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DEPT. OF ENVIRONMENT AND ENERGY

OCT 25 2019

Pete Ricketts, Governor

The Honorable Jean Stothert
Mayor of Omaha
1819 Farnam Street, Suite 300
Omaha, NE 68183

RE: Omaha Combined Sewer Overflows (CSO)
NDEE ID: 999428
PROGRAM ID: NE0133680

Enclosed is your permit and fact sheet. Please provide a copy of each to the facility contact person who is responsible for retaining the facility records. Also enclosed is a Permit Compliance Checklist; this provides a general overview of what NDEE evaluates to determine compliance during routine inspections.

Please contact your program specialist (indicated below) if you have any questions or to request a Permit Assistance Visit (PAV). The PAV is an opportunity for you and NDEE to discuss permit requirements and how they apply to your facility. The PAV is separate from a routine inspection.

☒ Brett Anderson	402-679-1429	NDEE Omaha Field Office
☐ John Flint	308-641-7273	NDEE Scottsbluff Field Office
☐ Mark Henning	402-471-4220	NDEE Norfolk Office
☐ Tim Lindeen	402-471-2023	NDEE Lincoln Office
☐ Mark Pomajzl	402-471-2936	NDEE Lincoln Office
☐ Jeff Stittle	308-530-0873	NDEE North Platte Field Office
☐ Jason Windhorst	402-471-4205	NDEE Lincoln Office

Thank you.

Kim Bubb, Staff Assistant
NPDES Permits and Compliance Section
Water Permits Division

Enclosure

cc w/enclosure:
Michael T. Arends, Plant Manager, City of Omaha, 5600 S 10th Street, Omaha NE 68107

Department of Environment and Energy
P.O. Box 98922
Lincoln, Nebraska 68509-8922

Jim Macy, Director
OFFICE 402-471-2186 FAX 402-471-2909
ndeq.moreinfo@nebraska.gov

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This guidance document is advisory in nature but is binding on an agency until amended by such agency. A guidance document does not include internal procedural documents that only affect the internal operations of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules and regulations made in accordance with the Administrative Procedure Act. If you believe that this guidance document imposes additional requirements or penalties on regulated parties, you may request a review of the document.

17-001 September 2019

Municipal Wastewater Treatment Facility Permit Compliance Checklist

Your permit provides the requirements you must meet to be in compliance with the National Pollutant Discharge Elimination System (NPDES). The Nebraska Department of Environment and Energy (NDEE) performs routine inspections to verify compliance. These inspections include a review of your required NPDES records, a review of your operation and maintenance activities, and observations of the physical condition of your wastewater treatment facility (WWTF). Further details may be found in the body and Attachment A of your permit and NDEE Titles 119, 123, and 197, available on the Department website. During a records review and the inspection, as applicable to your facility, we will evaluate the following list to determine compliance:

General Permit Compliance

- Meeting Limits
- Meeting Compliance Schedule (if included)
- Effluent and Influent Sampling
- Meeting Narrative Requirements
- Visual Observation of the Effluent Discharge to the receiving water.

Records Review

- 3 years of required records
  - Permit/Fact sheet/Application
  - DMRs
  - Analytical Results/Lab Documentation
  - Sample Collection/Handling Documentation
  - Flow records

Discharge Monitoring Reports (DMRs)

- Electronic Reporting
- DMRs Submitted On Time
- DMR Copies Retained

Reporting

- Backups
- Sanitary Sewer Overflow (SSO)
- By-pass
- Limit Violation

Lift Stations

- Backup power/redundancy
- Pump Conditions
- Vents/Lights
- Alarms
- Screens/Comminutor/Grinder
- Auxiliary backup/Redundancy

Flow Measurement

- Condition of Equipment
- Calibration of Equipment

Lagoon Treatment

- Splitter Box
- Operating Depth
- Vegetation Control
- Erosion Control
- Animal Control
- Lagoon Appearance
- Fence/Signs Condition
- Gate Closed and Locked

Mechanical Treatment

- Operation
- Process Control
- Physical Condition of the Equipment
- Backup Power/Redundancy

Biosolids

- Required Records and Land Application Setback Compliance
- 40 CFR 503 Compliance

Laboratory

- Analytical Equipment Calibration
- Complete Bench Sheets
- Correct Analytical Methods
- Correct Laboratory Procedures

Sample Handling

- Correct Collection Method/Frequency
- Holding Time/Preservation/Temperature

General Operation and Maintenance (O&M)

- Maintenance Record Keeping
  - Repairs
  - Routine Jetting and Cleaning
  - Inflow and Infiltration (I&I)
- SCADA/Alarms

Operator Certification

- Certified Operator
- Sufficient Backup

Pretreatment

- Significant Industrial Users (SIUs)

Industrial Stormwater Permit

- Only required if your design flow is 1 MGD or Greater
- SWPPP/BMPs/Inspections

If you have questions please call the NPDES Permits and Compliance Section at 402-471-4220.

Produced by: Nebraska Department of Environment and Energy, P.O. Box 98922, Lincoln, NE 68509-8922; phone (402) 471-2186. To view this, and other information related to our agency, visit our web site at http://dee.ne.gov.

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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**
NDEE ID	**999428**
Facility	**City of Omaha Combined Sewer Overflows**
Permittee	**City of Omaha, Omaha, Nebraska**
Receiving Water	**Papillion Creek and Missouri River Drainage Basins**
Effective Date	**October 1, 2015**
Modification Date	**November 1, 2019**
Expiration Date	**September 30, 2020**

Pursuant to a Delegation Memorandum dated July 1, 2019, and signed by the Director, the undersigned hereby executes this document on behalf of the Director.

Signed this 24th day of October, 2019

Steven M. Goans
Deputy Director – Water

Department of Environment and Energy
P.O. Box 98922
Lincoln, Nebraska 68509-8922

Jim Macy, Director
OFFICE 402-471-2186 FAX 402-471-2909
ndeq.moreinfo@nebraska.gov

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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 collection system or 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, 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 Water Resource Recovery Facilities. The CSO Outfalls associated with the Missouri River WRRF (MRWRRF) collection system are listed in Table 1 below and the CSO Outfalls associated with the Papillion Creek WRRF (PCWRRF) collection system are listed in Table 2 below. The MRWRRF CSO Outfall 102 is an approved wet weather bypass outfall of combined 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 MRWRRF, Outfall 001, is authorized according to NPDES Permit NE0036358 and the discharge of treated wastewater from the PCWRRF, Outfall 001, is authorized according to NPDES Permit NE0112810. Wet weather discharge from the City of Omaha municipal separate storm sewer system (MS4) is authorized in NPDES Permit NE0133698.

B. Missouri River WRR Service Area CSO Outfalls

Table 1: Combined Sewer Overflow Outfalls from the Missouri River WRRF Service Area				
Outfall	**Lat/Long**	**Location**	**Treatment Plant**	**Receiving Water**
102	41.20139 -95.92420	Approved Bypass at Missouri River WRRF (see Part II)	Missouri River Plant	Missouri River
103	41.34309 -95.95745	Bridge Street Lift Station	Missouri River Plant	Missouri River
105	41.32484 -95.94566	Minne Lusa Avenue	Missouri River Plant	Outfall channel to Missouri River
106	41.27674 -95.92464	North Interceptor	Missouri River Plant	Outfall channel to Missouri River
107	41.27685 -95.92526	Grace Street	Missouri River Plant	Outfall channel to Missouri River
108	41.26489 -95.92553	Burt-Izard Street	Missouri River Plant	Outfall channel to Missouri River
109	41.25140 -95.91986	1st and Leavenworth	Missouri River Plant	Missouri River
110	41.24801 -95.91782	Pierce Street Lift Station	Missouri River Plant	Missouri River
111	41.24321 -95.91654	Hickory Street lift Station	Missouri River Plant	Outfall channel to Missouri River
112	41.23771 -95.91412	Martha Street	Missouri River Plant	Outfall channel to Missouri River
114	41.22384 -95.91741	Grover Street	Missouri River Plant	Outfall channel to Missouri River
115	41.22078 -95.92019	Riverview Lift Station	Missouri River Plant	Outfall channel to Missouri River.
117	41.21301 -95.92813	Missouri Avenue Lift Station	Missouri River Plant	Outfall channel to Missouri River
118	41.20602 -95.92914	South Omaha - Ohern Street	Missouri River Plant	Missouri River
119	41.19543 -95.92794	Monroe Street Lift Station	Missouri River Plant	Missouri River
121	41.2518 -95.9183	Jones Street	Missouri River Plant	Missouri River

C. Papillion Creek WRRF Service Area CSO Outfalls

Table 2: Combined Sewer Overflow Outfalls from the Papillion Creek WRRF Service Area				
Outfall	**Lat/Long**	**Location**	**Treatment Plant**	**Receiving Water**
201	41.07711 -95.87001	Papillion Creek WRRF 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
210	41.25009 -96.02087	72nd and Mayberry	Papillion Creek Plant	Little Papillion Creek
211	41.2403 -95.0167	69th and Pierce	Papillion Creek Plant	Little Papillion Creek
212	41.2401 -96.0169	69th and Woolworth	Papillion Creek Plant	Little Papillion Creek

Part II. CSO Outfall 102 Requirements

A. Interim Requirements for CSO Outfall 102 – Effective until January 1, 2023

The Interim Requirements for CSO Outfall 102 listed below shall be in effect until January 1, 2023. On and after January 1, 2023 the Final Requirements for CSO Outfall 102 in Part II (B) and (C) of this permit shall be in effect.

The bypass of combined wastewater through CSO Outfall 102 at the MRWRRF is approved only when all of the following conditions are fulfilled. Approval for discharge through Outfall 102 may be modified or revoked by the NDEE if there is a substantial increase in the volume or characteristics of the pollutants being introduced into the POTW that is not consistent with the objectives of the LTCP.

1. Secondary treatment is provided for an instantaneous flow rate of up to 42 MGD (65 cfs) at the MRWRRF and the City is in compliance with secondary permit limits for CBOD and TSS in the MRWRRF NPDES Permit NE0036358.
2. Discharge through CSO Outfall 102 is approved only for combined wastewater during wet weather events.
3. Discharge through CSO Outfall 102 shall receive treatment to include solids and floatables removal and disposal, plus primary treatment.
4. The effluent discharged through Outfall 102 is monitored according to the requirements set forth in Table 3 below.

Table 3: Interim Requirements for CSO Outfall 102

Parameters	Storet#	Units	Limit		Monitoring Frequency	Sample Type
			Value			
Flow Rate	50050	MGD	Report		Hourly	Metered
Total Flow	82220	MG	Report		Hourly	Metered
Duration of Discharge	81381	Hours	Report		Hourly	Metered
Total Suspended Solids	00530	mg/L	Report		Each event	Composite[a]
Biochemical Oxygen Demand	00310	mg/L	Report		Each event	Composite[a]
Total Residual Chlorine [b]	50060	mg/L	Report		Once every 4 hours	Grab
Parameters	**Storet #**	**Units**	**Limit**		**Monitoring Frequency**	**Sample Type**
			Geometric mean			
E. coli [c]	31648	# 100 mL	Report		Once every 4 hours	Grab
Parameters	**Storet #**	**Units**	**Limit**		**Monitoring Frequency**	**Sample Type**
			Minimum	**Maximum**		
pH	00400	SU	Report	Report	Once every 4 hours	Grab

Footnotes
(a) Samples should be taken as individual grab samples as a flow weighted composite. One sample shall be reported per event, but as a composite of the whole discharge event. Sampling will be conducted according to standards set forth in 40 CFR Part 136.
(b) Monitoring for TRC is required only when chlorine producing chemical is added to the treatment system.
(c) *E. coli* monitoring applies annually only during the recreational season (May 1 through Sept. 30).

B. Final Requirements for CSO Outfall 102 – Effective on January 1, 2023

The final requirements for CSO Outfall 102 listed below shall be in effect on January 1, 2023.

The bypass of combined wastewater through CSO Outfall 102 at the MRWRRF is approved only when all of the following conditions are fulfilled. Approval for discharge through Outfall 102 may be modified or revoked by the NDEE if there is a substantial increase in the volume or characteristics of the pollutants being introduced into the POTW that is not consistent with the objectives of the LTCP.

1. Secondary treatment is provided for an instantaneous flow rate of up to 64 MGD (99 cfs) at the MRWRRF and the City is in compliance with secondary permit limits for CBOD and TSS in the MRWRRF NPDES Permit NE0036358.
2. Discharge through CSO Outfall 102 is approved only for combined wastewater during wet weather events.
3. Discharge through CSO Outfall 102 shall receive treatment to include solids and floatables removal and disposal, primary treatment, and disinfection when required.
4. The effluent discharged through Outfall 102 is monitored and limited according to the requirements set forth in Tables 4 and 5 below.

Table 4: Final Requirements for CSO Outfall 102

Parameters	Storet#	Units	Limit Value	Monitoring Frequency	Sample Type
Flow Rate	50050	MGD	Report	Hourly	Metered
Total Flow	82220	MG	Report	Hourly	Metered
Duration of Discharge	81381	Hours	Report	Hourly	Metered
Total Suspended Solids	00530	mg/L	Report	Each event	Composite[a]
Biochemical Oxygen Demand	00310	mg/L	Report	Each event	Composite[a]
Parameters	**Storet#**	**Units**		**Monitoring Frequency**	**Sample Type**
Total Residual Chlorine [b]	50060	mg/L	Report TRC values	Once every 4 hours	Grab
Are you in compliance with TRC limits? [c]	51487	NA	Yes (DMR Report = 1) No (DMR Report = 0)	Once every 4 hours	NA

Parameters	Storet #	Units	Limit		Monitoring Frequency	Sample Type
			Minimum	Maximum		
pH	00400	SU	6.5	9.0	Once every 4 hours	Grab

Footnotes:

(a) Samples should be taken as individual grab samples as a flow weighted composite. One sample shall be reported per event, but as a composite of the whole discharge event. Sampling will be conducted according to standards set forth in 40 CFR Part 136.

(b) Monitoring for TRC is required only when chlorine producing chemical is added to the treatment system.

(c) TRC compliance is determined by calculation of flow variable concentration limits which are based on the flow rate in the Missouri River (Qs) and the combined flow rates from CSO 102 (Q102) and MRWRRF 001 (Q001) according to the following equations[Limit TRC = 0.019 + (0.019)(Qs)(0.034)/(Q102 + Q001)]. See Flow Variable Protocol for TRC at CSO 102 and MRWRRF 001, that is to be developed according to the schedule in Part IX((9) of this permit..

C. Final *E. coli* Requirements for CSO Outfall 102 – Effective on January 1, 2023

The interim report requirement for *E. coli* for CSO Outfall 102 shall be applicable until January 1, 2023 Compliance with final *E. coli* limits for CSO Outfall 102 shall be effective on January 1, 2023. *E. coli* limits are dependent upon the duration of discharge from Outfall CSO 102 during a calendar month as set forth in Table 5 below.

One and only one *E. coli* sample shall be collected and analyzed once every 4 hours during discharge through Outfall CSO 102 until discharge through the outfall ceases. *E. coli* samples shall be representative of the monitored activity during the entire discharge event. Each discharge event is defined as 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.

Table 5: Final *E. coli* Requirements for CSO Outfall 102 [a]

Total duration of discharge during the calendar month	Parameter	Storet #	Units	Monthly Geomean Limit[b]	Monitoring Frequency	Sample Type
≤ 4 hours	*E. coli*	31648	# 100 mL	1096	Once every 4 hours	Grab
> 4 hours ≤ 8 hours	*E. coli*	31648	# 100 mL	565	Once every 4 hours	Grab
> 8 hours ≤ 12 hours	*E. coli*	31648	# 100 mL	421	Once every 4 hours	Grab
>12 hours ≤ 16 hours	*E. coli*	31648	# 100 mL	354	Once every 4 hours	Grab
> 16 hours ≤ 20 hours	*E. coli*	31648	# 100 mL	314	Once every 4 hours	Grab
> 20 hours ≤ 24 hours	*E. coli*	31648	# 100 mL	287	Once every 4 hours	Grab
> 24 hours ≤ 36 hours	*E. coli*	31648	# 100 mL	242	Once every 4 hours	Grab
> 36 hours ≤ 48 hours	*E. coli*	31648	# 100 mL	219	Once every 4 hours	Grab
> 48 hours ≤ 60 hours	*E. coli*	31648	# 100 mL	205	Once every 4 hours	Grab
> 60 hours ≤ 72 hours	*E. coli*	31648	# 100 mL	194	Once every 4 hours	Grab
> 72 hours ≤ 168 hours	*E. coli*	31648	# 100 mL	162	Once every 4 hours	Grab
> 168 hours ≤ 360 hours	*E. coli*	31648	# 100 mL	145	Once every 4 hours	Grab
> 360 hours	*E. coli*	31648	# 100 mL	126	Once every 4 hours	Grab

Parameters	Storet #	Units	Value	Monitoring Frequency	Sample Type
E. coli	31648	# 100 mL	Report monthly geomean	Calendar month	Grab
Are you in compliance with monthly *E. coli* limits? [c]	51487	NA	Yes (DMR Report = 1) No (DMR Report = 0)	Calendar month	NA
Duration of Discharge in Calendar Month	81381	Hours	Report	Calendar month	Calculated
Sampling Events in Calendar Month	51484	Number	Report	Calendar month	Calculated

Footnotes:

[a] *E. coli* monitoring and limits apply annually only during the recreational season (May 1 through Sept. 30).
[b] Limit for geomean of all *E. coli* samples analyzed during the calendar month
[c] Determined from duration of discharge during the calendar month and monthly geomean limit from list above.

Part III. CSO Outfall 205 Requirements

The discharge of treated combined wastewater from Outfall 205, final effluent from the Retention Treatment Basin at 64th and Dupont, is authorized and shall be monitored and limited as specified in Tables 6, 7, and 8 below. The combined wastewater discharged through CSO Outfall 205 shall receive treatment to include solids and floatables removal and disposal, primary treatment, and disinfection when required.

Monitoring shall be conducted by sampling after all treatment processes and prior to discharge to the Little Papillion Creek, unless an alternative or more specific monitoring point is specified by the NDEE.

A. Interim Requirements for CSO Outfall 205 – Effective on January 1, 2024

The Interim Requirements for CSO Outfall 205 listed below in Table 6 shall be in effect beginning on January 1, 2024. On and after January 1, 2026; the Final Requirements for CSO Outfall 205 in Table 7 and Table 8 of this permit shall be in effect.

Table 6: Interim Requirements for CSO Outfall 205

Parameters	Storet#	Units	Limit		Monitoring Frequency	Sample Type
			Value			
Flow Rate	50050	MGD	Report		Hourly	Metered
Total Flow	82220	MG	Report		Hourly	Metered
Duration of Discharge	81381	Hours	Report		Hourly	Metered
Total Suspended Solids	00530	mg/L	Report		Each event	Composite[a]
Biochemical Oxygen Demand	00310	mg/L	Report		Each event	Composite[a]
Total Residual Chlorine [b]	50060	mg/L	Report		Once every 4 hours	Grab
Parameters	**Storet #**	**Units**	**Limit**		**Monitoring Frequency**	**Sample Type**
			Geometric mean			
E. coli [c]	31648	# 100 mL	Report		Once every 4 hours	Grab
Parameters	**Storet #**	**Units**	**Limit**		**Monitoring Frequency**	**Sample Type**
			Minimum	**Maximum**		
pH	00400	SU	Report	Report	Once every 4 hours	Grab

Footnotes:

(a) Samples should be taken as individual grab samples as a flow weighted composite. One sample shall be reported per event, but as a composite of the whole discharge event. Sampling will be conducted according to standards set forth in 40 CFR Part 136.

(b) Monitoring for TRC is required only when chlorine producing chemical is added to the treatment system.

(c) *E. coli* monitoring applies annually only during the recreational season (May 1 through Sept. 30).

B. Final requirements for CSO Outfall 205 – Effective on January 1, 2026.

Table 7: Final Requirements for CSO Outfall 205

Parameters	Storet#	Units	Limit		Monitoring Frequency	Sample Type
			Value			
Flow Rate	50050	MGD	Report		Hourly	Metered
Total Flow	82220	MG	Report		Hourly	Metered
Duration of Discharge	81381	Hours	Report		Hourly	Metered
Total Suspended Solids	00530	mg/L	Report		Each event	Composite[a]
Biochemical Oxygen Demand	00310	mg/L	Report		Each event	Composite[a]
Parameters	**Storet#**	**Units**	**Monthly Average**	**Daily Maximum**	**Monitoring Frequency**	**Sample Type**
Total Residual Chlorine [b]	50060	mg/L	0.011	0.019	Once every 4 hours	Grab
		kg/day	14.5	25.1		
Parameters	**Storet #**	**Units**	**Limit**		**Monitoring Frequency**	**Sample Type**
			Minimum	**Maximum**		
pH	00400	SU	6.5	9.0	Once every 4 hours	Grab

Footnotes:

(a) Samples should be taken as individual grab samples as a flow weighted composite. One sample shall be reported per event, but as a composite of the whole discharge event. Sampling will be conducted according to standards set forth in 40 CFR Part 136.

(b) Monitoring for TRC is required only when chlorine producing chemical is added to the treatment system.

C. Final *E. coli* Requirements for CSO Outfall 205 – Effective on January 1, 2026.

The interim report requirement for *E. coli* for CSO Outfall 205 shall be applicable on January 1, 2024. Compliance with final *E. coli* limits for CSO Outfall 205 shall be effective on January 1, 2026. *E. coli* limits are dependent upon the duration of discharge from Outfall CSO 205 during a calendar month as set forth in Table 5 below.

One and only one *E. coli* sample shall be collected and analyzed once every 4 hours during discharge through Outfall CSO 205 until discharge through the outfall ceases. *E. coli* samples shall be representative of the monitored activity during the entire discharge event. Each discharge event is defined as 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

Table 8: Final *E. coli* Requirements for CSO Outfall 205 [a]

Total duration of discharge during the calendar month	Parameter	Storet #	Units	Monthly Geomean Limit[b]	Monitoring Frequency	Sample Type
≤ 4 hours	*E. coli*	31648	# 100 mL	1096	Once every 4 hours	Grab
> 4 hours ≤ 8 hours	*E. coli*	31648	# 100 mL	565	Once every 4 hours	Grab
> 8 hours ≤ 12 hours	*E. coli*	31648	# 100 mL	421	Once every 4 hours	Grab
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> 36 hours ≤ 48 hours	*E. coli*	31648	# 100 mL	219	Once every 4 hours	Grab
> 48 hours ≤ 60 hours	*E. coli*	31648	# 100 mL	205	Once every 4 hours	Grab
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> 360 hours	*E. coli*	31648	# 100 mL	126	Once every 4 hours	Grab
Parameters	**Storet #**	**Units**	**Value**		**Monitoring Frequency**	**Sample Type**
E. coli	31648	# 100 mL	Report monthly geomean		Calendar month	Grab
Are you in compliance with monthly *E. coli* limits? [c]	51487	NA	Yes (DMR Report = 1) No (DMR Report = 0)		Calendar month	NA
Duration of Discharge in Calendar Month	81381	Hours	Report		Calendar month	Calculated
Sampling Events in Calendar Month	51484	Number	Report		Calendar month	Calculated

Footnotes:
[a] *E. coli* monitoring and limits apply annually only during the recreational season (May 1 through Sept. 30).
[b] Limit for geomean of all *E. coli* samples analyzed during the calendar month
[c] Determined from duration of discharge during the calendar month and monthly geomean limit from list above.

Part IV. Nine Minimum Controls (NMC)

The City of Omaha shall submit documentation in the Annual Report (Part VIII) 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 Long Term Control Plan.

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 the Department.

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 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 NDEE.

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 shall 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 NDEE as soon as possible. (See Part IX).

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.

Part V. Long Term Control Plan (LTCP)

The City of Omaha submitted the complete LTCP to the NDEE on Sept. 25, 2009, in fulfillment of NPDES Permit requirements and the *CSO Control Policy*. The LTCP was subsequently approved by the NDEE on February 10, 2010. An Update to the Long Term Control Plan was submitted to the NDEE on Sept. 29, 2014, which was approved by the NDEE on Jan. 23, 2015. Minor modification to the Update to the Long Term Control Plan was approved by the NDEE on April 3, 2015.

The City of Omaha shall submit documentation and reports applicable to the LTCP in the Annual Report (Part VIII) according to the conditions and requirements specified below.

A. Characterization, Monitoring, and Modeling of the CSS

Protocols for characterization, monitoring, and modeling of the CSS is included in Section 2 of the LTCP *Baseline Conditions/Study Basins Descriptions*. This section of the LTCP addresses the response of the CSS to various precipitation events, identified the number, location, frequency, and characteristics of CSOs, and identified water quality impacts that resulted from CSOs.

The City of Omaha shall continue to characterize, monitor, and model the CSS as set forth in the LTCP. A narrative summary of changes to the characterization, monitoring, and modeling of the CSS as construction projects and sewer separation projects are implemented shall be included in the Annual Report.

B. Public Participation Plan

A public participation strategy that was used throughout the LTCP development and implementation is included in Section 5 of the LTCP *Public Participation Process*.

The City of Omaha shall continue to employ a public participation process throughout implementation of the LTCP and document public participation activities in the Annual Report.

C. Consideration of Sensitive Areas

The identification of sensitive areas to which the CSOs discharge is included in Section 2 of the LTCP *Baseline Conditions/Study Basins Description*. (See also Update to LTCP 2014) 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 NDEE in coordination with other State or Federal Agencies.

The City of Omaha shall include any changes to the status of previously identified sensitive areas in the Annual Report.

D. Evaluation of Alternatives

The process that the City of Omaha undertook to identify, screen, evaluate, and select CSO control technologies and alternatives for the Missouri River and the Papillion Creek watersheds is included in Section 3 of the LTCP *CSO Control Alternatives Evaluation.* (See also Update to LTCP 2014) This process resulted in a group of selected CSO controls that includes two retention treatment basins, upgrades to the MRWRRF, replacement force mains, a deep tunnel for storage, green solutions, and sewer separation projects which are anticipated to satisfy presumption approach of the *CSO Control Policy* and will not preclude meeting WQS.

Any significant changes or revisions to the controls set forth in the LTCP and a final projects list in the LTCP shall be submitted by March 31, 2021, to the NDEE for review and approval according to the Part IX (F) *Revisions to the Long Term Control Plan.*

E. Cost/Performance Considerations

An evaluation of the benefit cost ratios for CSO control levels and financial capability analysis is included in Section 3 *Control Alternative Evaluation* and Section 6 *Financial Capability Evaluation* of the LTCP (see also Update to LTCP 2014).

The City of Omaha shall submit a financial report to the NDEE by March 31, 2021; that sets forth a strategy to obtain sufficient revenue to fund the CSO program through at least the year 2024 that includes funding for the specific projects in the *Implementation Schedule,* Section 7 of the LTCP (see also Update to LTCP 2014).

F. Operational Plan

The City of Omaha submitted a preliminary wet weather operational strategy plan that provides an overview of the collective operation of the combined sewer overflow controls to be implemented by the City in Section 8 *Monitoring Program and CSO Wet Weather Operations Plan* of the LTCP.

The City of Omaha shall update the wet weather operational strategy plan as major CSO projects are constructed and are operationally complete. Significant updates to the wet weather operational strategy plan shall be included in the Annual Report.

G. Maximizing Treatment at the Existing POTW Treatment Facilities

An evaluation of the feasibility of expanding wet weather treatment at both the MRWRRF and the PCWRRF is included in Section 3.0 of the LTCP *CSO Control Alternatives Evaluation* (see also Update to LTCP 2014). Major projects are included in the LTCP during the next 5 years to maximize treatment of combined wastewater at the MRWRRF. Expansion of the treatment capacity of the PCWRRF is scheduled after this permit term.

The City of Omaha shall continue to evaluate opportunities to maximize treatment at the WRRFs as part of the adaptive management strategy for implementation of the LTCP. A summary of any new approaches identified to maximize treatment of combined wastewater at the WRRFs shall be included in the Annual Report.

H. Implementation Schedule

An implementation schedule that complies with the October 1, 2027 deadline for completing the CSO project is included in Section 7.0 of the LTCP *Implementation Schedule.* (See also Update to LTCP 2014) The construction and sewer separation projects will be implemented in phases some of which will be operationally complete by the end of this permit term.

The construction and sewer separation projects that will be designed, constructed, or operationally completed during the current permit term are included in Part VI *Compliance Schedule for Implementation*

of CSO Control Projects of this permit which is the enforceable mechanism for implementation of these controls. The City of Omaha shall include progress reports on implementation of the CSO construction and sewer separation projects set forth in the compliance schedule in the Annual Report.

I. Post-Construction Compliance Monitoring Program

An outline of a post-construction compliance monitoring program is included in Section 8 of the LTCP *Monitoring Program and CSO Wet Weather Operations Plan* plus a draft document *Water Quality Monitoring for the Implementation Monitoring Plan (IMP)* was included with CSO NPDES permit application received March 29, 2010.

1. In-stream monitoring data shall be conducted that is consistent with the *Implementation Monitoring Plan*. The data for this monitoring shall be included in the Annual Report.
2. Verification of sewer separation projects will be used to confirm that the desired level of separation was achieved. The City of Omaha may use various approaches to verify sewer separation including visual verification, water quality monitoring, or flow monitoring. The results of studies performed that support the deactivation of a CSO outfall shall be included in the Annual Report.

Part VI. Compliance Schedule for Implementation of CSO Control Projects

Upon issuance of this permit, the City of Omaha shall implement the compliance schedule below for construction projects set forth in the Long Term Control Plan (LTCP). This schedule may be modified in accordance with NDEE Title 119 and written notice from the NDEE. The City of Omaha shall include a yearly summary of construction activities, actions, and other measures applicable to this compliance schedule in the Annual Report (Part VII).

The following definitions shall apply to compliance schedule dates:

- Bid Year – The year when the bidding process for a specific project is started.
- Begin Final Design – The date when a Notice to Proceed is issued to a design consultant, or in the case of a design that is completed by City staff, the date when work is started by City staff.
- Commence Construction – When a Notice to Proceed is issued to the contractor.
- Complete Construction – When a major project or sewer separation project is substantially complete.
- Operationally Complete – When a major CSO project is substantially complete, is ready for its intended use, and has been made ready to operate by the City.

A. Schedule for Completion of the South Interceptor Force Main (SIFM) Project

June 30, 2018

On or before June 30, 2018; the City of Omaha shall complete the construction and evaluation of the SIFM project as listed below so that the project is operationally complete.

1. South Interceptor Force Main (SIFM)

   The City of Omaha shall replace the existing SIFM with a new SIFM which will extend from the valve vault south of I-480 to the MRWRRF and will serve Burt-Izard, Leavenworth, Riverview, and Missouri Avenue Lift Stations.

B. Schedule for Completion of the Missouri River Water Resource Recovery Facility Improvements

December 31, 2019

On or before December 31, 2019; the City of Omaha shall complete the construction and evaluation of the projects listed below so that these projects are operationally complete.

1. Missouri River Improvements

   The City of Omaha Missouri River Resource Rercovery Facility (WRRF) shall be modified as described

below so that the WRRF can provide secondary treatment of a flow rate of up to 64 MGD and primary treatment of an influent peak hour flow rate of 150 MGD during wet weather events by means of a new headworks facility, primary clarifiers, and a new disinfection basin.

a. Headwork Facility. A new headworks facility at the Missouri River WRRF shall be constructed with a sustained peak hour flow rate of 150 MGD by October 31, 2017

b. Primary Clarifier Improvements. A new primary clarifier splitter structure shall be constructed to split influent flow to the existing primary clarifiers and improvements will be made to the existing primary clarifiers by October 31, 2017

c. CSO 102 Disinfection. A chlorine contact basin shall be constructed to disinfect that portion of the effluent from the primary clarifiers that is discharged through CSO Outfall 102 rather than being treated by the WRRF's secondary treatment system. The system shall also include the capability to chlorinate the effluent from CSO 102 followed by dechlorination by December 31, 2019.

C. Schedule for Phase 2 Major Projects of the LTCP

December 31, 2023

On or before December 31, 2023; the City of Omaha shall complete the construction and evaluation of the project listed below so that this project is operationally complete.

Project

1. Retention Treatment Basin at CSO 205

   The City of Omaha shall construct a treatment structure approved by the Department at CSO 205, located at 64th and Dupont.

D. Schedule for Phase 3 Major Projects of the LTCP

June 30, 2018

On or before June 30, 2018; the City of Omaha shall submit a report to the NDEE detailing the alternative projects for the Minne Lusa Basin approved by the City which will achieve the requirements for the elimination or capture of 85% of the volume of combined sewage in the combined sewer system.

E. Schedule for Phase 4 Major Projects of the LTCP

December 31, 2023

On or before December 31, 2023; the City of Omaha shall begin final design of one of the projects listed below.

Projects

1. LV Jones Street to Leavenworth Diversion
2. Deep Tunnel Lift Station and Force Main
3. CSO Deep Tunnel and Drop Shafts
4. Deep Tunnel Grit Basin Facilities
5. Conveyance to Deep Tunnel Drop Shafts
6. CSO 119 Monroe Basin Storage Facility
7. MRWWTP Retention Treatment Basin
8. CSO 118 Ohern Basin Storage
9. Cole Creek CSO 204 – 63rd and Ames Storage Tank (if required)

F. Schedule for Phase 2 Sewer Separation Projects of the LTCP

September 30, 2017

On or before September 30, 2017; the City of Omaha shall complete the construction of the sewer separation projects listed below.

Projects

1. Bridge Street (CSO 103-1, 36th Street)
2. Burt-Izard (CSO 108-3, Nicholas Street Phase 1)
3. South Interceptor (CSO 117-1, Missouri Avenue Phase 1)
4. Minne Lusa (CSO108-3, JCB & Miami Phases 1 & 2 and Adams Park Improvements)

G. Schedule for Phase 3 Sewer Separation Projects of the LTCP

December 31, 2018

On or before December 31, 2018; the City of Omaha shall complete the construction of the sewer separation projects listed below.

Projects

1. Burt-Izard (CSO 108-3B, Nicholas Street Phase 2)
2. Cole Creek (CSO 204, Phase 1)
3. Ohern/Monroe (CSO119-6, Gilmore Avenue Phase 1 & 2)

H. Schedule for Phase 4 Sewer Separation Projects of the LTCP

December 31, 2016

On or before December 31, 2016; the City of Omaha shall commence bidding on one of the sewer separation projects listed below

Projects

1. Lake James to Fontenelle Park
2. Minne Lusa-105-15, Forrest Lawn Separation
3. South Interceptor-117-1, Missouri Avenue Phase 2
4. Burt –Izzard-108-3, Nicholas Street Phase 3
5. Papillion Creek South 207/208, 42nd & Q
6. Cole Creek 204, Phase 2
7. Burt-Izard-108-3, Nicholas & Webster Separation Phase 2

I. Schedule for Phase 5 Sewer Separation Projects of the LTCP

December 31, 2019

On or before December 31, 2019; the City of Omaha shall commence bidding on one of the sewer separation projects listed below.

Projects

1. Papillion Creek North-210-2 Inflow Reduction Project
2. Cole Creek 204, Phase 3
3. Cole Creek 203-1 Sewer Separation

4. Cole Creek 202, Phase 1
5. Cole Creek 202, Phase 2
6. Papillion Creek North-212-1, Separation
7. Papillion Creek North 210-1, Separation
8. Papillion Creek North 211-2, Inflow Reduction Project

J. Schedule for Phase 6 Sewer Separation Projects of the LTCP

December 31, 2021

On or before December 31, 2021; the City of Omaha shall commence bidding on one of the sewer separation projects listed below.

Projects

1. South Interceptor-110-1, Pierce Street
2. Ohern/Monore-119-5A, South Barrel Conversion
3. Ohern/Monroe-119-5B, South Barrel Conversion
4. Burt-Izard-108-8, 18th and Seward

Part VII. Statement of LTCP Compliance Objective

The compliance objective of the LTCP is that the City of Omaha shall eliminate or capture for treatment no less than 85% by volume of the combined sewage collected in the Omaha combined sewer system, during precipitation events on a system wide annual average basis. The capture for treatment or elimination of 85% of the combined sewage will be determined after completion of all LTCP projects and is not required during this permit term.

Part VIII. Annual Report

The City of Omaha shall submit an Annual Report to the NDEE within 90 days following each yearly (Oct 1 – Sept. 30) anniversary of this permit that provides a summary of the 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

Reports, documentation, dry weather overflow events, and evaluations as required for each of the *Nine Minimum Controls* in Part IV of this permit.

B. Reports and Documentation Applicable to the Long Term Control Plan

Reports and documentation required in the *Long Term Control Plan* as set forth in Part V of this permit.

C. Compliance Schedule for Implementation of CSO Control Projects

A summary of construction activities, actions, and other measures completed according to the *Compliance Schedule for Implementation of CSO Control Projects* set forth in Part VI of this permit.

D. CSO Outfall 102 and 205 Monitoring Data

A summary of monitoring data from Outfall CSO 102 and Outfall CSO 205.

E. Performance Report

Report the number of times each CSO outfall has an overflow and an evaluation as to whether the controls are achieving their design intent.

Provide documentation in the Annual Report that demonstrates that each CSO overflow occurrence was the result of a wet weather event.

Once in the term of the permit, provide the percent by volume of the combined sewage collected in the CSS during precipitation events on a system-wide annual average basis that is eliminated or captured for treatment.

F. In-stream Monitoring Data

A summary of in-stream monitoring data consistent with the *Implementation Monitoring Plan* objectives to include monitoring station identification, stream identification, the list of parameters along with the monitoring results.

G. 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, or other indicators or improvements of receiving water quality.

Part IX. Other Conditions and Requirements

A. Narrative Requirements Applicable to the Long Term Control Plan

The selected CSO controls shall be implemented, operated, and maintained as set forth in the Long Term Control Plan submitted to the NDEE on September 25, 2009 and updated September 29, 2014.

B. 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 NDEE 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.

C. Reopener Clause

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

D. Notification and Approval

Approval from the NDEE 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.

E. Immediate Reporting Requirements

The City of Omaha shall report within 24 hours to the NDEE 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 NDEE 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.

F. Revision of the Long Term Control Plan (LTCP)

The LTCP may require revision to reflect new information, new technology, or other changes that become evident during the LTCP implementation process. Proposed significant revisions to the LTCP shall be submitted by March 31, 2021, for review and approval by the NDEE. Significant revision to the LTCP generally means modification of the major CSO projects and milestone dates in Chapter 7, *Implementation Schedule,* of the LTCP.

G. Biosolids Disposal

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

H. Flow Variable Protocol for TRC at CSO 102 and MRWRRF 001

The City of Omaha shall develop a flow variable protocol for determining TRC limits at outfalls CSO102 and MRWRRF 001 by Oct. 1, 2018 for review and approval by NDEE.

I. Electronic Submission of Discharge Monitoring Reports

The National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule requires electronic reporting of NPDES information rather than the previously required paper based reports from the permitted facilities. To comply with the federal rule, permittees are required to submit DMRs electronically using the EPA NetDMR tool (Appendix A of 40 CFR part 127). Permittees may seek an electronic reporting waiver by submitting a letter to the department with a brief written statement regarding the basis for needing such a temporary waiver. The department will either approve or deny this electronic reporting waiver request. The duration of a temporary waiver may not exceed 5 years, which is the normal period for an NPDES permit term.

The permittee shall enter required DMRs monthly. Data for which only a "value" is to be reported shall report the monthly maximum value on the NetDMR tool. All values for each discharge shall be reported in the CSO Annual Report.

Phase II requirements for the electronic submission of Annual Reports should begin no later than December 21, 2020.

Table of Contents for Appendix A

Standard Conditions that Apply to NPDES and NPP Permits

Appendix A

Conditions Applicable to all NPDES Permits

The following conditions apply to all NPDES permits:

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, (Reissue 1999) and NDEE Title 115, Chapter 4.

2. **Duty to Comply**

   a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Federal Clean Water Act and the Applicable State Statutes and Regulations and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

   b. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

3. **Violations of this Permit**

   a. Any person who violates this permit may be subject to penalties and sanctions as provided by the Clean Water Act.

   b. Any person who violates this permit may be subject to penalties and sanctions as provided by the Nebraska Environmental Protection Act.

4. **Duty to Reapply**

   If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

5. **Need to Halt or Reduce Activity not a Defense**

   It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6. **Duty to Mitigate**

   The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

7. **Proper Operation and Maintenance**

   The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective performance based on designed facility removals, effective management, adequate operator staffing and training, adequate process controls, adequate funding that reflects proper user fee schedules, adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary

facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

8. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

9. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

10. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Dirccor 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 Director upon request, copies of records required to be kept by this permit.

11. Inspection and Entry

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

12. Monitoring and Records

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

c. Records of monitoring information shall include:

i) The date(s), exact place, time and methods of sampling or measurements;

ii) The individual(s) who performed the sampling or measurements;

iii) The date(s) analyses were performed;

iv) The individual(s) who performed the analyses;

v) The analytical techniques or methods used; and

vi) The results of such analyses.

d. Monitoring must be conducted according to test procedures approved under NDEE Title 119, Chapter 27 002 unless another method is required under 40 CFR Subchapters N – Effluent Guidelines and Standards Parts 425 to 471 or O – Sewer Sludge Parts 501 and 503.

e. Falsifies, Tampers, or Knowingly Renders Inaccurate

i) On actions brought by EPA, the Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction: be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 ycars, or both.

ii) On action brought by the State, Thc Ncbraska Environmental Protection Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished pursuant to Neb. Stat. §81-1508.01.

13. Signatory requirements

a. All applications, reports, or information submitted to the Director shall be signed and certified.

i) All permit applications shall be signed as follows:

(a) For a corporation

(i) By a responsible corporate officer: For the purpose of this section, a responsible corporate officer means:

(a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or

(b) The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(b) For a partnership or sole proprietorship

(i) By a general partner or the proprietor.

(c) For a municipality, State, Federal, or other public agency

(i) By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(a) The chief executive officer of the agency, or

(b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

b. Reports and Other Information

i) All reports required by permits, and other information requested by the Director shall be signed by a person described in this section [paragraphs13. a. i) (a),(b), or (c)], or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(a) The authorization is made in writing by a person described in paragraphs 13. a. i) (a),(b), or (c);

(b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (a duly authorized representative may thus be either a named individual or any individual occupying a named position) and;

(c) The written authorization is submitted to the Director.

c. Changes to Authorization

If an authorization of paragraphs 13. a. i) (a),(b), or (c) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification

All applications, reports and information submitted as a requirement of this permit shall contain the following certification statement:

i) 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.

e. False Statement, Representation, or Certification

i) The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

ii) The Nebraska Environmental Protection Act provides criminal penalties and sanctions for false statement, representation, or certification in any application, label, manifest, record, report, plan, or other document required to be filed or maintained by the Environmental Protection Act, the Integrated Solid Waste Management Act, the Livestock Waste Management Act or the rules or regulations adopted and promulgated pursuant to such acts.

14. Reporting Requirements

a. Planned Changes

i) The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(a) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in NDEE Title 119, Chapter 4 and 8.

(b) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under NDEE Title 119, Chapter 15.

(c) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions

that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. The sludge program is not delegated to the State so notification to the EPA Regional Administrator in addition to the State is required.

b. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

c. Transfers

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under NDEE Title 119, Chapter 24 in some cases, modification or revocation and reissuance is mandatory.

d. Monitoring Reports

i) Monitoring results shall be reported at the intervals specified elsewhere in this permit.

ii) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director.

iii) 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	**DMR Reporting Deadlines**
January - March	April 28
April - June	July 28
July - September	October 28
October - December	January 28

iv) For reporting results of monitoring of sludge use or disposal practices

v) Additional reports may be required by the EPA Regional Administrator.

vi) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved in NDEE Title 119, Chapter 27 002, or another method required for an industry-specific waste stream under 40 CFR Subchapters N – Effluent Guidelines and Standards Parts 425 to 471 and O – Sewer Sludge Parts 501 and 503, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director or EPA Regional Administrator.

vii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

e. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

f. Twenty-four Hour Reporting

i) The permittee shall report any noncompliance which may endanger human health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(a) Any unanticipated bypass which exceeds any effluent limitation in this permit.

(b) Any upset which exceeds any effluent limitation in this permit.

(c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours.

g. The Director may waive the written report on a case-by-case basis for reports under section 14. f. ii) (a), (b) and (c) if the oral report has been received within 24 hours.

h. Other noncompliance

The permittee shall report all instances of noncompliance not reported under paragraphs d., e., and f. of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph f. of this section.

i. Other information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

j. Noncompliance Report Forms

i) Noncompliance Report Forms are available from the Department and shall be submitted with or as the written noncompliance report.

ii) 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.

15. Bypass

a. Definitions

i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass Not Exceeding Limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 15.c. and d. of this section.

c. Notice

i) Anticipated Bypass

If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

ii) Unanticipated Bypass

The permittee shall submit notice of an unanticipated bypass as required in paragraph 14.f. of this section (24-hour notice).

d. Prohibition of Bypass

Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

iii) The permittee submitted notices as required under paragraph 15.c. of this section.

e. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 15.d.

16. Upset

a. Definition

Upset means 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. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 16.c. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions Necessary for a Demonstration of Upset.

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i) An upset occurred and that the permittee can identify the cause(s) of the upset;

ii) The permitted facility was at the time being properly operated;

iii) The permittee submitted notice of the upset as required in paragraph 14.f. ii) (a), of this section (24-hour notice).

iv) The permittee complied with any remedial measures required under paragraph (d) of this section.

d. Burden of Proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

17. 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.

18. Severability

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

19. Other Conditions that Apply to NPDES and NPP Permits

a. Land Application of Wastewater Effluent

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

The Wastewater Section of the Department must be notified in writing if the permittee chooses to land apply effluent.

b. Toxic Pollutants

The permittee shall not discharge pollutants to waters of the state that cause a violation of the standards established in NDEE 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.

c. 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 NDEE 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 Environment and Energy at telephone numbers (402) 471-2186 or (877) 253-2603 (toll free). When NDEE cannot be contacted, the permittee shall report to the Nebraska State Patrol for referral to the NDEE Immediate 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.

d. Removed Substances

i) 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 Environment and Energy.

(a) The disposal of nonhazardous industrial sludges shall conform to the standards established in or to the regulations established pursuant to 40 CFR Part 257.

(b) The disposal of sludge shall conform to the standards established in or to the regulations established pursuant to 40 CFR Part 503.

(c) If solids are disposed of in a licensed sanitary landfill, the disposal of solids shall conform to the standards established in NDEE Title 132.

ii) 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.

iii) This permit may be modified or revoked and reissued to incorporate regulatory limitations established pursuant to 40 CFR Part 503.

e. Representative Sampling

i) 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.

ii) Composite sampling shall be conducted in one of the following manners;

(a) Continuous discharge - a minimum of one discrete aliquot collected every three hours,

(b) Less than 24 hours - a minimum of hourly discrete aliquots or a continuously drawn sample shall be collected during the discharge, or

(c) Batch discharge - a minimum of three discrete aliquots shall be collected during each discharge.

(d) 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

(e) Where flow proportional sampling is infeasible or non-representative of the pollutant loadings, the Department may approve the use of time composite samples.

(f) Grab samples shall consist of a single aliquot collected over a time period not exceeding 15 minutes.

iii) All sample preservation techniques shall conform to the methods adopted in NDEE Title 119, Chapter 21 006 unless:

(a) In the case of sludge samples, alternative techniques are specified in 40 CFR Part 503, or

(b) Other procedures are specified in this permit.

iv) 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 the accuracy of the measurements. The accepted capability shall be consistent with that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of +/- 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 Measurement Manual," U.S. Department of the Interior, Bureau of Reclamation, Third Edition, Revised Reprint, 2001.
(Available online at http://www.usbr.gov/tsc/techreferences/mands/wmm/index.htm)

(b) "NPDES Compliance Flow Measurement Manual, "U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-77, September 1981, 147 pp.
(Available online at http://www.epa.gov/nscep, and enter 'NPDES Compliance Flow Measurement Manual, Publication MCD-77' in the search box)

f. Changes of Loadings to Publicly Owned Treatment Works (POTWs)

All POTWs must provide adequate notice to the Director of the following:

i) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to NDEE Title 119, Chapter 26, if it were directly discharging those pollutants;

ii) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

iii) For purposes of this paragraph, adequate notice shall include information on the quality and quantity of effluent introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

20. 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.

Annually: Once every calendar year.

Authorized Representative: Individual or position designated the authorization to submit reports, notifications, or other information requested by the Director on behalf of the Owner under the circumstances that the authorization is made in writing by the Owner, the authorization specifies the individual or position who is duly authorized, and the authorization is submitted to the Director.

Bimonthly: Once every other month.

Biosolids: Sewage sludge that is used or disposed through land application, surface disposal, incineration, or disposal in a municipal solid waste landfill.

Biweekly: Once every other week.

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

Certifying Official: See Section 13, Standard Conditions above.

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 Environment and Energy.

Director: The Director of the Nebraska Department of Environment and Energy.

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

Operator: A person (often the general contractor) designated by the owner who has day to day operational control and/or the ability to modify project plans and specifications related to the facility.

Owner: A person or party possessing the title of the land on which the activities will occur; or if the activity is for a lease holder, the party or individual identified as the lease holder; or the contracting government agency responsible for the activity.

Outfall: A discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, or container from which pollutants are or may be discharged into Waters of the State.

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 User (SIU): All industrial users subject to Categorical Pretreatment Standards or any industrial user that, unless exempted under Chapter 1, Section 105 of NDEE 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.

Sludge: Any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect.

30-Day Average: 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.

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.)

Waters of the State: All waters within the jurisdiction of this state including all streams, lakes, ponds, impounding reservoirs, marshes, wetlands, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, situated wholly or partly within or bordering upon the state.

Weekly Average: 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.

21. 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

NDEE: Nebraska Department of Environment and Energy

NDEE Title 115: Rules of Practice and Procedure

NDEE Title 117: Nebraska Surface Water Quality Standards

NDEE Title 118: Ground Water Quality Standards and Use Classification

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

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

NDEE 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

Nebraska Department of Environment and Energy
NPDES Permits and Compliance Section

1200 'N' Street, Suite 400, The Atrium
PO Box 98922
Lincoln, NE 68509-8922
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Modification Fact Sheet
City of Omaha Combined Sewer Overflow
Omaha, Nebraska
NPDES NE0133680 / NDEE ID 999428

Table of Contents

A. Proposed Action - Tentative Determination

On the basis of a preliminary staff review, the Nebraska Department of Environment and Energy has made a tentative determination to modify the NPDES Permit NE0133680 to the City of Omaha for Combined Sewer Overflows (CSO) based on the requirements and conditions set forth in the draft permit. The Department proposes to modify the permit during the five year term from October 1, 2015 through September 30, 2020.

B. Applicant and Facility Information

Applicant	City of Omaha
Address	1819 Farnam Street, Suite 707, Omaha, Nebraska 68183
NDEE ID	999428
Other Information:	The City of Omaha wastewater treatment service and collection system is a publicly owned utility (SIC Number 4952), which receives and treats domestic wastewater. The collection system in some sections of the City of Omaha is combined so that both sanitary wastewater and stormwater runoff share a common conveyance and outfall.

C. Summary of the Proposed Changes Between Draft Permit and Existing Permit

Summary of the proposed draft permit requirements are presented below. See the attached draft permit for specific information on the permit conditions.

1. Part II CSO 102 Requirements: The final requirements for Outfall 102 shall be effective on January 1, 2023, rather than January 1, 2022.
2. Part V. Long Term Control Plan, D. Evaluation of Alternatives: The October 1, 2019, date is changed to March 31, 2021.
3. Part V. Long Term Control Plan, E. Cost/Performance Considerations: The March 1, 2020, date is changed to March 31, 2021.
4. Part VI. Compliance Schedule for Implementation of CSO Control Projects, E. Schedule for Phase 4 Major Projects of the LTCP: The due date for beginning the final design of one of the projects is changed from December 31, 2019, to December 31, 2023.
5. Part VI. Compliance Schedule for Implementation of CSO Control Projects, J. Schedule for Phase 6 Sewer Separation Projects of the LTCP: The due date for bidding on one of the projects is changed from June 30, 2020, to December 31, 2021.
6. All references of wastewater treatment facility (WWTF) are changed to water resource recovery facility (WRRF) for both Missouri River and Papillion Creek.

D. Receiving Streams

City of Omaha CSO outfalls exist on the Missouri River, Big Papillion Creek, Little Papillion Creek, Blood Creek, and Cole Creek in the Missouri Tributaries River Basin. Segment, basin, and use designation are set forth in NDEE Title 117, Chapter 5, *Nebraska Surface Water Quality Standards*. Impairments and pollutants are from the NDEE *2018 Water Quality Integrated Report*.

1. Receiving Stream for the CSO Missouri River

Basin / Segment MT1-10000 in the Missouri Tributaries River Basin

Water Quality Usage Designations for the Missouri River

State Resource Water	No
Recreation	Yes
Aquatic Life	Warmwater A
Public Drinking Water Supply	Yes
Agriculture Water Supply	A
Industrial Water Supply	Yes
Aesthetics	Yes
Key Species	*Lake sturgeon, Pallid sturgeon, Sturgeon chub, Paddlefish, Blue catfish, Channel catfish, Flathead catfish*

Impairments and Parameters of Concern for the Missouri River

Impairments (Causes)	Public Drinking Water Supply (Sulfate), Recreation (*E. coli*)
TMDL	None
Comments/Actions	Fish consumption assessment completed

2. Receiving Stream for the CSO Big Papillion Creek

Basin / Segment MT1-10100 in the Missouri Tributaries River Basin

Water Quality Usage Designations for Big Papillion Creek

State Resource Water	No
Recreation	Yes
Aquatic Life	Warmwater A
Public Drinking Water Supply	No
Agriculture Water Supply	A
Industrial Water Supply	No
Aesthetics	Yes
Key Species	*Channel catfish*

Impairments and Parameters of Concern for Big Papillion Creek

Impairments (Causes)	Recreation (*E. coli*)
TMDL	*E. coli*
Comments/Actions	*E.* coli TMDL approved 9/09, Fish consumption assessment completed

3. **Receiving Stream for the CSO** Big Papillion Creek

Basin / Segment MT1-10110 in the Missouri Tributaries River Basin

Water Quality Usage Designations for Big Papillion Creek

State Resource Water	No
Recreation	Yes
Aquatic Life	Warmwater A
Public Drinking Water Supply	No
Agriculture Water Supply	A
Industrial Water Supply	No
Aesthetics	Yes
Key Species	None

Impairments and Parameters of Concern for Big Papillion Creek

Impairments (Causes)	Recreation (*E. coli*)
TMDL	*E. coli*
Comments/Actions	*E.* coli TMDL approved 9/09, Fish consumption assessment completed

4. **Receiving Stream for the CSO** Big Papillion Creek

Basin / Segment MT1-10120 in the Missouri Tributaries River Basin

Water Quality Usage Designations for Big Papillion Creek

State Resource Water	No
Recreation	Yes
Aquatic Life	Warmwater A
Public Drinking Water Supply	No
Agriculture Water Supply	A
Industrial Water Supply	No
Aesthetics	Yes
Key Species	None

Impairments and Parameters of Concern for Big Papillion Creek

Impairments (Causes)	Recreation (*E. coli*)
TMDL	*E. coli*
Comments/Actions	*E.* coli TMDL approved 9/09, Aquatic community assessment completed

5. Receiving Stream for the CSO Little Papillion Creek

Basin / Segment MT1-10111 in the Missouri Tributaries River Basin

Water Quality Usage Designations for Little Papillion Creek

State Resource Water	No
Recreation	Yes
Aquatic Life	Warmwater B
Public Drinking Water Supply	No
Agriculture Water Supply	A
Industrial Water Supply	No
Aesthetics	Yes
Key Species	None

Impairments and Parameters of Concern for Little Papillion Creek

Impairments (Causes)	Recreation (*E. coli*)
TMDL	*E. coli*
Comments/Actions	*E.* coli TMDL approved 9/09

6. Receiving Stream for the CSO Little Papillion Creek

Basin / Segment MT1-10112 in the Missouri Tributaries River Basin

Water Quality Usage Designations for Little Papillion Creek

State Resource Water	No
Recreation	No
Aquatic Life	Warmwater B
Public Drinking Water Supply	No
Agriculture Water Supply	A
Industrial Water Supply	No
Aesthetics	Yes
Key Species	None

Impairments and Parameters of Concern for Little Papillion Creek

Impairments (Causes)	None
TMDL	None
Comments/Actions	None

7. Receiving Stream for the CSO Cole Creek

Basin / Segment MT1-10111.1 in the Missouri Tributaries River Basin

Water Quality Usage Designations for Cole Creek

State Resource Water	No
Recreation	Yes
Aquatic Life	Warmwater B
Public Drinking Water Supply	No
Agriculture Water Supply	A
Industrial Water Supply	No
Aesthetics	Yes
Key Species	None

Impairments and Parameters of Concern for Cole Creek

Impairments (Causes)	Recreation (*E. coli*), Aquatic Life – Dissolved Oxygen (Unknown)
TMDL	*E. coli*
Comments/Actions	*E.* coli TMDL approved 9/09

8. Receiving Stream for the CSO Blood Creek

Basin / Segment Undesignated tributary to Big Papillion Creek, Segment MT1-10110 in the Missouri Tributaries River Basin

Water Quality Usage Designations for Big Papillion Creek

State Resource Water	No
Recreation	Yes
Aquatic Life	Warmwater A
Public Drinking Water Supply	No
Agriculture Water Supply	A
Industrial Water Supply	No
Aesthetics	Yes
Key Species	None

Impairments and Parameters of Concern for Big Papillion Creek

Impairments (Causes)	Recreation (*E. coli*)
TMDL	*E. coli*
Comments/Actions	*E.* coli TMDL approved 9/09, Fish consumption assessment completed

E. Antidegradation Review

An antidegradation review was performed for purposes of developing the permit pursuant to 40 CFR 131.12. The results of the evaluation indicate that the receiving streams listed in Part D of this permit in the Missouri River and Papillion Creek drainage basins have habitat for aquatic life. The designated uses of the receiving streams were considered during permit development. The implementation projects in the draft permit are protective of the Clean Water Act § 101(a)(2) fishable/swimmable goals and will improve the existing water quality in the receiving streams by reducing the volume of combined sewer overflows and by disinfection of combined wastewater discharged from Outfalls CSO 102 and CSO 205.

F. Overview of EPA CSO Control Policy

1. Regulatory Basis

A National Pollutant Discharge Elimination System (NPDES) permit is required for CSOs since these releases are discharges from point sources that are regulated under the Clean Water Act (CWA). Federal regulations concerning the NPDES program are set forth in 40 CFR Part 122 and State of Nebraska Regulations are set forth in NDEE Titles 117 and 119. Section 402 of the Federal Water Pollution Control Act (33 U.S.C. 1342) was amended on December 15, 2000 to include the following Section:

> (q) Combined Sewer Overflow.
>
> (1) REQUIREMENTS FOR PERMITS, ORDERS, AND DECREES - Each permit, order, or decree issued pursuant to this Act after the date of enactment of this subsection for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Control Policy signed by the Administrator on April 11, 1994.

Based on this amendment to the CWA, the draft permit for the City of Omaha CSO NPDES Permit will conform to the *Combined Sewer Overflow Control Policy* of April 11, 1994.

2. Principles and Objectives of CSO Control Policy

To address the challenges of CSO discharges, EPA issued a *National Combined Sewer Overflow Control Strategy* on August 10, 1989 (54 FR 37370). This document reaffirmed that CSOs are point source discharges subject to the NPDES permit requirement to CWA requirements. The document set forth three objectives:

- Ensure that if CSOs occur, they are only as a result of wet weather.
- Bring all wet weather CSO discharge points into compliance with the technology based and water quality based requirements of the CWA.
- Minimize the impacts of CSOs on water quality, aquatic biota, and human health.

The *Combined Sewer Overflow (CSO) Control Policy* Notice of 1994 reiterates the objectives of the 1989 Strategy and further defines requirements. The requirements and conditions in this draft permit are based on *CSO Control Policy* of 1994. The intent of *CSO Control Policy* is to provide guidance to permittees with CSOs, NPDES permitting and enforcement authorities, and State water quality standards (WQS) authorities. The Policy also provides guidance to ensure coordination among the appropriate parties in planning, selecting, designing, and implementing CSO management practices and controls to meet the requirements of the CWA and to ensure public involvement during the decision making process. Four key principles of the Policy ensure that CSO controls are cost effective and meet the objectives of the CWA. These key principles are:

- Providing clear levels of control that would be presumed to meet appropriate health and environmental objectives.
- Providing sufficient flexibility to municipalities to consider the site-specific nature of CSOs and to determine the most cost effective means of reducing pollutants and meeting CWA objectives and requirements.

- Allowing a phased approach to implementation of CSO controls considering a community's financial capability.
- Review and revision as appropriate, of water quality standards and their implementation procedures when developing CSO control plans to reflect the site-specific wet weather impacts of CSOs.

The *CSO Control Policy* also defines expectations for permittees, State WQS authorities, and NPDES permitting and enforcement authorities. These expectations include the following:

- Permittees should immediately implement the nine minimum controls (NMC), which are technology-based actions or measures designed to reduce CSOs and their effects on receiving water quality as soon as practicable but no later than January 1, 1997.
- Permittees should give priority to environmentally sensitive areas.
- Permittees should develop long-term control plans (LTCP) for controlling CSOs. A permittee may use one of two approaches: 1) demonstrate that its plan is adequate to meet the water quality-based requirements of the CWA ("demonstration approach"), or 2) implement a minimum level of treatment (e.g., primary clarification of at least 85 percent of the collected combined sewage flows) that is presumed to meet the water quality based requirements of the CWA, unless data indicate otherwise ("presumption approach").
- WQS authorities should review and revise, as appropriate, State Water quality Standards (WQS) during the CSO long-term planning process.
- NPDES permitting authorities should consider the financial capability of permittees when reviewing CSO control plans.

The control of CSOs has proven to be extremely complex due to the difficulty in quantifying CSO impacts on receiving water quality and the site-specific variability in volume, frequency, and characteristics of CSOs. Also, the financial consideration to control CSOs can be significant for most communities. A phased approach is implemented with the ultimate goal of achieving compliance with the technology and water quality requirements of the CWA.

G. Review of the City of Omaha Combined Sewer System

1. Introduction

A combined sewer system (CSS) is a collection system owned by a state or municipality which conveys domestic and industrial wastewater plus storm water through a single pipe system to a Publicly Owned Treatment Works (POTW). A combined sewer overflow (CSO) is the discharge from a CSS, during a wet weather event, at a point prior to the POTW. CSOs are point sources subject to NPDES permit requirements including technology based and water quality based requirements of the Clean Water Act (CWA). Overflow discharges from combined sewer systems during rain events result in the release to the receiving waters of untreated sanitary sewage plus pretreated industrial wastewater and stormwater runoff. Therefore it can be expected that combined sewer overflows will contain pollutants that are present in domestic and industrial wastewater as well as those present in urban stormwater runoff. Many different types of contaminants may be present which may include pathogens, oxygen-demanding pollutants, suspended solids, nutrients, toxics and floatable matter. Therefore, CSOs can cause a variety of adverse impacts on the physical characteristics of surface water, impair the viability of aquatic habitats, and pose a potential threat to drinking water supplies. CSOs have been shown to be a major contributor to use impairment and aesthetic degradation of many receiving waters. These discharges have the potential to have an adverse effect on the receiving water quality and degrade the beneficial uses of the receiving waters.

2. General Description of the Omaha Combined Sewer System (CSS)

The City of Omaha treats domestic wastewater in three separate treatment works two of which, the Missouri River Water Resource Recovery Facility (MRWRRF) and the Papillion Creek Water Resource Recovery Facility (PCWRRF), receive combined wastewater. The City's wastewater treatment system

encompasses a total service area of 333 square miles and a population base of 650,000. The wastewater collection and interceptor system within the total service area, owned and operated by the City, consist of approximately 2,000 linear miles of pipeline. The City's CSS service area covers approximately 45 square miles, containing a 790 mile wastewater collection system with approximately 480 miles of combined conveyance.

Combined sewer systems are designed to carry sanitary sewage and storm water in a single wastewater collection system. During dry weather, all of the flow from the CSS is directed to the wastewater treatment facility. In periods of rainfall or snowmelt, the total flow may exceed the capacity of the combined sewer system or the treatment facilities. When this occurs the CSS is designed to overflow directly to the receiving waters. These overflow outfalls are referred to as Combined Sewer Overflows (CSOs).

There are currently 26 CSOs existing in the Omaha Combined Sewer System which includes an approved CSO related bypass discharge from the primary clarifiers at the Missouri River WRRF. There are currently 16 CSOs overflowing to the Missouri River and 10 CSOs overflowing to tributaries of Papillion Creek. The location of these CSO outfalls and the water body to which they discharge is identified in Part I of the permit. The area of the City served by the 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, and Cole Creek.

3. Historical CSO Corrective Action by the City of Omaha

Prior to the October 1, 2002 issuance of the CSO Permit the City began a program to evaluate and control CSO events thereby improving water quality conditions in the receiving waters for the discharges from the City combined sewer collection system and WRRs. According to the City, the program activities included, but are not limited to;

- Between 1990 and 2002, the City spent $36.85 million on sewer separation projects, of which $10.5 million was spent on projects that directly reduced the number or magnitude of the CSOs or improved their quality. The sewer separation program is ongoing.
- Installation of mechanical bar screens at CSO 108 - Burt Izard and for the combined overflows from CSO 107 - Grace Street and CSO 106 - North Interceptor. These screens remove floatables and other large debris from the overflows. The cost of these screens was $6.4 million.

Since the 2002 issuance of the first CSO Permit, the City has complied with CSO Permit control activity requirements. The projects completed between 2002 and 2007 have included the following tasks.

- The City has eliminated four CSO discharge outfalls. These are CSO 116 - Homer Street at a cost of $2.80 million, CSO 209 - 44th and Harrison Street at a cost of $650,000, CSO 206 (43rd and S) at a cost of $921,860 and CSO 104 (Mormon Street) at a cost of $7.62 million.
- The City has spent $33.1 million on sewer separation projects of which $12.4 million was spent on projects that directly reduced the number or magnitude of the CSOs or improved the quality of discharge.
- As part of the ongoing sewer separation projects noted in the items above, the City has installed multiple storm water detention facilities. These facilities can result in a reduction in the CSOs as well as an improvement of the water quality of the overflows. Continued maintenance of these facilities is estimated at $1.4 million per year.
- The City has developed a model of the combined sewer system that is being used to evaluate alternatives for CSO controls. The cost of model development, flow monitoring, and technical assistance for development of submittals to NDEE is approximately $990,000.
- The City hired a program manager to assist in the development of the LTCP. As part of this program, consulting firms have been hired to develop specific basin plans for control of the CSOs. The cost for

development of the LTCP was $24.7 million.

Part IV of the 2002 CSO Permit required through specified CSO control activities that the City reduce the impacts of CSO discharges. CSO control activities as set forth in the CSO Permit include five primary components:

- implementation of the Nine Minimum Controls,
- submission of documentation to show that the Nine Minimum Controls Plan have been implemented,
- a schedule for the development of a LTCP,
- baseline CSO monitoring requirements, and
- annual report requirements

The City has developed and implemented the Nine Minimum Controls according to Permit requirements and submitted documentation in the Annual Reports.

In 2002, the City began development and implementation of the LTCP that included;

- The City submitted a Public Participation Plan on October 1, 2004.
- The City submitted a document that summarizes sensitive areas that will be considered in CSO LTCP activities in October 2006.
- The City submitted plans for Characterization, Monitoring and Modeling of the City's Combined Sewer System and Maximizing Flow to the Existing WRRFs in October 2005.
- The City submitted a plan for Evaluation of Alternatives in October 2004.
- The City submitted plans for Cost/Performance Considerations, development of Operational Plans, development of an Implementation Schedule and a Post Construction Compliance Program in October 2006.
- In connection with implementation of the CSO control activities, the City has conducted water quality studies of the Papillion Creek and Missouri River watershed in areas relevant to CSO controls. These studies were conducted by the City's consultant in cooperation with the United States Geological Survey ("USGS") under a $1,270,000 contract with the USGS.

The NDEE issued a letter to the City of Omaha requiring the submission of a Substantively Complete Long Term Control Plan (SCLTCP) by October 2007 and a final LTCP by October 2009. The deadline for the SCLTCP was successfully met by the City by the submission of the SCLTCP on October 1, 2007.

The City hired a Program Management (PMT) Team in January 2006 to develop the LTCP as well as a team of consultants to evaluate the combined sewer system on a basin specific basis. Teams include the Basin Consultants, the program Management Team, the City of Omaha, the USGS, a Financial Advisor, and a Public Participation Facilitator.

A protocol was developed by the City of Omaha to lay out a systematic procedure for developing, screening, and evaluating technologies and alternatives that can be consistently applied across all the basins. This includes the evaluation of basin, multi-basin, watershed, and system wide alternatives, from which the comprehensive LTCP was developed.

The CSO Control Policy recommends an enforceable mechanism such as a Consent Order for the development and implementation of the LTCP. The NDEE finalized a Consent Order with the City of Omaha on August 8, 2007 that established an enforcement mechanism that will ensure specific dates are met during the implementation of the LTCP. The Consent Order established the following requirements.

- The City shall submit a final LTCP to the NDEE for review and approval by October 1, 2009.
- The City shall complete implementation of the LTCP by October 1, 2024. (amended to 2037)
- The City shall submit yearly statue reports on the implementation of the LTCP to the NDEE.

The second CSO permit was reissued to the City of Omaha on October 1, 2007 for a term of three years and required continued implementation of the Nine Minimum Controls and the development of a final LTCP by October 1, 2009. The Final LTCP was submitted to the NDEE on September 25, 2009 that presented a schedule for implementation of selected controls to be completed by the October 2024 deadline (amended to October, 2037). The LTCP fulfilled the NPDES permit requirements and is consistent with the EPA CSO Control Policy and the NDEE Administrative Consent Order (Case No. 2710).

The third CSO permit was issued to the City of Omaha on Oct. 1, 2010 that contained a compliance schedule for implementation of selected CSO controls. Completion of these projects has resulted in a significant reduction in bacterial loading to the Missouri River. An Update to the Long Term Control Plan was submitted to the NDEE on Sept. 29, 2014, which was approved by the NDEE on Jan. 23, 2015.

Implementation of the LTCP, construction work performed on CSO projects, and a problem with the South Interceptor and Force Main project necessitated the City of Omaha to request a modification of the CSO permit and LTCP. The fourth CSO permit was issued to the City of Omaha on Oct. 1, 2015 that contained a compliance schedule for implementation of selected CSO controls. Afterward, the City submitted a modification request that was received by the NDEE on February 9, 2017 and a LTCP modification request that was received on March 1, 2017.

Most recently, a request was received by the Department on March 28, 2019, further requesting to modify the LTCP. This was granted in a letter sent to the City on May 20, 2019. The City has also submitted information regarding the 2019 flooding events, which may impact the schedule of implementation of the LTCP and CSO permit. This Force Majeure event was described in letters received by the Department on April 8, 2019 and June 5, 2019. The letters stated that the City would still work diligently to complete the implementation of the LTCP by October 1, 2037.

H. LTCP Modification

1. Permit Modification and LTCP Modification

The Department received a modification request from the City on March 28, 2019. The request was for changes in both the permit and LTCP. The Department approved the LTCP changes in a letter sent to the City on May 20, 2019 (Document # 20190031792). Among the changes was the next LTCP update due date. This date was changed from October 1, 2019 to March 1, 2020. The Department agrees to the change as it should not impact the completion of the CSO LTCP. As stated in the letter received on April 8, 2019, the City will still work to meet the final LTCP completion date in 2037.

The Department received another request on July 9, 2019. This was a request to further change the LTCP update due date to March 31, 2021. This date change was to help mitigate the response to the 2019 flood event. The Department agrees to the change as it should not impact the final LTCP completion date. The due date is changed in the permit. Along with the LTCP Update, a financial report of the cost and performance considerations is due March 21, 2020. The report due date is infeasible without knowing the final updates to the LTCP. Therefore, the due date for the financial report is also changed to March 31, 2021.

In addition to the changes for LTCP updates and reports, the flood impacted the Missouri River WRRF. The new chlorine disinfection system for CSO Outfall 102 was inundated by floodwaters. At the time of this modification, the City has not been able to determine the effectiveness of the system. Only water had been run through the disinfection system. The City has requested another year prior to implementation of *Escherichia coli* limits for Outfall 102. The final date for completion is changed in Part II of the permit.

I. Basis of Permit Requirements and Conditions

1. Introduction

The permit conforms to the requirements set forth in the *Combined Sewer Overflow (CSO) Policy* signed by the Administrator on April 11, 1994. The principles of the Policy ensure that CSO controls are cost effective while meeting the objectives of the Clean Water Act. The key principles are providing clear levels of control, providing flexibility to determine the most cost effective means to meet the CWA requirements, allowing a phased approach to implementing the controls, and revision of water quality standards, if appropriate, to reflect site-specific impacts of CSOs. The *CSO Control Policy* allows the NPDES permitting authority to establish a timetable for completion of the LTCP on a case-by-case basis to account for the complexity of the planning process.

The City of Omaha submitted the complete LTCP to the NDEE on Sept. 25, 2009 that has been updated several times. The LTCP sets forth a phased schedule that complies with the October 1, 2037 deadline for completing the CSO project as set forth in the Consent Order, Case No. 2710, signed on August 8, 2007 (Amended 2011). The Phase II requirements for implementation of a LTCP are set forth in the *CSO Control Policy* in Part IV(B)(2). According to the *CSO Control Policy* a Phase II permit should contain the following 7 constituents;

- Requirements to implement the technology-based controls including the Nine Minimum Controls.
- Narrative requirements which insure that the selected CSO controls are implemented, operated, and maintained as described in the LTCP.
- Performance standards for the selected CSO controls that specify either a Presumption Approach or a Demonstration Approach that will not preclude the attainment of water quality standards (WQS).
- Requirements to implement a water quality assessment program to demonstrate compliance with WQS, protection of designated uses, and effectiveness of CSO controls.
- Requirements to reassess overflows to sensitive areas in those cases where elimination or relocation of the overflow is not physically possible or economically achievable.
- Conditions establishing requirements for maximizing the treatment of wet weather flows at the POTW treatment plant.
- Reopener clause authorizing the NPDES authority to reopen and modify the permit if CSO controls fail to meet WQS or protect designated uses.

According to the *CSO Control Policy*, implementation of CSO controls may be phased based on the relative importance of and adverse impacts upon WQS and designated uses, as well as the permittee's financial capability and its previous efforts to control CSOs. Three additional permit cycles will be required to completely fulfill the Phase II conditions since the LTCP will not be completely implemented until 2037. Each of the Phase II conditions is addressed in the draft permit however complete fulfillment of all Phase II conditions will not be achieved until 2037.

2. Outfall Identification (Part I of the Permit)

The locations of the 26 CSO outfalls identified by the City of Omaha are listed in Part I of the permit as both a latitude/longitude and approximate street address. Outfalls CSO 104, 113, and 209 have been deactivated and are no longer included in the list of CSO outfalls in Part I. This section remains unchanged in the permit.

3. CSO Outfall 102 Requirements (Part II of the Permit)

The 2019 flooding impacted the Missouri River WRRF, the site of CSO Outfall 102. The new chlorine disinfection system for CSO Outfall 102 was inundated by floodwaters. At the time of this modification, the City has not been able to determine the effectiveness of the system. Only water had been run through the disinfection system. The City has requested another year prior to implementation of *Escherichia coli* limits for Outfall 102 in an email received on August 16, 2019. The finalization of the chlorine system

was delayed by the flood. The chlorine system testing will not be available until the end of the disinfection season in 2019. It is anticipated to begin testing in September, 2019.

The final date for completion is changed in Part II of the permit from January 1, 2022 to January 1, 2023 based on the 2019 Force Majeure event.

4. CSO Outfall 205 Requirements (Part III of the Permit)

The outfall improvements, monitoring requirements, and limits for this outfall are not changed in this permit modification.

5. Removal of Monitoring at Selected Outfalls

The requirement to monitor for various parameters at selected outfalls has been removed from the permit because no specific trends in the data have been observed and the data does not add any value to the City's evaluation of the LTCP. In-stream sampling is being performed on the Missouri River and Papillion Creek Tributaries by the City that provides useful data on improvement to water quality from storm water and CSO projects.

6. Nine Minimum Controls (Part IV of the Permit)

The nine minimum control measures have been unchanged in the permit modification.

7. Long Term Control Plan (Part V of the Permit)

The City of Omaha submitted the complete LTCP to the NDEE on Sept. 25, 2009, in fulfillment of the NPDES Permit requirements and the CSO Control Policy. The LTCP was subsequently approved by the NDEE on February 10, 2010. An Update to the Long Term Control Plan was submitted to the NDEE on Sept. 29, 2014, which was approved by the NDEE on Jan. 23, 2015. Minor modification to the Update to the Long Term Control Plan was approved by the NDEE on April 3, 2015. A further modification request for the LTCP was received by the NDEE on March 1, 2017. Most recently, a modification request was received on March 28, 2019, and granted on May 20, 2019.

A compliance schedule for implementation of the selected CSO controls is set forth in Part VI of the permit. The elements of the LTCP listed below will continue to apply as the specified controls are implemented. Reports, evaluations, and actions to be completed by the City applicable to the LTCP document are included in Part V of the permit.

The City of Omaha requested changes to Part V of the permit. On January 17, 2018, the Department and City of Omaha issued a modification to the Complaint and Compliance Order by Consent, dated August 8, 2007, and amended May 31, 2012. The modification states:

> *IT IS FURTHER ORDERED that the LTCP of 2014 shall be revised and submitted to NDEQ on or before March 1, 2020 for review and approval. The amended LTCP shall address the above changes. The revision shall be subject to, and contingent upon, approval by NDEQ. Upon approval by NDEQ the LCTP shall be performed by the City according to its terms and schedule as implanted through the City's NPDES permits.*
>
> Note: (NDEQ is now NDEE)

In order to comply with the changes to the Consent Order, the permit needs to be modified. The date of October 1, 2019, listed in Part V.D. of the permit shall be changed. The City of Omaha had requested the date to be changed to March 1, 2020 to be consistent with the Consent Order. However, in a request received by the Department on July 9, 2019, the City has requested this date to be changed in response to the 2019 Force Majeure flood event. Thus, this date will be changed to March 31, 2021.

8. Compliance Schedule for Implementation of CSO Control Projects (Part VI of the Permit)

The City of Omaha completed development of the CSO LTCP in 2009 (Updated 2014, 2017, and 2019) and has selected controls necessary to meet CWA requirements. In Part IV B(2) of the *CSO Control Policy*, conditions are set forth for Phase II CSO permits for implementation of the LTCP. Among these conditions are requirements which insure that the selected CSO controls are implemented, operated, and

maintained as described in the long-term CSO control plan. The *CSO Control Policy* affirms that the permitting authority should include an enforceable mechanism for implementation of the long-term CSO control plan. The NDEE has included a compliance schedule in the permit for implementation of the selected CSO control projects that have critical milestone dates within the 5 year permit term.

Compliance schedule conditions are set forth in Chapter 16 of NDEE Title 119 – *Rules and Regulations Pertaining to the Issuance of Permits Under the National Pollutant Discharge Elimination System.* Compliance schedule requirements set forth in NDEE Title 119 state that the permit may, when appropriate, specify a schedule for compliance leading to compliance with CWA and regulations. One milestone date, without interim dates, for each project, is included in the compliance schedule due to the complexity and variety of the various selected CSO controls. The regulations in NDEE Title 119 Chapter 16 allow for submission of annual reports in place of interim dates in a compliance schedule as long as the projected completion date is indicated.

The *Implementation Schedule* in Section 7 of the LTCP sets forth the City of Omaha's sequence of construction projects that are to be completed that will meet water quality-based requirements of the CWA no later than October 1, 2037. The schedule sets forth implementation phases, the selected control projects under each phase, and the years when the phases are expected to start and be completed. The compliance schedule in the permit is developed from the Major CSO Control Phases and Milestones listed in Table 7-1 of the LTCP and Sewer Separation Phases and Milestones listed in Table 7-2 of the LTCP. The projects included in the compliance schedule are listed below.

The schedules for the implementation phases have been revised as documented in the modified permit and in Section 5 of the Updated LTCP submitted in 2014, modified in 2017, and now again in 2019.

a. Phase 1 Major Projects of the LTCP – MRWRRF and Collection System Improvements

   The Phase 1 major project and implementation schedule are not altered in the permit modification.

b. Phase 2 Major Projects of the LTCP – Saddle Creek Outfall CSO 205

   The Phase 2 major project and implementation schedule are not altered in the permit modification.

c. Phase 3 Major Projects of the LTCP – Minne Lusa Stormwater Conveyance and Storage Basin

   The City of Omaha will submit the final schedule and project list will be included in an update to the LTCP and submitted no later than March 31, 2021, 2019.

   The period of evaluation of existing CSO improvements and alternatives to the current LTCP necessitates the removal of the requirements for Phase 3. The NDEE agrees that the City has made vast improvements in the CSO program, and an evaluation period would not hinder progress for final LTCP completion of 2037.

d. Phase 4 Major Projects of the LTCP – Deep Tunnel and Missouri River RTB plus Miscellaneous Projects

   Part VI.E of the permit lists nine major projects, with a requirement that the city begin final design of one of them by December 31, 2019. The LTCP Update in Table 5-14 also lists the requirement to begin final design of one of the projects by the same due date. These nine potential projects are the most costly projects considered by the City, including the Deep Tunnel System (DTS). The City is conducting an optimization study to determine the appropriate controls necessary to complete the CSO LTCP. This may include keeping the DTS as in the current LTCP, or other alternatives being considered which includes no-tunnel and modified tunnel alternatives. A first round of the evaluation was anticipated to be complete in early 2019, to be followed with a second more in-depth evaluation of the best alternatives. The plan is to have all evaluations done in time for the next LTCP update due in 2021.

   Five of the projects are related to the Deep Tunnel System. The City is planning to start preliminary design of the DTS until January 2022. Therefore, it is infeasible for the City to begin final design of one of the Major Phase 4 projects by December 31, 2019. The City is requesting the date be changed

to December 31, 2023, a date to be mirrored in the LTCP.

This date is not anticipated to delay the date of final completion of the LTCP and goal of elimination and capture of 85% of combined wastewater by October 1, 2037. Therefore, the date is changed to December 31, 2023 to coincide with City planning and dates after completion of the project evaluation(s).

e. Sewer Separation Projects in the LTCP

The City submitted a request for date change to sewer separation projects in the March 28, 2019 LTCP and permit modification request. Revisions to the Nicholas Phase 3 project have made the 18th and Seward Project no longer necessary. Also, the Pierce Street Sewer Separation Project is being evaluated by the City. The optimization and evaluation project will not be done until June 2020, so the status of the Pierce separation will not be known until after that time. The South Barrel Conversion A and B Projects have completed the 10% design threshold, but it is unknown if the projects will commence bidding. Recent progress meetings have evaluated the South Barrel projects, and it is anticipated that they will not meet the current date set forth in the permit. Therefore, in Part VI.J of the permit, the date to commence bidding is changed to December 31, 2021.

In order to coincide with the optimization evaluation, the Phase 6 sewer separation bidding due date must be changed. The Department agrees that this is necessary as the results of the evaluation(s) are changing the LTCP and CSO project. The date of June 30, 2020, is changed to December 31, 2021, in the permit to work with the results of the optimization evaluation. If the date needs to be modified further, it may be changed in LTCP and CSO permit modifications or updates.

9. Statement of LTCP Compliance Objective (Part VII of the Permit)

The LTCP compliance objective is included in the permit to provide a statement of basis for compliance after completion of implementation of the LTCP controls. The final long term CSO control plan will become the basis for NPDES permit limits and requirements and the selected controls should be sufficient to meet CWA requirements. The CSO control alternative specified in the Updated LTCP is based on the criterion set forth in Presumption Approach of the *CSO Control Policy* (EPA, 1995). According to the *CSO Control Policy*, a program that meets the requirements in Part 4(a)(1), elimination or capture of no less than 85 % of the combined sewage, would be presumed to provide an adequate level of control to meet the water- quality based requirements of the Clean Water Act. According to the Updated LTCP, submitted in Oct., 2014, the City of Omaha anticipates that the refinement of projects still result in control of 94% of the combined sewage on an annual average basis.

This Updated LTCP, modified in 2017 and 2019, will not change the presumptive approach for goal of no less than 85% elimination or capture of combined sewage. The Department has determined that the 85% capture or elimination of combined sewage requirements of the Presumption Approach of the CSO Control Policy shall be based upon the selected precipitation design year, which is 1969. The determination of no less than 85% capture by volume shall be based upon the volume of combined sewer overflows that occurred in the modeled representative year compared to the volume of combined sewage captured or eliminated after all controls and separation projects have been completed. To determine compliance with the Presumption Approach, the City of Omaha shall calibrate the combined sewer system model against actual flow information within 2 years after completion of the LTCP. The calibrated model results shall be compared with the combined sewers overflow from the selected design storm year. To be in compliance, the model must show that no less than 85% of the combined sewage in the combined sewer system has been captured or eliminated on an annual average basis when compared to the design year 1969.

The precipitation pattern and amounts of precipitation for 1969 constitute the representative year for precipitation. The City of Omaha has been performing the evaluation of percent capture based on a comparison between the combined sewer system in 2002, the year the CSO Permit was first issued, and the controls now in place and ultimately in the year 2037 when the LTCP is completed.

10. List of Projects

In addition to the LTCP and CSO permit modifications requested by the March 28, 2019 letter, the Department received a list of projects currently under design and/or construction. The projects are subject to revision and update, and will be included in LTCP updates submitted in 2020 and in future updates.

11. Annual Report (Part VIII of the Permit)

The City of Omaha is required to submit an Annual Report within 90 days following each yearly (Oct 1– thru Sept. 30) anniversary of this permit. Annual Report requirements are not changed in this permit modification.

12. Other Conditions and Requirements (Part IX of the Permit)

a. Narrative Requirements Applicable to the Long Term Control Plan

The requirement that the selected CSO controls be implemented, operated, and maintained as set forth in the LTCP is included in the permit based on the Phase II permit narrative requirements in *The CSO Control Policy*.

b. Narrative Requirements Applicable to CSO Discharges

The narrative limits on toxicity, noxious odors, objectionable materials, and undesirable aquatic life is in accordance with the narrative water quality criteria set forth in NDEE Title 117. The requirement that the CSO discharges not be toxic to aquatic life is according to the narrative water quality provision in Part IV 2(c) of the *CSO Control Policy*. The NDEE recognizes that these narrative requirements will not be fully attained until the LTCP has been completely implemented in 2037.

c. Reopener Clause

A reopener clause allowing the NDEE to modify or revoke and reissue the permit is included in the permit in accordance with regulations set forth in NDEE Title 119 and 40 CFR 122.

d. Notification and Approval

Notification and approval requirements are included in the permit to provide notification to the NDEE if additional CSO outfalls are proposed or if there is any construction or modification to the CSS that is not consistent with the LTCP. This requirement is consistent with the *CSO Control Policy* and also is in accordance with the requirements set forth in NDEE Title 123 *Rules and Regulations for Design, Operation and Maintenance of Wastewater Treatment Works.*

e. Immediate Reporting Requirements

Reporting to the NDEE of violations of the permit, substantial dry weather overflow, impact to the receiving waters, or spills to the CSS is in accordance with the enforcement and compliance requirements set forth in the *CSO Control Policy*. Substantial dry weather overflow includes an overflow that does not occur during a wet weather event, and is likely to continue for 24 hours, results in an overflow volume over 100,000 gallons, overflows containing pollutants in concentrations that presents a threat to human health or the environment, or are in a location that presents a threat to human health or the environment.

f. Revision of the Long Term Control Plan

The City of Omaha intends to use an adaptive management approach for the implementation of the LTCP which is a process to continually evaluate new technologies, the performance of the controls as they are implemented, and the health of the watersheds. This approach may require revision of the LTCP to reflect new information, new technology, or other changes that become evident during the implementation process. Proposed significant revisions to the LTCP are required to be submitted by March 31, 2021 for review and approval by the Department. This 2021 date was chosen in response to the 2019 Force Majeure flood event. Significant revision to the LTCP generally means modification of the major CSO projects and milestone dates in Chapter 7, *Implementation Schedule,* of the LTCP.

A modification request for the LTCP was received by the Department on March 1, 2017, and a further request on March 28, 2019.

g. Biosolids Disposal

The sludge requirements for monitoring and disposal are in accordance with 40 CFR Part 503 *Standards for the Use or Disposal of Sewage Sludge*. EPA Region VII administers the sludge regulations for the City of Omaha.

h. Flow Variable Protocol for TRC at CSO 102 and MRWRRF 001.

The requirement to develop a flow variable protocol for TRC at CSO 102 and MRWRRF 001 by Oct. 1, 2018 is included in the permit so that the administrative, technical, and operational procedures applicable to the flow variable TRC limits in Table 4 of the permit can be developed.

i. Electronic Submission of Discharge Monitoring Reports

On October 22, 2015, EPA published the Clean Water Act National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, which requires electronic reporting of NPDES information rather than the currently required paper based reports from the permitted facilities. To comply with the federal rule, permittees will be required to submit DMRs electronically using the EPA NetDMR tool (Appendix A of 40 CFR part 127).

Phase I requirements for electronic discharge monitoring reports are required as part of this rule, and should be entered monthly. Outfall 102 should be submitted currently and Outfall 205 must be submitted electronically monthly beginning January 1, 2024. The permittee shall enter DMRs monthly. Data for which only a "value" is to be reported shall report the monthly maximum value on the NetDMR tool. All values for each discharge shall be reported in the CSO Annual Report.

Phase II requirements for the electronic submission of Annual Reports should begin no later than December 21, 2020.

J. Supporting Documentation

The following documents and regulations were used in the preparation of the draft permit:

1. NDEE Title 117, *Nebraska Surface Water Quality Standards*, June 24, 2019.
2. NDEE Title 118, *Ground Water Quality Standards and Use Classifications*, March 27, 2006.
3. NDEE Title 119, *Rules and Regulations Pertaining to the Issuance of Permits under the National Pollutant Discharge Elimination System*, July 2, 2017.
4. NDEE Title 123, *Rules and Regulations for Design, Operation and Maintenance of Wastewater Treatment Works, March 3, 2008.*
5. NDEE Title 197, *Rules and Regulations for the Certification of Wastewater Treatment Facility Operators in Nebraska*, March 23, 2019.
6. Technical Support Document for Water Quality-based Toxic Control (EPA 505/2-90-001 PB91-127415, March, 1991.
7. 40 CFR, Part 122, 124, and 125, NPDES Regulations.
8. 40 CFR, Part 503, Sludge Regulations.
9. Environmental Protection Agency; *Combined Sewer Overflow (CSO) Control Policy;* Notice Federal Register, Vol. 59, No. 75, page 18688, April 19, 1994.
10. Permit application forms 1 and 2A from the City of Omaha for combined sewer system overflows received by the NDEE on March 27, 2015.
11. *City of Omaha Long Term Control Plan for the Omaha Combined Sewer Overflow Control Program* Volumes I and II, October 1, 2009 submitted to the NDEE on September 25, 2009.
12. *Update to Long-Term Control Plan for the Omaha Combined Sewer Overflow control Program,* received by the NDEE on Sept. 29, 2014.
13. NDEE files for the City of Omaha combined sewer system overflows, NPDES NE0133680; NDEE ID

999428.

14. The Nebraska Department of Environment and Energy, *Water Quality Integrated Report*, April 1, 2018.
15. Letter Re: "*Comments and Question on the City of Omaha's Combined Sewer Overflow (CS)) Long Term Control Plan (LTCP)*" signed by the NDEE on Jan. 08, 2010.
16. Letter Re: "*City of Omaha Long Term Control Plan (LTCP) Approval*" signed by the NDEE on Feb. 10, 2010.
17. *"NDEQ review of 'Updated to Long-Term Control Plan for the Omaha Combined Sewer Overflow Control Program' "*, approved by the NDEE on January 23, 2015.
18. *"Request to Modify Long Term control Plan (LTCP Update"*, approved by the NDEE on April 3, 2015.
19. *"A method for calculating average weekly bacteria permit limits (Revised)"*, Tetra Tech, Inc., 05/10/12.
20. EPA, *NPDES Storm Water Sampling Guidance Document*, EPA 833-8-92-001, July 1992.
21. Permit and LTCP modification request from the City of Omaha received by the NDEE on March 28, 2019.
22. Force Majeure notification received by the Department on June 5, 2019.
23. Force Majeure Follow-up and Request to Modify the Permit received by the NDEE on July 9, 2019.
24. Email from the City of Omaha and PMT received on August 16, 2019.

K. Information Requests

Inquiries concerning the draft permit, its basis or the public comment process may be directed to:

Kim Bubb Tel. (402) 471-8830 or (402) 471-4220 Fax: (402) 471-2909

Individuals requiring special accommodations or alternate formats of materials should notify the Department by calling (402) 471-2186. TDD users should call (800) 833-7352 and ask the relay operator to call the Department at (402) 471-2186.

Copies of the application and other supporting material used in the development of the permit are available for review and copying at the Department's office between 8:00 A.M. and 5:00 P.M. on weekdays.

Office Location: The Atrium, 1200 N Street, Suite 400, Lincoln, NE

Mail Address: NPDES Permits and Compliance Section, Nebraska Department of Environment and Energy, PO Box 98922; Lincoln, Nebraska 68509-8922

L. Submission of Formal Comments or Requests for Hearing

The date on which the public comment period ends is specified in the public notice. During the public notice period, the public may submit formal comments or objections, and/or petition the Department to hold a public hearing concerning the issuance of the draft permit. All such requests need to: be submitted in written form, state the nature of the issues to be raised, and present arguments and factual grounds to support them. The Department shall consider all written comments, objections and/or hearing petitions, received during public comment period, in making a final decision regarding permit issuance.

Formal comments, objections and/or hearing requests need to be submitted to:

Kim Bubb; NPDES Permits and Compliance Section

Mailing Address: Nebraska Department of Environment and Energy
PO Box 98922
Lincoln, Nebraska 68509-8922

Location Address: Nebraska Department of Environment and Energy
The Atrium, 1200 N Street, Suite 400
Lincoln, Nebraska