

NPDES Permit No. IL0030171

Notice No. KKD:12032701.daa

Public Notice Beginning Date: **June 4, 2020**

Public Notice Ending Date: **July 6, 2020**

National Pollutant Discharge Elimination System (NPDES)  
Permit Program

PUBLIC NOTICE/FACT SHEET  
of  
Draft Reissued NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois EPA  
Division of Water Pollution Control  
Permit Section  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276  
217/782-0610

Name and Address of Permittee:

North Shore Water Reclamation District  
P.O. Box 750  
14770 W. Wm. Koepsel Dr.  
Gurnee, Illinois 60031-0750

Name and Address of Facility:

NSWRD Clavey Road Water Reclamation Facility  
1210 Clavey Road  
Highland Park, Illinois 60035  
(Lake County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES Permit to discharge into the waters of the state and has prepared a draft Permit and associated fact sheet for the above named Permittee. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. All comments on the draft Permit and requests for hearing must be received by the IEPA by U.S. Mail, carrier mail or hand delivered by the Public Notice Ending Date. Interested persons are invited to submit written comments on the draft Permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the Permit applicant. The NPDES Permit and notice numbers must appear on each comment page.

The application, engineer's review notes including load limit calculations, Public Notice/Fact Sheet, draft Permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the draft Permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final Permit is issued. For further information, please call Kaushal Desai at 217/782-0610.

The following water quality and effluent standards and limitations were applied to the discharge:

Title 35: Environmental Protection, Subtitle C: Water Pollution, Chapter I: Pollution Control Board and the Clean Water Act were applied in determining the applicable standards, limitations and conditions contained in the draft Permit.

The applicant is engaged in treating domestic wastewater for the North Shore Water Reclamation District Clavey Road WRF service area.

The length of the Permit is approximately 5 years.

The main discharge number is 010. The seven day once in ten year low flow (7Q10) of the receiving stream, Skokie River is 0.6 cfs.

The design average flow (DAF) for the facility is 17.8 million gallons per day (MGD) and the design maximum flow (DMF) for the facility is 28.0 MGD. Wastewater treatment consists of screening, grit removal, scum removal, primary clarification, two-stage activated sludge process, biological phosphorous removal, clarification, tertiary filtration, and ultraviolet disinfection. Sludge treatment consists of thickening, anaerobic digestion, dewatering, drying and land application. Flows in excess of 19,444 gpm at the treatment plant are diverted to the treatment plant facility's Excess Flow Retention Basins for Storage. After plant influent flow subsides to less than design maximum flow, the sewage in the basins is returned to the plant for treatment. Flows in excess of the 20.4 MG capacity of the retention

basins are discharged through the WRF Excess Flow Outfall (011) to the Skokie River after screening, sedimentation, and disinfection.

This treatment works has an approved pretreatment program. There are 5 noncategorical SIUs and 3 CIUs.

This reissued Permit does not increase the facility's DAF, DMF, concentration limits, and/or load limits.

The Permittee is currently participating in the North Branch Chicago River Watershed Workgroup (NBWW). The Permittee shall work with other watershed members of the NBWW to determine the most cost effective means to remove dissolved oxygen (DO) and offensive condition impairments in the North Branch Chicago River Watershed to the extent feasible. The Permittee shall participate in the NBWW for the completion of the Bioassessment Monitoring Program Plan of the North Branch Chicago River Watershed Bioassessment Quality.

Federal law requires that permits for excess flow discharges include the 7-day and 30-day SS and BOD<sub>5</sub> concentration limitations and 85 percent removal requirements (unless the IEPA reduces or eliminates the percent removal requirements in accordance with 133.103(a) or (d)) specified in 40 CFR 133.102. IEPA is using an alternative effluent concentration limit based on the intermittent nature of the discharge. EPA is exercising its discretion to not object to this permit, but EPA expects that future permits will include the 7-day and 30-day SS and BOD<sub>5</sub> concentration limits; and also, the 85 percent removal requirements (unless the IEPA reduces or eliminates the percent removal requirements in accordance with 133.103(a) or (d)) for any excess flow discharge to receiving waters.

Application is made for the existing discharge(s) which are located in Lake County, Illinois. The following information identifies the discharge point, receiving stream and stream classifications:

<u>Discharge Number</u>	<u>Receiving Stream</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Stream Classification</u>	<u>Integrity Rating</u>
010	Skokie River	42° 08' 15" North	87° 47' 12" West	General Use	D
011	Skokie River	42° 09' 24" North	87° 47' 45" West	General Use	D
012	Skokie River	42° 09' 21" North	87° 47' 45" West	General Use	D
013	Skokie River	42° 08' 18" North	87° 47' 08" West	General Use	D

To assist you further in identifying the location of the discharge(s) please see the attached map.

The stream segment (Waterbody segment HCCD-09) receiving the discharge is on the 2016 303(d) list of impaired waters

The following parameters have been identified as the pollutants causing impairment:

<u>Potential Causes</u>	<u>Uses Impaired</u>
alterations in stream-side or littoral vegetative cover (non-pollutant), aquatic algae (non-pollutant), changes in stream depth and velocity patterns (non-pollutant), chlordane, chloride, other flow regime alterations (non-pollutant), dissolved oxygen (non-pollutant), total phosphorus, and sedimentation/siltation,	Aquatic Life
Fecal Coliform	Primary Contact
Bottom Deposits (non-pollutant)	Aesthetic quality

The stream segment (Waterbody segment RHJ) receiving the discharge during wet weather conditions is on the 2016 303 (d) list of impaired waters.

The following parameters have been identified as the pollutants causing impairment:

<u>Potential Causes</u>	<u>Uses Impaired</u>
Mercury	Fish Consumption
Total phosphorus and total suspended solids	Aesthetic quality

The discharge(s) from the facility is (are) proposed to be monitored and limited at all times as follows:

Discharge Number(s) and Name(s): 010 Main WRF Outfall Downstream of Skokie Lagoons  
 012 Old STP Discharge  
 013 Dundee Road Effluent Lift Station Bypass

Load limits computed based on a design average flow (DAF) of 17.8 MGD (design maximum flow (DMF) of 28.0 MGD).

The effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter	LOAD LIMITS lbs/day DAF (DMF)*			CONCENTRATION LIMITS mg/L			Regulation
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	
CBOD <sub>5</sub> **	1485(2335)		2969(4670)	10		20	35 IAC 304.120 40 CFR 133.102
Suspended Solids**	1781(2802)		3563(5604)	12		24	35 IAC 304.120 40 CFR 133.102
pH	Shall be in the range of 6 to 9 Standard Units						35 IAC 304.125
Fecal Coliform	Daily Maximum shall not exceed 400 per 100 mL (May through October)						35 IAC 304.121
Chlorine Residual						0.038	35 IAC 302.208
Ammonia Nitrogen (as N): April - October	223 (350)		445 (701)	1.5		3.0	35 IAC 355 and 35 IAC 302
Nov.-Feb.	312 (490)		1158(1821)	2.1		7.8	
March	223 (350)	564 (887)	787 (1238)	1.5	3.8	5.3	
Total Phosphorus (as P)***	148(234)			1.0			35 IAC 309.146
Total Nitrogen (as N)	Monitor only						35 IAC 309.146
Dissolved Reactive Phosphorus	Monitor only						35 IAC 309.146
Nitrate/Nitrite	Monitor only						35 IAC 309.146
Total Kjeldahl Nitrogen (TKN)	Monitor only						35 IAC 309.146
Alkalinity	Monitor only						35 IAC 309.146
Specific Conductivity	Monitor only						35 IAC 309.146
Temperature	Monitor only						35 IAC 309.146
				Monthly Avg. not less than	Weekly Avg. not less than	Daily Minimum	
Dissolved Oxygen March-July				N.A.	6.0	5.0	35 IAC 302.206
August-February				5.5	4.0	3.5	

\*Load Limits are calculated by using the formula: 8.34 x (Design Average and/or Maximum Flow in MGD) x (Applicable Concentration in mg/L).

\*\* BOD<sub>5</sub> and Suspended Solids (85% removal required): In accordance with 40 CFR 133, the 30-day average percent removal shall not be less than 85 percent.

\*\*\*A compliance schedule to provide the facility additional time to comply with the phosphorus limit has been included in this draft permit. The existing permit did not include a phosphorus limit.

This Permit contains an authorization to treat and discharge excess flow as follows:

Discharge Number(s) and Name(s): 011 WRF Excess Flow Outfall

<u>Parameter</u>	<u>CONCENTRATION LIMITS (mg/L)</u>	
	<u>Monthly Average</u>	<u>Regulation</u>
BOD <sub>5</sub>	*	40 CFR 133.102
Suspended Solids	*	40 CFR 133.102
Fecal Coliform	Daily Maximum Shall Not Exceed 400 per 100 mL	35 IAC 304.121
pH	Shall be in the range of 6 to 9 Standard Units	35 IAC 304.125
Chlorine Residual	0.75	35 IAC 304.208
Ammonia Nitrogen (as N)	Monitor Only	35 IAC 309.146
Total Phosphorus (as P)	Monitor Only	35 IAC 309.146
Dissolved Oxygen	Monitor Only	35 IAC 309.146

\*Concentration Limits (L) shall be determined by the following equation:

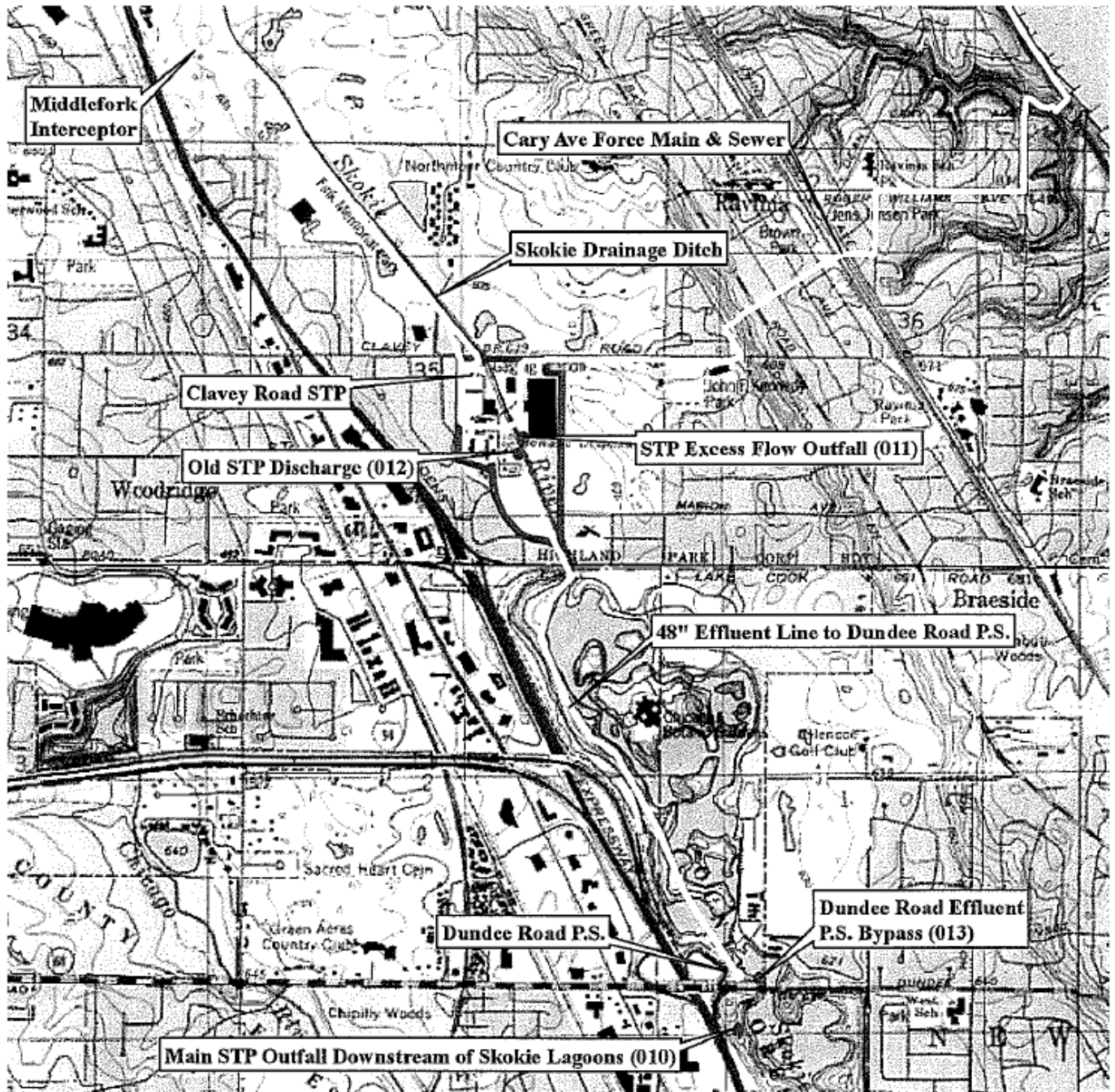
$$(L) = (-15/23)D + 49.565$$

Where (D) = number of days of discharge per month, and  
 (L) = monthly average effluent limitations (in mg/L) for BOD<sub>5</sub> and Suspended Solids

The above methodology has been approved by USEPA.

This draft Permit also contains the following requirements as special conditions:

1. Reopening of this Permit to include different final effluent limitations.
2. Operation of the facility by or under the supervision of a certified operator.
3. Submission of the operational data in a specified form and at a required frequency at any time during the effective term of this Permit.
4. More frequent monitoring requirement without Public Notice in the event of operational, maintenance or other problems resulting in possible effluent deterioration.
5. Prohibition against causing or contributing to violations of water quality standards.
6. Recording the monitoring results on Discharge Monitoring Report Forms using one such form for each outfall each month and submitting the forms to IEPA each month.
7. The provisions of 40 CFR Section 122.41(m) & (n) are incorporated herein by reference.
8. Effluent sampling point location.
9. Seasonal fecal coliform limits.
10. The Permittee implements and administers an industrial pretreatment program pursuant to 40 CFR §403.
11. Submission of annual fiscal data.
12. Submission of semi annual reports indicating the quantities of sludge generated and disposed.
13. Effluent limitations pursuant to an approved Total Maximum Daily Load (TMDL) study or water quality study.
14. The Permittee is required to perform biomonitoring tests in the 18<sup>th</sup>, 15<sup>th</sup>, 12<sup>th</sup> and 9<sup>th</sup> months prior to the expiration date of the permit, and to submit the results of such tests to the IEPA within one week of receiving the results from the laboratory.
15. Discharge Numbers 012 and 013 are emergency discharge points.
16. Burden Reduction.
17. Capacity, Management, Operations, and Maintenance (CMOM) plan requirements.
18. Optimization of existing treatment facilities.
19. Submission of phosphorus removal feasibility study.
20. Reasonable potential analysis and mixing study plan.
21. Compliance Schedule for Phosphorus.
22. Requirement to meet 0.5 mg/L phosphorus limit by January 1, 2030.
23. Nutrient Assessment Reduction Plan Requirements.
24. A requirement for participation in the North Branch Chicago River Watershed Workgroup (NBWW).
25. Monitoring for total phosphorus, dissolved reactive phosphorus, nitrate/nitrite, total kjeldahl nitrogen (TKN), ammonia, total nitrogen (calculated), alkalinity, specific conductivity, chloride and temperature once a month.
26. Monthly Water Sampling with NBWW members.
27. Report on reduction of infiltration and inflow.
28. BOD<sub>5</sub> and Suspended Solids Effluent Report.



NPDES Permit No. IL0030171

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date:

Issue Date:

Effective Date:

Name and Address of Permittee:

North Shore Water Reclamation District  
P.O. Box 750  
14770 W. Wm. Koepsel Dr.  
Gurnee, Illinois 60031-0750

Facility Name and Address:

NSWRD Clavey Road Water Reclamation Facility  
1210 Clavey Road  
Highland Park, Illinois 60035  
(Lake County)

Receiving Waters: Skokie River

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of the Ill. Adm. Code, Subtitle C, Chapter I, and the Clean Water Act (CWA), the above-named Permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the Effluent Limitations, Monitoring, and Reporting requirements; Special Conditions and Attachment H Standard Conditions attached herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the Permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Amy L. Dragovich, P.E.  
Manager, Permit Section  
Division of Water Pollution Control

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Effluent Limitations, Monitoring, and Reporting

## FINAL

Discharge Number(s) and Name(s): 010 Main WRF Outfall Downstream of Skokie Lagoons  
012 Old STP Discharge<sup>1</sup>  
013 Dundee Road Effluent Lift Station Bypass<sup>1</sup>

Load limits computed based on a design average flow (DAF) of 17.8 MGD (design maximum flow (DMF) of 28.0 MGD).

From the effective date of this Permit until the expiration date, the effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter	LOAD LIMITS lbs/day DAF (DMF)*			CONCENTRATION LIMITS mg/L			Sample Frequency	Sample Type
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum		
Flow (MGD)							Continuous	
CBOD <sub>5</sub> ** <sup>2</sup>	1485(2335)		2969(4670)	10		20	2 Days/Week	Composite
Suspended Solids** <sup>2</sup>	1781(2802)		3563(5604)	12		24	2 Days/Week	Composite
pH	Shall be in the range of 6 to 9 Standard Units						2 Days/Week	Grab
Fecal Coliform***	Daily Maximum shall not exceed 400 per 100 mL (May through October)						2 Days/Week	Grab
Chlorine Residual***						0.038	***	Grab
Ammonia Nitrogen: (as N) April - October	223 (350)		445 (701)	1.5		3.0	2 Days/Week	Composite
Nov.- Feb.	312 (490)		1158(1821)	2.1		7.8	2 Days/Week	Composite
March	223 (350)	564 (887)	787 (1238)	1.5	3.8	5.3	2 Days/Week	Composite
Total Phosphorus (as P)****	148(234)			1.0			1 Day/Week	Composite
Total Nitrogen (as N)	Monitor only						1 Day/Month	Composite
Dissolved Reactive Phosphorus	Monitor Only						1 Day/Month	Composite
Nitrate/Nitrite	Monitor Only						1 Day/Month	Composite
Total Kjeldahl Nitrogen (TKN)	Monitor Only						1 Day/Month	Composite
Alkalinity	Monitor Only						1 Day/Month	Grab
Specific Conductivity	Monitor Only						1 Day/Month	Composite
Temperature	Monitor Only						1 Day/Month	Grab
				Monthly Avg. not less than	Weekly Avg. not less than	Daily Minimum		
Dissolved Oxygen March-July				N.A.	6.0	5.0	2 Days/Week	Grab
August-February				5.5	4.0	3.5	2 Days/Week	Grab

\*Load limits based on design maximum flow shall apply only when flow exceeds design average flow.

\*\*Carbonaceous BOD<sub>5</sub> (CBOD<sub>5</sub>) testing shall be in accordance with 40 CFR 136.

\*\*\*See Special Condition 9.

\*\*\*\*See Special Condition 21.



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Effluent Limitations, Monitoring, and Reporting

FINAL

(Continued from previous page)

Discharge Number(s) 010 Main WRF Outfall Downstream of Skokie Lagoons  
012 Old STP Discharge<sup>1</sup>  
013 Dundee Road Effluent Lift Station Bypass<sup>1</sup>

<sup>1</sup> See Special Condition 15.

<sup>2</sup> BOD<sub>5</sub> and Suspended Solids (85% removal required): In accordance with 40 CFR 133, the 30-day average percent removal shall not be less than 85 percent. The percent removal need not be reported to the IEPA on DMRs but influent and effluent data must be available, as required elsewhere in this Permit, for IEPA inspection and review. For measuring compliance with this requirement, 5 mg/L shall be added to the effluent CBOD<sub>5</sub> concentration to determine the effluent BOD<sub>5</sub> concentration or BOD<sub>5</sub> may be measured directly.

Percent removal is a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of the raw wastewater influent concentrations to the facility and the 30-day average values of the effluent pollutant concentrations for a given time period.

Flow shall be reported on the Discharge Monitoring Report (DMR) as monthly average and daily maximum.

Fecal Coliform shall be reported on the DMR as a daily maximum value.

pH shall be reported on the DMR as minimum and maximum value.

Chlorine residual shall be reported on the DMR as a daily maximum value.

Dissolved oxygen shall be reported on the DMR as a minimum value.

Total Phosphorus shall be reported on the DMR as a daily maximum and monthly average value.

Total Nitrogen shall be reported on the DMR as a daily maximum value. Total Nitrogen is the sum of Total Kjeldahl Nitrogen, nitrate, and nitrite.

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Effluent, Limitations, Monitoring, and Reporting

## FINAL

Discharge Number(s) and Name(s): 011 WRF Excess Flow Outfall\*

Discharges from this outfall shall not occur until the design maximum flow has been conveyed to the main treatment facilities (19,444 gpm) and the excess flow treatment facilities are full. Stored wastewater shall be returned to the main treatment facilities for complete treatment as soon as capacity is available.

From the effective date of this Permit until the expiration date, the effluent of the above discharge(s) shall be monitored and limited at all times as follows:

	CONCENTRATION LIMITS (mg/L)		
<u>Parameter</u>	<u>Monthly Average</u>	<u>Sample Frequency</u>	<u>Sample Type</u>
Total Flow (MG)		Continuous When Discharging	
BOD <sub>5</sub>	***	Daily When Discharging	Grab
Suspended Solids	***	Daily When Discharging	Grab
Fecal Coliform	Daily Maximum Shall not Exceed 400 per 100 mL	Daily When Discharging	Grab
pH	Shall be in the range of 6 to 9 Standard Units	Daily When Discharging	Grab
Chlorine Residual	0.75	Daily When Discharging	Grab
Ammonia Nitrogen (as N)**	Monitor Only	Daily When Discharging	Grab
Total Phosphorus (as P)	Monitor Only	Daily When Discharging	Grab
Dissolved Oxygen	Monitor Only	Daily When Discharging	Grab

Total flow in million gallons shall be reported on the Discharge Monitoring Report (DMR) in the quantity maximum column. The main treatment plant facility flow at the time that 011 Excess Flow facilities are first utilized shall be reported in the comment section of the DMR in gallons per minute (gpm).

The duration of each discharge and rainfall event (i.e., start and ending time) including rainfall intensity shall be provided in the comment section of the DMR.

Report the number of days of discharge in the comments section of the DMR.

BOD<sub>5</sub> and Suspended Solids shall be reported on the DMR as a monthly average concentration.

Fecal Coliform shall be reported on the DMR as daily maximum.

pH shall be reported on the DMR as a minimum and a maximum.

Dissolved oxygen shall be reported on the DMR as a minimum value.

Ammonia Nitrogen shall be reported on the DMR as a maximum value.

Total Phosphorus shall be reported on the DMR as a monthly average and daily maximum value

Chlorine Residual shall be reported on the DMR as monthly average value.

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Effluent, Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s): 011 WRF Excess Flow Outfall\* (continued)

\* An explanation shall be provided in the comment section of the DMR should these facilities be used when the main treatment facility is not receiving Design Maximum Flow (DMF). The explanation shall identify the reasons the main facility is at a diminished treatment capacity. Additionally, the Permittee shall comply with the provisions of 40 CFR 122.41 (m) and (n).

\*\*See Special Condition 20.

\*\*\*Concentration Limits (L) shall be determined by the following equation:

$$(L) = (-15/23)D + 49.565$$

Where (D) = number of days of discharge per month, and  
(L) = monthly average effluent limitations (in mg/L) for BOD<sub>5</sub> and Suspended Solids

The above methodology has been approved by USEPA.

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Influent Monitoring, and Reporting

The influent to the plant shall be monitored as follows:

<u>Parameter</u>	<u>Sample Frequency</u>	<u>Sample Type</u>
Flow (MGD)	Continuous	
BOD <sub>5</sub>	2 Days/Week and Daily When Outfall 011 is Discharging	Composite*
Suspended Solids	2 Days/Week and Daily When Outfall 011 is Discharging	Composite*
Total Phosphorus (as P)	1 Day/Week	Composite

Influent samples shall be taken at a point representative of the influent.

Flow (MGD) shall be reported on the Discharge Monitoring Report (DMR) as monthly average and daily maximum.

BOD<sub>5</sub> and Suspended Solids shall be reported on the DMR as a monthly average concentration.

\* A grab sample may be taken when 011 is discharging.

Special Conditions

SPECIAL CONDITION 1. This Permit may be modified to include different final effluent limitations or requirements which are consistent with applicable laws and regulations. The IEPA will public notice the permit modification.

SPECIAL CONDITION 2. The use or operation of this facility shall be by or under the supervision of a Certified Class 1 operator.

SPECIAL CONDITION 3. The IEPA may request in writing submittal of operational information in a specified form and at a required frequency at any time during the effective period of this Permit.

SPECIAL CONDITION 4. The IEPA may request more frequent monitoring by permit modification pursuant to 40 CFR § 122.63 and Without Public Notice.

SPECIAL CONDITION 5. The effluent, alone or in combination with other sources, shall not cause a violation of any applicable water quality standard outlined in 35 Ill. Adm. Code 302 and 303.

SPECIAL CONDITION 6. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) electronic forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee is required to submit electronic DMRs (NetDMRs) instead of mailing paper DMRs to the IEPA unless a waiver has been granted by the Agency. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, <https://www2.illinois.gov/epa/topics/water-quality/surface-water/netdmr/pages/quick-answer-guide.aspx>.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 25<sup>th</sup> day of the following month, unless otherwise specified by the permitting authority.

Permittees that have been granted a waiver shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Attention: Compliance Assurance Section, Mail Code # 19  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

SPECIAL CONDITION 7. The provisions of 40 CFR Section 122.41(m) & (n) are incorporated herein by reference.

SPECIAL CONDITION 8. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 9. Fecal Coliform limits for Discharge Number 010, 012 and 013 are effective May thru October. Sampling of Fecal Coliform is only required during this time period.

Excluding chlorine associated with air scrubber discharge, any use of chlorine to control slime growths, odors or as an operational control, etc. shall not exceed the limit of 0.038 mg/L (daily maximum) total residual chlorine in the effluent. Sampling is required on a daily grab basis during the chlorination process. Reporting shall be submitted on the DMRs on a monthly basis.

SPECIAL CONDITION 10.

A. Publicly Owned Treatment Works (POTW) Pretreatment Program General Provisions

1. The Permittee shall implement and enforce its approved Pretreatment Program which was approved on December 27, 1984 and all approved subsequent modifications thereto. The Permittee shall maintain legal authority adequate to fully implement the Pretreatment Program in compliance with Federal (40 CFR 403), State, and local laws and regulations. All definitions in this section unless specifically otherwise defined in this section, are those definitions listed in 40 CFR 403.3. USEPA Region 5 is the Approval Authority for the administration of pretreatment programs in Illinois. The Permittee shall:
  - a. Develop and implement procedures to ensure compliance with the requirements of a pretreatment program as specified in 40 CFR 403.8 (f) (2);
  - b. Carry out independent inspection and monitoring procedures at least once per year, which will determine whether each significant industrial user (SIU) is in compliance with applicable pretreatment standards;
  - c. Evaluate whether each SIU needs a slug control plan or other action to control slug discharges. If needed, the SIU slug control plan shall include the items specified in 40 CFR 403.8(f)(2)(vi). For Industrial Users (IUs) identified as

Special Conditions

significant prior to November 14, 2005, this evaluation must have been conducted at least once by October 14, 2006; additional SIUs must be evaluated within 1 year of being designated an SIU;

- d. Update its inventory of Industrial Users (IUs) at least annually and as needed to ensure that all SIUs are properly identified, characterized, and categorized;
  - e. Receive and review self monitoring and other IU reports to determine compliance with all pretreatment standards and requirements, and obtain appropriate remedies for noncompliance by any IU with any pretreatment standard and/or requirement;
  - f. Investigate instances of noncompliance, collect and analyze samples, and compile other information with sufficient care as to produce evidence admissible in enforcement proceedings, including judicial action;
  - g. Require development, as necessary, of compliance schedules by each industrial user to meet applicable pretreatment standards; and,
  - h. Maintain an adequate revenue structure and staffing level for continued operation of the Pretreatment Program.
2. The Permittee shall issue/reissue permits or equivalent control mechanisms to all SIUs prior to expiration of existing permits or prior to commencement of discharge in the case of new discharges. The permits at a minimum shall include the elements listed in 40 CFR § 403.8(f)(1)(iii)(B).
  3. The Permittee shall develop, maintain, and enforce, as necessary, local limits to implement the general and specific prohibitions in 40 CFR § 403.5 which prohibit the introduction of any pollutants which cause pass through or interference and the introduction of specific pollutants to the waste treatment system from any source of nondomestic discharge.
  4. In addition to the general limitations expressed in Paragraph 3 above, applicable pretreatment standards must be met by all industrial users of the POTW. These limitations include specific standards for certain industrial categories as determined by Section 307(b) and (c) of the Clean Water Act, State limits, or local limits, whichever are more stringent.
  5. The USEPA and IEPA individually retain the right to take legal action against any industrial user and/or the POTW for those cases where an industrial user has failed to meet an applicable pretreatment standard by the deadline date regardless of whether or not such failure has resulted in a permit violation.
  6. The Permittee shall establish agreements with all contributing jurisdictions, as necessary, to enable it to fulfill its requirements with respect to all IUs discharging to its system.
  7. Unless already completed, the Permittee shall within six(6) months of the effective date of this Permit submit to USEPA and IEPA a proposal to modify and update its approved Pretreatment Program to incorporate Federal revisions to the general pretreatment regulations. The proposal shall include all changes to the approved program and the sewer use ordinance which are necessary to incorporate the revisions of the Pretreatment Streamlining Rule (which became effective on November 14, 2005), which are considered required changes, as described in the Pretreatment Streamlining Rule Fact Sheet 2.0: Required changes, available at: [http://cfpub.epa.gov/npdes/whatsnew.cfm?program\\_id=3](http://cfpub.epa.gov/npdes/whatsnew.cfm?program_id=3). This includes any necessary revisions to the Permittee's Enforcement Response Plan (ERP).
  8. Within 1 year from the effective date of this permit, the Permittee shall conduct a technical re-evaluation of its local limitations consistent with U.S. EPA's Local Limits Development Guidance (July 2004), and submit the evaluation and any proposed revisions to its local limits to IEPA and U.S. EPA Region 5 for review and approval. U.S. EPA Region 5 will request Permittee to submit the evaluation and any proposed revisions to its local limits on the spreadsheet found at <http://www.epa.gov/region5/water/npdestek/LocalLmt.XLS>. To demonstrate technical justification for new local industrial user limits or justification for retaining existing limits, the following information must be submitted to U.S. EPA:
    - a. Total plant flow
    - b. Domestic/commercial pollutant contributions for pollutants of concern
    - c. Industrial pollutant contributions and flows
    - d. Current POTW pollutant loadings, including loadings of conventional pollutants
    - e. Actual treatment plant removal efficiencies, as a decimal (primary, secondary, across the wastewater treatment plant)
    - f. Safety factor to be applied
    - g. Identification of applicable criteria:
      - i. NPDES permit conditions
        - Specific NPDES effluent limitations
        - Water-quality criteria
        - Whole effluent toxicity requirements
        - Criteria and other conditions for sludge disposal
      - ii. Biological process inhibition

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- Nitrification
  - Sludge digester
  - iii. Collection system problems
  - h. The Permittee's sludge disposal methods (land application, surface disposal, incineration, landfill)
  - i. Sludge flow to digester
  - j. Sludge flow to disposal
  - k. % solids in sludge to disposal, not as a decimal
  - l. % solids in sludge to digester, not as a decimal
  - m. Plant removal efficiencies for conventional pollutants
  - n. If revised industrial user discharge limits are proposed, the method of allocating available pollutants loads to industrial users
  - o. A comparison of maximum allowable headworks loadings based on all applicable criteria listed in g, above
  - p. Pollutants that have caused:
    - i. Violations or operational problems at the POTW, including conventional pollutants
    - ii. Fires and explosions
    - iii. Corrosion
    - iv. Flow obstructions
    - v. Increased temperature in the sewer system
    - vi. Toxic gases, vapors or fumes that caused acute worker health and safety problems
    - vii. Toxicity found through Whole Effluent Toxicity testing
    - viii. Inhibition
  - q. Pollutants designated as "monitoring only" in the NPDES permit
  - r. Supporting data, assumptions, and methodologies used in establishing the information a through q above.
9. The Permittee Pretreatment Program has been modified to incorporate a Pretreatment Program Amendment approved on July 10, 1995. The amendment became effective on the date of approval and is a fully enforceable provision of your Pretreatment Program.

Modifications of your Pretreatment Program shall be submitted in accordance with 40 CFR § 403.18, which established conditions for substantial and non-substantial modifications. All requests should be sent in electronic format to [r5npdes@epa.gov](mailto:r5npdes@epa.gov), Attention: NPDES Program Branch.

**B. Reporting and Records Requirements**

1. The Permittee shall provide an annual report briefly describing the permittee's pretreatment program activities over the previous calendar year. Permittees who operate multiple plants may provide a single report providing all plant-specific reporting requirements are met. Such report shall be submitted no later than May 31st of each year to USEPA, Region 5, 77 West Jackson Blvd., Chicago, Illinois 60604, Attention: Water Enforcement & Compliance Assurance Branch, and shall be in the format set forth in IEPA's POTW Pretreatment Report Package which contains information regarding:
- a. An updated listing of the Permittee's significant industrial users, indicating additions and deletions from the previous year, along with brief explanations for deletions. The list shall specify which categorical Pretreatment standards, if any, are applicable to each Industrial User.
  - b. A descriptive summary of the compliance activities including numbers of any major enforcement actions, (i.e., administrative orders, penalties, civil actions, etc.), and the outcome of those actions. This includes an assessment of the compliance status of the Permittee's industrial users and the effectiveness of the Permittee's Pretreatment Program in meeting its needs and objectives.
  - c. A description of all substantive changes made to the Permittee's Pretreatment Program. Changes which are "substantial modifications" as described in 40 CFR § 403.18(c) must receive prior approval from the USEPA.
  - d. Results of sampling and analysis of POTW influent, effluent, and sludge.
  - e. A summary of the findings from the priority pollutants sampling. As sufficient data becomes available the IEPA may modify this Permit to incorporate additional requirements relating to the evaluation, establishment, and enforcement of local limits for organic pollutants. Any permit modification is subject to formal due process procedures pursuant to State and Federal law and regulation. Upon a determination that an organic pollutant is present that causes interference or pass through, the Permittee shall establish local limits as required by 40 CFR § 403.5(c).
2. The Permittee shall maintain all pretreatment data and records for a minimum of three (3) years. This period shall be extended during the course of unresolved litigation or when requested by the IEPA or the Regional Administrator of USEPA. Records shall be available to USEPA and the IEPA upon request.

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3. The Permittee shall establish public participation requirements of 40 CFR 25 in implementation of its Pretreatment Program. The Permittee shall at least annually, publish the names of all IU's which were in significant noncompliance (SNC), as defined by 40 CFR § 403.8(f)(2)(viii), in a newspaper of general circulation that provides meaningful public notice within the jurisdictions served by the Permittee or based on any more restrictive definition of SNC that the POTW may be using.
4. The Permittee shall provide written notification to the USEPA, Region 5, 77 West Jackson Blvd., Chicago, Illinois 60604, Attention: NPDES Programs Branch and to the Deputy Counsel for the Division of Water Pollution Control, IEPA, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 within five (5) days of receiving notice that any Industrial User of its sewage treatment plant is appealing to the Circuit Court any condition imposed by the Permittee in any permit issued to the Industrial User by Permittee. A copy of the Industrial User's appeal and all other pleadings filed by all parties shall be mailed to the Deputy Counsel within five (5) days of the pleadings being filed in Circuit Court.

C. Monitoring Requirements

1. The Permittee shall monitor its influent, effluent and sludge and report concentrations of the following parameters on monitoring report forms provided by the IEPA and include them in its annual report. Samples shall be taken at Semi-annual intervals at the indicated reporting limit or better and consist of a 24-hour composite unless otherwise specified below. Sludge samples shall be taken of final sludge and consist of a grab sample reported on a dry weight basis.

STORET CODE	PARAMETER	Minimum reporting limit
01097	Antimony	0.07 mg/L
01002	Arsenic	0.05 mg/L
01007	Barium	0.5 mg/L
01012	Beryllium	0.005 mg/L
01027	Cadmium	0.001 mg/L
01032	Chromium (hex) (grab not to exceed 24 hours)*	0.01 mg/L
01034	Chromium (total)	0.05 mg/L
01042	Copper	0.005 mg/L
00718	Cyanide* (grab) (available **** or amenable to chlorination)*****	5.0 ug/L
00720	Cyanide (total) (grab)*****	5.0 ug/L
00951	Fluoride*	0.1 mg/L
01045	Iron (total)	0.5 mg/L
01046	Iron (Dissolved)*	0.5 mg/L
01051	Lead	0.05 mg/L
01055	Manganese	0.5 mg/L
71900	Mercury (effluent grab)***	1.0 ng/L**
01067	Nickel	0.005 mg/L
00556	Oil (hexane soluble or equivalent) (Grab Sample only)*	5.0 mg/L
32730	Phenols (grab)	0.005 mg/L
01147	Selenium	0.005 mg/L
01077	Silver (total)	0.003 mg/L
01059	Thallium	0.3 mg/L
01092	Zinc	0.025 mg/L

The minimum reporting limit for each parameter is specified by Illinois EPA as the regulatory authority.

The minimum reporting limit for each parameter shall be greater than or equal to the lowest calibration standard and within the acceptable calibration range of the instrument.

The minimum reporting limit is the value below which data are to be reported as non-detects.

The statistically-derived laboratory method detection limit for each parameter shall be less than the minimum reporting limit required for that parameter.

All sample containers, chemical and thermal preservation, holding times, analyses, method detection limit determinations and quality assurance/quality control requirements shall be in accordance with 40 CFR Part 136.

Unless otherwise indicated, concentrations refer to the total amount of the constituent present in all phases, whether solid, suspended or dissolved, elemental or combined including all oxidation states. Where constituents are commonly measured as other than total, the phase is so indicated.

\* Influent and effluent only

\*\*1 ng/L = 1 part per trillion.

\*\*\*Utilize USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E, other approved methods may be used for influent (composite) and sludge.



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\*\*\*\* USEPA Method OIA – 1677 or Standard Method SM 4500-CN G.

\*\*\*\*\*Analysis for cyanide (available or amenable to chlorination) is only required if cyanide (total) is detected at or above the minimum reporting limit.

2. The Permittee shall conduct an analysis for the one hundred and ten (110) organic priority pollutants identified in 40 CFR 122 Appendix D, Table II as amended. This monitoring shall be done annually and reported on monitoring report forms provided by the IEPA and shall consist of the following:

a. The influent and effluent shall be sampled and analyzed for the one hundred and ten (110) organic priority pollutants. The sampling shall be done during a day when industrial discharges are expected to be occurring at normal to maximum levels.

Samples for the analysis of acid and base/neutral extractable compounds shall be 24-hour composites.

Five (5) grab samples shall be collected each monitoring day to be analyzed for volatile organic compounds. A single analysis for volatile pollutants (Method 624) may be run for each monitoring day by compositing equal volumes of each grab sample directly in the GC purge and trap apparatus in the laboratory, with no less than one (1) mL of each grab included in the composite.

Wastewater samples must be handled, prepared, and analyzed by GC/MS in accordance with USEPA Methods 624 and 625 of 40 CFR 136 as amended.

b. The sludge shall be sampled and analyzed for the one hundred and ten (110) organic priority pollutants. A sludge sample shall be collected concurrent with a wastewater sample and taken as final sludge.

Sampling and analysis shall conform to USEPA Methods 624, 625, and other methods approved under 40 CFR 503 unless an alternate method has been approved by IEPA.

c. Sample collection, preservation and storage shall conform to approved USEPA procedures and requirements.

3. In addition, the Permittee shall monitor any new toxic substances as defined by the Clean Water Act, as amended, following notification by the IEPA.

4. Permittee shall report any noncompliance with effluent or water quality standards in accordance with Standard Condition 12(f) of this Permit.

5. Analytical detection limits shall be in accordance with 40 CFR 136. Minimum detection limits for sludge analyses shall be in accordance with 40 CFR 503.

D. Pretreatment Reporting

USEPA Region 5 is the Approval Authority for administering the pretreatment program in Illinois. All requests for modification of pretreatment program elements should be submitted in redline/strikeout format and must be sent to USEPA at [r5npdes@epa.gov](mailto:r5npdes@epa.gov).

Permittee shall upon notice from USEPA, modify any pretreatment program element found to be inconsistent with 40 CFR 403.

SPECIAL CONDITION 11. During January of each year the Permittee shall submit annual fiscal data regarding sewerage system operations to the Illinois Environmental Protection Agency/Division of Water Pollution Control/Compliance Assurance Section. The Permittee may use any fiscal year period provided the period ends within twelve (12) months of the submission date.

Submission shall be on forms provided by IEPA titled "Fiscal Report Form For NPDES Permittees".

SPECIAL CONDITION 12. For the duration of this Permit, the Permittee shall determine the quantity of sludge produced by the treatment facility in dry tons or gallons with average percent total solids analysis. The Permittee shall maintain adequate records of the quantities of sludge produced and have said records available for U.S. EPA and IEPA inspection. The Permittee shall submit to the IEPA, at a minimum, a semi-annual summary report of the quantities of sludge generated and disposed of, in units of dry tons or gallons (average total percent solids) by different disposal methods including but not limited to application on farmland, application on reclamation land, landfilling, public distribution, dedicated land disposal, sod farms, storage lagoons or any other specified disposal method. Said reports shall be submitted to the IEPA by January 31 and July 31 of each year reporting the preceding January thru June and July thru December interval of sludge disposal operations.

Duty to Mitigate. The Permittee shall take all reasonable steps to minimize any sludge use or disposal in violation of this Permit.

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Sludge monitoring must be conducted according to test procedures approved under 40 CFR 136 unless otherwise specified in 40 CFR 503, unless other test procedures have been specified in this Permit.

Planned Changes. The Permittee shall give notice to the IEPA on the semi-annual report of any changes in sludge use and disposal.

The Permittee shall retain records of all sludge monitoring, and reports required by the Sludge Permit as referenced in Standard Condition 25 for a period of at least five (5) years from the date of this Permit.

If the Permittee monitors any pollutant more frequently than required by this permit or the Sludge Permit, the results of this monitoring shall be included in the reporting of data submitted to the IEPA.

The Permittee shall comply with existing federal regulations governing sewage sludge use or disposal and shall comply with all existing applicable regulations in any jurisdiction in which the sewage sludge is actually used or disposed.

The Permittee shall comply 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 the standards for sewage sludge use or disposal even if the permit has not been modified to incorporate the requirement.

The Permittee shall ensure that the applicable requirements in 40 CFR Part 503 are met when the sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator.

Monitoring reports for sludge shall be reported on the form titled "Sludge Management Reports" to the following address:

Illinois Environmental Protection Agency  
Bureau of Water  
Compliance Assurance Section  
Mail Code #19  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

SPECIAL CONDITION 13. This Permit may be modified to include alternative or additional final effluent limitations pursuant to an approved Total Maximum Daily Load (TMDL) Study, an approved Nutrient Assessment Reduction Plan, or an approved trading program.

SPECIAL CONDITION 14. The Permittee shall conduct biomonitoring of the effluent from Discharge Number(s) 010.

Biomonitoring

- A. Acute Toxicity - Standard definitive acute toxicity tests shall be run on at least two trophic levels of aquatic species (fish, invertebrate) representative of the aquatic community of the receiving stream. Testing must be consistent with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Fifth Ed.) EPA/821-R-02-012. Unless substitute tests are pre-approved; the following tests are required:
1. Fish 96-hour static LC<sub>50</sub> Bioassay using fathead minnows (*Pimephales promelas*).
  2. Invertebrate 48-hour static LC<sub>50</sub> Bioassay using *Ceriodaphnia*.
- B. Testing Frequency - The above tests shall be conducted using 24-hour composite samples unless otherwise authorized by the IEPA. Sample collection and testing must be conducted in the 18<sup>th</sup>, 15<sup>th</sup>, 12<sup>th</sup>, and 9<sup>th</sup> month prior to the expiration date of this Permit. When possible, bioassay sample collection should coincide with sample collection for metals analysis or other parameters that may contribute to effluent toxicity.
- C. Reporting - Results shall be reported according to EPA/821-R-02-012, Section 12, Report Preparation, and shall be mailed to IEPA, Bureau of Water, Compliance Assurance Section or emailed to [EPA.PrmtSpecCondtns@Illinois.gov](mailto:EPA.PrmtSpecCondtns@Illinois.gov) within one week of receipt from the laboratory. Reports are due to the IEPA no later than the 16<sup>th</sup>, 13<sup>th</sup>, 10<sup>th</sup>, and 7<sup>th</sup> month prior to the expiration date of this Permit.
- D. Toxicity – Should a bioassay result in toxicity to >20% of organisms tested in the 100% effluent treatment, the IEPA may require, upon notification, six (6) additional rounds of monthly testing on the affected organism(s) to be initiated within 30 days of the toxic bioassay. Results shall be submitted to IEPA within one (1) week of becoming available to the Permittee. Should any of the additional bioassays result in toxicity to ≥50% of organisms tested in the 100% effluent treatments, the Permittee must contact the IEPA within one (1) day of the results becoming available to the Permittee and begin the toxicity identification and reduction evaluation process as outlined below.

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- E. Toxicity Identification and Reduction Evaluation - Should any of the additional bioassays result in toxicity to  $\geq 50\%$  of organisms tested in the 100% effluent treatment, the Permittee must contact the IEPA within one (1) day of the results becoming available to the Permittee and begin the toxicity identification evaluation process in accordance with Methods for Aquatic Toxicity Identification Evaluations, EPA/600/6-91/003. The IEPA may also require, upon notification, that the Permittee prepare a plan for toxicity reduction evaluation to be developed in accordance with Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833B-99/002, which shall include an evaluation to determine which chemicals have a potential for being discharged in the plant wastewater, a monitoring program to determine their presence or absence and to identify other compounds which are not being removed by treatment, and other measures as appropriate. The Permittee shall submit to the IEPA its plan for toxicity reduction evaluation within ninety (90) days following notification by the IEPA. The Permittee shall implement the plan within ninety (90) days or other such date as contained in a notification letter received from the IEPA.

The IEPA may modify this Permit during its term to incorporate additional requirements or limitations based on the results of the biomonitoring. In addition, after review of the monitoring results, the IEPA may modify this Permit to include numerical limitations for specific toxic pollutants. Modifications under this condition shall follow public notice and opportunity for hearing.

SPECIAL CONDITION 15. Discharge Number 012 (Old STP Discharge to Skokie River upstream of Skokie Lagoons) and Discharge Number 013 (Dundee Road Effluent Lift Station Bypass with discharge to Skokie River upstream of Skokie Lagoons) are emergency discharge points. The use of those discharge points is subject to the reporting requirements contained in standard condition 12(f) of this permit except when discharge occurs as a result of essential maintenance or high storm water levels within the Edens Expressway ditch. Discharge resulting from essential maintenance or high storm water levels within the Edens Expressway ditch shall be reported in the discharge monitoring report for the month of the discharge. Any discharge shall also meet the requirements as presented on page 2 of this permit.

SPECIAL CONDITION 16. The Permittee has undergone a Monitoring Reduction review and the influent and effluent sample frequency has been reduced for parameters due to sustained compliance. The IEPA may request that the influent and effluent sampling frequency for these parameters be increased without Public Notice. This provision does not limit EPA's authority to require additional monitoring, information or studies pursuant to Section 308 of the CWA.

SPECIAL CONDITION 17. The Permittee shall work towards the goals of achieving no discharges from sanitary sewer overflows or basement back-ups and ensuring that overflows or back-ups, when they do occur do not cause or contribute to violations of applicable standards or cause impairment in any adjacent receiving water. Overflows from sanitary sewers are expressly prohibited by this permit and by Ill. Adm. Code 306.304. As part of the process to ultimately achieve compliance through the elimination of and mitigating the adverse impacts of any such overflows if they do occur, the Permittee shall (A) identify and report to IEPA all SSOs that do occur, and (B) develop, implement and submit to the IEPA a Capacity, Management, Operations, and Maintenance (CMOM) plan which includes an Asset Management strategy within twenty-four (24) months of the effective date of this Permit or review and revise any existing plan accordingly. The Permittee shall modify the Plan to incorporate any comments that it receives from IEPA and shall implement the modified plan as soon as possible. The Permittee should work as appropriate, in consultation with affected authorities at the local, county, and/or state level to develop the plan components involving third party notification of overflow events. The Permittee may be required to construct additional sewage transport and/or treatment facilities in future permits or other enforceable documents should the implemented CMOM plan indicate that the Permittee's facilities are not capable of conveying and treating the flow for which they are designed.

The CMOM plan shall include the following elements:

A. Measures and Activities:

1. A complete map and system inventory for the collection system owned and operated by the Permittee;
2. Organizational structure; budgeting; training of personnel; legal authorities; schedules for maintenance, sewer system cleaning, and preventative rehabilitation; checklists, and mechanisms to ensure that preventative maintenance is performed on equipment owned and operated by the Permittee;
3. Documentation of unplanned maintenance;
4. An assessment of the capacity of the collection and treatment system owned and operated by the Permittee at critical junctions and immediately upstream of locations where overflows and backups occur or are likely to occur; use flow monitoring and/or sewer hydraulic modeling, as necessary;
5. Identification and prioritization of structural deficiencies in the system owned and operated by the Permittee. Include preventative maintenance programs to prevent and/or eliminate collection system blockages from roots or grease, and prevent corrosion or negative effects of hydrogen sulfide which may be generated within collection system;
6. Operational control, including documented system control procedures, scheduled inspections and testing, list of scheduled frequency of cleaning (and televising as necessary) of sewers;
7. The Permittee shall develop and implement an Asset Management strategy to ensure the long-term sustainability of the collection system. Asset Management shall be used to assist the Permittee in making decisions on when it is most appropriate to repair, replace or rehabilitate particular assets and develop long-term funding strategies; and
8. Asset Management shall include but is not limited to the following elements:
  - a. Asset Inventory and State of the Asset;
  - b. Level of Service;

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- c. Critical Asset Identification;
- d. Life Cycle Cost; and
- e. Long-Term Funding Strategy.

## B. Design and Performance Provisions:

- 1. Monitor the effectiveness of CMOM;
- 2. Upgrade the elements of the CMOM plan as necessary; and
- 3. Maintain a summary of CMOM activities.

## C. Overflow Response Plan:

- 1. Know where overflows and back-ups within the facilities owned and operated by the Permittee occur;
- 2. Respond to each overflow or back-up to determine additional actions such as clean up; and
- 3. Locations where basement back-ups and/or sanitary sewer overflows occur shall be evaluated as soon as practicable for excessive inflow/infiltration, obstructions or other causes of overflows or back-ups as set forth in the System Evaluation Plan.
- 4. Identify the root cause of the overflow or basement backup, and document to files;
- 5. Identify actions or remediation efforts to reduce risk of reoccurrence of these overflows or basement backups in the future, and document to files.

## D. System Evaluation Plan:

- 1. Summary of existing SSO and Excessive I/I areas in the system and sources of contribution;
- 2. Evaluate plans to reduce I/I and eliminate SSOs;
- 3. Evaluate the effectiveness and performance in efforts to reduce excessive I/I in the collection system;
- 4. Special provisions for Pump Stations and force mains and other unique system components; and
- 5. Construction plans and schedules for correction.

## E. Reporting and Monitoring Requirements:

- 1. Program for SSO detection and reporting; and
- 2. Program for tracking and reporting basement back-ups, including general public complaints.

## F. Third Party Notice Plan:

- 1. Describes how, under various overflow scenarios, the public, as well as other entities, would be notified of overflows within the Permittee's system that may endanger public health, safety or welfare;
- 2. Identifies overflows within the Permittee's system that would be reported, giving consideration to various types of events including events with potential widespread impacts;
- 3. Identifies who shall receive the notification;
- 4. Identifies the specific information that would be reported including actions that will be taken to respond to the overflow;
- 5. Includes a description of the lines of communication; and
- 6. Includes the identities and contact information of responsible POTW officials and local, county, and/or state level officials.

For additional information concerning USEPA CMOM guidance and Asset Management please refer to the following web site addresses.  
[http://www.epa.gov/npdes/pubs/cmom\\_guide\\_for\\_collection\\_systems.pdf](http://www.epa.gov/npdes/pubs/cmom_guide_for_collection_systems.pdf) and  
[http://water.epa.gov/type/watersheds/wastewater/upload/guide\\_smallsystems\\_assetmanagement\\_bestpractices.pdf](http://water.epa.gov/type/watersheds/wastewater/upload/guide_smallsystems_assetmanagement_bestpractices.pdf)

**SPECIAL CONDITION 18.** The Permittee shall develop and submit to the Agency a Phosphorus Discharge Optimization Plan within 18 months of the effective date of this permit. The plan shall include a schedule for the implementation of these optimization measures. Annual progress reports on the optimization of the existing treatment facilities shall be submitted to the Agency by March 31 of each year beginning 12 months from the effective date of the permit. In developing the plan, the Permittee shall evaluate a range of measures for reducing phosphorus discharges from the treatment plant, including possible source reduction measures, operational improvements, and minor facility modifications that will optimize reductions in phosphorus discharges from the wastewater treatment facility. The Permittee's evaluation shall include, but not be limited to, an evaluation of the following optimization measures:

- A. WWTF influent reduction measures.
  - 1. Evaluate the phosphorus reduction potential of users.
  - 2. Determine which sources have the greatest opportunity for reducing phosphorus (i.e., industrial, commercial, institutional, municipal and others).
    - a. Determine whether known sources (i.e., restaurant and food preparation) can adopt phosphorus minimization and water conservation plans.
    - b. Evaluate implementation of local limits on influent sources of excessive phosphorus.
- B. WWTF effluent reduction measures.
  - 1. Reduce phosphorus discharges by optimizing existing treatment processes.
    - a. Adjust the solids retention time for either nitrification, denitrification, or biological phosphorus removal.

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- b. Adjust aeration rates to reduce dissolved oxygen and promote simultaneous nitrification-denitrification.
- c. Add baffles to existing units to improve microorganism conditions by creating divided anaerobic, anoxic, and aerobic zones.
- d. Change aeration settings in plug flow basins by turning off air or mixers at the inlet side of the basin system.
- e. Minimize impact on recycle streams by improving aeration within holding tanks.
- f. Reconfigure flow through existing basins to enhance biological nutrient removal.
- g. Increase volatile fatty acids for biological phosphorus removal.

SPECIAL CONDITION 19. The Permittee shall, within 18 months of the effective date of this permit, prepare and submit to the Agency a Phosphorus Removal Feasibility Study (PRFS) that identifies the method, timeframe, and costs of reducing phosphorus levels in its discharge to a level consistently meeting a potential future effluent limit of 0.5 mg/L or 0.1 mg/L. The study shall evaluate the construction and O & M costs of the application of this limit on a monthly, seasonal and annual average basis. The feasibility report shall also be shared with the North Branch Chicago River Watershed Workgroup. Previously submitted feasibility studies that did not include an alternative effluent limit of 0.5 mg/L or 0.1 mg/L may be amended to identify supplemental treatment technologies necessary to achieve 0.5 mg/L or 0.1 mg/L.

SPECIAL CONDITION 20. The Agency shall consider all monitoring data submitted by the discharger in accordance with the monitoring requirements of this permit for all parameters, including but not limited to data pertaining to ammonia and dissolved oxygen for discharges from Discharge Number 011, to determine whether the discharges are at levels which cause, have the reasonable potential to cause or contribute to exceedances of water quality standards; and, if so, to develop appropriate water quality based effluent limitations. If the discharger wants the Agency to consider mixing when determining the need for and establishment of water quality based effluent limitations, the discharger shall submit a study plan on mixing for IEPA approval.

SPECIAL CONDITION 21. A phosphorus limit of 1.0 mg/L (monthly average) shall become effective eighteen (18) months from the effective date of this Permit.

In order for the Permittee to achieve the above limit, it will be necessary to modify existing treatment facilities to include phosphorus removal, reduce phosphorus sources or explore other ways to prevent discharges that exceed the limit. The Permittee must implement the following compliance measures consistent with the schedule below:

A. Progress Report on Optimization	6 months from the effective date of this permit
B. Complete Optimization	12 months from the effective date of this permit
C. Achieve Monthly Concentration and Loading Effluent Limitations for Total Phosphorus	18 Months from the effective date of this Permit

Compliance dates may be modified based on the results of the Phosphorus Removal Feasibility Report required by Special Condition 19 of this Permit. All modifications of this Permit must be in accordance with 40 CFR 122.62 or 40 CFR 122.63.

Reporting shall be submitted on the NetDMR's on a monthly basis.

REPORTING

The Permittee shall submit reports for items A, B, and C of the compliance schedule indicating: a) the date the item was completed, or b) that the item was not completed, the reasons for non-completion and the anticipated completion date to the Agency Compliance Section.

SPECIAL CONDITION 22:

- A. Subject to paragraph (B) below, an effluent limit of 0.5 mg/L Total Phosphorus 12 month rolling geometric mean (calculated monthly) basis (hereinafter "the Limit"), shall be met by the Permittee by January 1, 2030, unless the Permittee demonstrates that meeting such Limit is not technologically or economically feasible in one of the following manners:
1. the Limit is not technologically feasible through the use of biological phosphorus removal (BPR) process(es) at the treatment facility; or
  2. the Limit would result in substantial and widespread economic or social impact. Substantial and widespread economic impacts must be demonstrated using applicable USEPA guidance, including but not limited to any of the following documents:
    - (a) Interim Economic Guidance for Water Quality Standards, March 1995, EPA-823-95-002;
    - (b) Combined Sewer Overflows – Guidance for Financial Capability Assessment and Schedule Development, February 1997, EPA-832—97-004;
    - (c) Financial Capability Assessment Framework for Municipal Clean Water Act Requirements, November 24, 2014; and

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- (d) any additional USEPA guidance on affordability issues that revises, supplements or replaces those USEPA guidance documents; or
3. the Limit can only be met by chemical addition for phosphorus removal at the treatment facility in addition to those processes currently contemplated; or
  4. the Limit is demonstrated not to be feasible by January 1, 2030, but is feasible within a longer timeline, then the Limit shall be met as soon feasible and approved by the Agency; or
  5. the Limit is demonstrated not to be achievable, then an effluent limit that is achievable by the Permittee (along with associated timeline) will apply instead, except that the effluent limit shall not exceed 0.6 mg/L Total Phosphorus 12 month rolling geometric mean (calculated monthly).
- B. The Limit shall be met by the Permittee by January 1, 2030, except in the following circumstances:
1. If the Permittee develops a written plan, preliminary engineering report, facility plan, or project plan no later than January 1, 2025, to rebuild or replace the secondary treatment process(es) of the treatment facility, the Limit shall be met by December 31, 2035; or
  2. If the Permittee decides to construct/operate biological nutrient removal (BNR) process(es), incorporating nitrogen reduction, the Limit shall be met by December 31, 2035; or
  3. If the Permittee decides to use chemical addition for phosphorus removal instead of BPR, the Limit and the effluent limit of 1.0 mg/L Total Phosphorus monthly average shall be met by December 31, 2025; or
  4. If the Permittee has already installed chemical addition for phosphorus removal instead of BPR, and has a 1.0 mg/L Total Phosphorus monthly average effluent limit in its permit, or the Permittee is planning to install chemical addition with an IEPA construction permit that is issued on or before July 31, 2018, the 1.0 mg/L Total Phosphorus monthly average effluent limit (and associated compliance schedule) shall apply, and the Limit shall not be applicable; or
  5. The NARP determines that a limit lower than the Limit is necessary and attainable. The lower limit and timeline identified in the NARP shall apply to the Permittee; or
  6. If the Permittee participates in a watershed group that is developing a NARP for an impairment related to phosphorus or a risk of eutrophication, and IEPA determines that the group has the financial and structural capability to develop the NARP by the deadline specified in the NARP provisions below.
- C. The Permittee shall identify and provide adequate justification of any exception identified in paragraph (A) or circumstance identified in paragraph (B), regarding meeting the Limit. The justification shall be submitted to the Agency at the time of renewal of this permit or by December 31, 2023, whichever date is first. Any justification or demonstration performed by the Permittee pursuant to paragraph (A) or circumstance pursuant to paragraph (B) must be reviewed and approved by the Agency. The Agency will renew or modify the NPDES permit as necessary. No date deadline modification or effluent limitation modification for any of the exceptions or circumstances specified in paragraphs (A) or (B) will be effective until it is included in a modified or reissued NPDES permit.
- D. For purposes of this permit, the following definitions are used:
1. BPR (Biological Phosphorus Removal) is defined herein as treatment processes which do not require use of supplemental treatment processes at the treatment facilities before or after the biological system, such as but not limited to, chemical addition, carbon supplementation, fermentation, or filtration. The use of filtration or additional equipment to meet other effluent limits is not prohibited, but those processes will not be considered part of the BPR process for purposes of this permit, and
  2. BNR (Biological Nutrient Removal) is defined herein as treatment processes used for nitrogen and phosphorus removal from wastewater before it is discharged. BNR treatment processes, as defined herein, do not require use of supplemental treatment processes at the treatment facilities before or after the biological system, such as but not limited to, chemical addition, carbon supplementation, fermentation or filtration. The use of filtration or additional equipment to meet other effluent limits is not prohibited, but those processes will not be considered part of the BNR process for purposes of this permit.
- E. The 0.5 mg/L Total Phosphorus 12 month rolling geometric mean (calculated monthly) effluent limit applies to the effluent from the treatment plant.

**SPECIAL CONDITION 23:** The Agency has determined that the Permittee's treatment plant effluent is located upstream of a waterbody or stream segment that has been determined to have a phosphorus related impairment. This determination was made upon reviewing available information concerning the characteristics of the relevant waterbody/segment and the relevant facility (such as quantity of discharge flow and nutrient load relative to the stream flow).

A phosphorus related impairment means that the downstream waterbody or segment is listed by the Agency as impaired due to dissolved oxygen and/or offensive condition (algae and/or aquatic plant growth) impairments that is related to excessive phosphorus levels.

Special Conditions

The Permittee shall develop, or be a part of a watershed group that develops, a Nutrient Assessment Reduction Plan (NARP) that will meet the following requirements:

- A. The NARP shall be developed and submitted to the Agency by December 31, 2024. This requirement can be accomplished by the Permittee, by participation in an existing watershed group or by creating a new group. The NARP shall be supported by data and sound scientific rationale.
- B. The Permittee shall cooperate with and work with other stakeholders in the watershed to determine the most cost-effective means to address the phosphorus related impairment. If other stakeholders in the watershed will not cooperate in developing the NARP, the Permittee shall develop its own NARP for submittal to the Agency to comply with this condition.
- C. In determining the target levels of various parameters necessary to address the phosphorus related impairment, the NARP shall either utilize the recommendations by the Nutrient Science Advisory Committee or develop its own watershed-specific target levels.
- D. The NARP shall identify phosphorus input reductions by point source discharges and non-point source discharges in addition to other measures necessary to remove phosphorus related impairments in the watershed. The NARP may determine, based on an assessment of relevant data, that the watershed does not have an impairment related to phosphorus, in which case phosphorus input reductions or other measures would not be necessary. Alternatively, the NARP could determine that phosphorus input reductions from point sources are not necessary, or that phosphorus input reductions from both point and nonpoint sources are necessary, or that phosphorus input reductions are not necessary and that other measures, besides phosphorus input reductions, are necessary.
- E. The NARP shall include a schedule for the implementation of the phosphorus input reductions by point sources, non-point sources and other measures necessary to remove phosphorus related impairments. The NARP schedule shall be implemented as soon as possible and shall identify specific timelines applicable to the Permittee.
- F. The NARP can include provisions for water quality trading to address the phosphorus related impairments in the watershed. Phosphorus/Nutrient trading cannot result in violations of water quality standards or applicable antidegradation requirements.
- G. The Permittee shall request modification of the permit within 90 days after the NARP has been completed to include necessary phosphorus input reductions identified within the NARP. The Agency will modify the NPDES permit, if necessary.
- H. If the Permittee does not develop or assist in developing the NARP, and such a NARP is developed for the watershed, the Permittee will become subject to effluent limitations necessary to address the phosphorus related impairments. The Agency shall calculate these effluent limits by using the NARP and any applicable data. If no NARP has been developed, the effluent limits shall be determined for the Permittee on a case-by-case basis, so as to ensure that the Permittee's discharge will not cause or contribute to violations of the dissolved oxygen or narrative water quality standards.

SPECIAL CONDITION 24: The Permittee shall participate in the North Branch Chicago River Watershed Workgroup (NBWW). The Permittee shall work with other watershed members of the NBWW to determine the most cost effective means to remove dissolved oxygen (DO) and offensive condition impairments in the North Branch Chicago River Watershed to the extent feasible.

- A. The NBWW will conduct the following activities in accordance with the Plan during the term of this permit:
  - 1. Develop an Integrated Prioritization System (IPS) and supporting tools consisting of in-depth analysis of all chemical, physical and biological data collected in past watershed assessments to develop a library of data analysis tools and prioritization mechanisms related to future impairment restoration activities.
  - 2. Develop a Nutrient Assessment Reduction Plan (NARP) sequenced as follows:
    - a. Develop Preliminary NARP Workplan to be utilized to plan and budget the multiyear development and completion of a NBWW NARP. The Preliminary NARP Workplan shall be completed by December 31, 2021. The Workplan shall be submitted with the annual progress report per Section (B) below.
    - b. Develop NBWW NARP in accordance with the requirements in Special Condition 24.
  - 3. Continue comprehensive water quality monitoring program consisting of bioassessment monitoring, flow monitoring, and water column and sediment chemistry sampling and analysis; modify these programs as necessary to meet NARP objectives.
- B. The Permittee shall submit an annual progress report on the activities identified in (A) above, which includes the monitoring data from the previous year, to the Agency by March 31st of each year. The Permittee may work cooperatively with the NBWW to prepare a single annual progress report that is common among NBWW members.
- C. In its application for renewal of this permit, the Permittee shall consider and incorporate recommended NBWW activities listed in any annual progress report or Nutrient Assessment Reduction Plan that the Permittee will implement during the next permit term.

SPECIAL CONDITION 25: The Permittee shall monitor the wastewater effluent for Total Phosphorus, Dissolved Reactive Phosphorus, Nitrate/Nitrite, Total Kjeldahl Nitrogen (TKN), Ammonia, Total Nitrogen (calculated), Alkalinity, Specific Conductivity, Chloride and Temperature at least once a month beginning on the effective date of this permit. The Permittee shall monitor the wastewater influent for Total Phosphorus at least once a month. The results shall be submitted on electronic Discharge Monitoring Report Forms (NetDMRs) to IEPA unless otherwise specified by the IEPA.

Special Conditions

SPECIAL CONDITION 26: The Permittee shall conduct monthly water quality sampling in the receiving stream both upstream and downstream of the NPDES outfall for the following parameters: dissolved reactive phosphorus, total phosphorus, total organic carbon, chlorophyll a, dissolved oxygen, total ammonia nitrogen, nitrate/nitrite, total kjeldahl nitrogen, pH, total suspended solids, volatile suspended solids and temperature. The results shall be submitted to the Agency by March 31st of each year. The Permittee may work cooperatively with the NBWW to conduct monitoring and prepare a single annual monitoring report that is common among NBWW permittees.

SPECIAL CONDITION 27: On or before March 31 of each year, the Permittee shall submit a report that provides an estimate of the extent of reduction (volume and percent of annual total) of infiltration and inflow that has been accomplished during the preceding year (assessed on an annual average basis). The fourth report submitted in accordance with this special condition shall also include an analysis of the costs to remove remaining flow contributed from infiltration and inflow as compared to the total costs for transportation and treatment of the infiltration and inflow.

SPECIAL CONDITION 28: On or before March 31 of each year, the Permittee shall submit a report to IEPA that summarizes the effluent data for BOD<sub>5</sub> and Suspended Solids (SS) from Excess Flow Outfall 011 during the preceding year. Each report shall include a statement as to how often and by how much the effluent exceeded the levels of 30 mg/l BOD<sub>5</sub> and 30 mg/l SS on a monthly average basis, 45 mg/l BOD<sub>5</sub> and 45 mg/l SS on a weekly average basis, and 85% removal for both parameters monthly. If the effluent exceeds any of these levels or percentage removals, then the Permittee shall also include in the report a description of the measures that the Permittee would need to implement so that discharges from Excess Flow Outfall 011 would either (a) be eliminated or (b) be sufficiently treated so that such discharges would comply with such limitations. The report shall also include an estimate of the costs of the measures.