

NPDES Permit No. IL0021156

Notice No. FRB:11020402.bah

Public Notice Beginning Date: **November 10, 2011**

Public Notice Ending Date: **December 12, 2011**

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 Discharger:

City of South Beloit  
519 Blackhawk Blvd.  
South Beloit, Illinois 61080

Name and Address of Facility:

City of South Beloit - STP  
100 Perry Avenue  
South Beloit, Illinois 61080  
(Winnebago 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 discharger. 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 Francis Burba 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 City of South Beloit.

The length of the Permit is approximately 5 years.

The main discharge number is 001. The seven day once in ten year low flow (7Q10) of the receiving stream, Rock River is 313.0 cfs.

The design average flow (DAF) for the existing facility is 3.0 million gallons per day (MGD) and the design maximum flow (DMF) for the facility is 5.6 MGD. Treatment consists of screening, grit removal, activated sludge, final clarifiers, chlorine disinfection/dechlorination, aerobic digestion, and land application of sludge.

The design average flow (DAF) for the proposed facility is 4.99 million gallons per day (MGD) and the design maximum flow (DMF) for the facility is 10.0 MGD. Treatment consists of screening, grit removal, fine screens, activated sludge, final clarifiers, UV disinfection, post aeration, aerobic digestion, and land application of sludge.

This reissued Permit increases the facility's DAF, DMF, concentration limits, and/or load limits.

Application is made for the existing discharge(s) which is (are) located in Winnebago 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>
001	Rock River	42° 29' 09" North	89° 02' 45" West	General Use	Not Rated

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

The stream segment(s) (Waterbody Segment P-15) receiving the discharge from outfall(s) 001 is (are) on the 303(d) list of impaired waters.

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

<u>Potential Causes (2006 List)</u>	<u>Uses Impaired (2006 List)</u>
Nitrogen (total)	Aquatic life
Mercury & polychlorinated biphenyls	Fish consumption

<u>Potential Causes (partially approved 2008 List)</u>	<u>Uses Impaired (partially approved 2008 List)</u>
Mercury & polychlorinated biphenyls	Fish consumption
Fecal Coliform	Primary contact

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): 001 STP Outfall (Existing Facility)

Load limits computed based on a design average flow (DAF) of 3.0 MGD (design maximum flow (DMF) of 5.6 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>	500 (934)	1001 (1868)		20	40		35 IAC 304.120 40 CFR 133.102
Suspended Solids	626 (1168)	1126 (2102)		25	45		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						0.05	35 IAC 302.208
Ammonia Nitrogen: March-May/Sept.-Oct.	38 (70)		80 (149)	1.5		3.2	35 IAC 355 and 35 IAC 302
June-August	38 (70)	95 (177)	105 (196)	1.5	3.8	4.2	
Nov.-Feb.	100 (187)		118 (220)	4.0		4.7	
Phosphorus	Monitor Only						35 IAC 304.123
Total Nitrogen	Monitor Only						35 IAC 309.146

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

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): 001 STP Outfall (Proposed Facility)

Load limits computed based on a design average flow (DAF) of 4.99 MGD (design maximum flow (DMF) of 10.0 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>	416 (834)		832 (1668)	10		20	35 IAC 304.120 40 CFR 133.102
Suspended Solids	499 (1001)		999 (2002)	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
Ammonia Nitrogen: March-May/Sept.-Oct.	62 (125)		133 (267)	1.5		3.2	35 IAC 355 and 35 IAC 302
June-August	62 (125)	158 (317)	175 (350)	1.5	3.8	4.2	
Nov.-Feb.	166 (334)		196 (392)	4.0		4.7	
Phosphorus	42 (83)			1.0			35 IAC 304.123
Total Nitrogen	Monitor Only						35 IAC 309.146

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

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. Effluent sampling point location.
7. Controlling the sources of infiltration and inflow into the sewer system.
8. Seasonal fecal coliform limits.
9. Monitoring for arsenic, barium, cadmium, hexavalent chromium, total chromium, copper, weak acid dissociable cyanide, total cyanide, fluoride, dissolved iron, total iron, lead, manganese, mercury, nickel, oil, phenols, selenium, silver and zinc is required to be conducted semi-annually beginning 3 months from the effective date.
10. Burden reduction.
11. Submission of annual fiscal data.
12. 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.
13. Submission of semi annual reports indicating the quantities of sludge generated and disposed.
14. 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.
15. Notify IEPA upon completion of the proposed 4.99 MGD STP.
16. Determination of Mixing Zone and ZID.
17. Capacity, Management, Operations and Maintenance (CMOM) requirements.
18. Bypass provisions of 40 CFR Section 122.41 (m) & (n).
19. Reopening of this Permit to include revised effluent limitations based on a Total Daily Load (TMDL) or other water quality study.
20. Total Nitrogen monitoring.
21. A requirement to monitor and a limit of 0.05 mg/L for residual chlorine when it is used

**Antidegradation Assessment  
NPDES Permit No. IL0021156**

The City of South Beloit is proposing to expand the wastewater treatment facility from 3.0 MGD to 4.99 MGD. The treatment will consist of screening, grit removal, fine screens, activated sludge, final clarifiers, UV disinfection and post aeration. Ferric chloride will be added for phosphorus removal. The plant is showing significant signs of aging. Much of the equipment is outdated, undersized, or inadequate. The plant is also stressed hydraulically during high infiltration periods that coincide with higher river elevation events and there are significant hydraulic bottlenecks in the plant. Growth projections for the City predict a year 2030 population of 17,100 or nearly triple the year 2000 Census estimate. Therefore, the City has chosen to undertake a Facility Plan to develop a cost effective wastewater treatment system to serve the City's needs to the year 2030.

The NPDES permit will have a permit limit of 1.0 mg/L for phosphorous. Therefore, loading of phosphorus to the receiving stream will be reduced. The facility will remove total nitrogen, however, it is not known if the loading will increase or decrease. The CBOD<sub>5</sub>/TSS of the existing facility is 20/25 mg/L respectively. The City of South Beloit has agreed to a reduced limit for CBOD<sub>5</sub>/TSS of 10/12 mg/L respectively. Therefore, loading of CBOD<sub>5</sub> and TSS to the receiving stream will be reduced. The existing ammonia loading to the receiving stream, as a daily maximum, is 200 lbs/day as a weighted average. There is not currently a monthly average. The proposed

loading to the receiving stream, as a daily maximum, is 161 lbs/day as a weighted average. Therefore, loading of ammonia to the receiving stream will be reduced.

The information in this antidegradation assessment came from the September 2008 Facility Plan prepared by McMahon Associates.

#### **Identification and Characterization of the Affected Water Body.**

The subject facility discharges to the Rock River at a point where 313.0 cfs of flow exists upstream of the outfall during critical 7Q10 low-flow conditions. The Rock River is classified as a General Use Water. The Rock River is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating in that document. The Rock River, Waterbody Segment, P-15, is listed on the Illinois Integrated Water Quality Report and Section 303(d) List – 2006 as impaired for aquatic life use with potential causes given as aquatic algae (non-pollutant), fish kills (non-pollutant), nitrogen (total), and other flow regime alterations (non-pollutant); and fish consumption use with potential causes given as mercury and polychlorinated biphenyls. The partially approved 2008 Illinois Integrated Water Quality Report and Section 303(d) List is identical except that nitrogen (total) was removed as a potential cause for the aquatic life use and primary contact use impairment was listed with cause given as fecal coliform. This segment of the Rock River is subject to enhanced dissolved oxygen standards.

#### **Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.**

Phosphorus loading will decrease as a result of the expanded facility removing phosphorus. Nitrogen loading may or may not increase since the facility will be operating the facility to remove nitrogen. Any nitrogen load increase that possibly will occur will be extremely small. The Agency is developing state water quality standards that will formulate the basis for future nutrient management strategies. Upon adoption of state standards and development of a management strategy, there may be additional nutrient reduction requirements imposed on this source. At the present time however, the incremental nitrogen loading increase anticipated to result from this project is not expected to increase algae or other noxious plant growth, diminish the present aquatic community or otherwise aggravate existing stream conditions. The Illinois Nutrient Standards Workgroup has been convened to develop nutrient standards and will strive to keep NPDES permitted dischargers aware of its findings, allowing them to anticipate future nutrient permit limits.

#### **Fate and Effect of Parameters Proposed for Increased Loading.**

The nitrogen discharged will be absorbed by aquatic or riparian terrestrial plants or will remain in the stream.

#### **Purpose and Anticipated Benefits of the Proposed Activity.**

The proposed project will update the facility and provide treatment capacity for future growth.

#### **Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.**

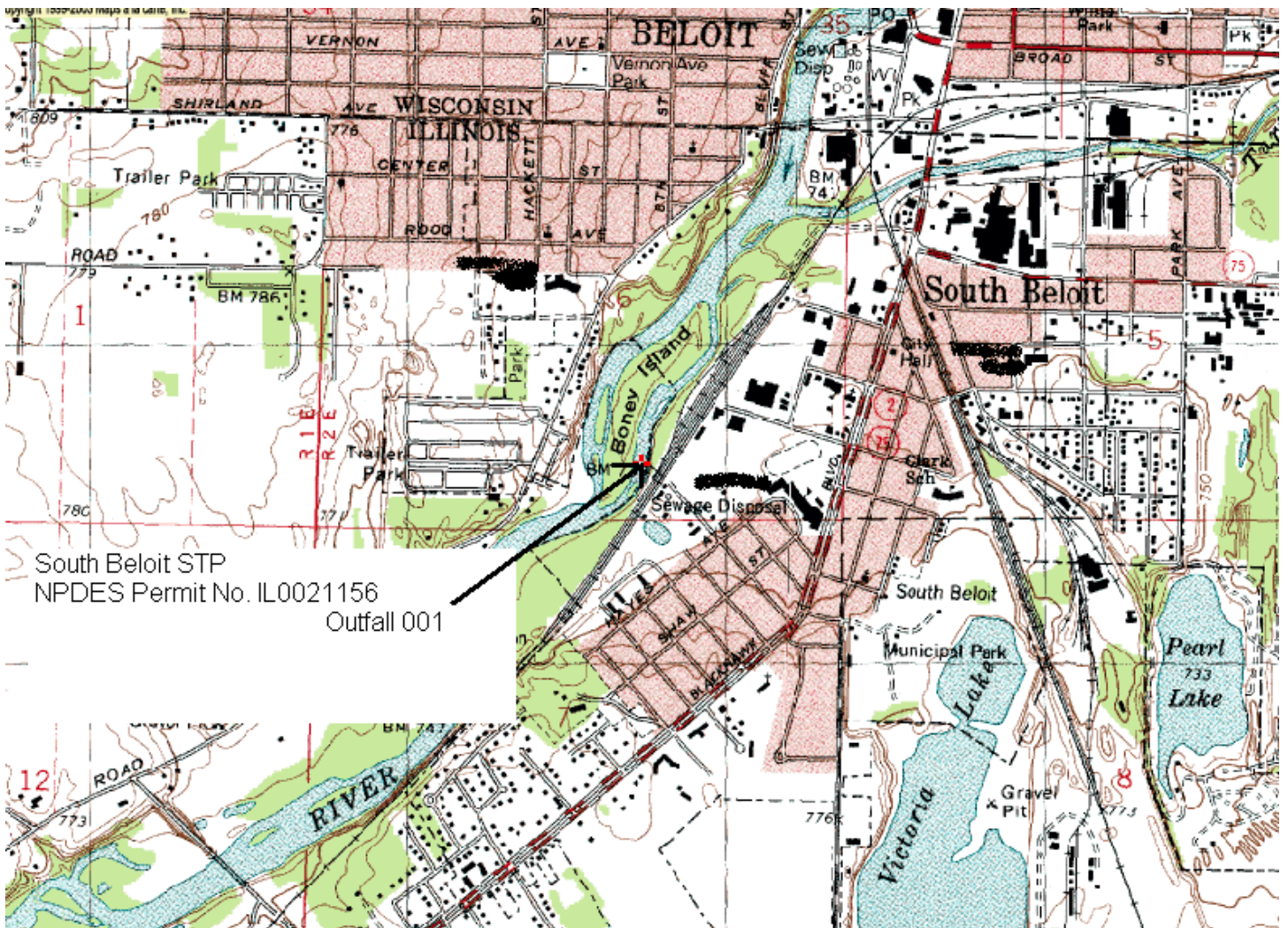
The facility is designing the wastewater treatment facility beyond what is required and for all parameters the loading will be less, with the possible exception of total nitrogen. It is not known if the loading of total nitrogen will decrease.

#### **Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities**

On June 15, 2009, the IDNR EcoCAT web-based tool was used and indicated that there were no endangered/threatened species present in the vicinity of the discharge. The IDNR EcoCAT web-based tool terminated the consultation.

#### **Agency Conclusion.**

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time the draft permit was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving stream will be maintained; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the community at large by providing sewage treatment for the expected population growth. Comments received during the NPDES permit public notice period will be evaluated before a final decision is made by the Agency.



NPDES Permit No. IL0021156

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:

City of South Beloit  
519 Blackhawk Blvd.  
South Beloit, Illinois 61080

Facility Name and Address:

City of South Beloit - STP  
100 Perry Avenue  
South Beloit, Illinois 61080  
(Winnebago County)

Receiving Waters: Rock 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 standard conditions and attachments 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.

Alan Keller, P.E.  
Manager, Permit Section  
Division of Water Pollution Control

SAK:FRB:11020402.bah



NPDES Permit No. IL0021156

Effluent Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s): 001 STP Outfall (Existing Facility)

Load limits computed based on a design average flow (DAF) of 3.0 MGD (design maximum flow (DMF) of 5.6 MGD).

Excess flow facilities (if applicable) shall not be utilized until the main treatment facility is receiving its maximum practical flow.

From the effective date of this permit until the start of operation of the proposed 4.99 MGD STP or expiration date, whichever comes first, 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> **	500 (934)	1001 (1868)		20	40		2 Days/Week	Composite
Suspended Solids	626 (1168)	1126 (2102)		25	45		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***						0.05	2 Days/Week	Grab
Ammonia Nitrogen: as (N) March-May/Sept.-Oct.	38 (70)		80 (149)	1.5		3.2	2 Days/Week	Composite
June-August	38 (70)	95 (177)	105 (196)	1.5	3.8	4.2	2 Days/Week	Composite
Nov.-Feb.	100 (187)		118 (220)	4.0		4.7	2 Days/Week	Composite
Phosphorus	Monitor Only						1 Day/Month	Composite
Total Nitrogen	Monitor Only						1 Day/Month	Composite

\*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 8.

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 DMR as daily maximum value.

Phosphorus and Total Nitrogen shall be reported on DMR as daily maximum value.

## NPDES Permit No. IL0021156

Effluent Limitations, Monitoring, and Reporting

## FINAL

Discharge Number(s) and Name(s): 001 STP Outfall (Proposed Facility)

Load limits computed based on a design average flow (DAF) of 4.99 MGD (design maximum flow (DMF) of 10.0 MGD).

Excess flow facilities (if applicable) shall not be utilized until the main treatment facility is receiving its maximum practical flow.

From the completion and start of operation of the proposed plant expansion 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> **	416 (834)		832 (1668)	10		20	3 Days/Week	Composite
Suspended Solids	499 (1001)		999 (2002)	12		24	3 Days/Week	Composite
pH	Shall be in the range of 6 to 9 Standard Units						3 Days/Week	Grab
Fecal Coliform***	Daily Maximum shall not exceed 400 per 100 mL (May through October)						3 Days/Week	Grab
Ammonia Nitrogen: as (N) March-May/Sept.-Oct.	62 (125)		133 (267)	1.5		3.2	3 Days/Week	Composite
June-August	62 (125)	158 (317)	175 (350)	1.5	3.8	4.2	3 Days/Week	Composite
Nov.-Feb.	166 (334)		196 (392)	4.0		4.7	3 Days/Week	Composite
Phosphorus	42 (83)			1.0			3 Days/Week	Composite
Total Nitrogen****	Monitor Only						1 Day/Month	Composite

\*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 8.

\*\*\*\*See Special Condition 20.

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 DMR as daily maximum value.

NPDES Permit No. IL0021156

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	Composite
Suspended Solids	2 Days/Week	Composite

\*When the proposed 4.99 MGD facility becomes operational, influent monitoring sample frequency shall be increased to 3 days/week.

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.

Special Conditions

SPECIAL CONDITION 1. This Permit may be modified to include different final effluent limitations or requirements which are consistent with applicable laws, regulations, or judicial orders. 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 in the event of operational, maintenance or other problems resulting in possible effluent deterioration.

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.

SPECIAL CONDITION 6. 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 7. This Permit may be modified to include requirements for the Permittee on a continuing basis to evaluate and detail its efforts to effectively control sources of infiltration and inflow into the sewer system and to submit reports to the IEPA if necessary.

SPECIAL CONDITION 8. Fecal Coliform limits for Discharge Number 001 are effective May thru October. Sampling of Fecal Coliform is only required during this time period.

The total residual chlorine limit is applicable at all times. If the Permittee is chlorinating for any purpose during the months of November through April, sampling is required on a daily grab basis. Sampling frequency for the months of May through October shall be as indicated on effluent limitations, monitoring and reporting page of this Permit.

SPECIAL CONDITION 9. The Permittee shall conduct semi-annual monitoring of the effluent and report concentrations (in mg/l) of the following listed parameters. Monitoring shall begin three (3) months from the effective date of this permit. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted on Discharge Monitoring Report Forms to IEPA unless otherwise specified by the IEPA. The parameters to be sampled and the minimum reporting limits to be attained are as follows:

<u>STORET CODE</u>	<u>PARAMETER</u>	<u>Minimum reporting limit</u>
01002	Arsenic	0.05 mg/L
01007	Barium	0.5 mg/L
01027	Cadmium	0.001 mg/L
01032	Chromium (hexavalent) (grab)	0.01 mg/L
01034	Chromium (total)	0.05 mg/L
01042	Copper	0.005 mg/L
00718	Cyanide (weak acid dissociable) (grab)	5.0 ug/L
00720	Cyanide (total) (grab not to exceed 24 hours)	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 (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
01092	Zinc	0.025 mg/L

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.

\*1.0 ng/L = 1 part per trillion.

\*\*Utilize USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E.

Special Conditions

SPECIAL CONDITION 10. The Permittee has undergone a Monitoring Reduction review and the influent and effluent sample frequency has been reduced for BOD, CBOD<sub>5</sub>, SS, pH and ammonia due to sustained compliance. The IEPA will require that the influent and effluent sampling frequency for these parameters be increased to 3 days/week if effluent deterioration occurs due to increased wasteload, operational, maintenance or other problems. The increased monitoring will be required Without Public Notice when a permit modification is received by the Permittee from the IEPA. This is applicable only for the existing 3.0 MGD facility.

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. The Permittee shall conduct biomonitoring of the effluent from Discharge Number(s) 001.

Biomonitoring

1. 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:
  - a. Fish - 96 hour static LC<sub>50</sub> Bioassay using fathead minnows (*Pimephales promelas*).
  - b. Invertebrate 48-hour static LC<sub>50</sub> Bioassay using *Ceriodaphnia*.
2. Testing Frequency - The above tests shall be conducted using 24-hour composite samples unless otherwise authorized by the IEPA. Samples must be collected in the 18th, 15th, 12th, and 9th month prior to the expiration date of this Permit.
3. Reporting - Results shall be reported according to EPA/821-R-02-012, Section 12, Report Preparation, and shall be submitted to IEPA, Bureau of Water, Compliance Assurance Section within one week of receipt from the laboratory. Reports are due to the IEPA no later than the 16th, 13th, 10th, and 7th month prior to the expiration date of this Permit.
4. Toxicity - Should a bioassay result in toxicity to >20% of organisms test 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 (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 may wish to contact the IEPA to request the discontinuance of further sampling at which time the IEPA may require the Permittee to begin the toxicity reduction evaluation and identification as outlined below.
5. Toxicity Reduction Evaluation - Should the results of the biomonitoring program identify toxicity, the IEPA may require that the Permittee prepare a plan for toxicity reduction evaluation and identification. This plan shall be developed in accordance with Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833B-99/002, and 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 13. 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 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.

Special Conditions

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 23 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 the Sludge Permit, the results of this monitoring shall be included in the reporting of data submitted to the IEPA.

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 14. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) 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 may choose to submit electronic DMRs (eDMRs) instead of mailing paper DMRs to the IEPA. More information, including registration information for the eDMR program, can be obtained on the IEPA website, <http://www.epa.state.il.us/water/edmr/index.html>.

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

Permittees not using eDMRs 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 15. The Permittee shall notify the IEPA in writing once the treatment plant expansion has been completed. A letter stating the date that the expansion was completed shall be sent to the following address within fourteen (14) days of the expansion becoming operational:

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 16. Modeling or field studies may be used to demonstrate the availability of a mixing zone and zone of initial dilution (ZID). The purpose of these optional studies is to define the dilution ratios present during 7Q10 low receiving stream flow conditions. Any report submitted to the IEPA should show effluent concentrations at various distances downstream of the effluent outfall, sufficient to demonstrate the areas of the mixing zone and ZID, during the observed or modeled low flow condition. The mixing regulations of 35 IAC 302.102 will then be used to determine if the conditions necessary for the Agency to grant a mixing zone and ZID are present. If the permittee intends to pursue this option, a study plan outlining the methodologies proposed to be used must be submitted for IEPA approval. The IEPA will review the study results and may reopen and modify this Permit to eliminate or include revised effluent limitations based on the results of the collected data.

Special Conditions

SPECIAL CONDITION 17.

The Permittee shall develop and submit to the IEPA a Capacity, Management, Operations, and Maintenance (CMOM) plan within twelve (12) months of the effective date of this Permit. The Permittee may be required to construct additional sewage transport and/or treatment facilities in future permits or other enforceable documents.

The CMOM plan shall include the following elements:

A. Measures and Activities:

1. A complete map of the collection system;
2. Schedules, checklists, and mechanisms to ensure that preventative maintenance is performed on equipment;
3. An assessment of the capacity of the collection and treatment system at critical junctions and immediately upstream of locations where overflows and backups occur or are likely to occur; and
4. Identification and prioritization of structural deficiencies in the system.

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 backups occur; and,
2. Respond to each overflow or backup to determine additional actions such as clean up.

D. System Evaluation Plan.

E. Reporting and Monitoring Requirements.

SPECIAL CONDITION 18. The provisions of 40 CFR Section 122.41 (m) & (n) are applicable and are hereby incorporated by reference.

SPECIAL CONDITION 19. This Permit maybe modified to include alternative or additional final effluent limitations pursuant to an approved Total Maximum Daily Load (TMDL) study or upon completion of alternate water quality study.

SPECIAL CONDITION 20. The Permittee shall operate the expanded facilities designed for biological nutrient removal (BNR). Monitoring for Total Nitrogen is required to document the actual total nitrogen effluent concentration. Once the plant expansion becomes operational, the Permittee shall monitor the effluent for total nitrogen once per month. The monitoring shall be a composite sample and the results reported as a daily maximum on the Permittee's Discharge Monitoring Forms.

The Permittee shall notify the IEPA in writing of any operational deficiencies and corrective measures to be taken if the treatment plant exceeds the concentration values of 1.0 mg/L of Total Phosphorus or 8.0 mg/L of Total Nitrogen in the effluent. Correspondence shall be directed to:

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

Illinois Environmental Protection Agency  
Bureau of Water  
Rockford Field Office  
4302 North Main Street  
Rockford, Illinois 61103

SPECIAL CONDITION 21. For Discharge No. 001 for the proposed facility (4.99 MGD), any use of chlorine to control slime growths, odors or as an operational control, etc. shall not exceed the limit of 0.05 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 DMR's on a monthly basis.