recreational, agricultural, and industrial) and to adopt criteria to protect these uses. Based on the EPA’s guidelines, the State will establish water quality standards applicable to state waters necessary to support the designated uses. Section 303(c) of the Federal CWA (33 U.S.C. 1313(c)) requires that states shall from time to time, but at least once every three years, review and modify appropriate water quality standards. If a state fails to adopt adequate water quality standards, EPA may adopt standards applicable to the State waters.

The proposed revisions to Title 117 constitute the Department’s recommended modifications under this triennial review.

By the numbered proposal above, the regulation changes are necessary as follows:

1. Revisions to lists and references of key biological species ensure that Title 117 provisions are in keeping with state agency obligations under the Nebraska Nongame and Endangered Species Conservation Act (Neb. Rev. Stat. §37-807). Including the scientific nomenclature in Chapter 5 is needed to ensure that species are correctly identified and to reduce ambiguity due to differences in regional common naming conventions.
2. Section 101(a)(2) of the federal Clean Water Act states that “*wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved.*” This establishes a presumption that aquatic life and recreational beneficial uses are to be supported by all waters. Thus, unless shown through a use attainability analysis (UAA), waterbodies should be assigned a recreational beneficial use. Of the 1558 stream segments designated in Title 117 Chapter 5, 308 are designated for the primary contact recreation (PCR) use and 380 have had use attainability analyses performed to demonstrate that PCR is not attainable. It is unlikely that UAAs on the remaining 870 stream segments would show that the recreational use is not attainable. Therefore, these 870 stream segments should have the primary contact recreation (PCR) assigned to comply with the Clean Water Act and 40 CFR Part 131. These new designations also comply with the declaration of legislative purpose in Neb. Rev Stat. 81-1501(1), which is “*to protect and improve the quality of water for human consumption, wildlife, fish and other aquatic life, industry, recreation, and other productive, beneficial uses.*”

3. New streams, lakes, and reservoirs that have been identified to be added since the last triennial review are 'Waters of the State'; the Department proposes that they be identified in Title 117 consistent with the manner in which we identify other streams, lakes, and reservoirs.
4. New streams, lakes, and reservoirs that have been identified to be removed since the last triennial review are 'Waters of the State'; the Department proposes that they be identified in Title 117 consistent with the manner in which we identify other streams, lakes, and reservoirs.
5. Water quality criteria revisions are needed to keep current with sound science. This revision is based on the revised Clean Water Act Section 304(a), priority pollutant list, criteria recommendation for selenium. The change reflects an errata correction.
6. The housekeeping changes are needed to properly identify waterbodies to be consistent with Title 117 naming conventions and to correct typographical errors. As well as providing the location of the implementation procedure for determining natural background concentrations of chloride for site specific chloride criteria.

Impact of the Proposed Changes

The proposed revisions involving primary contact recreation (PCR) designation will result in additional NPDES permit limits requiring disinfection of wastewater. It is estimated that 13 out of 291 permitted facilities will need to add disinfection to their wastewater treatment process. Of these facilities, one already has disinfection equipment in place. The Clean Water State Revolving Fund (SRF) is available for financial assistance to communities needing to upgrade their facilities

Section-by-Section Description of the Proposed Changes

Throughout T117 references to the Nebraska Department of Environmental Quality is changed to reflect the merger with the Nebraska Energy Office in 2019, to Nebraska Department of Environment and Energy. There are also typographical error corrections throughout.

Changes to Chapter 4 (Standards for Water Quality) include an update to the aquatic life selenium criteria based on an errata correction published by EPA in 2021 to indicate that fish tissue criteria will be the preferred criteria over water quality criteria unless selenium inputs are increasing in a waterbody, and the inclusion of a reference to Document 3.7 in the Nebraska Continuing Planning Process Document "Natural Background Chloride Criteria: Site Specific Chloride Implementation Procedure Title 117 – Nebraska Surface Water Quality Standards" which was signed on June 22, 2023.

Changes to Chapter 5 (Stream Classification By Basin) include the removal or addition of key species based on the latest scientific information, the inclusion of scientific nomenclature to remove ambiguity, the designation of 870 stream segments with the designated beneficial use of Primary Contact Recreation to comply with the CWA Section 101(a)(2), the addition of 4 stream segments, and updates to stream names to conform to the Geographic Names Information System.

Changes to Chapter 6 (Lakes and Impounded Waters) include the addition of 8 lakes / reservoirs, the removal of one reservoir that no longer exists, and updates to lake / reservoir names to conform to the Geographic Names Information System.

Changes to Chapter 7 (Water Quality Standards for Wetlands) include, an update to the aquatic life selenium criteria based on an errata correction published by EPA in 2021 to indicate that fish tissue

criteria will be the preferred criteria over water quality criteria unless selenium inputs are increasing in a waterbody, and the removal or addition of key species based on the latest scientific information.

Please refer to the redline version of Title 117 for more information about any of the above-mentioned changes.