

US EPA ARCHIVE DOCUMENT



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

SEP 30 2009

Mr. Mike Linder, Director  
Nebraska Department of Environmental Quality  
Suite 400, The Atrium  
1200 N Street  
Lincoln, Nebraska 68509-8922

Dear Mr. Linder:

Under Section 303(c) of the Clean Water Act (CWA), 33 U.S.C. § 1313(c), states are to hold public hearings for the purpose of reviewing applicable water quality standards (WQS) no less than once every three years, and to submit any revised or new standards to the U. S. Environmental Protection Agency (EPA) for review and approval. Federal regulations at 40 C.F.R. §§ 131.20, 131.21, and 131.22 implement these requirements.

The Nebraska 2006 WQS revisions were adopted by the Nebraska Environmental Quality Council (EQC) on December 2, 2005. As part of the review process, the final draft revisions were made available for a 30-day public review period starting March 11, 2006 and ending April 14, 2006. The availability of the revisions was announced in the public notice section of the: Omaha World-Herald, Lincoln Star-Journal, Grand Island Independent, Norfolk Daily News, North Platte Telegraph, and Scottsbluff Star Herald. The revisions were also made available through the Nebraska Department of Environmental Quality (NDEQ) internet site and all NDEQ field offices. Based on our review, Nebraska's public participation process is consistent with, and satisfies, the procedural requirements of 40 C.F.R. § 131.20. The Assistant Attorney General certified the revised WQS on February 13, 2006. The revisions were then approved by the Governor and submitted to the Secretary of State on July 26, 2006. NDEQ submitted the adopted WQS, by letter, to the Environmental Protection Agency (EPA) on August 17, 2006. EPA received the WQS submittal on August 21, 2006, and considers this submission to constitute the state's triennial review of WQS.

Under Section 303(c) of the CWA, EPA is required to review and to approve or disapprove new or revised WQS adopted by the state. This review involves a determination of whether:

- the state has adopted water uses consistent with the requirements of the CWA;
- the state has adopted criteria that protect the designated water uses;
- the state has followed its legal procedures for revising or adopting standards;
- the state standards that do not include the uses specified in section 101(a)(2) of the CWA are based upon appropriate technical and scientific data and analyses; and,
- the state submission meets the requirements included in 40 C.F.R. § 131.6.

As Director of the Water, Wetlands and Pesticides Division, I am charged with the responsibility of reviewing and approving or disapproving new or revised state WQS under section 303(c) of the CWA. With this letter, EPA is approving or deferring action on certain new or revised WQS submitted by NDEQ and will review the remaining new or revised WQS to determine if the basis for the revisions are approvable in a subsequent action. EPA is not taking action on certain provisions included in NDEQ's submission that are not new or revised WQS. The enclosure to this letter provides a more detailed description of EPA's rationale for approving or deferring certain new or revised WQS and for not taking action on provisions that are not new or revised WQS.

### SECTION I: ITEMS EPA IS APPROVING

- A. Chapter 1-024: the revised definition of endangered species to clarify that it is only applicable for the purposes of Title 117.
- B. Chapter 1-042: new text defining natural background was added.
- C. Chapter 2-009.05: language removed concerning high-flow exceptions.
- D. Chapter 4-002: language removed to identify that fecal coliform criteria are no longer used to make Primary Contact Recreation (PCR) determinations. Language was added to clarify that PCR criteria are only in effect during a defined recreation season.
- E. Chapter 4-002.01: the removal of this paragraph from Title 117 because fecal coliform criteria are no longer in effect.
- F. Chapter 4-002.02: the renumbering of this paragraph to 4-002.01 and the revisions of the single sample maximum for *E. coli*.
- G. Chapter 4-003.01C1: the adoption of the acute and chronic Tributyltin (TBT) criteria.
- H. Chapter 4-003.01C2: the adoption of methylmercury criterion of 0.215 milligram per kilogram (mg/kg); this is a fish tissue assessment for the protection of human health.
- I. Chapter 4-003.01H: the adoption of minimum alkalinity criterion of 20 milligrams per Liter (mg/L), except where natural background is less.
- J. Chapter 4-004.01B: the revision of the drinking water criterion for arsenic from 0.05 mg/L to 0.010 mg/L.
- K. Chapter 4-004.01B: the adoption of the drinking water criterion for Uranium of 0.030 mg/L.
- L. Chapter 5-004: the designation of primary contact recreation for 212 stream segments totaling 3,230 miles.
- M. Chapter 5-004: the adoption of the Public Drinking Water Supply use designation for the Little Blue River (LB1-10000), Platte River (MP-10000), Rock Creek (NE1-13700), and Soldier Creek (WH1-20300).
- N. Chapter 5-004: the adoption of the Industrial Water Supply use designation for lakes in Chapter 6-005.
- O. Chapter 6-004: the clarification of Nebraska's current policy of not issuing National Permit Discharge Elimination System permits for discharges to lakes and impounded waters, except those listed in subparagraphs 004.01 through 004.03.

- P. Chapter 6-005: newly classified lakes with use designations including Recreation, Warmwater Class A Aquatic Life, Agricultural Class A Water Supply, and Aesthetics.
- Q. Chapter 6-005: removal of classified lakes or impounded waters based on aerial photographs and information from communities and Natural Resources Districts that these waters no longer exist.
- R. Chapter 6-005: corrections made listing lakes in new subbasins based on their correct geographic location.
- S. Chapter 6-005: the adoption of the Public Drinking Water Supply use designation for lakes in Chapter 6-005.
- T. Chapter 7-004.01B1a: the addition of the Colorado Butterfly Plant, *Gaura neomexicana coloradensis*, to the Key Species list based on its designation by the U. S. Fish and Wildlife Service (USFWS), and the Nebraska Game and Parks Commission as an endangered species.
- U. Chapter 7-004.01C1: newly adopted acute and chronic Tributyltin (TBT) criteria.
- V. Chapter 7-004.01C2: the adoption of Methylmercury criterion at 0.215 mg/kg as a fish tissue assessment for the protection of human health.
- W. Chapter 7-004.01E: the adoption of minimum alkalinity criterion of 20 mg/L except where natural background is less.

## **SECTION II: ITEMS ON WHICH EPA IS DEFERRING ACTION**

- A. Chapter 4-003.05: numeric nutrient criteria for the protection of aquatic life in lakes and reservoirs.
- B. Chapter 6-005: the application of the numeric nutrient criteria from Chapter 4-003.05 to lakes and reservoirs for the protection of aquatic life.

### **EPA will act upon the following revisions to existing or revised WQS contained in the 2006 submittal in a subsequent action:**

- Chapter 2-004: application of standards to lakes and impoundments not identified in Chapter 6, nor contained elsewhere.
- Chapter 4-003.01C1: water column Mercury chronic criterion
- Chapter 4-003.02B5b: site-specific numeric chloride criteria based on natural background.
- Chapter 4-003.02B6a: site-specific numeric chloride criteria based on natural background.
- Chapter 5-004: North Branch Mira Creek ( LO2-10420).
- Chapter 5-004: South Branch Snake Creek (NI4-20330).
- Chapter 7-004.01A: the insertion of chloride in the list of water quality parameters that may naturally vary outside accepted ranges for other surface waters and for which the criteria are to be based on natural background values.
- Chapter 7-004.01C1: Mercury chronic criterion for wetlands.

EPA initiated consultation with the USFWS under section 7(a)(2) of the Endangered Species Act in 2005. Section 7(a)(2) requires that federal agencies, in consultation with the USFWS, insure that their actions are not likely to jeopardize the existence of federally listed species or result in the adverse modification of designated critical habitat of such species. As of today, this consultation has not been completed. By approving the standards "subject to" the results of consultation under section 7(a)(2) of the Endangered Species Act, EPA retains the discretion to revise its approval decisions if the consultation identifies deficiencies in the water quality standards.

We look forward to continuing to work with NDEQ to update its WQS through the triennial review process. If you have any questions regarding this matter, please contact John DeLashmit, Chief, Water Quality Management Branch, at (913) 551-7821 or by email at [delashmit.john@epa.gov](mailto:delashmit.john@epa.gov). The staff contact regarding this letter is Keith Hayden, and he may be reached at (913) 551- 7828.

Sincerely,



William A. Spratlin  
Director  
Water, Wetlands and Pesticides Division

Enclosure

## EPA REGION 7 ACTION ON TITLE 117: 2006 NEBRASKA SURFACE WATER QUALITY STANDARDS

Under section 303(c) of the Clean Water Act (CWA), the U. S. Environmental Protection Agency (EPA) is required to review and to approve or disapprove new or revised water quality standards (WQS) adopted by the state. This review involves a determination of whether:

- the state has adopted water uses consistent with the requirements of the CWA;
- the state has adopted criteria that protect the designated water uses;
- the state has followed its legal procedures for revising or adopting standards;
- the state standards that do not include the uses specified in section 101(a)(2) of the CWA are based upon appropriate technical and scientific data and analyses; and,
- the state submission meets the requirements included in 40 C.F.R. § 131.6.

As noted in the cover letter to this enclosure, EPA will be taking action upon the following revisions to existing or revised WQS contained in the 2006 submittal in a subsequent action:

- Chapter 2-004: application of standards to lakes and impoundments not identified in Chapter 6, nor contained elsewhere.
- Chapter 4-003.01C1: water column Mercury chronic criterion.
- Chapter 4-003.02B5b: site-specific numeric chloride criteria based on natural background.
- Chapter 4-003.02B6a: site-specific numeric chloride criteria based on natural background.
- Chapter 5-004: North Branch Mira Creek ( LO2-10420).
- Chapter 5-004: South Branch Snake Creek (NI4-20330).
- Chapter 7-004.01A: chloride has been inserted in the list of water quality parameters that may naturally vary outside accepted ranges for other surface waters and for which the criteria are to be based on natural background values.
- Chapter 7-004.01C1: Mercury chronic criterion for wetlands.

### SECTION I: ITEMS EPA IS APPROVING

- A. Chapter 1-024: the revised definition of endangered species to clarify that it is only applicable for the purposes of Title 117.
- B. Chapter 1-042: new text defining natural background was added.
- C. Chapter 2-009.05: language was removed concerning high-flow exceptions.
- D. Chapter 4-002: language was removed to identify that fecal coliform criteria are no longer used to make Primary Contact Recreation (PCR) determinations. Language was added to clarify that PCR criteria are only in effect during a defined recreation season.
- E. Chapter 4-002.01: the removal of this paragraph from Title 117 because fecal coliform criteria are no longer in effect.

- F. Chapter 4-002.02: the renumbering of this paragraph to 4-002.01 and the revisions of the single sample maximum for *E. coli*.
- G. Chapter 4-003.01C1: the adoption of the acute and chronic Tributyltin (TBT) criteria.
- H. Chapter 4-003.01C2: the adoption of methylmercury criterion of 0.215 milligrams per kilogram (mg/kg); this is a fish tissue assessment for the protection of human health.
- I. Chapter 4-003.01H: the adoption of minimum alkalinity criterion of 20 milligrams per Liter (mg/L), except where natural background is less.
- J. Chapter 4-004.01B: the revision of the drinking water criterion for arsenic from 0.05 mg/L to 0.010mg/L.
- K. Chapter 4-004.01B: the adoption of the drinking water criterion for Uranium of 0.030 mg/L.
- L. Chapter 5-004: the designation of primary contact recreation for 212 stream segments totaling 3,230 miles.
- M. Chapter 5-004: the adoption of the Public Drinking Water Supply use designation for the Little Blue River (LB1-10000), Platte River (MP-10000), Rock Creek (NE1-13700), and Soldier Creek (WH1-20300).
- N. Chapter 5-004: the adoption of the Industrial Water Supply use designation for lakes in Chapter 6-005.
- O. Chapter 6-004: the clarification of Nebraska's current policy of not issuing National Pollutant Discharge Elimination System (NPDES) permits for discharges to lakes and impounded waters, except those listed in subparagraphs 004.01 through 004.03.
- P. Chapter 6-005: newly classified lakes with use designations including Recreation, Warmwater Class A Aquatic Life, Agricultural Class A Water Supply, and Aesthetics.
- Q. Chapter 6-005: removal of classified lakes or impounded waters based on aerial photographs and information from communities and Natural Resources Districts that these waters no longer exist.
- R. Chapter 6-005: corrections made listing lakes in new subbasins based on their correct geographic location.
- S. Chapter 6-005: the adoption of the Public Drinking Water Supply use designation for lakes in Chapter 6-005.
- T. Chapter 7-004.01B1a: the addition of the Colorado Butterfly Plant, *Gaura neomexicana coloradensis*, to the Key Species list based on its designation by the U. S. Fish and Wildlife Service (USFWS), and the Nebraska Game and Parks Commission as an endangered species.
- U. Chapter 7-004.01C1: newly adopted acute and chronic Tributyltin (TBT) criteria.
- V. Chapter 7-004.01C2: the adoption of Methylmercury criterion at 0.215 mg/kg as a fish tissue assessment for the protection of human health.
- W. Chapter 7-004.01E: the adoption of minimum alkalinity criterion of 20 mg/L except where natural background is less.

**SECTION II: ITEMS ON WHICH EPA IS DEFERRING ACTION**

- A. Chapter 4-003.05: numeric nutrient criteria for the protection of aquatic life in lakes and reservoirs.
- B. Chapter 6-005: the application of the numeric nutrient criteria from Chapter 4-003.05, to lakes and reservoirs for the protection of aquatic life.

**SECTION III: ITEMS UPON WHICH EPA IS TAKING NO ACTION**

- A. Chapter 1-005: the definition for “Applicable Level of Treatment or Control.”
- B. Chapter 1-042: a typographical error in the definition for natural background, the phrase “shall mean” is written twice.
- C. Chapter 1-043: the new definition for “natural background” was inserted as paragraph number 042, causing the renumbering for paragraph’s 043 – 083.
- D. Chapter 2-008: the incorporation of Title 121 into Title 119.
- E. Chapter 4-001: the name change of the Nebraska Department of Water Resources to the Nebraska Department of Natural Resources.
- F. Chapter 4-002.02: the renumbering of 002.02 - 002.02D to 002.01 - 002.01D due to the deletion of 002.01.
- G. Chapter 4-002.02C: the letter “d” was added to the word “use” to correct a spelling error.
- H. Chapter 4-003.01B: the addition of the word “background” to harmonize this paragraph with the definition of “Natural Background” in Chapter 1.
- I. Chapter 4-003.01C1: revisions to correct typographical errors on footnotes for various criteria in the table, and to add Chemical Abstract Services Registry Numbers (CAS) to certain pollutants.
- J. Chapter 4-003.01H: the renumbering of 003.01H - 003.01I1 to 003.01I - 003.01J1.
- K. Chapter 5-004: the renumbering of Thomas Creek from NI3-12200 to NI3-12500. As a result, several other stream segments also changed segment numbers.
- L. Chapter 5-004: Long Pine Creek – Willow Creek to Bone Creek is revised as segment number 12300.
- M. Chapter 5-004: the renaming of Snake Creek (NI4-20300) based on newer mapping.
- N. Chapter 5-004: segment NI4-20310 name changed from South Branch Snake Creek to Spring Creek.
- O. Chapter 7-004: the name change of the Nebraska Department of Water Resources to the Nebraska Department of Natural Resources.
- P. Chapter 7-004.01C1: the correction of a typographical error on a footnote for acute atrazine criteria.
- Q. Chapter 7-004.01F: the insertion of Alkalinity criteria, at paragraph 004.01E, resulting in the changing of Residual Chlorine criteria to paragraph number 004.01F. This necessitated the renumbering of the paragraphs for one hour and four day concentrations of Residual Chlorine.

## **SECTION I: ITEMS EPA IS APPROVING**

EPA has found the following new or revised changes to Nebraska's water quality standards (WQS) to be consistent with Section 303(c) of the CWA and EPA's implementing regulations at 40 CFR § 131.6. EPA is hereby approving the following Nebraska provisions which are new or revised since the date of Nebraska's last WQS submission on January 13, 2003.

**The *italicized* words in the sections below represent language contained in Nebraska water quality standards, Title 117; underlined words represent additions to Title 117; and ~~strike-through~~ words represent deletions to Title 117.**

### **A. Chapter 1-024: Definition of Terms**

*“Endangered Species” shall mean, for the purpose of this Title, any aquatic species identified by the Nebraska Game and Parks Commission whose continued existence as a viable component of the wild fauna of the State is determined to be in jeopardy or which meets the criteria of the Federal Endangered Species Act.*

The definition of “Endangered Species” was revised to clarify that it is only applicable for the purposes of Title 117. This revision is consistent with regulations at 40 C.F.R. § 131.6(f), and is hereby approved by EPA.

### **B. Chapter 1-042: Definition of Terms**

*“Natural Background” shall mean shall mean quantifiable measurements of water quality existing in the absence of water pollution.*

New text that defines “Natural Background” was added. The phrase “natural” had been used in previous versions of Title 117 without having been defined in the state's regulation. This revision is consistent with regulations at 40 C.F.R. § 131.6(f), and is hereby approved by EPA.

### **C. Chapter 2-009.05: Application of Standards**

*~~Streams during periods when the flow is greater than the 7-day 10-year high flow, unless an assigned beneficial use still exists under these conditions. Thirty day average ammonia criteria will not apply to streams during periods when the flow is greater than the 30-day 5-year high flow unless an assigned beneficial use still exists under these conditions.~~*

This paragraph was disapproved in EPA's August 8, 2003 WQS approval/disapproval letter, because it was found to be inconsistent with Section 101(a)(2) and 303(c) of the CWA, and Federal implementing regulations at 40 CFR §§ 131.5(a)(2), 131.6(c), and 131.11(a)(1). Therefore, this provision has not been in effect for CWA purposes. Nebraska has struck this provision in accordance with EPA's disapproval, thereby providing the public and other

CWA programs clarification that this provision is not in effect for CWA purposes. EPA hereby approves the removal of this paragraph.

#### D. Chapter 4-002: Standards for Water Quality

*This use applies to surface waters which are used, or have a high potential to be used, for primary contact recreational activities. Primary contact recreation includes activities where the body may come into prolonged or intimate contact with the water, such that water may be accidentally ingested and sensitive body organs (e.g., eyes, ears, nose, etc.) may be exposed. Although the water may be accidentally ingested, it is not intended to be used as a potable water supply unless acceptable treatment is applied. These waters may be used for swimming, water skiing, canoeing, and similar activities. Any of the following criteria may be used to determine support of this use. These criteria apply during the recreational period of May 1 through September 30.*

The sentence struck above from paragraph 2, was removed due to the fact that fecal coliform bacteria criteria for the protection of Primary Contact Recreation (PCR) were removed, as discussed in Section E, below. By letter dated August 8, 2003, EPA previously approved the state's criteria for *E. coli*, contained in its 2002 WQS submission. Now *E. coli* is used to determine support of PCR. The last sentence in paragraph 2 states that the criteria apply only during the recreational season. This is consistent with implementing regulations at C.F.R. § 131.10(f), and is hereby approved by the EPA.

#### E. Chapter 4-002.01: Standards for Water Quality

*002.01 Fecal Coliform. Bacteria of the fecal coliform group shall not exceed a geometric mean of 200/100 ml, nor equal or exceed 400/100 ml, in more than 10% of the samples. These criteria are based on a minimum of five samples taken within a 30-day period. This does not preclude fecal coliform limitations based on effluent guidelines. These criteria apply during the recreational period of May 1 through September 30.*

Fecal coliform bacteria criteria for PCR are being replaced by *E. coli* criteria. Nebraska included both fecal coliform and *E. coli* bacteria criteria in its 2002 WQS during a period of transition. In the 1986 guidance EPA recommended that states begin transitioning from fecal coliform to *E. coli* indicators. Nebraska retained fecal coliform criteria as a basis to establish wastewater permit limits. EPA now has an approved method for establishing wastewater permit limits using *E. coli*, and as a result, the fecal coliform criteria are unnecessary. This revision is consistent with 1986 Ambient Water Quality Criteria for Bacteria, Section 303(c) of the CWA, and Federal implementing regulations at 40 C.F.R. §§ 131.6 and 131.11.

#### F. Chapter 4-002.02: Standards for Water Quality

*E. coli bacteria shall not exceed a geometric mean of 126/100 ml. For increased confidence of the criteria, the geometric mean should be based on a minimum of five samples taken within a 30-day period. This does not preclude fecal coliform limitations based on effluent guidelines. The following ~~Single-sample~~ single sample maximum maxima allowable*

densities shall not exceed the following criteria be used solely for issuing periodic public advisories regarding use of waterbodies for Primary Contact Recreation.

Single sample maxima language for *E. coli* was revised to clarify that it will only be used to issue periodic advisories to the public regarding the use of waters for PCR. This revised language is consistent with Section 303(c) of the CWA, and Federal implementing regulations at 40 C.F.R. §§ 131.6.

**G. Chapter 4-003.01C1: Standards for Water Quality**

<u>POLLUTANT</u>	<u>CRITERIA (µg/L)</u>		<u>CAS No.*</u>
	<u>Acute</u>	<u>Chronic</u>	
Tributyltin (TBT)	0.46 <sup>c</sup>	0.072 <sup>d</sup>	*****

Toxic substances acute and chronic Tributyltin (TBT) criteria were adopted for the protection of all aquatic life use classes. The acute criterion is 0.46 micrograms per Liter (µg/L), and the chronic criterion is 0.072µg/L. TBT has not been assigned a CAS number. These new numeric criteria are consistent with the numeric criteria EPA published pursuant to Section 304(a) of the CWA and EPA’s implementing regulations at 40 C.F.R. §131.11, and are hereby approved by EPA.

**H. Chapter 4-003.01C2: Standards for Water Quality**

The following criteria for the protection of human health based on consumption of fish and other aquatic organisms shall not be exceeded. These criteria are expressed as fish tissue concentrations (mg/kg fish).

<u>POLLUTANT</u>	<u>CRITERIA (mg/kg)</u>	<u>CAS No.*</u>
Methylmercury	0.215	22967926

The methylmercury criterion for the protection of all aquatic life uses, paragraph 003.01C2, has been adopted at 0.215 mg/kg. This is a fish tissue assessment for the protection of human health. This new numeric criterion is consistent with the numeric criteria EPA published pursuant to Section 304(a) of the CWA and EPA’s implementing regulations at 40 C.F.R. § 131.11, and is hereby approved by EPA.

**I. Chapter 4-003.01H: Standards for Water Quality**

Alkalinity: No less than 20 mg/l as CaCO3 except where natural background is less.

Minimum Alkalinity criterion of 20 mg/L is adopted, except where natural background is less. This new numeric criterion is consistent with the numeric criteria EPA published pursuant to Section 304(a) of the CWA and EPA’s implementing regulations at 40 C.F.R. § 131.11, and is hereby approved by EPA.

**J. Chapter 4-004.01B: Standards for Water Quality**

<u>POLLUTANT</u>	<u>NUMERICAL LIMIT</u>
Arsenic	<del>0.05</del> <u>0.01</u> mg/L

Nebraska revised its arsenic criterion from 0.05 mg/L to 0.01 mg/L for the protection of the public water supply designated use. This new criterion is consistent with National Primary Drinking Water Regulations maximum contaminant level for public water supplies and EPA implementing regulations at 40 C.F.R. §§ 131.11(a) and 141.62(b). This criterion is hereby approved by EPA.

**K. Chapter 4-004.01B: Standards for Water Quality**

<u>POLLUTANT</u>	<u>NUMERICAL LIMIT</u>
Uranium	<u>0.03</u> mg/L

Nebraska has adopted new Uranium criteria of 0.03 mg/L for the protection of the public water supply designated use. This new criterion is consistent with National Primary Drinking Water Regulations maximum contaminant level for public water supplies and EPA implementing regulations at 40 C.F.R. §§ 131.11(a) and 141.66(e). This criterion is hereby approved by EPA.

**L. Chapter 5-004: Stream Classification by Basin**

Nebraska has designated 212 stream segments, totaling 3,230 miles, for PCR. A complete list of these segments can be found in Appendix A, at the end of this enclosure. This use designation is consistent with Section 101(a)(2) of the CWA and Federal implementing regulations at 40 C.F.R. §§ 131.6(a) and 131.10(a). The change in use designation for the waters listed in Appendix A is hereby approved by EPA.

**M. Chapter 5-004: Stream Classification by Basin**

- Little Blue River (LB1-10000)
- Platte River (MP-10000)
- Rock Creek (NE1-13700)
- Soldier Creek (WH1-20300)

Nebraska has adopted new Public Drinking Water Supply designated uses for the preceding four stream segments. These new use designations are consistent with Section 303(c)(2) of the CWA and Federal implementing regulations at 40 C.F.R. §§ 131.6(a) and 131.10(a) and are hereby approved by EPA.

**N. Chapter 5-004: Stream Classification by Basin**

Loup River Canal (LP1-21800)  
 Tri-County Supply Canal (MP2-20500)  
 Sutherland Canal (NP1-40200)  
 Outlet Canal (SP1-10500)  
 Outlet Canal (SP1-10600)  
 Sutherland Canal (SP1-10700)  
 South Platte River Supply Canal (SP1-10710)

Nebraska has adopted the Industrial Water Supply use designation for the preceding seven stream segments. These new use designations areas consistent with Section 303(c)(2) of the CWA and Federal implementing regulations at 40 C.F.R. §§ 131.6(a) and 131.10(a) and are hereby approved by EPA

**O. Chapter 6-004: Lakes and Impounded Waters**

*No discharge of wastewater from domestic, municipal, or industrial sources shall be allowed directly into ~~these~~ lakes or impounded waters except:*

The preceding revision was made to clarify Nebraska's current policy of not issuing NPDES permits for discharges to lakes and impounded waters, except those listed in subparagraphs 004.01 through 004.03. This revision is consistent with EPA's implementing regulations at 40 C.F.R. §131.6(f), and is hereby approved by EPA.

**P. Chapter 6-005: Lakes and Impounded Waters**

*Bear Creek Lake (BB1-L0065)*  
*Swanton Lake (BB2-L0005)*  
*Overland Trails Reservoir (BB3-L0035)*  
*Clark's Pond (BB3-L0045)*  
*Oxbow Trails Reservoir (BB4-L0035)*  
*Aurora Leadership Center Lake (BB4-L0045)*  
*Powder Creek Lake (MT2-L0005)*  
*Wirth Brothers Lake (Site 27) (NE3-L0045)*

Nebraska has added the preceding eight lakes and their designated uses based on new information from Natural Resource Districts (NRD), communities, and the departments monitoring program. Use designations for these lakes and impounded waters include Recreation, Warmwater Class A Aquatic Life, Agricultural Class A Water Supply, and Aesthetics. EPA approves the additions of designated uses for these lakes and impounded waters as consistent with Sections 303(c)(2) and 101(a) of the CWA and Federal implementing regulations at 40 C.F.R. §§ 131.6 and 131.10.

**Q. Chapter 6-005: Lakes and Impounded Waters**

*Exeter City Lake (BB3-L0020)*  
*Aurora City Lake (BB4-L0050)*  
*Lock Linda (WMA) (MP2-L0080)*  
*Blue Heron Lake (WMA) (MP2-L0670)*  
*Moran Canyon Lake (MP2-L0830)*

Nebraska has removed the preceding five lakes or impounded waters and all assigned designated uses based on aerial photographs and information from NRD's and communities that they no longer exist. A description of why each lake was removed was provided to the Region by Nebraska, and can be found in Appendix B. These revisions are consistent with regulations at 40 C.F.R. § 131.10(g)(5), and are hereby approved by EPA.

**R. Chapter 6-005: Lakes and Impounded Waters**

*Andy's Lake (EL4-L0005); moved from subbasin EL3 to EL4*  
*Twenty-one Lake (NI3-L0181); moved from subbasin LO2 to NI3*  
*Center Lake (NI3-L0182); moved from subbasin LO2 to NI3*  
*Lee Lake (NI3-L0183); moved from subbasin LO2 to NI3*  
*Pony Lake (NI3-L0184); moved from subbasin LO2 to NI3*  
*East Sweetwater Lake (NI3-L0185); moved from subbasin LO2 to NI3*  
*Round Lake (Tom's Lake) (NI3-L0191); moved from subbasin LO2 to NI3*  
*Homestead Lake (NI3-L0192); moved from subbasin LO2 to NI3*  
*Campbell Lake (NI3-L0193); moved from subbasin LO2 to NI3*  
*Lost Lake (NI3-L0194); moved from subbasin LO2 to NI3*  
*Dad's Lake (NI3-L0195); moved from subbasin LO2 to NI3*  
*Baker Lake (NI3-L0196); moved from subbasin LO2 to NI3*  
*Three Corners Lake (NI3-L0380); from subbasin LO3 to NI3*

The preceding lakes in this paragraph were found to be located in the wrong subbasins. As a result of more current mapping, EPA approves listing the lakes in new subbasins, based on their correct geographic location. The newer mapping is based on current USGS 1:24,000 scale topographic maps. All use designations remain the same. These revisions are consistent with regulations at 40 C.F.R. § 131.6(b), and are hereby approved.

**S. Chapter 6-005: Lakes and Impounded Waters**

*Crystal Springs Northwest Lake (LB1-L0020)*  
*Crystal Springs Center Lake (LB1-L0030)*  
*Crystal Springs East Lake (LB1-L0040)*

Nebraska has adopted a Public Drinking Water Supply designated use for the preceding three lakes. These new use designations are consistent with Section 303(c)(2) of the CWA

and Federal implementing regulations at 40 C.F.R. §§ 131.6(a) and 131.10(a), and are hereby approved by EPA.

**T. Chapter 7-004.01B1a: Water Quality Standards for Wetlands**

The Colorado Butterfly Plant, *Gaura neomexicana coloradensis*, has been added to the Key Species list of endangered species biological criteria for protection of aquatic life based on its designation by the United States Fish and Wildlife Service, and the Nebraska Game and Parks Commission as an endangered species. This revision to WQS is consistent with implementing regulations at 40 C.F.R. § 131.6(f), and is hereby approved by EPA.

**U. Chapter 7-004.01C1: Water Quality Standards for Wetlands**

<u>POLLUTANT</u>	<u>CRITERIA (µg/L)</u>		<u>CAS No.*</u>
	<u>Acute</u>	<u>Chronic</u>	
Tributyltin (TBT)	0.46 <sup>c</sup>	0.072 <sup>d</sup>	*****

Acute and chronic Tributyltin (TBT) criteria have been added to the list of toxic substances for aquatic life criteria for the protection of wetlands. The acute value is 0.46µg/L, and the chronic value is 0.072µg/L. TBT has not been assigned a CAS number. These new numeric criteria are consistent with the numeric criteria EPA published pursuant to Section 304(a) of the CWA and EPA’s implementing regulations at 40 C.F.R. § 131.11, and are hereby approved by EPA.

**V. Chapter 7-004.01C2: Water Quality Standards for Wetlands**

The following criteria for the protection of human health based on consumption of fish and other aquatic organisms shall not be exceeded. These criteria are expressed as fish tissue concentrations (mg/kg fish).

<u>POLLUTANT</u>	<u>CRITERIA (mg/kg)</u>	<u>CAS No.*</u>
Methylmercury	0.215	22967926

A wetlands Toxic Substances Methylmercury criterion, paragraph 003.01C2, has been established at 0.215 mg/kg. This is a fish tissue assessment for the protection of human health. This new numeric criterion is consistent with the numeric criteria EPA published pursuant to Section 304(a) of the CWA and EPA’s implementing regulations at 40 C.F.R. § 131.11, and is hereby approved by EPA.

**W. Chapter 7-004.01E: Water Quality Standards for Wetlands**

Alkalinity: No less than 20 mg/l as CaCO3 except where natural background is less.

A wetlands minimum Alkalinity criterion of 20 mg/L for the protection of aquatic life has been established, except where natural background is less. This new numeric criterion is consistent with the numeric criteria EPA published pursuant to Section 304(a) of the CWA and EPA's implementing regulations at 40 C.F.R. § 131.11, and is hereby approved by EPA.

## **SECTION II: ITEMS EPA IS DEFERRING**

### **A. Chapter 4-003.05: Standards for Water Quality**

*The following criteria associated with various nutrient classifications shall apply to lakes or impounded waters according to codes listed in Chapter 6. Where no classification has been specified for a lake or impounded water, criteria associated with the statewide default classification shall apply. Criteria are based on seasonal averages from April 1 through September 30.*

Table 2. Nutrient Criteria for Lakes and Impounded Waters.

<u>Lake or Impounded Waters</u>		<u>Total Phosphorus</u> <u>(<math>\mu\text{g/l}</math>)</u>	<u>Total Nitrogen</u> <u>(<math>\mu\text{g/l}</math>)</u>	<u>Chlorophyll a</u> <u>(<math>\mu\text{g/l}</math>)</u>
<u>Classification Codes</u>				
<u>Reservoirs</u>	<u>R1</u>	<u>54</u>	<u>1310</u>	<u>7</u>
	<u>R2</u>	<u>54</u>	<u>1310</u>	<u>7</u>
	<u>R3</u>	<u>112</u>	<u>570</u>	<u>8</u>
	<u>R4</u>	<u>1050</u>	<u>1980</u>	<u>5</u>
	<u>R5</u>	<u>69</u>	<u>660</u>	<u>24</u>
	<u>R6</u>	<u>54</u>	<u>1310</u>	<u>7</u>
	<u>R7</u>	<u>37</u>	<u>610</u>	<u>7</u>
	<u>R8</u>	<u>38</u>	<u>610</u>	<u>11</u>
	<u>R9</u>	<u>62</u>	<u>570</u>	<u>8</u>
	<u>R10</u>	<u>38</u>	<u>520</u>	<u>9</u>
	<u>R11</u>	<u>131</u>	<u>600</u>	<u>11</u>
	<u>R12</u>	<u>134</u>	<u>1460</u>	<u>44</u>
	<u>R13</u>	<u>143</u>	<u>1540</u>	<u>16</u>
	<u>R14</u>	<u>134</u>	<u>1460</u>	<u>44</u>
	<u>R15</u>	<u>133</u>	<u>1460</u>	<u>44</u>
	<u>R16</u>	<u>111</u>	<u>1070</u>	<u>30</u>
	<u>R17</u>	<u>134</u>	<u>1460</u>	<u>44</u>
	<u>R18</u>	<u>139</u>	<u>1460</u>	<u>44</u>
	<u>R19</u>	<u>873</u>	<u>1980</u>	<u>5</u>
	<u>R20</u>	<u>746</u>	<u>1980</u>	<u>5</u>
	<u>R21</u>	<u>709</u>	<u>1980</u>	<u>5</u>
	<u>R22</u>	<u>873</u>	<u>2760</u>	<u>14</u>
<u>Sandpits</u>	<u>SP</u>	<u>95</u>	<u>1240</u>	<u>49</u>
<u>SandHills</u>	<u>SH</u>	<u>3000</u>	<u>38960</u>	<u>341</u>
<u>Statewide Default</u>	<u>SW</u>	<u>564</u>	<u>2300</u>	<u>29</u>

For the 2005 triennial review, NDEQ asked the University of Nebraska – Lincoln (UNL) for assistance in developing numeric nutrient criteria for lakes and reservoirs. UNL conducted this work for lake and reservoir nutrient classification and numeric nutrient criteria derivation in conjunction with a larger project concerning lakes and reservoirs in agriculturally-dominated regions. EPA, upon review of the new numeric nutrient criteria, finds that the criteria are not consistent with regulations at C.F.R. §§ 131.5(a)(2), 131.6(c), and 131.11.

Specifically, EPA found the numeric nutrient criteria lacked sound scientific rationale and were not sufficiently protective of aquatic life uses. To remedy the situation, EPA, NDEQ, and UNL created a technical advisory committee (TAC) to assist NDEQ with development of scientifically defensible numeric nutrient criteria. The TAC created a Nutrient Criteria Development Plan that states the goals and expected timeframe for completion of the numeric nutrient criteria. According to this plan, lakes and reservoir numeric nutrient criteria will be completed for use as numeric translators for narrative criteria in October 2009. Nebraska anticipates that formal adoption of the revised numeric nutrient criteria will take place during the 2011 WQS triennial review.

EPA is hereby deferring action on this revision to Title 117, Chapter 4, 003.05, with the expectation that numeric nutrient criteria will be revised and adopted according to the timeline contained in the October 2008 Nebraska Nutrient Criteria Development Plan. Because these nutrient criteria for lakes and impounded waters included in the Nebraska 2006 triennial review have not been approved by EPA; they may not be used for CWA purposes pursuant to 40 C.F.R. § 131.21.

## **B. Chapter 6-005: Lakes and Impounded Waters**

As described in the paragraphs above, in 2005 NDEQ adopted numeric nutrient criteria into Chapter 4-003.05, for the protection of aquatic life uses in lakes and reservoirs. Chapter 6, 005, has the purpose of applying those numeric nutrient criteria to the lakes and reservoirs identified in this Chapter. As stated above, EPA found that the numeric nutrient criteria for lakes and reservoirs adopted in Chapter 4, 003.05, lacked sound scientific rationale and were not sufficiently protective of aquatic life uses.

Consequently, EPA is deferring action on these criteria pending submittal, by the state, of the 2011 triennial review package. Nebraska anticipates that formal adoption of the revised numeric nutrient criteria, and consequently, adoption of revised numeric nutrient criteria for the protection of aquatic life uses for lakes and impoundments, will take place during the 2011 WQS triennial review.

EPA is hereby deferring action on this revision to Title 117, Chapter 6, 005, with the expectation that numeric nutrient criteria for the protection of aquatic life uses for lake and reservoirs will be revised and adopted according to the timeline contained in the October 2008 Nutrient Criteria Development Plan. Because these numeric nutrient criteria for lakes

and reservoirs included in the Nebraska 2006 triennial review at Chapter 4, 003.05, have not been approved by EPA, they may not be applied to the lakes and reservoirs listed in Chapter 6-005, pursuant to 40 CFR § 131.21.

### **SECTION III: ITEMS UPON WHICH EPA IS TAKING NO ACTION**

#### **A. Chapter 1-005: Definition of Terms**

*“Applicable Level of Treatment or Control” shall mean that treatment or control which is required by Title 119 - Rules and Regulations Pertaining to the Issuance of Permits under the National Pollutant Discharge Elimination System; Title 120 - Procedures Pursuant to Section 401 of the Federal Clean Water Act, 33 U.S.C. § 1251 Et Seq., for Certification by the Department of Activities Requiring a Federal License or Permit which may Result in a Discharge; ~~Title 121 – Effluent Guidelines and Standards; Title 127 – Rules and Regulations Governing the Nebraska Pretreatment Program;~~ or which is otherwise specified by the Department considering best available technology and management practices.*

The definition for “Applicable Level of Treatment or Control” was revised to reflect the elimination of Title 121 and Title 127 which were incorporated into Title 119. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

#### **B. Chapter 1-042: Definition of Terms**

*“Natural Background” shall mean shall mean quantifiable measurements of water quality existing in the absence of water pollution.*

In the definition for natural background, the phrase “shall mean” is written twice. This is a typographical error, and the phrase should only be listed once. Correction of this typographical error is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

#### **C. Chapter 1-043: Definition of Terms**

Because the new definition for “natural background” was added in paragraph number 042, as approved by EPA, above, it was necessary to renumber definitions for paragraph’s 043 – 083. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

#### **D. Chapter 2-008: Application of Standards**

*These standards, except water quality criteria associated with aesthetics (Chapter 4, 005), will not apply to effluents and non-contact cooling water discharges, although these standards are used in deriving effluent limitations pursuant to ~~Title 121 – Effluent Guidelines~~*

~~and Standards~~ Title 119 - Rules and Regulations Pertaining to the Issuance of Permits Under the National Pollutant Discharge Elimination System.

The citation to Title 121 has been struck and replaced with a citation to Title 119, to reflect the adoption in Title 119 that replaced Title 121. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**E. Chapter 4-001: Standards for Water Quality**

*These uses are not intended in any way to conflict with the quantitative beneficial uses provided for in Neb. Rev. Stat., Ch. 46, regulating irrigation or the authority of the Nebraska Department of ~~Water~~ Natural Resources.*

A revision was made to reflect the name change of the Nebraska Department of Water Resources to the Nebraska Department of Natural Resources. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**F. Chapter 4-002.02: Standards for Water Quality**

~~002.02—002.02D.~~ 002.01 – 002.01D.

002.02 - 002.02D was renumbered 002.01 - 002.01D due to the deletion of 002.01, as approved by EPA, above. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**G. Chapter 4-002.02C: Standards for Water Quality**

*406/100 ml at lightly used recreational waters.*

The letter “d” was added to the word “use” to correct a spelling error. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**H. Chapter 4-003.01B: Standards for Water Quality**

*The temperature of a receiving water shall not be increased by a total of more than 5°F (3°C) from natural background outside the mixing zone. For the Missouri River, from the South Dakota-Nebraska state line near Ft. Randall Dam to Sioux City, Iowa, the maximum temperature limit is 85°F (29°C) with an allowable change of 4°F (2°C) from natural background. For cold waters, the maximum limit is 72°F (22°C) with an allowable change of 5°F (3°C) from natural background. For warm waters, the maximum limit is 90°F (32°C). For impoundments, the temperature of the epilimnion of surface waters shall not be raised more than 3°F (2°C) above that which existed before the addition of heat of artificial origin. Unless a special study shows that the discharge of heated effluent into the hypolimnion will be desirable, such practice is not recommended and water for cooling should not be pumped from the hypolimnion to be discharged to the same body of water.*

The word “background” was added to harmonize this paragraph with the new definition of “Natural Background” in Chapter 1, as approved by EPA, above. This revision is considered a substantive change to Nebraska’s regulations, but does not constitute a new or revised WQS requiring EPA action.

**I. Chapter 4-003.01C1: Standards for Water Quality**

*Table 1. Addition of CAS numbers and correction of typographical errors for criteria in paragraph 003.01C1.*

<b>CRITERIA (µg/L)</b>			
<b>POLLUTANT</b>	<b>Acute</b>	<b>Chronic</b>	<b>CAS number*</b>
<i>Atrazine</i>	<i>330<sup>ce</sup></i>	<i>12<sup>de</sup></i>	
<i>Dieldrin</i>	<i>0.24<sup>ae</sup></i>		
<i>Lindane<sup>2</sup></i>	<i>0.95<sup>ae</sup></i>		
<i>Copper</i>			<u><i>7440508</i></u>
<i>Mercury<sup>8</sup></i>			<u><i>7439976</i></u>
<i>Nickel</i>			<u><i>7440020</i></u>
<i>Zinc</i>			<u><i>7440666</i></u>

Changes have been made to correct typographical errors on footnotes for various criteria in the table, and to add Chemical Abstract Services Registry Numbers (CAS) to certain pollutants. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**J. Chapter 4-003.01H: Standards for Water Quality**

~~003.01H – 003.01H1.~~ 003.01I – 003.01J1.

003.01H - 003.01H1 was renumbered 003.01I - 003.01J1 due to the addition of alkalinity criteria, as approved by EPA, above. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**K. Chapter 5-004: Stream Classification by Basin**

*Table 3. Renumbering of Sub-basin NI-3.*

<i>Stream Segment</i>	<i>Segment Number</i>
<del><i>Thomas Creek</i></del>	<del><i>12200</i></del>
<del><i>Long Pine Creek – Bone Creek to Niobrara River</i></del>	<del><i>12300</i></del>
	<u><i>12200</i></u>
<del><i>Short Pine Creek</i></del>	<del><i>12310</i></del>
	<u><i>12210</i></u>
<del><i>Bone Creek – Unnamed Creek (Sec 23-30N-22W) to Long Pine Creek</i></del>	<del><i>12320</i></del>
	<u><i>12220</i></u>

<i>Sand Draw</i>	<del>12321</del> <u>12221</u>
<i>Unnamed Creek</i> (Sec 23-30N-22W)	<del>12322</del> <u>12222</u>
<i>Bone Creek – Headwaters to Unnamed Creek</i> (Sec 23-30N-22W)	<del>12330</del> <u>12230</u>
<i>Long Pine Creek – Willow Creek to Bone Creek</i>	<del>12400</del> <u>123000</u>
<i>Willow Creek</i>	<del>12410</del> <u>12310</u>
<i>Long Pine Creek – Headwaters to Willow Creek</i>	<del>12500</del> <u>12400</u>
<i>Thomas Creek</i>	<u>12500</u>

Thomas Creek has been renumbered from NI3-12200 to NI3-12500. This was done to correct the order in which segments were presented from downstream to upstream. As a result of the renumbering, several other stream segments identified above changed segment numbers. All use designations remain the same. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**L. Chapter 5-004: Stream Classification by Basin**

*Long Pine Creek – Willow Creek to Bone Creek - 123000*

Long Pine Creek – Willow Creek to Bone Creek is listed as segment number 123000. It should be listed as segment number 12300. This typographical error will be remedied during the next triennial review submittal in 2009. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**M. Chapter 5-004: Stream Classification by Basin**

*Snake Creek – ~~Sec 10 – 25N – 53W~~ confluence of North and South Branch Snake Creek to Sec 7- 24N - 50W.*

Snake Creek (NI4-20300) has been re-named based on newer mapping. The newer mapping is based on current USGS 1:24,000 scale topographic maps. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**N. Chapter 5-004: Stream Classification by Basin**

*~~South Branch Snake~~ Spring Creek – Sec 3 – 24N – 52W to Snake Creek.*

Segment NI4-20310 has changed names from South Branch Snake Creek to Spring Creek as a result of newer mapping. The newer mapping is based on current USGS 1:24,000 scale

topographic maps. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**O. Chapter 7-004: Water Quality Standards for Wetlands**

*Nebraska Department of ~~Water~~ Natural Resources.*

A revision was made to reflect the name change of the Nebraska Department of Water Resources to the Nebraska Department of Natural Resources. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**P. Chapter 7-004.01C1: Water Quality Standards for Wetlands**

<u>POLLUTANT</u>	<u>CRITERIA (ug/l)</u>
Atrazine	<u>Acute</u> 330 <sup>ce</sup>

A clerical change has been made to correct a typographical error on a footnote for acute atrazine criteria. The superscripted footnote incorrectly contained an extra letter, which was deleted to reflect the correct footnote. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**Q. Chapter 7-004.01F: Water Quality Standards for Wetlands**

*~~004.01E.~~ 004.01F.*

The insertion of Alkalinity criteria, at paragraph 004.01E, as approved by EPA above, resulted in the changing of Residual Chlorine criteria to paragraph number 004.01F. This necessitated the renumbering of the paragraphs for one hour and four day concentrations of Residual Chlorine. This is an administrative action which does not require EPA approval under Section 303(c) of the CWA.

**Appendix A: Title 117 – Waters Newly Designated with Primary Contact Recreation Approved by EPA**

<u>Segment Number</u>	<u>Segment Name</u>
BB1-10100	Mission Creek - Nebraska-Kansas border (Sec 33-1N-8E) to Nebraska-Kansas border (Sec 35-1N-7E)
BB1-10800	Big Indian Creek - Sicily Creek to Big Blue River
BB2-10000	Turkey Creek - Swan Creek to Big Blue River
BB2-20000	Turkey Creek - Spring Creek to Swan Creek
BB3-20000	West Fork Big Blue River - School Creek to Beaver Creek
BB4-10000	Big Blue River – Blue Bluff Dam (Sec 19-9N-4E) to West Fork Big Blue River
BB4-20000	Big Blue River – Lincoln Creek to Blue Bluff Dam (Sec 19-9N-4E)
EL1-10900	Maple Creek - Confluence of East and West Fork Maple Creeks to Elkhorn River
EL1-20100	Pebble Creek - Unnamed Creek (Sec 17-20N-6E) to Elkhorn River
EL1-21000	Rock Creek
EL1-21900	Union Creek - Meridian Creek to Elkhorn River
EL1-22000	Union Creek - Taylor Creek to Meridian Creek
EL2-10000	Logan Creek - Big Slough Creek to Elkhorn River
EL2-20000	Logan Creek - South Logan Creek to Big Slough Creek
EL2-20800	South Logan Creek - Dog Creek to Logan Creek
EL3-10000	North Fork Elkhorn River - Spring Creek to Elkhorn River
EL3-20000	North Fork Elkhorn River - Dry Creek to Spring Creek
EL3-20200	Willow Creek - Sec 32-26N-3W to North Fork Elkhorn River
EL3-20300	Willow Creek - Headwaters to Sec 32-26N-3W
EL3-20400	Dry Creek - Sec 33-27N-3W to North Fork Elkhorn River
EL4-10400	Battle Creek - Sec 12-23N-3W to Elkhorn River
EL4-11300	Cedar Creek - Blacksnake Creek to Elkhorn River
EL4-20300	Clearwater Creek - Sec 28-25N-9W to Elkhorn River
EL4-20700	South Fork Elkhorn River - Dry Creek to Elkhorn River
EL4-40000	Elkhorn River - Confluence of South Fork and North Fork Elkhorn River to Holt Creek
LB1-10200	Rock Creek
LB2-10100	Big Sandy Creek - Dry Sandy Creek to Little Blue River
LB2-20000	Little Blue River - Liberty Creek to Spring Creek
LB2-30000	Little Blue River - Thirty-two Mile Creek to Liberty Creek
LO1-10600	Beaver Creek - Bogus Creek to Loup River

<u>Segment Number</u>	<u>Segment Name</u>
LO1-10700	Beaver Creek - Rae Creek (Sec 11-21N-7W) to Bogus Creek
LO1-20000	Loup River - Loup River Canal Diversion (Sec 6-16N-4W) to Beaver Creek
LO1-20200	Loup River Canal - Diversion (Sec 6-16N-4W) to Sec 28-18N-2W (exits Loup River Basin into Lower Platte River Basin – see subbasin LP1)
LO1-30400	Cedar River - Lake Erikson Dam (Sec 25-21N-12W) to Clear Creek
LO1-30500	Cedar River - Sec 14-22N-13W to Lake Ericson Dam (Sec 25-21N-12W)
LO2-11500	Calamus River - Sec 28-27N-23W to Sec 28-26N-22W
LO2-20100	Goose Creek - Sec 16-26N-25W to North Loup River
LO3-10400	Oak Creek - Headwaters to Unnamed Creek (Sec 30-14N-11W)
LO3-40400	Victoria Creek
LO3-50310	South Fork Dismal River - Spring Creek to Dismal River
LO3-50330	North Fork Dismal River - Bobtail Creek to Dismal River
LO4-10100	Mud Creek - Clear Creek to South Loup River
LO4-40000	South Loup River - North Fork South Loup River to Unnamed Creek (Sec 28-17N-25W)
LP1-11200	Decker Creek
LP1-20600	Shell Creek - Loseke Creek to Platte River
LP2-10100	Wahoo Creek - Sand Creek to Salt Creek
LP2-10110	Clear Creek - Sec 14-13N-9E to Wahoo Creek
LP2-20600	Oak Creek - North Oak Creek to Elk Creek
LP2-21500	Beal Slough
LP2-30000	Salt Creek - Hickman Branch to Beal Slough
LP2-30100	Cardwell Branch
MP1-10100	Clear Creek
MP1-10200	Loup Power Canal - Sec 35-17N-1E to Platte River (enters Middle Platte River Basin from Lower Platte River Basin - see subbasin LP1)
MP2-20200	Turkey Creek
MP2-20300	Spring Creek
MP2-20500	Tri-County Supply Canal - North Platte Diversion Dam (Sec 7-13N-29W) to J-2 Return on Platte River (Sec 2-8N-21W)
MP2-40200	Pawnee Slough
MP2-40400	White Horse Creek
MT1-10100	Papillion Creek - Big Papillion Creek to Missouri River
MT1-10111	Little Papillion Creek - Thomas Creek to Big Papillion Creek

<u>Segment Number</u>	<u>Segment Name</u>
MT1-10111.1	Cole Creek
MT1-10200	Papillion Creek - South Papillion Creek to Big Papillion Creek
MT1-11900	Blackbird Creek - South Blackbird Creek to Missouri River
MT1-12000	Omaha Creek - Sec 12-27N-8E to Missouri River
MT2-10100	Elk Creek - Sec 35-29N-7E to Missouri River
MT2-10500	Aowa Creek - South Creek to Missouri River
MT2-10520	South Creek - Daily Branch to Aowa Creek
MT2-10521	Daily Branch
MT2-10530	South Creek - Jordan Creek to Daily Branch
MT2-11300	Bow Creek - West Bow Creek to Missouri River
MT2-11310	West Bow Creek - Unnamed Creek (Sec 1-31N-1W) to Bow Creek
MT2-11400	Bow Creek - East Bow Creek to West Bow Creek
MT2-11410	East Bow Creek - Unnamed Creek (Sec 10-30N-3E) to Bow Creek
MT2-12400	Bazile Creek - Howe Creek to Missouri River
MT2-12500	Bazile Creek - Little Bazile Creek to Howe Creek
NE1-10700	Unnamed Creek (Sec 5-3N-17E)
NE1-10810	Unnamed Creek (Sec 2-3N-16E)
NE1-12310	Unnamed Creek (Sec 8-8N-14E)
NE1-13000	Weeping Water Creek - Stove Creek to South Cedar Creek
NE2-10600	Muddy Creek - Little Muddy Creek to Big Nemaha River
NE2-10750	Little Muddy Creek - Whiskey Run to Muddy Creek
NE2-11200	Pony Creek
NE2-12130	Turkey Creek - West Branch Turkey Creek to Nebraska-Kansas border (Sec 35-1N-11E)
NE2-12200	North Fork Big Nemaha River - Todd Creek to Big Nemaha River
NE3-13100	North Fork Little Nemaha River - Deer Creek to Little Nemaha River
NE3-20000	Little Nemaha River - South Fork Little Nemaha River to North Fork Little Nemaha River
NE3-20300	South Fork Little Nemaha River - Turkey Creek to Little Nemaha River
NE3-30000	Little Nemaha River - Hooper Creek to South Fork Little Nemaha River
NI1-10100	Ponca Creek - Beaver Creek (Sec 1-33N-12W) to Missouri River
NI1-10180	Beaver Creek (Sec 1-33N-12W)
NI2-10100	Verdigre Creek - North Branch Verdigre Creek to Niobrara River
NI2-10140	North Branch Verdigre Creek

<u>Segment Number</u>	<u>Segment Name</u>
NI2-10200	Verdigre Creek - Confluence of South Branch and East Branch Verdigre Creeks (Sec 33-29N-7W) to North Branch Verdigre Creek
NI2-10230	Middle Branch Verdigre Creek
NI2-10270	Merriman Creek - Unnamed Creek (Sec 25-28N-7W) to Verdigre Creek
NI2-10300	South Branch Verdigre Creek - Headwaters to East Branch Verdigre Creek (Sec 33-29N-7W)
NI2-10310	East Branch Verdigre Creek - Grove Lake Dam (Sec 22-28N-7W) to South Branch Verdigre Creek (Sec 33-29N-7W)
NI2-10320	East Branch Verdigre Creek - Headwaters to Grove Lake Dam (Sec 22-28N-7W)
NI2-10800	Steel Creek
NI2-11200	Louse Creek - Sec 36-32N-10W to Niobrara River
NI2-11400	Redbird Creek - Blackbird Creek to Niobrara River
NI2-11700	Eagle Creek
NI2-11780	Middle Branch Eagle Creek
NI2-11781	North Branch Eagle Creek
NI2-12300	Big Sandy Creek - Spring Creek to Niobrara River
NI2-12400	Big Sandy Creek - Headwaters to Spring Creek
NI3-10100	Keya Paha River - Nebraska-South Dakota border (Sec 23-35N-20W) to Niobrara River
NI3-10290	Lost Creek - Headwaters to Nebraska-South Dakota border (Sec 22-35N-23W)
NI3-12220	Bone Creek - Unnamed Creek (Sec 23-30N-22W) to Long Pine Creek
NI3-12221	Sand Draw
NI3-12400	Long Pine Creek - Headwaters to Willow Creek
NI3-13110	North Branch Plum Creek
NI3-20500	Fairfield Creek
NI3-22000	Minnechaduza Creek - Headwaters to Dry Creek
NI3-22100	Schlagel Creek
NI3-22300	Gordon Creek - Headwaters to Betsy Creek
NI3-22510	Boardman Creek
NI3-22520	Clifford Creek
NI4-10100	Bear Creek
NI4-10110	Dry Creek - Sec 13-34N-39W to Bear Creek
NI4-10120	Dry Creek (Horseshoe Drainage Ditch) - Headwaters to Sec 13-34N-39W
NI4-10200	Leander Creek
NI4-10700	Deer Creek

<u>Segment Number</u>	<u>Segment Name</u>
NI4-10800	Pine Creek - Sec 11-28N-44W to Niobrara River
NI4-20000	Niobrara River - Mirage Flats Canal Diversion (Sec 26-29N-48W) to Box Butte Creek
NI4-40000	Niobrara River - Whistle Creek to Box Butte Reservoir Dam (Sec 28-29N-49W)
NI4-50000	Niobrara River - Nebraska-Wyoming border (Sec 18-31N-57W) to Whistle Creek
NP1-10100	Scout Creek - Ditch No. 2 (Sec 29-14N-30W) to North Platte River
NP1-10110	Ditch No. 2 (Sec 29-14N-30W)
NP1-20510	West Birdwood Creek
NP1-30900	Whitetail Creek - Unnamed Creek (Sec 2-15N-38W) to North Platte River
NP1-40200	Sutherland Canal - Keystone Diversion Dam to Sec 32-14N-35W (exits North Platte River Basin into South Platte River Basin - see subbasin SP1)
NP2-10300	Otter Creek - Headwaters to Lake C.W. McConaughy
NP2-10900	Blue Creek - Union Canal (Sec 18-16N-42W) to Graf Canal (Sec 19-16N-42W)
NP2-11000	Blue Creek - Hooper Canal (Sec 6-16N-42W) to Union Canal (Sec 18-16N-42W)
NP2-11100	Blue Creek - Blue Creek Canal (Sec 33-17N-42W) to Hooper Canal (Sec 6-16N-42W)
NP2-11200	Blue Creek - Sec 19-18N-42W to Blue Creek Canal (Sec 33-17N-42W)
NP2-11300	Blue Creek - Sec 23-19N-44W to Sec 19-18N-42W
NP2-11400	Blue Creek - Headwaters to Sec 23-19N-44W
NP3-10300	Pumpkin Creek - Lawrence Fork to Courthouse Rock Canal (Sec 30-19N-50W)
NP3-10900	Red Willow Creek - Wildhorse Drain to North Platte River
NP3-10920	Wildhorse Drain - Headwaters to Wildhorse Canyon
NP3-11400	Bayard Drain - Stuckenhole Drain (Sec 28-21N-52W) to Alliance Canal (Sec 4-20N-52W)
NP3-11700	Ninemile Creek - Minatare Drain (Sec 10-21N-53W) to North Platte River
NP3-11800	Ninemile Creek - Alliance Drain to Minatare Drain (Sec 10-21N-53W)
NP3-11820	Alliance Drain
NP3-11900	Ninemile Creek - East Ninemile Creek to Alliance Drain
NP3-12000	Ninemile Creek - Headwaters to East Ninemile Creek
NP3-12400	Gering Drain - Sec 24-21N-55W to North Platte River
NP3-12600	Winters Creek - Dunham Andrews Drain (Sec 8-22N-54W) to North Platte River
NP3-12900	Tub Springs Drain - Unnamed Creek (Sec 8-22N-55W) to North Platte River
NP3-13000	Tub Springs Drain - Sunflower Drain (Sec 33-23N-55W) to Unnamed Creek (Sec 8-23N-55W)
NP3-13100	Tub Springs Drain - Hiersche Drain (Sec 23-23N-55W) to Sunflower Drain (Sec 33-23N-55W)
NP3-13110	Hiersche Drain (Sec 23-23N-55W)
NP3-30300	Sheep Creek - Dry Sheep Creek to Tri-State Canal (Sec 17-23N-57W)

<u>Segment Number</u>	<u>Segment Name</u>
NP3-30310	Dry Sheep Creek
NP3-30400	Sheep Creek - Unnamed Creek (Sec 15-24N-58W) to Dry Sheep Creek
NP3-30600	Horse Creek - Nebraska-Wyoming border (Sec 33-23N-58W) to North Platte River
RE1-10200	Lost Creek
RE1-20300	Courtland Canal - Superior-Courtland Diversion Dam (Sec 7-1N-9W) to Nebraska-Kansas border (Sec 32-1N-7W)
RE1-31200	Thompson Creek
RE2-10100	Methodist Creek
RE2-10200	Cook Creek
RE2-10300	Prairie Dog Creek - Nebraska-Kansas border (Sec 31-1N-19W) to Harlan County Lake
RE2-10610	Beaver Creek - Nebraska-Kansas border (Sec 36-1N-29W) to Sappa Creek
RE3-10200	Medicine Creek - Fox Creek to Medicine Creek Dam
RE3-10300	Medicine Creek - Hay Canyon to Fox Creek
RE3-10400	Medicine Creek - Headwaters to Hay Canyon
RE3-10500	Red Willow Creek - Red Willow Dam to Republican River
RE3-10600	Red Willow Creek - Hayes Center WMA (Sec 11-7N-32W) to Red Willow Dam
RE3-20200	Frenchman Creek - Stinking Water Creek to Republican River
RE3-20220	Stinking Water Creek
RE3-20400	Frenchman Creek - Sand Draw to Enders Dam
RE3-20500	Frenchman Creek - Headwaters to Sand Draw
RE3-30000	Republican River - Trenton Dam to Frenchman Creek
RE3-40500	South Fork Republican River - Nebraska-Kansas border (Sec 36-1N-38W) to Republican River
RE3-40800	Rock Creek
RE3-50000	Republican River - Confluence of North Fork Republican River and Arikaree River to Rock Creek
RE3-50300	North Fork Republican River - Nebraska-Colorado border (Sec 10-1N-42W) to Republican River
RE3-50400	Arikaree River - Nebraska-Kansas border (Sec 36-1N-42W) to Republican River
SP1-10100	Fremont Slough - Sec 13-13N-30W to Sec 18-13N-29W
SP1-10200	Fremont Slough (Sec 7-13N-29W) - Sec 13-13N-31W to South Platte River
SP1-10500	Outlet Canal (Sec 9-13N-30W) - Lake Maloney to South Platte River
SP1-10600	Outlet Canal - Sutherland Reservoir to Lake Maloney
SP1-10700	Sutherland Canal - Sec 32-14N-35W to Sutherland Reservoir (enters South Platte River Basin from North Platte River Basin - see subbasin NP1)
SP1-20000	South Platte River - Fremont Slough (Sec 32-14N-31W) to Outlet Canal (Sec 10-13N-30W)
SP1-20100	Fremont Slough (Sec 32-14N-31W) - Sec 2-13N-32W to South Platte River

<u>Segment Number</u>	<u>Segment Name</u>
SP1-30000	South Platte River - Unnamed Creek (Sec 31-14N-33W) to Fremont Slough (Sec 32-14N-31W)
SP1-30200	Unnamed Creek (Sec 31-14N-33W)
SP1-40000	South Platte River - Unnamed Creek (Sec 33-14N-34W) to Unnamed Creek (Sec 31-14N-33W)
SP1-50000	South Platte River - Sutherland Canal to Unnamed Creek (Sec 33-14N-34W)
SP1-60000	South Platte River - Korty Diversion Dam to Sutherland Canal
SP1-70000	South Platte River - Western Canal (Sec 16-13N-39W) to Korty Diversion Dam
SP1-80000	South Platte River - Western Canal (Sec 13-12N-43W) to Western Canal (Sec 16-13N-39W)
SP1-90000	South Platte River - Nebraska-Colorado border (Sec 22-12N-43W) to Western Canal (Sec 13-12N-43W)
WH1-11110	Little Bordeaux Creek
WH1-11300	Chadron Creek
WH1-11400	Dead Horse Creek
WH1-11500	Trunk Butte Creek
WH1-11600	Big Cottonwood Creek
WH1-11700	Indian Creek
WH1-11710	Cunningham Creek
WH1-11810	East Ash Creek
WH1-11820	West Ash Creek
WH1-12000	Little Cottonwood Creek - Headwaters to Sand Creek (Sec 12-32N-52W)
WH1-20100	White Clay Creek
WH1-20120	Squaw Creek - Headwaters to Nebraska National Forest boundary (Sec 20-31N-51W)
WH1-20130	Unnamed Creek (Sec 36-31N-52W)
WH1-30000	White River - Kyle Creek (Sec 35-31N-54W) to Soldier Creek
WH1-30100	Dead Man's Creek
WH2-10000	Hat Creek - Warbonnet Creek to Nebraska-South Dakota border (Sec 22-35N-54W)
WH2-10100	Squaw Creek

## Appendix B: Lakes Removed From Title 117, Chapter 6-005 Approved by EPA

### Exeter City Lake (BB3-L0020)

Exeter, population 661, has had a city lake listed in Title 117 since 1985 when a number of lakes were added based on information from the State Comprehensive Outdoor Recreation Plan (SCORP). The SCORP information was never questioned or verified. With the advent of the Geospatial Information System (GIS) capabilities, an effort was made to locate every lake listed in Title 117 on digital orthophotos and U.S. Geological Survey (USGS) quadrangles. When a number of lakes could not be located, investigations ranging from field verification to local citizen interviews were conducted to verify the presence of the lake and its location. Based on local information, the listing for Exeter in 1985 was erroneous.

### Aurora City Lake (BB4-L0050)

Aurora, population 3,810, has had a city lake listed in Title 117 since 1972. The source of this listing is not known. A small rectangular pond appears on the USGS quadrangle, which is dated 1968. However, no pond appears on any digital orthophotos available to the Nebraska Department of Environmental Quality. Information from the City Administrator indicates that this “pond” has not existed for over 25 years and may have been eliminated as part of an expansion of the city. The City Administrator knows of no other possible lake within the jurisdiction of Aurora.

### Loch Linda (WMA) (MP2-L0080)

Loch Linda has appeared in Title 117 since 1976. This lake was originally created as a borrow pit for aggregate during the construction of Interstate 80 in the 1960s. The proximity of this lake to the Platte River subjected it to floods from the river and eventual siltation and capture by the river. The 1999 digital orthophoto shows this lake as having disappeared with only a small channel of the Platte River flowing along what was its northern shoreline. Subsequent digital orthophotos depict even greater succession with the small channel all but disappearing. The location of what was Loch Linda is now an island within the Platte River.

### Blue Heron Lake (WMA) (MP2-L0670)

Blue Heron Lake first appeared in Title 117 in 1985 when a number of lakes were added based on information from the SCORP. This lake was originally created as a borrow pit for aggregate during the construction of Interstate 80 in the 1960s. The proximity of this lake to the Platte River subjected it to floods from the river and eventual siltation and capture by the river. The 1999 digital orthophoto shows this lake as having disappeared with only a channel of the Platte River flowing through the location of the original lake. Subsequent digital orthophotos depict even greater succession with the channel becoming smaller and all but disappearing as the channels of the Platte River evolve. The location of what was Loch Linda is now thinly forested land between channels of the Platte River.

### Moran Canyon Lake (MP2-L0830)

Moran Canyon Lake first appeared in Title 117 in 1985. This addition was based on a map in a 1961 brochure from the Central Public Power and Irrigation District (CNPPID) that depicted a small canal storage reservoir along the Tri-County Supply Canal. The brochure’s map was based on original plans from CNPPID. Moran Canyon Lake was never built.