

Wastewater Section

Suite 400, The Atrium, 1200 'N' Street PO Box 98922 Lincoln, NE 68509-8922 Tel. 402/471-4220 Fax 402/471-2909

# Authorization to Discharge Under the National Pollutant Discharge Elimination System (NPDES)

This NPDES permit is issued in compliance with the provisions of the Federal Water Pollution Control Act (33 U.S.C. Secs. 1251 et. seq. as amended to date), the Nebraska Environmental Protection Act (Neb. Rev. Stat. Secs. 81-1501 et. seq. as amended to date), and the Rules and Regulations promulgated pursuant to these Acts. The facility and outfall(s) identified in this permit are authorized to discharge wastewater and are subject to the limitations, requirements, prohibitions and conditions set forth herein. This permit regulates and controls the release of pollutants in the discharge(s) authorized herein. This permit does not relieve permittees of other duties and responsibilities under the Nebraska Environmental Protection Act, as amended, or established by regulations promulgated pursuant thereto.

NPDES Permit No.:

NE0133680

IIS File Number

PCS 73880-P

Facility:

City of Omaha Combined Sewer Overflows

Permittee

City of Omaha, Omaha, Nebraska

premiser 2007

Receiving Water

Papillion Creek and Missouri River Drainage Basins

Effective Date:

October 1, 2007

**Expiration Date:** 

September 30, 2012

Pursuant to a Delegation Memorandum dated July 26, 1999 and signed by the Director, the undersigned hereby executes this document on behalf of the Director.

Cianad this

DIII

Page 1 of 25

# TABLE OF CONTENTS

PART I.	IDENTIFICATION OF OUTFALLS AUTHORIZED TO DISCHARGE UNDER THIS PERMIT	3
A.	Characterization of Combined Sewer Overflow Outfalls	3
B.	Missouri River WWTP Service Area CSO Outfalls	4
C.	Papillion Creek WWTP Service Area CSO Outfalls	5
PART II	I. MISSOURI RIVER WWTP – OUTFALL 102 MONITORING REQUIREMENTS	6
PART II	II. CSO DISCHARGE MONITORING REQUIREMENTS AT SELECTED OUTFALLS	7
PART I	V. NINE MINIMUM CONTROLS (NMC)	8
A.	Proper Operation and Maintenance (O & M)	
В.	Maximize Use of the Collection System for Storage	
C.	Review and Modification of Pretreatment Programs	
D.	Maximization of Flow to the POTWs for Treatment	
E.	Prohibition of CSOs during Dry Weather	
F.	Control of Solid and Floatable Materials in CSOs	
G.	Pollution Prevention.	
H.	Public Notification	
I.	Monitoring to Characterize CSO Impacts and the Efficacy of CSO Controls	
PART V	. LONG TERM CONTROL PLAN (LTCP)	
A.	Characterization, Monitoring, and Modeling of the CSS	
В.	Public Participation Plan	
C.	Consideration of Sensitive Areas	
D.	Evaluation of Alternatives	
E.	Cost/Performance Considerations	
F.	Operational Plan	
G.	Maximizing Treatment at the Existing POTW Treatment Facilities	
Н.	Implementation Schedule	
I.	Post-Construction Compliance Monitoring Program	
PART V	I. ANNUAL REPORT	
A.	Nine Minimum Controls	
В.	Long Term Control Plan	
C.	CSO Discharge Monitoring Data	
D.	Other Information	
	II. OTHER CONDITIONS AND REQUIREMENTS	
	Narrative Requirements Applicable to CSO Discharges	
В.	Reopener Clause	
C.	Notification and Approval	
D.	Immediate Reporting Requirements	
E.	Implementation and Revision of the Long Term Control Plan	
F.	Biosolids Disposal	
	DIX A – STANDARD CONDITIONS THAT APPLY TO NPDES AND NPP PERMITS	
A.	General Conditions	
B.	Management Requirements	
C.	Monitoring and Records	
D.	Reporting Requirements	
E. F.	Operation and Maintenance	
r. G.	Abbreviations	
U.	ADDICVIALIONS	

Page 3 of 24

# Part I. Identification of Outfalls Authorized to Discharge under this Permit

#### A. Characterization of Combined Sewer Overflow Outfalls

Combined sewer systems (CSS) are wastewater collection systems that are designed to transport sanitary sewage and stormwater in a single pipe to the wastewater treatment facility. In periods of dry weather, the combined sewer system conveys wastewater to the treatment facility. During wet weather events such as rainfall or snowmelt, total flows can exceed the capacity of the treatment facility. When this occurs the combined sewer system is designed to overflow directly to the receiving stream through combined sewer overflow (CSO) outfalls. The area of the City of Omaha served by a combined sewer system is generally bounded on the east by the Missouri River, the west by 76th Street, the north by Interstate I-680 and on the south by Harrison Street/Douglas County Line. CSO outfalls exist on the Missouri River, Big Papillion Creek, Little Papillion Creek, Blood Creek, Copper Creek, and Cole Creek

This permit specifically authorizes wet weather discharges from the City of Omaha's CSS through CSO outfalls according to the requirements, conditions, and limitations set forth in this permit. CSO outfalls are defined as designated overflow points in the combined sewer system (CSS) designed for the purpose of allowing the discharge of wet weather flows to receiving waters prior to receiving complete treatment in the City's Wastewater Treatment Plants. The CSO Outfalls associated with the Missouri River WWTP (MRWWTP) collection system are listed in Table 1 below and the CSO Outfalls associated with the Papillion Creek WWTP (PCWWTP) collection system are listed in Table 2 below. The MRWWTP CSO Outfall 102 is a permitted wet weather by-pass outfall of wastewater that has received primary treatment, but not secondary treatment.

This permit does not address nor authorize treated wastewater discharges from the City of Omaha wastewater treatment facilities or storm water discharges through the separate storm sewer system. The discharge of treated wastewater from the MRWWTP, outfall 001, is authorized according to NPDES Permit NE0036358 and the discharge of treated wastewater from the PCWWTP, outfall 001, is authorized according to NPDES Permit NE0112810. Wet weather discharge form the City of Omaha municipal separate storm sewer system (MS4) is authorized in NPDES Permit NE0133698.

Page 4 of 24

# **B.** Missouri River WWTP Service Area CSO Outfalls

Table 1:	Combined Sewer	<b>Overflow Outfalls from the</b>	Missouri River WW	TP Service Area
Outfall	Lat/Long	Location	Treatment Plant	Receiving Water
102	41.20139	Missouri River WWTP	Missouri River Plant	Missouri River
	-95.92420	Primary Clarifier		
103	41.34309	Bridge Street lift station	Missouri River Plant	Missouri River
	-95.95745			
104	41.33673	Mormon Street	Missouri River Plant	Missouri River
	-95.95313			
105	41.32484	Minne Lusa Avenue	Missouri River Plant	Outfall channel to
	-95.94566			Missouri River
106	41.27674	North Interceptor	Missouri River Plant	Outfall channel to
	-95.92464			Missouri River
107	41.27685	Grace Street	Missouri River Plant	Outfall channel to
	-95.92526			Missouri River
108	41.26489	Burt-Izard Street	Missouri River Plant	Outfall channel to
	-95.92553			Missouri River
109	41.25140	1st and Leavenworth	Missouri River Plant	Missouri River
	-95.91986			
110	41.24801	Pierce Street Lift Station	Missouri River Plant	Missouri River
	-95.91782			
111	41.24321	Hickory Street lift Station	Missouri River Plant	Outfall channel to
	-95.91654			Missouri River
112	41.23771	Martha Street	Missouri River Plant	Outfall channel to
	-95.91412			Missouri River
113	41.23088	Spring Street Lift Station	Missouri River Plant	Missouri River
	-95.91354			
114	41.22384	Grover Street	Missouri River Plant	Outfall channel to
	-95.91741			Missouri River
115	41.22078	Riverview Lift Station	Missouri River Plant	Outfall channel to
	-95.92019			Missouri River.
117	41.21301	Missouri Avenue Lift Station	Missouri River Plant	Outfall channel to
	-95.92813			Missouri River
118	41.20602	South Omaha - Ohern Street	Missouri River Plant	Missouri River
	-95.92914			
119	41.19543	Monroe Street Lift Station	Missouri River Plant	Missouri River
	-95.92794			
121	41.2518	Jones Street	Missouri River Plant	Missouri River
	-95.9183			

Page 5 of 24

# C. Papillion Creek WWTP Service Area CSO Outfalls

Table 2: Combined Sewer Overflow Outfalls from the Papillion Creek WWTP Service Area					
Outfall	Lat/Long	Location	Treatment Plant	Receiving Water	
201	41.07711 -95.87001	Papillion Creek WWTP Interceptor	Papillion Creek Plant	Missouri River	
202	41.28863 -96.02482	72nd and Bedford	Papillion Creek Plant	Cole Creek	
203	41.29222 -96.02139	69th and Evans	Papillion Creek Plant	Cole Creek	
204	41.29931 -96.01801	63rd and Ames	Papillion Creek Plant	Cole Creek	
205	41.23513 -96.01219	64th and Dupont	Papillion Creek Plant	Outfall channel to Little Papillion Creek	
207	41.20272 -95.98020	44th and Y Street	Papillion Creek Plant	Blood Creek to Big Papillion Creek	
208	41.20073 -95.98177	45th and T Street	Papillion Creek Plant	Blood Creek to Big Papillion Creek	
209	41.07711 -95.98062	44th and Harrison	Papillion Creek Plant	Copper Creek to Big Papillion Creek	
210	41.25009 -96.02087	72nd and Mayberry	Papillion Creek Plant	Little Papillion Creek	
211	41.2403 -95.0167	69 <sup>th</sup> and Pierce	Papillion Creek Plant	Little Papillion Creek	
212	41.2401 96.0169	69 <sup>th</sup> and Woolworth	Papillion Creek Plant	Little Papillion Creek	

Page 6 of 24

# Part II. Missouri River WWTP - Outfall 102 Monitoring Requirements

The discharge of combined sewage from Outfall 102 following screening, grit removal, and primary clarification into the Missouri River is authorized and shall be monitored as specified in Table 3 below. Monitoring shall be conducted by sampling after primary treatment processes and prior to discharge to the receiving stream, unless an alternative monitoring point is specified by the NDEQ.

The discharge of wastewater from Outfall 102 is authorized only when all of the following conditions are met. Approval for discharge for Outfall 102 may be modified or revoked by the NDEQ if there is a substantial increase in the volume or characteristics of the pollutants being introduced into the POTW.

- 1. Influent wastewater flows to the Missouri River WWTP exceeds an instantaneous flow rate of 42 MGD (65 cfs) due to wet weather inflow into the combined sewer system.
- 2. Only the amount of influent flow that exceeds the capacity as defined by the instantaneous flow rate of the secondary treatment system shall be discharged.
- 3. Primary treatment is provided.
- 4. The City is in compliance with permit development requirements related to the Long Term Control Plan.
- 5. The discharges shall be monitored according to the conditions set forth in Table 3 below.

Table 3: Discharge Monitoring Requirements for Outfall 102							
		Units	Limi	its	Monitoring	Sample Type	
Parameters	Storet#		Monthly Average	Daily Maximum	Frequency (b)		
Total Flow	82220	MG	Report	Report	Once per discharge event	Metered	
Duration of Discharge	81381	Hours	Report	Report	Each discharge event	Metered	
Total Suspended Solids	00530	mg/L	Report	Report	Once per discharge event	Composite	
Biochemical Oxygen Demand	85002	mg/L	Report Report		Once per discharge event	Composite	
			Limits		Monitoring		
Parameters	Storet #	Units	Monthly Geometric Mean	Daily Maximum	Frequency	Sample Type	
E. coli <sup>(a)</sup>	31648	# 100 mL	Report	Report	Once per discharge event	Grab	
Parameters	Storet #	Units		its	Monitoring	Sample Type	
<del>- w. w</del>			Minimum	Maximum	Frequency		
рН	00400	SU	Report	Report	Once per discharge event	Grab	

#### Footnotes

<sup>(</sup>a) Monitoring for E. coli is required only during the recreational season (May 1 through Sept. 30)

<sup>(</sup>b)Once per discharge event is defined as a single sample of 102 during the time period from when precipitation begins to when all CSO or bypasses have stopped and flow into the plant has returned to normal dry weather levels.

Page 7 of 24

# Part III. CSO Discharge Monitoring Requirements at Selected Outfalls

The following selected outfalls 105, 106, 107, 108, 203, and 205 shall be monitored as set forth in Table 4 below at least once per year. Samples shall be collected after all inlets to the combined sewer system prior to discharge to the receiving stream. The City may propose an alternative monitoring program or monitoring locations to replace the requirements in Table 4 below. The proposed changes may be implemented without a permit modification if approved by the NDEQ.

Table 4: Monitoring Requirements for Outfall 105, 106, 107, 108, 203, and 205					
Parameters	Storet#	Units	Limits	Monitoring Frequency	Sample Type
Total Flow	82220	MG	Report	Annually	Calculated or Metered <sup>(a)</sup>
Duration of Discharge	81381	Hours	Report	Annually	Calculated or Metered
<b>Total Suspended Solids</b>	00530	mg/L	Report	Annually	Grab
<b>Biochemical Oxygen Demand</b>	85002	mg/L	Report	Annually	Grab
Chemical Oxygen Demand	81017	mg/L	Report	Annually	Grab
Total Kjeldahl Nitrogen	00625	mg/L	Report	Annually	Grab
Total Phosphorous	00665	mg/L	Report	Annually	Grab
Chloride	00940	mg/L	Report	Annually	Grab
E. coli	50278	# 100 mL	Report	Annually	Grab
рН	00400	SU	Report	Annually	Grab
Floating Solids or Visible Foam	45613	Presence or Absence	Report	Annually	Visual Inspection
Footnotes					

Page 8 of 24

### **Part IV.** Nine Minimum Controls (NMC)

The City of Omaha shall submit documentation in the Annual Report (Part VI) according to the conditions and requirements specified below. The NMCs are operations and procedures that will reduce combined sewer overflows and their effects on receiving water quality that do not require significant engineering studies or major construction and are consistent with the complete LTCP.

# A. Proper Operation and Maintenance (O & M)

Proper operation and maintenance of the CSS and CSO outfalls consists of a program to ensure that O & M procedures are periodically reviewed, updated, and documented. A major emphasis of O & M activities shall be on the elimination of dry weather overflows.

The City of Omaha shall include revisions and additions to the City of Omaha O & M procedures in the Annual Report submitted to NDEQ.

### B. Maximize Use of the Collection System for Storage

The City shall continue to implement their program to maximize the use of the collection system for storage.

The City of Omaha shall, as appropriate, review the CSS annually to identify any locations where minor modifications can be made to increase in-system storage. These modifications shall be implemented as soon as practicably possible and documented in the Annual Report submitted to NDEQ.

### C. Review and Modification of Pretreatment Programs

Minimize the impacts of discharges into the CSS from nondomestic sources.

As new significant industrial users are added to the CSS system, the City of Omaha shall determine what impact their dischargers would have on the quality and quantity of CSO discharges during wet weather events. A summary of new significant industrial users and measures taken the City to address any discharges during wet weather will be documented in the Annual Report.

#### D. Maximization of Flow to the POTWs for Treatment

Maximization of flow to the POTWs involves simple modifications to the CSS and treatment plant to enable as much wet weather flow as possible to reach the treatment plant.

The City of Omaha shall, as appropriate, evaluate and implement simple modifications to the CSS and procedures at the treatment plants to maximize flow to the POTWs. Any modifications shall be documented in the annual report.

### E. Prohibition of CSOs during Dry Weather

Dry weather overflows from the City of Omaha combined sewer system are prohibited.

The City of Omaha shall document all dry weather overflows and the measures taken to correct the cause of the overflow in the Annual Report. Substantial dry weather overflows shall be reported to the NDEQ as soon as possible. (See Part VII).

Page 9 of 24

#### F. Control of Solid and Floatable Materials in CSOs

The control of solid and floatable materials in CSOs is intended to reduce visible floatables and solids using relatively simple measures.

The City of Omaha shall, as appropriate, reassess and implement site-specific processes to control solids and floatables in CSOs using relatively simple measures. If reassessment is appropriate, the conclusions and implementation of control measures shall be documented in the Annual Report.

#### G. Pollution Prevention

Pollution prevention is intended to keep contaminants from entering the CSS and accordingly the receiving waters by way of the CSOs.

The City of Omaha shall document any new pollution prevention measures enacted by the City in the Annual Report.

#### H. Public Notification

Public notification is intended to inform the public of location of CSO outfalls, occurrences of CSOs, plus health and environmental effects of CSOs.

The City of Omaha shall document any revision or updates to public notification procedures in the Annual Report plus any public announcements related to CSO discharges.

### I. Monitoring to Characterize CSO Impacts and the Efficacy of CSO Controls.

Monitoring to Characterize CSO impacts involves inspections and other simple methods to determine the occurrence and apparent impact of CSOs.

The City of Omaha shall document any additional CSOs discovered by the City during routine inspections in the Annual Report. Characterization of the CSS system and the impact of the CSO discharges shall be regulated according to the requirements in the LTCP.

Page 10 of 24

# Part V. Long Term Control Plan (LTCP)

The City of Omaha shall submit to the NDEQ by October 1, 2009; a complete long term CSO control plan (LTCP) that has been developed in agreement with the requirements of the EPA CSO Control Policy and the Clean Water Act (CWA). The LTCP shall conform to the CSO Control Policy (see Appendix B) and shall ultimately result in compliance with the requirements of the CWA. The LTCP shall also consider the site-specific nature of the CSOs and evaluate the cost effectiveness of a range of controls.

### A. Characterization, Monitoring, and Modeling of the CSS

The City of Omaha shall submit a LTCP that characterizes the CSS developed through records review, monitoring, modeling, and other means. The Plan shall establish the existing baseline conditions, evaluate the efficacy of the CSO technology-based controls, and determine the baseline conditions upon which the long-term control plan will be based. The characterization shall address the response of the CSS to various precipitation events, identify the number, location, frequency, and characteristics of CSOs, and identify water quality impacts that result from CSOs.

# **B.** Public Participation Plan

The City of Omaha shall continue to implement their public participation strategy throughout the LTCP development and implementation process.

#### C. Consideration of Sensitive Areas

The City of Omaha shall include in the plan a procedure to periodically reassess the identification of sensitive areas to which CSOs discharge. Sensitive areas include water with threatened or endangered species and their designated critical habitat, waters with primary contact recreation, public drinking water intakes, and any other areas identified by the City of Omaha or the NDEQ in coordination with other State or Federal Agencies.

#### D. Evaluation of Alternatives

The evaluation by the City of Omaha shall include consideration of CSO control alternatives that would be necessary to achieve compliance with the technology and water quality requirements of the Clean Water Act (CWA). Alternatives presented must give the highest priority to controlling CSOs to any sensitive areas identified in Part (C) above. As part of the LTCP, the controls must adhere to a presumption approach or a demonstration approach as set forth in the *EPA Combined Sewer Overflow (CSO) Control Policy* (see Appendix B) to meet the requirements of the CWA.

### E. Cost/Performance Considerations

The City of Omaha shall include in the plan cost/performance curves that demonstrate the relationship among the set of CSO control alternatives that correspond to the ranges identified in Part (D) above. The plan must also include an assessment procedure to determine the City of Omaha's financial capability that includes the impact of CSO control costs on individual households and the City's debt, socioeconomic, and financial conditions.

# F. Operational Plan

The city of Omaha shall include in the plan, preliminary operation and maintenance procedures that address implementation of the selected CSO controls.

Page 11 of 24

### G. Maximizing Treatment at the Existing POTW Treatment Facilities

The City of Omaha shall include in the plan an evaluation of the feasibility of expanding wet weather treatment at both the MRWWTP and the PCWWTP. The evaluation shall include increasing both primary and secondary wet weather treatment at both plants during the implementation phase of the LTCP.

### H. Implementation Schedule

The City of Omaha shall include in the plan all pertinent information necessary to develop the construction and financing schedule for implementation of the selected CSO controls. The schedule for implementation of the selected CSO controls may be phased based on the relative importance of adverse impacts upon WQS and designated uses, priority projects identified in the plan, and on the City of Omaha's financial capability.

# I. Post-Construction Compliance Monitoring Program

The City of Omaha shall include in the plan a post-construction water quality-monitoring program that is adequate to verify compliance with water quality standards and protection of designated uses as well as to ascertain the effectiveness of the CSO controls. The post construction water quality-monitoring program should be derived from current CSO monitoring activities so that the long term effectiveness of the selected CSO controls can be established.

Page 12 of 24

# Part VI. Annual Report

The City of Omaha shall submit an annual report to the NDEQ by April 1 for events from the preceding year (January – December) that provides a summary of actions, activities, and measures taken by the City of Omaha to fulfill the requirements of this permit. The Annual Report shall contain at a minimum the following sections.

#### A. Nine Minimum Controls

Progress reports, documentation, dry weather overflow events, and evaluations as required for each of the NMCs in Part IV of this permit.

### B. Long Term Control Plan

Progress reports and documentation of the LTCP development as required in Part V of this permit. Report should also include projects accomplished before October 2009 and projects implemented or completed in accordance with LTCP.

### C. CSO Discharge Monitoring Data

A summary of monitoring data from MRWWTP outfall 102 and monitoring data for selected CSO outfalls as required in Part II and Part III of the permit.

#### **D.** Other Information

Other information that may be included in the Annual Report to include "measures of success" such as reduction in the number of overflow events, reduction in the number of CSO outfalls, sewer separation projects, or other indicators or improvements of receiving water quality.

Page 13 of 24

### Part VII. Other Conditions and Requirements

# A. Narrative Requirements Applicable to CSO Discharges

The following narrative requirements are applicable to CSO discharges from the City of Omaha combined sewer system to the receiving water during wet weather events.

- 1. The CSO discharges shall not be toxic to aquatic life in surface waters of the State outside the mixing zones allowed in NDEQ Title 117, *Nebraska Surface Water Quality Standard*.
- 2. The CSO discharges shall not contain floating, suspended, colloidal, or settleable materials that produce objectionable films, colors, turbidity, deposits, or noxious odors in the receiving stream or waterway.
- 3. The CSO discharges shall not contain pollutants at concentrations or levels that cause the occurrence of undesirable or nuisance aquatic life in the receiving stream.

### **B.** Reopener Clause

This permit may be modified or revoked and reissued for cause.

### C. Notification and Approval

Approval from the NDEQ shall be obtained in advance by the City of Omaha for any of the following actions.

- 1. The addition of any new combined sewer outfalls to the CSS.
- 2. Any modifications, improvements, or additions to the CSS that expands the CSO service area.
- 3. The addition of storm water or surface inlets to the combined sewer system that would result in expansion of the existing CSS service area.

### D. Immediate Reporting Requirements

The City of Omaha shall report within 24 hours to the NDEQ verbally upon becoming aware of any of the following events. A follow-up written report on any of these events shall be submitted by the City to the NDEQ within five days after the verbal report.

- 1. A substantial dry weather overflow event and the actions taken by the City to mitigate the impact of the overflow and correct the problem.
- 2. Indication that the discharge from any CSO outfall may be causing distress to fish, aquatic life, plant life, wildlife, or livestock.
- 3. Any sizeable spill, leak, or contamination in the CSS that could adversely impact CSO discharges.

### E. Implementation and Revision of the Long Term Control Plan

- 1. The selected CSO controls presented in the LTCP shall be implemented, operated, and maintained as described in the approved Plan.
- 2. The Plan may require revisions from time to time to reflect new information, new technology, or other changes that become evident during the implementation process. Substantial revisions to the LTCP must be submitted in writing as a modification to the LTCP for review and approval by the NDEQ.

#### F. Biosolids Disposal

The City of Omaha shall dispose of biosolids obtained from the combined sewer system and/ or CSO outfalls in accordance with NDEQ Title 119, Chapter 12 and 40 CFR, Part 503.

Page 14 of 24

### Appendix A – Standard Conditions that Apply to NPDES and NPP Permits

These general conditions are applicable to all NPDES and NPP permits. These conditions shall not preempt any more stringent requirements found elsewhere in this permit.

### A. General Conditions

#### 1. Information Available

All permit applications, fact sheets, permits, discharge data, monitoring reports, and any public comments concerning such shall be available to the public for inspection and copying, unless such information about methods or processes is entitled to protection as trade secrets of the owner or operator under Neb. Rev. Stat. §81-1527, (Cum. Supp. 1992) and NDEQ Title 115, Chapter 4.

# 2. Duty to Comply

All authorized discharges shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

The permittee shall comply with all conditions of this permit. Failure to comply with these conditions may be grounds for administrative action or enforcement proceedings including injunctive relief and civil or criminal penalties.

The filing of a request by the permittee for a permit modification, revocation and re-issuance, termination or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

### 3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize, prevent or correct any adverse impact to the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as required by the NDEQ to determine the nature and impact of the noncompliant discharge.

#### 4. Permit Actions

This permit may be modified, suspended, revoked or reissued, in part or in whole, in accordance with the regulations set forth in NDEQ Titles 119, Chapter 24. In addition, this permit may be modified, revoked and reissued to incorporate standards or limitations issued pursuant to Sections 301(b)(b)(c), 301(b)(b)(d), 304(b)(b), 307(a)(b), or 405(d) of the Clean Water Act and Public Law 100-4 (i.e., industrial categorical standards and municipal sludge regulations).

### 5. Land Application of Wastewater Effluent

The permittee shall be permitted to discharge treated wastewater effluent by means of land application in accordance with the regulations and standards set forth in NDEQ Title 119, Chapter 12, <u>002</u>.

### 6. Toxic Pollutants

The permittee shall not discharge pollutants to waters of the state that cause a violation of the standards established in NDEQ Titles 117, 118 or 119. All discharges to surface waters of the state shall be free of toxic (acute or chronic) substances which alone or in combination with other substances, create conditions unsuitable for aquatic life outside the appropriate mixing zone.

Page 15 of 24

### 7. Oil and Hazardous Substances/Spill Notification

Nothing in this permit shall preclude the initiation of any legal action or relieve the permittee from any responsibilities, liabilities or penalties under Section 311 of the Clean Water Act. The permittee shall conform to the provisions set forth in NDEQ Title 126, *Rules and Regulations Pertaining to the Management of Wastes*. If the permittee knows, or has reason to believe, that oil or hazardous substances were released at the facility and could enter waters of the state or any of the outfall discharges authorized in this permit, the permittee shall immediately notify the Department of a release of oil or hazardous substances. During Department office hours (i.e., 8:00 a.m. to 5:00 p.m., Monday through Friday, except holidays), notification shall be made to the Nebraska Department of Environmental Quality at telephone numbers (402) 471-2186 or (877) 253-2603 (toll free). When NDEQ cannot be contacted, the permittee shall report to the Nebraska State Patrol for referral to the NDEQ Emergency Response Team at telephone number (402) 471-4545. It shall be the permittee's responsibility to maintain current telephone numbers necessary to carry out the notification requirements set forth in this paragraph.

### 8. Property Rights

The issuance of this permit does not convey any property rights of any sort or any exclusive privileges nor does it authorize any damage to private property or any invasion of personal rights nor any infringement of federal, state or local laws or regulations.

# 9. Severability

If any provision of this permit is held invalid, the remainder of this permit shall not be affected.

### 10. Other Rules and Regulations Liability

The issuance of this permit in no way relieves the obligation of the permittee to comply with other rules and regulations of the Department.

#### 11. Inspection and Entry

The permittee shall allow the Director or his authorized representative, upon the presentation of his identification and at a reasonable time:

- a. to enter upon the permittee's premises where a regulated facility or activity is located or conducted, or records are required to be kept under the terms and conditions of the permit,
- b. to have access to and copy any records required to be kept under the terms and conditions of the permit,
- c. to inspect any facilities, equipment (including monitoring and control), practices or operations regulated or required in the permit, and
- d. to sample or monitor any substances or parameters at any location.

#### 12. Penalties

Violations of the terms and conditions of this permit may result in the initiation of criminal and/or civil actions. Civil penalties can result in fines of up to \$10,000.00 per day (Neb. Rev. Stat. §81-1508, as amended to date). Criminal penalties for willful or negligent violations of this permit may result in penalties of \$10,000.00 per day or by imprisonment. Violations may also result in federal prosecution.

### **B.** Management Requirements

#### 1. Duty to Provide Information

The permittee shall furnish to the Department within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records retained as a requirement of this permit.

Page 16 of 24

### 2. Duty to Reapply

The permittee shall apply for a re-issuance of this permit, if an activity regulated by this permit is to be continued after the expiration date of this permit. The application shall be submitted at least 180 days before the expiration of this permit on an application form supplied by the Department, as set forth in NDEQ Titles 119, Chapter 5 <u>002</u>.

### 3. Signatory Requirements

All reports and applications required by this permit or submitted to maintain compliance with this permit, shall be signed and certified as set forth in this section.

- a. Permit applications shall be signed by a cognizant official who meets the following criteria:
  - i) for a corporation: by a principal executive officer of at least the level of vice-president,
  - ii) for a partnership or sole proprietorship: by a general partner or the proprietor, respectively, or
  - iii) for a municipality, state, federal or other public facility: by either a principal executive officer or highest ranking elected official.
- b. Discharge monitoring reports and other information shall be signed by the **cognizant official** or by an **authorized representative**.
- c. The cognizant official designates an authorized representative. The authorized representative is responsible for the overall operation of the facility (i.e., the WWTF Operator, the City Manager, the Public Utilities Superintendent or similar person).
- d. Any change in the signatories shall be submitted to the Department, in writing, within 30 days after the change.
- e. Certification. All applications, reports and information submitted as a requirement of this permit, shall contain the following certification statement:

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

#### C. Monitoring and Records

#### 1. Representative Sampling

Samples and measurements taken as required within this permit shall be representative of the discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water or substance. Monitoring points shall not be changed without notification to the Department and with the written approval of the Director.

- a. Composite sampling shall be conducted in one of the following manners:
  - i) continuous discharge a minimum of one discrete aliquot collected every three hours,
  - ii) less than 24 hours a minimum of hourly discrete aliquots or a continuously drawn sample shall be collected during the discharge, or
  - iii) batch discharge a minimum of three discrete aliquots shall be collected during each discharge.

Page 17 of 24

- b. Composite samples shall be collected in one of the following manners:
  - i) the volume of each aliquot must be proportional to either the waste stream flow at the time of sampling or the total waste stream flow since collection of the previous aliquot,
  - ii) a number of equal volume aliquots taken at varying time intervals in proportion to flow,
  - iii) a sample continuously collected in proportion to flow, and
  - iv) where flow proportional sampling is infeasible or nonrepresentative of the pollutant loadings, the Department may approve the use of time composite samples.
- c. Grab samples shall consist of a single aliquot collected over a time period not exceeding 15 minutes.
- d. All sample preservation techniques shall conform to the methods adopted in NDEQ Title 119, Chapter 21, 006 unless:
  - i) in the case of sludge samples, alternative techniques are specified in the 40 CFR, Part 503, or
  - ii) other procedures are specified in this permit.

#### 2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be used to insure the accuracy and reliability of measurements. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements. The accepted capability shall be consistent with the type of that device. Devices selected shall be capable of measuring flows with a maximum deviation of  $\pm$ 10%. The amount of deviation shall be from the true discharge rates throughout the range of expected discharge volumes. Guidance can be obtained from the following references for the selection, installation, calibration and operation of acceptable flow measurement devices:

- a. "Water Management Manual," U. S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 2001, 327 pp. Available from the National Technical Information Services (NTIS)
- b. "NPDES Compliance Inspection Manual," U. S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance, Publication EPA 300-B-94-014 September 1994. This document is available from the National Technical Information Services (NTIS).

### 3. Test Procedures

Test procedures used for monitoring required by this permit shall conform to the methods adopted in NDEQ Title 119, Chapter 21, 006 unless:

- a. in the case of sludge samples, alternative techniques are specified in the 40 CFR, Part 503, or
- b. other procedures are specified in this permit.

# 4. Averaging of Measurements

Averages shall be calculated as an arithmetic mean except:

- a. bacterial counts which shall be calculated as a geometric mean, or
- b. where otherwise specified by the Department.

Page 18 of 24

#### 5. Retention of Records

The permittee shall retain records of all monitoring activities for a period of at least three years (except five years for biosolids data) as set forth in NDEQ Titles 119, Chapter 14 <u>001.02</u>. The types of records that must be retained include, but are not limited to:

- a. calibration and maintenance records.
- b. original strip chart recordings,
- c. copies of all reports required by this permit,
- d. monitoring records and information, and
- e. electronically readable data.

The permittee shall retain records of monitoring required by this permit that are related to biosolids use and disposal for a period of five years or longer, as required in NDEQ Titles 119, Chapter 14.

### 6. Record Contents

As set forth in NDEQ Title 119, Chapter 14, records of sampling or monitoring information shall include:

- a. the date(s), exact place, time and methods of sampling or measurements,
- b. the name(s) of the individual(s) who performed the sampling or measurements,
- c. the date(s) the analyses were performed,
- d. the individual(s) who performed the analyses,
- e. the analytical techniques or methods used,
- f. the results of such analyses, and
- g. laboratory data, bench sheets and other required information.

# **D.** Reporting Requirements

### 1. Immediate Notification

- a. NPP permittees shall report immediately to the publicly owned treatment works (POTW), any discharge to the POTW that may result in a violation of NDEQ Title 119, Chapter 26.
- b. All permittees shall report immediately to the NDEQ:
  - i) discharges of oil or hazardous substances which threaten waters of the state or public health and welfare, and
  - ii) discharges causing in-stream toxicity (i.e., a fish kill) or an immediate threat to human health.

Initial notification may be verbal. A written noncompliance notification shall be submitted as set forth in Section D. 3 of this Appendix.

### 2. Test Procedures

Test procedures used for monitoring required by this permit, shall conform to the methods adopted in NDEQ Title 119, Chapter 27 unless:

- a. In the case of biosolids samples, alternative techniques are specified in the NDEQ Title 119, Chapter 14; or
- b. Other procedures are specified in this permit.

Page 19 of 24

### 3. 24-Hour Reporting

As set forth in NDEQ Title 119, Chapter 14 the permittee shall report to the NDEQ, within 24 hours of becoming aware of:

- a. any noncompliance which may endanger the environment or human health or welfare,
- b. any unanticipated bypass,
- c. all upsets,
- d. any discharge to a POTW that causes a violation of the prohibited discharge standards, or
- e. any noncompliance of an effluent limitation in this permit.

Initial notification may be verbal. A written noncompliance notification shall be submitted as set forth in Section D. 3 of this permit.

As set forth in NDEQ Title 119, Chapter 26, if sampling performed by an industrial user (NPP permittee) indicates a permit effluent violation, the permittee shall notify the Department and the City within 24 hours of becoming aware of the violation. The permittee shall resample and have it analyzed. The results of the resampling analysis shall be submitted to the Department and the City within 30 days after becoming aware of the violation.

### 4. Written Noncompliance Notification

- a. The permittee shall submit a written noncompliance report to the NDEQ:
  - i) within five days of becoming aware of any noncompliance with the:
    - (a) NPP effluent limitations or requirements set forth in this permit, or
    - (b) NPDES toxic pollutant effluent limitations or requirements set forth in this permit.
  - ii) within seven days of becoming aware of any other noncompliance with the NPDES requirements and/or effluent limitations set forth in this permit.
- b. The written notification shall be submitted on a noncompliance form supplied by the Department and shall include:
  - i) a description of the discharge and cause of noncompliance,
  - ii) the period of noncompliance, including exact dates and times, or if not corrected, the anticipated time the noncompliance is expected to continue, and
  - iii) the steps taken to reduce, eliminate and prevent the reoccurrence of the noncompliance.

The submittal of a written noncompliance report does not relieve the permittee of any liability from enforcement proceedings that may result from the violation of permit or regulatory requirements.

# 5. Quarterly Discharge Monitoring Reports (DMRs)

The permittee shall report the monitoring results required by this permit on a DMR form supplied or approved by the Department. Monitoring results shall be submitted on a quarterly basis using the reporting schedule set forth below, unless otherwise specified in this permit or by the Department.

Monitoring Quarters	<b>DMR Reporting Deadlines</b>
January - March	April 28
April - June	July 28
July - September	October 28
October - December	January 28

If the permittee monitors any pollutant more frequently than required by this permit, using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted on the DMR. The frequency of the analysis shall also be reported on the DMR.

Page 20 of 24

### 6. Changes in Discharge

Any facility expansion, production increases or process modifications which will result in new or substantially increased discharges of pollutants or a change in the nature of the discharge of pollutants must be reported by the permittee 180 days prior to the expansion, increases or modifications, either by amending his original application or by submitting a new application. This permit may be modified or revoked and reissued as a result of this notification to maintain compliance with applicable state or federal regulations.

# 7. Changes in Toxic Discharges from Manufacturing, Commercial, Mining and Silvicultural Facilities

Permittees discharging from manufacturing, commercial, mining and silvicultural facilities shall report to the Department:

- a. if any toxic pollutant not limited in this permit is discharged from any NPDES outfall as a result of any activity that will or has occurred and results in its routine or frequent discharge. The Department shall be informed if that discharge exceeds the following notification levels:
  - i) 100 micrograms per liter (0.1 mg/L) for any toxic pollutant,
  - ii) 200 micrograms per liter for acrolein and acrylonitrile (0.2 mg/L),
  - iii) 500 micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol (0.5 mg/L),
  - iv) 1000 micrograms per liter for antimony (1 mg/L),
  - v) five times the maximum concentration value reported for that pollutant in the permit application or
  - vi) an alternative level established by the Director, and
- b. if any toxic pollutant not limited in this permit is discharged from an NPDES outfall as a result of any activity that will or has occurred and results in its nonroutine discharge. The Department shall be informed if that discharge exceeds the following notification levels:
  - i) 500 micrograms per liter (0.5 mg/L) for any toxic pollutant,
  - ii) 1000 micrograms for antimony (1 mg/L),
  - iii) ten times the maximum concentration value reported for that pollutant in the permit application, or
  - iv) an alternative level established by the Director.

### 8. Changes in Sludge Quality

The permittee shall provide written notice to the Department of any alteration or addition that results in a significant change in the permittee's sludge use or disposal practices. This permit may be modified or revoked and reissued as a result of this notification to maintain compliance with applicable state or federal regulations.

# 9. Changes of Loadings to Publicly Owned Treatment Work (POTW)

POTW's shall notify the Department of the following:

- a. any new introduction of pollutants from dischargers subject to the categorical pretreatment discharge limitations set forth in NDEQ Title 119, Chapter 27, and
- b. any substantial change in the volume or character of pollutants being introduced into the POTW.

Notification shall be made 180 days in advance whenever possible. Information on the quantity and quality of new discharges and their anticipated impact on the POTW shall be included.

Page 21 of 24

#### 10. Transfers

The permittee shall notify the Department at least 30 days prior to the proposed transfer of ownership of this permit or the permitted facility to another party. The Department may modify or revoke and reissue this permit as set forth in NDEQ Title 119, Chapter 24.

### 11. Compliance Schedules

The permittee shall submit a written report of compliance or noncompliance with any compliance schedule established in this permit. The written report shall be submitted within 14 days following all deadlines established in the compliance schedule. If compliance has not been achieved, the report shall include an alternative completion date, an explanation of the cause of the noncompliance and an explanation of the steps being taken to ensure future compliance. The submission of this report does not ensure the Department's acceptance of alternative compliance dates nor does it preclude the Department from initiating enforcement proceedings based upon the reported noncompliance.

### E. Operation and Maintenance

#### 1. Proper Operation and Maintenance

The permittee shall, at all times, maintain in good working order and operate as efficiently as possible, any facilities or systems of control installed by the permittee in order to achieve compliance with the terms and conditions of this permit. This would include, but not be limited to, effective performance based on designed facility removals, effective management, adequate operator staffing and training, adequate laboratory and process controls, and adequate funding which reflects proper user fee schedules.

### 2. Treatment System Failure and Upset

An upset is an affirmative defense to an enforcement action brought for noncompliance with technology-based permit effluent limitations if the permittee can demonstrate, through properly signed, operating logs or other relevant evidence, that:

- a. an upset occurred and the specific cause was identified,
- b. that the facility was properly operated and maintained at such time,
- c. the Department was notified within 24 hours of the permittee becoming aware of the upset, and
- d. the permittee took action to reduce, eliminate and prevent a reoccurrence of upset, including minimizing adverse impact to waters of the state.

Page 22 of 24

### 3. Bypassing

Any diversion from or bypass of the treatment facilities, other than Outfall 102, is prohibited, unless:

- a. It is unavoidable to prevent loss of life, personal injury or severe property damage;
  - i) No feasible alternative exists, i.e., auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime;
  - ii) The permittee submits notice to the Department within 24 hours of becoming aware of the bypass or if the bypass is anticipated or should have been anticipated, the Department is notified at least ten days prior to the bypass; and
  - iii) The bypass is conducted under conditions determined to be necessary by the Director to minimize any adverse effects.
- b. If the bypass is needed for regular preventative maintenance for which back-up equipment should be provided, the bypass will not be allowed. When a bypass occurs, the burden is on the permittee to demonstrate compliance with items "a" through "d" above.
- c. Additionally, NPP permittees shall report any bypasses to the POTW. Unanticipated bypasses shall be reported immediately and anticipated bypasses shall be reported at least ten days in advance.
- d. All NPDES permittees shall notify the general public that a bypass of the treatment system is occurring. The public notification shall include:
  - i) Location of the bypass;
  - ii) The date the bypass started;
  - iii) Anticipated length of time the bypass will occur; and
  - iv) An estimate of the total volume of wastewater bypassed.

#### 4. Removed Substances

Solids, sludge, filter backwash or other pollutants removed in the course of treatment or control of wastewater shall be disposed of at a site and in a manner approved by the Nebraska Department of Environmental Quality. The disposal of nonhazardous industrial sludges shall conform to the standards established in or to the regulations established pursuant to 40 CFR, Part 257. The disposal of sludge shall conform to the standards established in or to the regulations established pursuant to 40 CFR, Part 503. If solids are disposed of in a licensed sanitary landfill, the disposal of solids shall conform to the standards established in NDEQ Title 132. Publicly owned treatment works shall dispose of sewage sludge in a manner that protects public health and the environment from any adverse effects which may occur from toxic pollutants as defined in Section 307 of the Clean Water Act. This permit may be modified or revoked and reissued to incorporate regulatory limitations established pursuant to 40 CFR, Part 503.

Page 23 of 24

#### F. Definitions

**Administrator**: The Administrator of the USEPA.

**Aliquot**: An individual sample having a minimum volume of 100 milliliters that is collected either manually or in an automatic sampling device.

**Biweekly**: Once every other week. **Bimonthly**: Once every other month.

**Bypass**: The intentional diversion of wastes from any portion of a treatment facility.

**Daily Average**: An effluent limitation that cannot be exceeded and is calculated by averaging the monitoring results for any given pollutant parameter obtained during a 24-hour day.

**Department**: Nebraska Department of Environmental Quality.

**Director**: The Director of the Nebraska Department of Environmental Quality.

**Industrial Discharge**: Wastewater that originates from an industrial process and / or is noncontact cooling water and / or is boiler blowdown.

Industrial User: A source of indirect discharge (a pretreatment facility).

**Monthly Average**: Is an effluent limitation that cannot be exceeded. It is calculated by averaging any given pollutant parameter monitoring results obtained during a calendar month.

**Passive Discharge**: A discharge from a POTW that occurs in the absence of an affirmative action and is not authorized by the NPDES permit (e.g. discharges due to a leaking valve, discharges from an overflow structure) and / or is a discharge from an overflow structure not designed as part of the POTW (e.g. discharges resulting from lagoon berm / dike breaches).

**Publicly Owned Treatment Works (POTW)**: A treatment works as defined by Section 212 of the Clean Water Act (Public Law 100-4) which is owned by the state or municipality, excluding any sewers or other conveyances not leading to a facility providing treatment.

Semiannually: Twice every year

**Significant Industrial Use (SIU)**: All industrial users subject to Categorical Pretreatment Standards or any industrial user that, unless exempted under Chapter 1, Section <u>115</u> of NDEQ Title 119, discharges an average of 25,000 gallons per day or more of process water; or contributes a process waste stream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW; or is designated as such by the Director on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any National Pretreatment Standard or requirement.

**30-Day Average**: Is an effluent limitation that cannot be exceeded. It is calculated by averaging any given pollutant parameter monitoring results obtained during a calendar month.

**Total Toxic Organics (TTO):** The summation of all quantifiable values greater than 0.01 milligrams per liter (mg/l) for toxic organic compounds that may be identified elsewhere in this permit. (If this term has application in this permit, the list of toxic organic compounds will be identified, typically in the Limitations and Monitoring Section(s) and/or in an additional Appendix to this permit.)

**Toxic Pollutant:** Those pollutants or combination of pollutants, including disease causing agents, after discharge and upon exposure, ingestion, inhalation or assimilation into an organism, either directly from the environment or indirectly by ingestion through food chains will, on the basis of information available to the administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunction (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

Page 24 of 24

**Upset**: An exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities or improper operation and maintenance or lack thereof.

**Volatile Organic Compounds (VOC):** The summation of all quantifiable values greater than 0.01 milligrams per liter (mg/l) for volatile, toxic organic compounds that may be identified elsewhere in this permit. (See the definition for Total Toxic Organics above. In many instances, VOCs are defined as the volatile fraction of the TTO parameter. If the term "VOC" has application in this permit, the list of toxic organic compounds will be identified, typically in the Limitations and Monitoring Section(s) and/or in an additional Appendix to this permit.)

**Weekly Average**: Is an effluent limitation that cannot be exceeded. It is calculated by averaging any given pollutant parameter monitoring results obtained during a fixed calendar week. The permittee may start their week on any weekday but the weekday must remain fixed. The Department approval is required for any change of the starting day.

"X" Day Average: An effluent limitation defined as the maximum allowable "X" day average of consecutive monitoring results during any monitoring period where "X" is a number in the range of one to seven days.

### G. Abbreviations

**CFR**: Code of Federal Regulations

kg/Day: Kilograms per Day
MGD: Million Gallons per Day
mg/L: Milligrams per Liter

**NOI**: Notice of Intent

NDEQ: Nebraska Department of Environmental Quality

NDEQ Title 115: Rules of Practice and Procedure

NDEQ Title 117: Nebraska Surface Water Quality Standards

NDEQ Title 118: Ground Water Quality Standards and Use Classification

NDEQ Title 119: Rules and Regulations Pertaining to the Issuance of Permits under the National Pollutant Discharge Elimination System

NDEQ Title 126: Rules and Regulations Pertaining to the Management of Wastes

NDEO Title 132: Integrated Solid Waste Management Regulations

**NPDES**: National Pollutant Discharge Elimination System

**NPP**: Nebraska Pretreatment Program **POTW**: Publicly Owned Treatment Works

**μg/L**: Micrograms per Liter

**WWTF**: Wastewater Treatment Facility