

NPDES Permit No. IL0021873  
Notice No. IL0021873-15.TTL

Public Notice Beginning Date: **June 5, 2015**

Public Notice Ending Date: **July 6, 2015**

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 Belleville  
101 South Illinois Street  
Belleville, Illinois 62220

Name and Address of Facility:

City of Belleville STP Plant #1  
450 Environmental Drive  
Belleville, Illinois 62220  
(St. Clair 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 indicates 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 Todd Lamm 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 and industrial wastewater for the City of Belleville and portions of St. Clair Township.

The length of the Permit is approximately 5 years.

The main discharge numbers are 001 and 002. The seven day once in ten year low flow (7Q10) of the receiving stream, Richland Creek, is 0 cfs.

The design average flow (DAF) for the existing facility is 8 million gallons per day (MGD) and the design maximum flow (DMF) for the existing facility is 16.0 MGD. Treatment consists of grit removal, primary treatment, roughing filter, activated sludge, tertiary filtration, first flush storage and disinfection.

The design average flow (DAF) for the proposed facilities is 12.4 million gallons per day (MGD) and the design maximum flow (DMF) for the proposed facilities is 27.0 MGD. Treatment consists of the existing plant units of grit removal, primary treatment, roughing filter, activated sludge, tertiary filtration and added influent screening and UV disinfection. The additional treatment facilities consist of influent screening, countercurrent activated sludge, clarification and UV disinfection. Existing sludge storage lagoons will be converted to aerated detention basins for combined sewage storage and if necessary chlorinated and discharge. Sludge will be treated by autothermal thermophilic aerobic digestion, dewatered and stored before land application.

This treatment works has an approved pretreatment program. There are 3 non-categorical SIUs and 3 CIUs.

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

The year-round disinfection exemption approved by the IEPA on June 11, 1992 and included in past permit actions shall be revoked upon operational attainment of the expanded facility.

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

| Outfall | Receiving Stream | Latitude        | Longitude      | Stream Classification | Biological Stream Characterization |
|---------|------------------|-----------------|----------------|-----------------------|------------------------------------|
| 001     | Richland Creek   | 38° 28.8' North | 89° 58.5' West | General Use           | Not Rated                          |
| 038     | Richland Creek   | 38° 29.8' North | 89° 58.5' West | General Use           | Not Rated                          |
| 002     | Richland Creek   | 38° 29.9' North | 89° 58.8' 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), OC-94, receiving the discharge from outfall(s) 001, 038, 002 is (are) not on the draft 2014 303 (d) list of impaired waters.

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 East STP Outfall

Load limits computed based on a design average flow (DAF) of 8.0 MGD (design maximum flow (DMF) of 16.0 MGD).

| Parameter  | LOAD LIMITS lbs/day*<br>DAF (DMF)              |                   |                                     | CONCENTRATION<br>LIMITS mg/L           |                                |                   | Regulation                       |
|--|--|-------------------|-------------------------------------|--|--------------------------------|-------------------|----------------------------------|
|  | Monthly<br>Average                             | Weekly<br>Average | Daily<br>Maximum                    | Monthly<br>Average                     | Weekly<br>Average              | Daily<br>Maximum  |                                  |
| CBOD <sub>5</sub>  | 667 (1334)                                     |                   | 1334 (2669)                         | 10                                     |                                | 20                | 35 IAC 304.120<br>40 CFR 133.102 |
| Suspended Solids   | 801 (1601)                                     |                   | 1601 (3203)                         | 12                                     |                                | 24                | 35 IAC 304.120<br>40 CFR 133.102 |
| pH   | Shall be in the range of 6 to 9 Standard Units |                   |                                     |  |                                |                   | 35 IAC 304.125                   |
| Fecal Coliform   | See Below**                                    |                   |                                     |  |                                |                   | 35 IAC 304.121                   |
| Chlorine Residual  |  |                   |                                     |  |                                | 0.05              | 35 IAC 302.208                   |
| Phosphorus   | 66.7 (133.4)                                   |                   |                                     | 1.0                                    |                                |                   | 35 IAC 304.123                   |
| Ammonia Nitrogen:<br>March<br>April - October<br>November-February | 107 (214)<br>100 (200)<br>127 (254)            | 274 (547)         | 360 (721)<br>200 (400)<br>360 (693) | 1.6<br>1.5<br>1.9                      | 4.1<br>NA<br>NA                | 5.4<br>3.0<br>5.2 | 35 IAC 355 and<br>35 IAC 302     |
| Total Nitrogen   | Monitor Only                                   |                   |                                     |  |                                |                   | 35 IAC 309.146                   |
|  |  |                   |                                     | Monthly<br>Average<br>not less<br>than | Weekly<br>Average<br>less than | Daily<br>Minimum  |                                  |
| Dissolved Oxygen<br>March-July<br>August-February                  |  |                   |                                     | ----<br>5.5                            | 6.0<br>4.0                     | 5.0<br>3.5        | 35 IAC 302.206                   |

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

\*\* Fecal coliform shall not exceed May through October a geometric mean of 200 cfu/100 ml nor exceed  $3.91 \times 10^{10}$  cfu/day when effluent flows are at or below the Design Average Flow (DAF) nor exceed  $7.17 \times 10^{10}$  cfu/day when effluent flows exceed the DAF, nor shall more than 10% of the samples during any 30 day period exceed 400 cfu/100 ml.

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): 002 West STP Outfall

Load limits computed based on a design average flow (DAF) of 4.4 MGD (design maximum flow (DMF) of 11.0 MGD).

| Parameter         | LOAD LIMITS lbs/day*<br>DAF (DMF)              |                   |                  | CONCENTRATION<br>LIMITS mg/L        |                                       |                  | Regulation                       |
|-------------------|--|-------------------|------------------|-------------------------------------|---------------------------------------|------------------|----------------------------------|
|                   | Monthly<br>Average                             | Weekly<br>Average | Daily<br>Maximum | Monthly<br>Average                  | Weekly<br>Average                     | Daily<br>Maximum |                                  |
| CBOD <sub>5</sub> | 367 (917)                                      |                   | 734 (1835)       | 10                                  |                                       | 20               | 35 IAC 304.120<br>40 CFR 133.102 |
| Suspended Solids  | 440 (1101)                                     |                   | 881 (2202)       | 12                                  |                                       | 24               | 35 IAC 304.120<br>40 CFR 133.102 |
| pH                | Shall be in the range of 6 to 9 Standard Units |                   |                  |                                     |                                       |                  | 35 IAC 304.125                   |
| Fecal Coliform    | See Below**                                    |                   |                  |                                     |                                       |                  | 35 IAC 304.121                   |
| Chlorine Residual |  |                   |                  |                                     |                                       | 0.05             | 35 IAC 302.208                   |
| Phosphorus        | 36.7 (91.7)                                    |                   |                  | 1.0                                 |                                       |                  | 35 IAC 304.123                   |
| Ammonia Nitrogen: |  |                   |                  |                                     |                                       |                  |                                  |
| March             | 58.7 (147)                                     | 150 (376)         | 198 (495)        | 1.6                                 | 4.1                                   | 5.4              | 35 IAC 355 and<br>35 IAC 302     |
| April - October   | 55 (138)                                       | --                | 110 (275)        | 1.5                                 | NA                                    | 3.0              |                                  |
| November-February | 69.7 (174)                                     | --                | 191(477)         | 1.9                                 | NA                                    | 5.2              |                                  |
| Total Nitrogen    | Monitor Only                                   |                   |                  |                                     |                                       |                  | 35 IAC 309.146                   |
|                   |  |                   |                  | Monthly<br>Average not<br>less than | Weekly<br>Average<br>not less<br>than | Daily<br>Minimum |                                  |
| Dissolved Oxygen  |  |                   |                  |                                     |                                       |                  |                                  |
| March-July        |  |                   |                  | ----                                | 6.0                                   | 5.0              | 35 IAC 302.206                   |
| August-February   |  |                   |                  | 5.5                                 | 4.0                                   | 3.5              |                                  |

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

\*\* Fecal coliform shall not exceed May through October a geometric mean of 200 cfu/100 ml nor exceed  $2.15 \times 10^{10}$  cfu/day when effluent flows are at or below the Design Average Flow (DAF) nor exceed  $4.92 \times 10^{10}$  cfu/day when effluent flows exceed the DAF, nor shall more than 10% of the samples during any 30 day period exceed 400 cfu/100 ml.

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

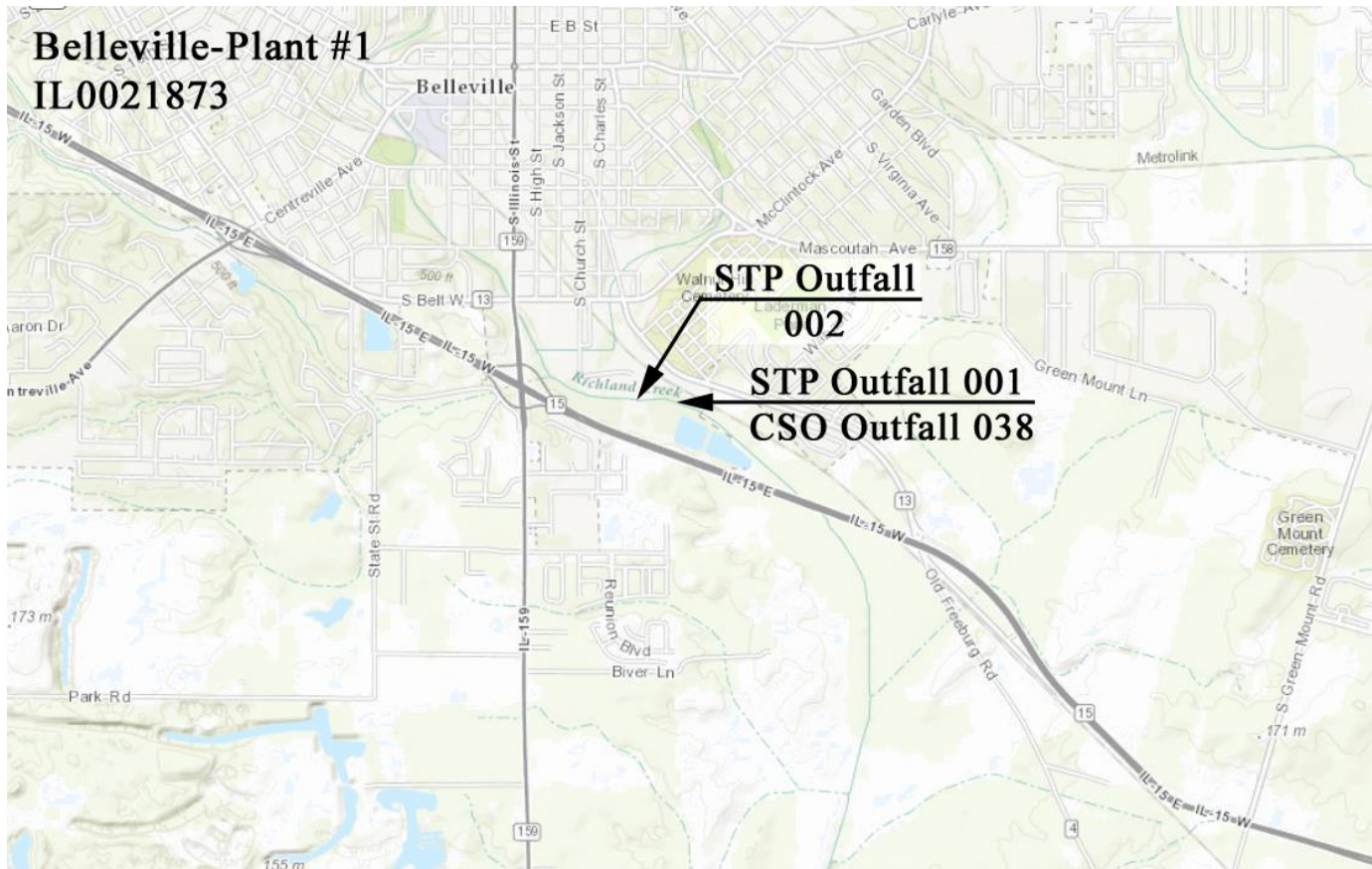
Discharge Number(s) and Name(s): 038 Treated CSO Outfall

| Parameter                 | CONCENTRATION LIMITS mg/L                      |              | Regulation     |
|---------------------------|--|--------------|----------------|
|                           | Daily Maximum                                  |              |                |
| 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 302.208 |
| 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 |

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. Effluent sampling point location.
8. A requirement to monitor and a limit of 0.05 mg/L for residual chlorine when it is used.
9. Additional sampling for Heptachlor Epoxide.
10. The Permittee implements and administers an industrial pretreatment program pursuant to 40 CFR Section 403.
11. Burden reduction.
12. Submission of annual fiscal data.
13. A requirement for biomonitoring of the effluent.
14. Submission of semi annual reports indicating the quantities of sludge generated and disposed.
15. An authorization of combined sewer and treatment plant discharges.
16. The provisions of 40 CFR Section 122.41(m) & (n) are incorporated herein by reference.
17. Submission of Capacity, Management, Operations, and Maintenance (CMOM) plan.

18. Prepare a phosphorus removal feasibility study.
19. Development of a phosphorus discharge optimization plan.
20. At minimum 85% removal of CBOD<sub>5</sub> and suspended solids.



NPDES Permit No. IL0021873

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 Belleville  
101 South Illinois Street  
Belleville, Illinois 62220

Facility Name and Address:

City of Belleville STP Plant #1  
450 Environmental Drive  
Belleville, Illinois 62220  
(St. Clair County)

Receiving Waters: Richland Creek

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:REP:TTL:IL0021873-15

## NPDES Permit No. IL0021873

Effluent Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s): 001 East STP Outfall

Load limits computed based on a design average flow (DAF) of 8.0 MGD (design maximum flow (DMF) of 16.0 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<br>DAF (DMF)*              |                   |                  | CONCENTRATION<br>LIMITS MG/L           |                                       |                  | Sample<br>Frequency | Sample<br>Type |
|----------------------|--|-------------------|------------------|--|---------------------------------------|------------------|---------------------|----------------|
|                      | Monthly<br>Average                             | Weekly<br>Average | Daily<br>Maximum | Monthly<br>Average                     | Weekly<br>Average                     | Daily<br>Maximum |                     |                |
| Flow (MGD)           |  |                   |                  |  |                                       |                  | Continuous          | RIT            |
| CBOD <sub>5</sub> ** | 667 (1334)                                     |                   | 1334 (2669)      | 10                                     |                                       | 20               | 2 days/week         | Composite      |
| Suspended Solids     | 801 (1601)                                     |                   | 1601 (3203)      | 12                                     |                                       | 24               | 2 days/week         | Composite      |
| pH                   | Shall be in the range of 6 to 9 Standard Units |                   |                  |  |                                       |                  | 2 days/week         | Grab           |
| Fecal Coliform       | See Below <sup>†</sup>                         |                   |                  |  |                                       |                  | 2 days/week         | Grab           |
| Chlorine Residual    |  |                   |                  |  |                                       | 0.05             | ***                 | Grab           |
| Phosphorus           | 66.7 (133.4)                                   |                   |                  | 1.0                                    |                                       |                  | 2 days/week         | Composite      |
| Ammonia Nitrogen:    |  |                   |                  |  |                                       |                  |                     |                |
| March                | 107 (214)                                      | 274 (547)         | 360 (721)        | 1.6                                    | 4.1                                   | 5.4              | 5 days/week         | Composite      |
| April - October      | 100 (200)                                      |                   | 200 (400)        | 1.5                                    | NA                                    | 3.0              | 5 days/week         | Composite      |
| November-February    | 127 (254)                                      |                   | 360 (693)        | 1.9                                    | NA                                    | 5.2              | 5 days/week         | Composite      |
| Total Nitrogen****   |  |                   |                  |  |                                       |                  | 2 days/week         | Composite      |
|                      |  |                   |                  | Monthly<br>Average<br>not less<br>than | Weekly<br>Average<br>not less<br>than | Daily<br>Minimum |                     |                |
| Dissolved Oxygen     |  |                   |                  |  |                                       |                  |                     |                |
| March-July           |  |                   |                  | ---                                    | 6.0                                   | 5.0              | 2 days/week         | Grab           |
| August-February      |  |                   |                  | 5.5                                    | 4.0                                   | 3.0              | 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 7.

\*\*\*\*Total Nitrogen sample results shall be reported as a monthly average and daily maximum value on the DMR.

<sup>†</sup> Fecal coliform shall not exceed May through October a geometric mean of 200 cfu/100 ml nor exceed  $3.91 \times 10^{10}$  cfu/day when effluent flows are at or below the Design Average Flow (DAF) nor exceed  $7.17 \times 10^{10}$  cfu/day when effluent flows exceed the DAF, nor shall more than 10% of the samples during any 30 day period exceed 400 cfu/100 ml.

Fecal Coliform sample results shall be reported May through October as a daily maximum value on the DMR.

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

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

Chlorine Residual shall be reported on DMR as daily maximum.

Dissolved oxygen shall be reported on DMR as daily minimum.



## NPDES Permit No. IL0021873

Effluent Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s): 002 West STP Outfall

Load limits computed based on a design average flow (DAF) of 4.4 MGD (design maximum flow (DMF) of 11.0 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<br>DAF (DMF)*              |                   |                  | CONCENTRATION<br>LIMITS MG/L           |                                       |                  | Sample<br>Frequency | Sample<br>Type |
|----------------------|--|-------------------|------------------|--|---------------------------------------|------------------|---------------------|----------------|
|                      | Monthly<br>Average                             | Weekly<br>Average | Daily<br>Maximum | Monthly<br>Average                     | Weekly<br>Average                     | Daily<br>Maximum |                     |                |
| Flow (MGD)           |  |                   |                  |  |                                       |                  | Continuous          | RIT            |
| CBOD <sub>5</sub> ** | 367 (917)                                      |                   | 734 (1835)       | 10                                     |                                       | 20               | 5 days/week         | Composite      |
| Suspended Solids     | 440 (1101)                                     |                   | 881 (2202)       | 12                                     |                                       | 24               | 5 days/week         | Composite      |
| pH                   | Shall be in the range of 6 to 9 Standard Units |                   |                  |  |                                       |                  | 5 days/week         | Grab           |
| Fecal Coliform       | See Below <sup>†</sup>                         |                   |                  |  |                                       |                  | 5 days/week         | Grab           |
| Chlorine Residual    |  |                   |                  |  |                                       | 0.05             | ***                 | Grab           |
| Phosphorus           | 36.7 (91.7)                                    |                   |                  | 1.0                                    |                                       |                  | 5 days/week         | Composite      |
| Ammonia Nitrogen:    |  |                   |                  |  |                                       |                  |                     |                |
| March                | 58.7 (147)                                     | 150 (376)         | 198 (495)        | 1.6                                    | 4.1                                   | 5.4              | 5 days/week         | Composite      |
| April - October      | 55 (138)                                       | --                | 110 (275)        | 1.5                                    | NA                                    | 3.0              | 5 days/week         | Composite      |
| November-February    | 69.7 (174)                                     | --                | 191(477)         | 1.9                                    | NA                                    | 5.2              | 5 days/week         | Composite      |
| Total Nitrogen****   |  |                   |                  |  |                                       |                  | 2 days/week         | Composite      |
|                      |  |                   |                  | Monthly<br>Average<br>not less<br>than | Weekly<br>Average<br>not less<br>than | Daily<br>Minimum |                     |                |
| Dissolved Oxygen     |  |                   |                  |  |                                       |                  |                     |                |
| March - July         |  |                   |                  | --                                     | 6.0                                   | 5.0              | 5 days/week         | Grab           |
| August-February      |  |                   |                  | 5.5                                    | 4.0                                   | 3.5              |                     |                |

\*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 7.

\*\*\*\*Total Nitrogen sample results shall be reported as a monthly average and daily maximum value on the DMR.

<sup>†</sup> Fecal coliform shall not exceed May through October a geometric mean of 200 cfu/100 ml nor exceed  $2.15 \times 10^{10}$  cfu/day when effluent flows are at or below the Design Average Flow (DAF) nor exceed  $4.92 \times 10^{10}$  cfu/day when effluent flows exceed the DAF, nor shall more than 10% of the samples during any 30 day period exceed 400 cfu/100 ml.

Fecal Coliform sample results shall be reported May through October as a daily maximum value on the DMR.

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

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

Chlorine Residual shall be reported on DMR as daily maximum.

Dissolved oxygen shall be reported on DMR as daily minimum.

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Effluent Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s): 038 Treated Combined Sewage Outfall

These flow facilities shall not be utilized until the first flush storage has been filled.

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:

| <u>Parameter</u>          | <u>CONCENTRATION LIMITS (mg/L)</u>             | <u>Sample Frequency</u> | <u>Sample Type</u> |
|---------------------------|--|-------------------------|--------------------|
|                           | <u>Daily Maximum</u>                           |                         |                    |
| Total Flow (MG)           |  | Daily When Discharging  | Continuous         |
| 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.

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 minimum and maximum value.

Chlorine Residual shall be reported on DMR as daily maximum value.

An explanation shall be provided in the comment section of the DMR should these facilities be used if either main treatment facilities are not receiving the Design Maximum Flow (DMF) of 18,750 gpm. The explanation shall identify the reasons the main facilities are at a diminished treatment capacity. Additionally, the Permittee shall comply with the provisions of Special Condition 15.

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Influent Monitoring, and Reporting

The influent to the plant shall be monitored as follows:

| Parameter        | Sample Frequency | Sample Type |
|------------------|------------------|-------------|
| Flow (MGD)       | Continuous       | RIT         |
| BOD <sub>5</sub> | 2 days/week      | Composite   |
| Suspended Solids | 2 days/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.

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 Section 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.

SPECIAL CONDITION 6: 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 (NetDMRs) instead of mailing paper DMRs to the IEPA. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, <http://www.epa.state.il.us/water/net-dmr/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 NetDMRs 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. 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 8. For Discharges No. 001 and 002, 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.

SPECIAL CONDITION 9. The Permittee shall monitor the effluent for the following parameter monthly for a period of ten (10) consecutive months, beginning three (3) months from the attainment of operational level of new treatment train. This Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted on the DMRs to IEPA. The parameter to be sampled and the minimum reporting limits to be attained are as follows:

| <u>STORET</u><br><u>CODE</u> | <u>PARAMETER</u>   | <u>Minimum</u><br><u>reporting limit</u> |
|------------------------------|--------------------|--|
| 39420                        | Heptachlor Epoxide | 0.01 µ g/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.

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 June 25, 1985 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

Special Conditions

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 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 levels 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).
  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 pollutant(s) 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 one (1) year 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 spreadsheet found at: <http://www.epa.gov/region5/water/npdestek/Localimt.XLS>), and submit the evaluation and any proposed revisions to its local limits to IEPA and U.S. EPA Region 5 for review and approval. 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

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- 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
      - 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. Modifications of your Pretreatment Program shall be submitted in accordance with 40 CFR § 403.18, which established conditions for substantial and nonsubstantial modifications. All requests should be sent in electronic format to [r5npdes@epa.gov](mailto:r5npdes@epa.gov), attention: NPDES Programs 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 April 28th of each year to USEPA, Region 5, 77 West Jackson Blvd., Chicago, Illinois 60604, Attention: Water Enforcement and 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

Special Conditions

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.
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<br>CODE | PARAMETER  | Minimum<br>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                 |

\* 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.

\*\*\*\* USEPA Method OIA-1677.

Minimum reporting limits are defined as - (1) The minimum value below which data are documented as non-detects. (2) Three to ten times the method detection limit. (3) The minimum value of the calibration range.

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

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 and 625 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(e) 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 electronic format and should 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.** The Permittee has undergone a Monitoring Reduction review and the influent and effluent sample frequency has been reduced for CBOD<sub>5</sub>, Suspended Solids, Dissolved Oxygen and pH due to sustained compliance. The IEPA may require 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 12.** 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 13.** The Permittee shall conduct biomonitoring of the effluent from Discharge Number(s) 001.



Special ConditionsBiomonitoring

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  $\geq$ 50% of organisms tested in the 100% effluent treatments, the Permittee shall immediately notify IEPA in writing of the test results.
5. Toxicity Reduction Evaluation and Identification - Should the biomonitoring program identify toxicity and result in notification by IEPA, the permittee shall develop a plan for toxicity reduction evaluation and identification. The plan shall be developed and implemented 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 within ninety (90) days following notification by the IEPA. The Permittee shall implement the plan within ninety (90) days of notification of the permittee above or other such date as is received by 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 and toxicity reduction evaluation, the IEPA may modify this Permit to include numerical limitations for specific toxic pollutants and additional whole effluent toxicity monitoring to confirm the results of the evaluation. Modifications under this condition shall follow public notice and opportunity for hearing.

**SPECIAL CONDITION 14.** 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.

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 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.

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The permit may be modified to incorporate any applicable standards for sewage sludge use or disposal promulgated under Section 45(d) of the CWA.

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 15.

AUTHORIZATION OF  
COMBINED SEWER AND TREATMENT PLANT DISCHARGES

The IEPA has determined that at least a portion of the collection system consists of combined sewers. References to the collection system and the sewer system refer only to those parts of the system which are owned and operated by the Permittee unless otherwise indicated. The Permittee is authorized to discharge from the overflow(s)/bypass(es) listed below provided the diversion structure is located on a combined sewer and the following terms and conditions are met:

| <u>Discharge Number</u> | <u>Location</u>                           | <u>Receiving Water</u> |
|-------------------------|---|------------------------|
| 003 (A-1)               | Portland Avenue & Mascoutah Avenue        | Richland Creek         |
| 004 (B-1)               | South Church Street & Richland Creek      | Richland Creek         |
| 005 (B-2)               | Freeburg Avenue & Van Buren Street        | East Creek             |
| 008 (C-1)               | South Belt East & Route 159               | Richland Creek         |
| 011 (C3a)               | Garfield Street & Richland Creek          | Richland Creek         |
| 012 (C4)                | Centerville Avenue & Lincoln Street       | Richland Creek         |
| 014 (C-5)               | West Main Street & South 6th Street       | Richland Creek         |
| 020 (D-1)               | 4th Street North of Monroe Street         | Richland Creek         |
| 023 (D-4)               | Southern RR & 23rd Street                 | Catawba Creek          |
| 030 (D-9)               | 66th Street North of West Main Street     | Schoenberger Creek     |
| 035 (D-13)              | 88th Street at Lift Station 14            | Powdermill Creek       |
| 037 (E-2)               | 370 feet North of "E" Street & 9th Street | Catawba Creek          |

A. CSO Monitoring, Reporting and Notification Requirements

- The Permittee shall monitor the frequency of discharge (number of discharges per month) and estimate the duration (in hours) of each discharge from each outfall listed in this Special Condition. Estimates of storm duration and total rainfall shall be provided for each storm event.

| <u>Start Date</u> | <u>Rainfall Duration (hrs.)</u> | <u>Rainfall Amount (in.)</u> | <u>CSO Outfall #</u> | <u>Outfall Description</u> | <u>Estimated Duration of CSO Discharge (hrs.)</u> | <u>Estimated Volume of CSO Discharge (MG)</u> |
|-------------------|---------------------------------|------------------------------|----------------------|----------------------------|---|---|
|-------------------|---------------------------------|------------------------------|----------------------|----------------------------|---|---|

For frequency reporting, all discharges from the same storm, or occurring within 24 hours, shall be reported as one. The date that a discharge commences shall be recorded for each outfall. Reports shall be in the form specified by the IEPA and on forms provided by the IEPA (e.g., Form IL 532-2471, or updated form of same). These forms shall be submitted to the IEPA monthly with the DMRs and covering the same reporting period as the DMRs. Parameters (other than flow frequency and volume), if required in this Permit, shall be sampled and reported as indicated in the transmittal letter for such report forms.

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2. All Submittals listed in this Special Condition can be mailed to the following address:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

Attention: CSO Coordinator, Compliance Assurance Section

All submittals hand carried shall be delivered to 1021 North Grand Avenue East

B. CSO Treatment Requirements

3. All combined sewer overflows and treatment plant bypasses shall be given sufficient treatment to prevent pollution and the violation of applicable water quality standards and to the extent required by the federal Clean Water Act, the 1994 CSO Control Policy including any amendments made by the Wet Weather Water Quality Act of 2000. Sufficient treatment consists of the following:
- Treatment as described in PCB 85-218 and dated November 29, 1987 and AS 99-1 and dated March 22, 2002 shall be provided; and,
  - Any additional treatment, necessary to comply with all applicable water quality based requirements of this permit, including but not limited to, the requirement that discharges from CSOs not cause or contribute to violations of applicable water quality standards or cause use impairment in the receiving waters.
4. All CSO discharges authorized by this Permit shall be treated, in whole or in part, to the extent necessary to prevent accumulations of sludge deposits, floating debris and solids in accordance with 35 Ill. Adm. Code 302.203 and to prevent depression of oxygen levels below the applicable water quality standards.
5. Overflows during dry weather are prohibited. Dry weather overflows shall be reported to the IEPA pursuant to Standard Condition 12(f) of this Permit (24 hour notice).
6. The collection system shall be operated to optimize transport of wastewater flows and to minimize CSO discharges and the treatment system shall be operated to maximize treatment of wastewater flows.

C. CSO Nine Minimum Controls

7. The Permittee shall comply with the nine minimum controls contained in the National CSO Control Policy published in the Federal Register on April 19, 1994. The nine minimum controls are:
- Proper operation and maintenance programs for the sewer system and the CSOs;
  - Maximum use of the collection system for storage;
  - Review and modification of pretreatment requirements to assure CSO impacts are minimized;
  - Maximization of flow to the POTW for treatment;
  - Prohibition of CSOs during dry weather;
  - Control of solids and floatable materials in CSOs;
  - Pollution prevention programs which focus on source control activities;
  - Public notification to ensure that citizens receive adequate information regarding CSO occurrences and CSO impacts; and,
  - Monitoring to characterize impacts and efficiency of CSO controls.

A CSO pollution prevention plan (PPP) shall be developed by the Permittee unless one has already been prepared for this collection system. Any previously-prepared PPP shall be reviewed, and revised if necessary, by the Permittee to address the items contained in Chapter 8 of the U.S. EPA guidance document, Combined Sewer Overflows, Guidance For Nine Minimum

Special Conditions

Controls, and any items contained in previously-sent review documents from the IEPA concerning the PPP. Combined Sewer Overflows, Guidance For Nine Minimum Controls is available on line at <http://www.epa.gov/npdes/pubs/owm0030.pdf>. The PPP (or revised PPP) shall be presented to the general public at a public information meeting conducted by the Permittee annually during the term of the effective date of this Permit. The Permittee shall submit documentation that the pollution prevention plan complies with the requirements of this Permit and that the public information meeting was held. Such documentation shall be submitted to the IEPA within twelve (12) months of the effective date of this Permit and shall include a summary of all significant issues raised by the public, the Permittee's response to each issue, and two (2) copies of the "CSO Pollution Prevention Plan Certification" one (1) with original signatures. This certification form is available online at <http://www.epa.state.il.us/water/permits/waste-water/forms/cso-pol-prev.pdf>. Following the public meeting, the Permittee shall implement the pollution prevention plan and shall maintain a current pollution prevention plan, updated to reflect system modifications, on file at the sewage treatment works or other acceptable location and made available to the public. The pollution prevention plan revisions shall be submitted to the IEPA one (1) month from the revision date.

D. Sensitive Area Considerations

8. Pursuant to Section II.C.3 of the federal CSO Control Policy of 1994, sensitive areas are any water likely to be impacted by a CSO discharge which meet one or more of the following criteria: (1) designated as an Outstanding National Resource Water; (2) found to contain shellfish beds; (3) found to contain threatened or endangered aquatic species or their habitat; (4) used for primary contact recreation; or, (5) within the protection area for a drinking water intake structure.

The IEPA has determined that Outfall 003 discharges to a sensitive area. An LTCP was submitted and approved February 1, 2012 calling for the elimination of the discharge if economically feasible and technically achievable. If elimination has been determined by the Permittee to not be economically feasible or technically achievable, the permittee shall submit a plan and schedule for treating the discharge.

E. CSO Operational and Maintenance Plans

9. The Permittee shall implement a CSO O&M plan to reduce, to the greatest extent practicable, the total loading of pollutants and floatables entering the receiving stream and to mitigate, to the greatest extent practicable, the impacts from such loadings, to ensure that the Permittee ultimately achieves compliance with water quality standards. These plans, tailored to the local government's collection and waste treatment system, shall include mechanisms and specific procedures where applicable to ensure:
- a. Collection system inspection on a scheduled basis;
  - b. Sewer, catch basin, and regulator cleaning and maintenance on a scheduled basis;
  - c. Inspections are made and preventive maintenance is performed on all pump/lift stations;
  - d. Collection system replacement, where necessary;
  - e. Detection and elimination of illegal connections;
  - f. Detection, prevention, and elimination of dry weather overflows;
  - g. The collection system is operated to maximize storage capacity and the combined sewer portions of the collection system are operated to delay storm entry into the system; and,
  - h. The treatment and collection systems are operated to maximize treatment.

The IEPA received a CSO operational and maintenance plan "CSO O&M plan" for this sewerage system on October 27, 2014. The Permittee shall fully implement the plan and review and revise, if needed, the CSO O&M plan to reflect system changes and any comments previously sent to the Permittee by the IEPA. The CSO O&M plan shall be presented to the general public at a public information meeting conducted by the Permittee within nine (9) months of the effective date of this Permit. The Permittee shall submit documentation that the public information meeting was held within twelve (12) months of the effective date of this Permit. Such documentation shall be submitted to the IEPA within twelve (12) months of the effective date of this Permit and shall include a summary of all significant issues raised by the public, the Permittee's response to each issue, and two (2) copies of the "CSO Operational Plan Checklist and Certification", one (1) copy with original signatures. Copies of the "CSO Operational Plan Checklist and Certification" are available online at <http://www.epa.state.il.us/water/permits/waste-water/forms/cso-checklist.pdf>. The Permittee shall maintain a current CSO O&M plan, updated to reflect system modifications, on file at the sewage treatment works or other acceptable location and made available to the public. CSO O&M plan revisions shall be implemented immediately and revised plans shall be submitted to the IEPA within one (1) month from the revision date.

Special ConditionsF. Sewer Use Ordinances

10. The Permittee, within six (6) months of the effective date of this Permit, shall review and where necessary, modify its existing sewer use ordinance to ensure it contains provisions addressing the conditions below. If no ordinance exists, such ordinance shall be developed and implemented within six (6) months from the effective date of this Permit. Upon completion of the review of the sewer use ordinance(s), the Permittee shall submit two (2) copies of a completed "Certification of Sewer Use Ordinance Review", one (1) with original signatures. Copies of the certification form can be obtained on line at <http://www.epa.state.il.us/water/permits/waste-water/forms/sewer-use.pdf>. The Permittee shall submit copies of the sewer use ordinance(s) to the IEPA one (1) month from the revision date. Sewer use ordinances are to contain specific provisions to:
- a. Prohibit introduction of new inflow sources to the sanitary sewer system;
  - b. Require that new construction tributary to the combined sewer system be designed to minimize and/or delay inflow contribution to the combined sewer system;
  - c. Require that inflow sources on the combined sewer system be connected to a storm sewer, within a reasonable period of time, if a storm sewer becomes available;
  - d. Provide that any new building domestic waste connection shall be distinct from the building inflow connection, to facilitate disconnection if a storm sewer becomes available;
  - e. Assure that CSO impacts from non-domestic sources are minimized by determining which non-domestic discharges, if any, are tributary to CSOs and reviewing, and, if necessary, modifying the sewer use ordinance to control pollutants in these discharges; and,
  - f. Assure that the owners of all publicly owned systems with combined sewers tributary to the Permittee's collection system have procedures in place adequate to ensure that the objectives, mechanisms, and specific procedures given in Paragraph 8 of this Special Condition are achieved.

The Permittee shall enforce the applicable sewer use ordinances.

G. Long-Term Control Planning and Compliance with Water Quality Standards

11. A. Pursuant to Section 301 of the federal Clean Water Act, 33 U.S.C. Section 1311 and 40 CFR Section 122.4, discharges from the CSOs, including the outfalls listed in this Special Condition and any other outfall listed as a "Treated Combined Sewage Outfall", shall not cause or contribute to violations of applicable water quality standards or cause use impairment in the receiving waters. In addition, discharges from CSOs shall comply with all applicable parts of 35 Ill. Adm. Code 306.305(a), (b), (c), and (d).
- B. This is a Phase II Permit under USEPA's 1994 CSO Policy requiring implementation of the LTCP received by IEPA on September 19, 2009. The implementation schedule can be found under the Action Item section of Paragraph 14 of this Special Condition 14. Consistent with the design conditions of the LTCP, the numeric water quality based effluent limitations for the CSOs in this permit are that there shall be no more than 4 untreated CSO discharges from any specific outfall during any 12 month period of time. This limitation shall become effective on September 1, 2033.
12. A public notification program in accordance with Section II.B.8 of the federal CSO Control Policy of 1994 shall be developed employing a process that actively informs the affected public. The program shall include at a minimum public notification of CSO occurrences and CSO impacts, with consideration given to including mass media and/or Internet notification. The Permittee shall also consider posting signs in waters likely to be impacted by CSO discharges at the point of discharge and at points where these waters are used for primary contact recreation. Provisions shall be made to include modifications of the program when necessary and notification to any additional member of the affected public. The program shall be presented to the general public at a public information meeting conducted by the Permittee. The Permittee shall conduct the public information meeting within nine (9) months of the effective date of this Permit. The Permittee shall submit documentation that the public information meeting was held, shall submit a summary of all significant issues raised by the public and the Permittee's response to each issue and shall identify any modifications to the program as a result of the public information meeting. The Permittee shall submit the public information meeting documentation to the IEPA and implement the public notification program within twelve (12) months of the effective date of this Permit. The Permittee shall submit copies of the public notification program to the IEPA upon written request.
13. If any of the CSO discharge points listed in this Special Condition are eliminated, or if additional CSO discharge points, not listed in this Special Condition, are discovered, the Permittee shall notify the IEPA in writing within one (1) month of the respective outfall elimination or discovery. Such notification shall be in the form of a request for the appropriate modification of this NPDES

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Permit.

H. Summary of Compliance Dates in this CSO Special Condition

14. The following summarizes the dates that submittals contained in this Special Condition are due at the IEPA (unless otherwise indicated):

|  |  |
|--|--|
| Submission of CSO Monitoring Data (Paragraph 1)  | 25th of every month                              |
| Submission of Revised CSO O&M Plan (Paragraph 9)   | 1 month from revision date                       |
| Elimination of a CSO or Discovery of Additional CSO Locations (Paragraph 13)   | 1 month from discovery or elimination            |
| Control (or Justification for No Control) of CSOs to Sensitive Areas (Paragraph 8)   | 3 months from IEPA notification                  |
| Certification of Sewer Use Ordinance Review (Paragraph 10)   | 6 months from the effective date of this Permit  |
| Conduct Pollution Prevention, OMP and PN Public Information Meeting (Paragraphs, 7, 9 and 12)<br><b>No Submittal Due with this Milestone</b> | 9 months from the effective date of this Permit  |
| Submit Pollution Prevention Certification, OMP Certification and PN Information Meeting Summary (Paragraphs, 7, 9 and 12)                    | 12 months from the effective date of this Permit |

## Long-Term CSO Control Plan (Paragraph 10):

| <u>Action Item</u>   | <u>Start Date</u> | <u>Completion Date</u> |
|--|-------------------|------------------------|
| South Side CSO bidding and contract award  |                   | Sep-15                 |
| Construction of East Creek SSO detention tank  |                   | Oct-15                 |
| SSO design for separation of combined sewers in Sections 2 & 6, manhole repairs and Orbon detention pond       |                   | May-16                 |
| Design CSO 9th and E Street improvements and SSR 23 lift station   |                   | Sep-16                 |
| SSO Sections 2 & 6 bidding and award of contract   | Jul-16            | Oct-16                 |
| SSO Repairs to East B Street storm water pumping station   | Sep-15            | Mar-17                 |
| CSO 9th, E, and SSR 23 lift station bidding and award of contract  | Nov-16            | Mar-17                 |
| SSO design for Charles Street and LaSalle Street sewer main replacements                                       | Feb-17            | Jul-17                 |
| SSO Charles and LaSalle sewer bidding and award of contract  | Nov-17            | Feb-18                 |
| Study and Design of Lower End Disinfection System  | Jun-15            | Jun-18                 |
| Construction of South Side CSO lift station, gravity sewers and force main                                     | Oct-15            | Dec-18                 |
| SSO construction for separation of combined sewers in Sections 2 & 6, manhole repairs and Orbon detention pond | Mar-17            | Mar-19                 |
| CSO 9th, E, and SSR 23 lift station construction   | Jun-17            | Jun-19                 |
| SSO Charles and LaSalle construction   | Sep-18            | Sep-19                 |
| CSO Construction of Phase 1 lower-end disinfection   | Apr-19            | Jul-20                 |

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|  |        |        |
|--|--------|--------|
| CSO design upper-end basins and 66th and 88th Streets improvements, monitor the effects of the low-end storm management basins | Jan-19 | Aug-21 |
| SSO sewer lining and manhole repair as City funds are made available   | May-19 | Apr-22 |
| CSO Upper-end basins, 66th and 88th Streets bidding and contract award   | Dec-21 | May-22 |
| CSO Portland Avenue design   | Jan-23 | Feb-24 |
| CSO Upper-end basins, 66th and 88th Streets construction   | Sep-22 | Sep-24 |
| CSO Portland Avenue bidding and award of contract  | May-24 | Sep-24 |
| CSO design for disinfection of upper-end storm water management basins   | Jan-26 | Jan-27 |
| CSO Construction of Portland Avenue Improvements   | May-25 | May-27 |
| CSO upper-end basin disinfection bidding and contract award  | May-28 | Sep-28 |
| CSO design for disinfection of lower end storm water management basins   | May-29 | May-30 |
| CSO Construction of upper-end disinfection   | May-29 | Mar-31 |
| CSO lower-end basin disinfection bidding and contract award  | Nov-30 | Mar-31 |
| CSO Construction of Phase 2 lower-end disinfection   | Sep-31 | Sep-33 |

All submittals listed in this Special Condition can be mailed to the following address:

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

All submittals hand carried shall be delivered to 1021 North Grand Avenue East.

I. Reopening and Modifying this Permit

15. The IEPA may initiate a modification for this Permit at any time to include requirements and compliance dates which have been submitted in writing by the Permittee and approved by the IEPA, or other requirements and dates which are necessary to carry out the provisions of the Illinois Environmental Protection Act, the Clean Water Act, or regulations promulgated under those Acts. Public Notice of such modifications and opportunity for public hearing shall be provided.

SPECIAL CONDITION 16. The provisions of 40 CFR Section 122.41(m) & (n) are incorporated herein by reference.

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 Ill. Adm. Code 306.304. In order to accomplish these goals, the Permittee shall develop, implement and submit to the IEPA a Capacity, Management, Operations, and Maintenance (CMOM) plan which includes an Asset Management strategy within 12 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:

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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 as necessary;
  5. Identification and prioritization of structural deficiencies in the system owned and operated by the Permittee;
  6. Scheduled inspections and testing;
  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;
    - 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.
- 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. Special provisions for Pump Stations and force mains and other unique system components; and
  4. 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, within eighteen (18) months of the effective date of this permit, prepare and submit to the



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Agency a feasibility study 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 and 0.1 mg/L. The study shall evaluate the construction and O & M costs of the application of these limits on a monthly, seasonal and annual average basis.

SPECIAL CONDITION 19. The Permittee shall develop and submit to the Agency a Phosphorus Discharge Optimization Plan within eighteen (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. 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 and implement 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 nitrification, denitrification, or biological phosphorus removal.
    - 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 20: BOD<sub>5</sub> and Suspended Solids (85% removal required) For Discharge No. 001 and 002: In accordance with 40 CFR 133, the 30-day average percent removal shall not be less than 85 percent except as provided in Sections 133.103 and 133.105. 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.

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.