IOWA DEPARTMENT OF NATURAL RESOURCES

National Pollutant Discharge Elimination System (NPDES) Permit

OWNER NAME & ADDRESS

CITY OF WATERLOO
715 MULBERRY STREET
WATERLOO, IA 50703

FACILITY NAME & ADDRESS

WATERLOO CITY OF STP
3505 EASTON AVENUE
WATERLOO, IA 50702

Section 31, T89N, R12W
Black Hawk County

IOWA NPDES PERMIT NUMBER: 0790001
DATE OF ISSUANCE:
DATE OF EXPIRATION:

YOU ARE REQUIRED TO FILE FOR RENEWAL OF THIS PERMIT BY:
EPA NUMBER: IA0042650

This permit is issued pursuant to the authority of section 402(b) of the Clean Water Act (33 U.S.C. 1342(b)), Iowa Code section 455B.174, and rule 567-64.3, Iowa Administrative Code. You are authorized to operate the disposal system and to discharge the pollutants specified in this permit in accordance with the effluent limitations, monitoring requirements and other terms set forth in this permit.

You may appeal any condition of this permit by filing a written notice of appeal and request for administrative hearing with the director of the department within 30 days of permit issuance.

Any existing, unexpired Iowa operation permit or Iowa NPDES permit previously issued by the department for the facility identified above is revoked by the issuance of this permit. This provision does not apply to any authorization to discharge under the terms and conditions of a general permit issued by the department or to any permit issued exclusively for the discharge of stormwater.

FOR THE DEPARTMENT OF NATURAL RESOURCES

By _____

Ben Hucka
NPDES Section, Environmental Services Division

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Outfall No.: 001 EASTON AVENUE ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

Receiving Stream: CEDAR RIVER

Route of Flow: CEDAR RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

Waters designated Class B(WW1) are those in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrates species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

Outfall No.: 004 BYPASS AT THE HACKETT ROAD LIFT STATION.

Receiving Stream: UNNAMED CREEK

Route of Flow: UNNAMED CREEK TO CEDAR RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

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Outfall No.: 008 SATELLITE ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

Receiving Stream: CEDAR RIVER

Route of Flow: CEDAR RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

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Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Outfall No.: 009 BYPASS AT SHORELINE OVERFLOW WHEN STREAM FLOW IS LESS THAN 8500 CFS (USGS GAGE 05464000)

Receiving Stream: CEDAR RIVER

Route of Flow: CEDAR RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

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Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

Outfall No.: 010 BYPASS AT EQUALIZATION BASIN OVERFLOW

Receiving Stream: CEDAR RIVER

Route of Flow: DRAINAGE DITCH TO CEDAR RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

Waters designated Class B(WW1) are those in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrates species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

Outfall No.: 011 TOTAL TREATMENT FACILITY SHORELINE DISCHARGE- STREAM FLOW IS GREATER THAN OR EQUAL TO 8500 CFS (USGS GAGE 05464000)

Receiving Stream: CEDAR RIVER

Route of Flow: CEDAR RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

Waters designated Class B(WW1) are those in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrates species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Outfall No.: 012 BYPASS AT SERGEANT RD AND FLETCHER AVE

Receiving Stream: BLACK HAWK CREEK

Route of Flow: BLACK HAWK CREEK

Class A3 waters are children's recreational use waters in which recreational uses by children are common. Class A3 waters are water bodies having definite banks and bed with visible evidence of flow or occurrence of water. This type of use would primarily occur in urban or residential areas.

Waters designated Class B(WW1) are those in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrates species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

Outfall No.: 801 TOTAL TREATMENT FACILITY DIFFUSER DISCHARGE.

Receiving Stream: CEDAR RIVER

Route of Flow: CEDAR RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

Waters designated Class B(WW1) are those in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrates species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited.

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Effluent Limitations:

You are prohibited from discharging pollutants except in compliance with the following effluent limitations:

The following dates are approximate while Permit is in Draft

001 EASTON AVENUE ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

Outfall: 001 Effective Dates: Permit Issue Date to Permit Expire Date			
Parameter	**Season**	**Limit Type**	**Limits**
CBOD5			
	Yearly	7 Day Average	40 MG/L
	Yearly	30 Day Average	25 MG/L
TOTAL SUSPENDED SOLIDS			
	Yearly	7 Day Average	45 MG/L
	Yearly	30 Day Average	30 MG/L

008 SATELLITE ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

Outfall: 008 Effective Dates: Permit Issue Date to Permit Expire Date			
Parameter	**Season**	**Limit Type**	**Limits**
CBOD5			
	Yearly	7 Day Average	40 MG/L
	Yearly	30 Day Average	25 MG/L
TOTAL SUSPENDED SOLIDS			
	Yearly	7 Day Average	45 MG/L
	Yearly	30 Day Average	30 MG/L

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

011 TOTAL TREATMENT FACILITY SHORELINE DISCHARGE- STREAM FLOW IS GREATER THAN OR EQUAL TO 8500 CFS (USGS GAGE 05464000)

Outfall: 011 Effective Dates: Permit Issue Date to Permit Expire Date			
Parameter	**Season**	**Limit Type**	**Limits**
CBOD5			**85% Removal Required**
	Yearly	7 Day Average	11609 LBS/DAY
	Yearly	30 Day Average	7256 LBS/DAY
TOTAL SUSPENDED SOLIDS			**85% Removal Required**
	Yearly	7 Day Average	13060 LBS/DAY
	Yearly	30 Day Average	8707 LBS/DAY
NITROGEN, TOTAL (AS N)			
	Yearly	30 Day Average	9285.5 LBS/DAY
	Yearly	Daily Maximum	15199.0 LBS/DAY
PH			
	Yearly	Daily Maximum	9.0 STD UNITS
	Yearly	Daily Minimum	6.0 STD UNITS
E. COLI			
	MAR	Geometric Mean	126 #/100 ML
	APR	Geometric Mean	126 #/100 ML
	MAY	Geometric Mean	126 #/100 ML
	JUN	Geometric Mean	126 #/100 ML
	JUL	Geometric Mean	126 #/100 ML
	AUG	Geometric Mean	126 #/100 ML
	SEP	Geometric Mean	126 #/100 ML
	OCT	Geometric Mean	126 #/100 ML
	NOV	Geometric Mean	126 #/100 ML
ACUTE TOXICITY, CERIODAPHNIA			
	Yearly	Daily Maximum	1 NO TOXICITY
ACUTE TOXICITY, PIMEPHALES			
	Yearly	Daily Maximum	1 NO TOXICITY

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Outfall: 011 Effective Dates: Permit Issue Date to Permit Expire Date			
Parameter	**Season**	**Limit Type**	**Limits**
AMMONIA NITROGEN (N)			
	JAN	30 Day Average	69.4 MG/L 12696 LBS/DAY
	JAN	Daily Maximum	69.4 MG/L 12696 LBS/DAY
	FEB	30 Day Average	78.4 MG/L 13832 LBS/DAY
	FEB	Daily Maximum	78.4 MG/L 13832 LBS/DAY
	MAR	30 Day Average	68.0 MG/L 12392 LBS/DAY
	MAR	Daily Maximum	68.0 MG/L 12392 LBS/DAY
	APR	30 Day Average	53.9 MG/L 10546 LBS/DAY
	APR	Daily Maximum	53.9 MG/L 10546 LBS/DAY
	MAY	30 Day Average	60.5 MG/L 11394 LBS/DAY
	MAY	Daily Maximum	60.5 MG/L 11394 LBS/DAY
	JUN	30 Day Average	59.5 MG/L 10079 LBS/DAY
	JUN	Daily Maximum	59.5 MG/L 11114 LBS/DAY
	JUL	30 Day Average	64.1 MG/L 11575 LBS/DAY
	JUL	Daily Maximum	64.1 MG/L 12395 LBS/DAY
	AUG	30 Day Average	62.0 MG/L 10982 LBS/DAY
	AUG	Daily Maximum	62.0 MG/L 11823 LBS/DAY
	SEP	30 Day Average	55.2 MG/L 10890 LBS/DAY
	SEP	Daily Maximum	55.2 MG/L 10890 LBS/DAY
	OCT	30 Day Average	54.0 MG/L 10558 LBS/DAY
	OCT	Daily Maximum	54.0 MG/L 10558 LBS/DAY
	NOV	30 Day Average	52.5 MG/L 10145 LBS/DAY
	NOV	Daily Maximum	52.5 MG/L 10145 LBS/DAY
	DEC	30 Day Average	54.3 MG/L 10655 LBS/DAY
	DEC	Daily Maximum	54.3 MG/L 10655 LBS/DAY

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

801 TOTAL TREATMENT FACILITY DIFFUSER DISCHARGE.

Outfall: 801 Effective Dates: Permit Issue Date to Permit Expire Date			
Parameter	**Season**	**Limit Type**	**Limits**
CBOD5			**85% Removal Required**
	Yearly	7 Day Average	11609 LBS/DAY
	Yearly	30 Day Average	7256 LBS/DAY
TOTAL SUSPENDED SOLIDS			**85% Removal Required**
	Yearly	7 Day Average	13060 LBS/DAY
	Yearly	30 Day Average	8707 LBS/DAY
NITROGEN, TOTAL (AS N)			
	Yearly	30 Day Average	9285.5 LBS/DAY
	Yearly	Daily Maximum	15199.0 LBS/DAY
PH			
	Yearly	Daily Maximum	9.0 STD UNITS
	Yearly	Daily Minimum	6.0 STD UNITS
E. COLI			
	MAR	Geometric Mean	126 #/100 ML
	APR	Geometric Mean	126 #/100 ML
	MAY	Geometric Mean	126 #/100 ML
	JUN	Geometric Mean	126 #/100 ML
	JUL	Geometric Mean	126 #/100 ML
	AUG	Geometric Mean	126 #/100 ML
	SEP	Geometric Mean	126 #/100 ML
	OCT	Geometric Mean	126 #/100 ML
	NOV	Geometric Mean	126 #/100 ML
ACUTE TOXICITY, CERIODAPHNIA			
	Yearly	Daily Maximum	1 NO TOXICITY
ACUTE TOXICITY, PIMEPHALES			
	Yearly	Daily Maximum	1 NO TOXICITY

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Outfall: 801 Effective Dates: Permit Issue Date to Permit Expire Date			
Parameter	**Season**	**Limit Type**	**Limits**
AMMONIA NITROGEN (N)			
	JAN	30 Day Average	55.9 MG/L 9364 LBS/DAY
	JAN	Daily Maximum	95.0 MG/L 16561 LBS/DAY
	FEB	30 Day Average	70.0 MG/L 11372 LBS/DAY
	FEB	Daily Maximum	116.5 MG/L 19558 LBS/DAY
	MAR	30 Day Average	30.7 MG/L 4998.7 LBS/DAY
	MAR	Daily Maximum	108.5 MG/L 21421 LBS/DAY
	APR	30 Day Average	21.5 MG/L 3519.0 LBS/DAY
	APR	Daily Maximum	79.8 MG/L 14363.0 LBS/DAY
	MAY	30 Day Average	18.0 MG/L 2962.7 LBS/DAY
	MAY	Daily Maximum	79.1 MG/L 14162.8 LBS/DAY
	JUN	30 Day Average	11.6 MG/L 1931.6 LBS/DAY
	JUN	Daily Maximum	78.1 MG/L 13877.8 LBS/DAY
	JUL	30 Day Average	14.2 MG/L 2283.2 LBS/DAY
	JUL	Daily Maximum	87.4 MG/L 25229 LBS/DAY
	AUG	30 Day Average	13.0 MG/L 2082.2 LBS/DAY
	AUG	Daily Maximum	74.1 MG/L 13652.6 LBS/DAY
	SEP	30 Day Average	13.4 MG/L 2221.8 LBS/DAY
	SEP	Daily Maximum	94.6 MG/L 16916 LBS/DAY
	OCT	30 Day Average	30.8 MG/L 5020.2 LBS/DAY
	OCT	Daily Maximum	93.5 MG/L 16990 LBS/DAY
	NOV	30 Day Average	38.7 MG/L 6282.3 LBS/DAY
	NOV	Daily Maximum	78.4 MG/L 13970.8 LBS/DAY
	DEC	30 Day Average	45.8 MG/L 8998 LBS/DAY
	DEC	Daily Maximum	72.7 MG/L 13467 LBS/DAY

Facility Name: WATERLOO CITY OF STP
Permit Number: 0790001

Non-Standard Effluent Limits

Outfall #	Limits Effective During Blending Mode of Operation

Parameter	Season	Limit Type	Limits
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	7 Day Average	45 MG/L 13060 LBS/DAY
	Yearly	30 Day Average	30 MG/L 8707 LBS/DAY

011 and 801

Monitoring and Reporting Requirements

(a) Samples and measurements taken shall be representative of the volume and nature of the monitored wastewater.

(b) Analytical and sampling methods specified in 40 CFR Part 136 or other methods approved in writing by the department shall be utilized. All effluent samples for which a limit applies must be analyzed using sufficiently sensitive methods (i.e. testing procedures) approved under 567 IAC Chapter 63 and 40 CFR Part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter I, subchapter N or O.

For the purposes of this paragraph, an approved method is sufficiently sensitive when:
(1) the method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or
(2) the method has the lowest ML of the approved analytical methods for the measured pollutant or pollutant parameter.

Samples collected for operational testing need not be analyzed by approved analytical methods; however, commonly accepted test methods should be used.

(c) You are required to report all data including calculated results needed to determine compliance with the limitations contained in this permit. The results of any monitoring not specified in this permit performed at the compliance monitoring point and analyzed according to 40 CFR Part 136 shall be included in the calculation and reporting of any data submitted in accordance with this permit. This includes daily maximums and minimums, 30-day averages and 7-day averages for all parameters that have concentration (mg/l) and mass (lbs/day) limits. In addition, flow data shall be reported in million gallons per day (MGD).

(d) Records of monitoring activities and results shall include for all samples: the date, exact place and time of the sampling; the dates the analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses.

(e) Results of all monitoring shall be recorded on forms provided by, or approved by, the department, and shall be submitted to the appropriate regional field office of the department by the fifteenth day following the close of the reporting period. Your reporting period is on a MONTHLY basis, ending on the last day of each reporting period.

(f) Operational performance monitoring for treatment unit process control shall be conducted to ensure that the facility is properly operated in accordance with its design. The results of any operational performance monitoring need not be reported to the department, but shall be maintained in accordance with rule 567 IAC 63.2 (455B). The results of any operational performance monitoring specified in this permit shall be submitted to the department in accordance with these reporting requirements.

(g) Chapter 63 of the rules provides you with further explanation of your monitoring requirements.

All dates are approximate while Permit is in Draft

Facility Name: WATERLOO CITY OF STP
Permit Number: 0790001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from Permit Issue Date to Permit Expire Date				
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	7/WEEK OR DAILY	24 HOUR COMPOSITE	RAW WASTE
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE
001	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	NITROGEN, TOTAL KJELDAHL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	PH	7/WEEK OR DAILY	GRAB	RAW WASTE
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	RAW WASTE
001	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	24 HOUR COMPOSITE	RAW WASTE
001	CBOD5	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
008	BIOCHEMICAL OXYGEN DEMAND (BOD5)	7/WEEK OR DAILY	24 HOUR COMPOSITE	RAW WASTE
008	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE
008	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
008	NITROGEN, TOTAL KJELDAHL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
008	PH	7/WEEK OR DAILY	GRAB	RAW WASTE
008	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
008	TEMPERATURE	7/WEEK OR DAILY	GRAB	RAW WASTE
008	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	24 HOUR COMPOSITE	RAW WASTE
008	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	BLENDED FLOW
008	CBOD5	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
008	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from Permit Issue Date to Permit Expire Date				
011	ACUTE TOXICITY, CERIODAPHNIA	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
011	ACUTE TOXICITY, PIMEPHALES	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
011	AMMONIA NITROGEN (N)	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
011	BIOCHEMICAL OXYGEN DEMAND (BOD5)	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
011	CBOD5	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
011	E. COLI	GEO. MEAN 1/3 MONTHS	GRAB	EFFLUENT AFTER DISINFECTION
011	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	EFFLUENT AFTER DISINFECTION
011	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
011	PH	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION
011	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
011	TEMPERATURE	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION
011	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from Permit Issue Date to Permit Expire Date				
801	STREAM FLOW	7/WEEK OR DAILY	MEASUREMENT	CEDAR RIVER AT USGS STREAM GAGE 05464000
801	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	FLOW EQUALIZATION BASIN OVERFLOW TO SATELLITE PLANT
801	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	SPLIT FLOW EFFLUENT
801	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	FLOW EQUALIZATION BASIN RETURN
801	BIOCHEMICAL OXYGEN DEMAND (BOD5)	7/WEEK OR DAILY	CALCULATED	RAW WASTE
801	FLOW	7/WEEK OR DAILY	CALCULATED	TOTAL RAW WASTE FLOW
801	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	CALCULATED	RAW WASTE
801	NITROGEN, TOTAL KJELDAHL (AS N)	1 TIME PER WEEK	CALCULATED	RAW WASTE
801	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	CALCULATED	RAW WASTE
801	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	CALCULATED	RAW WASTE
801	ACUTE TOXICITY, CERIODAPHNIA	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
801	ACUTE TOXICITY, PIMEPHALES	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
801	AMMONIA NITROGEN (N)	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
801	BATHYMETRIC REPORT	1 EVERY 12 MONTHS	MEASUREMENT	INSTREAM EFFLUENT DIFFUSER
801	BIOCHEMICAL OXYGEN DEMAND (BOD5)	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
801	CBOD5	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
801	DIFFUSER VALIDATION REPORT	1 EVERY 12 MONTHS	VISUAL	INSTREAM EFFLUENT DIFFUSER
801	E. COLI	GEO. MEAN 1/3 MONTHS	GRAB	EFFLUENT AFTER DISINFECTION
801	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	EFFLUENT AFTER DISINFECTION
801	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
801	PH	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION
801	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
801	TEMPERATURE	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION
801	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
801	VISUAL OBSERVATION	1 EVERY MONTH	VISUAL	INSTREAM EFFLUENT DIFFUSER

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Special Monitoring Requirements

Outfall # **Description**

008 **FLOW**

Flow shall be reported if partially treated wastewater from the satellite plant is diverted to the disinfection chamber as outlined on the blending mode of operation page of this permit. If partially treated effluent is not being diverted to the disinfection unit, the facility shall report "not required" on the discharge monitoring report for that day.

011, 801 **BIOCHEMICAL OXYGEN DEMAND (BOD5)**

All BOD5 samples must be seeded at the laboratory prior to analysis when the disinfection equipment is in use.

E. COLI

The limit for E. coli of 126 org/100 ml specified on the limits pages of this permit for outfall(s) 801 and 011 is a monthly geometric mean. The disinfection season is established in the Iowa Administrative Code, Subparagraph 567 IAC 61.3(3)"a"(1), and is in effect from March 15 to November 15. Any disinfection system (chlorine, UV light, etc.) shall be operated to comply with the limit during the entire disinfection season whenever wastewater is being discharged from outfall(s) 801 and 011.

The facility must collect and analyze a minimum of five samples in one calendar month during each 3-month period from March 15 to November 15. The 3-month periods are March – May, June – August, and September – November. The collection of five samples in each 3-month period will result in a minimum of 15 samples being collected during a calendar year. For example, for the first 3-month period, the operator may choose April as the calendar month to collect the 5 individual E. coli samples to determine compliance with the limits. The operator may also choose the months of March or May as well, as long as each of the 5 samples is collected during a single calendar month. The same principle applies to the other two 3-month periods during the disinfection season. The following requirements apply to the individual samples collected in one calendar month:
Samples must be spaced over one calendar month.
No more than one sample can be collected on any one day.
There must be a minimum of two days between each sample.
No more than two samples may be collected in a period of seven consecutive days.

If the effluent has been disinfected using chlorine, ultraviolet light (UV), or any other process intended to disrupt the biological integrity of the E. coli, the samples shall be analyzed using the Most Probable Number method found in Standard Method 9223B (Colilert® or Colilert-18® made by IDEXX Laboratories, Inc.). If the effluent has not been disinfected the samples may be analyzed using either the MPN method above or EPA Method 1603: Escherichia coli (E. coli) in water by membrane filtration using modified membrane-thermotolerant E. coli agar (modified mTEC) or mColiBlue-24® made by the Hach Company.

The geometric mean must be calculated using all valid sample results collected during a month. The geometric mean formula is as follows: Geometric Mean = (Sample one * Sample two * Sample three * Sample four *Sample five…Sample N)^(1/N), which is the Nth root of the result of the multiplication of all of the sample results where N = the number of samples. If a sample result is a less than value, the value reported by the lab without the less than sign should be used in the geometric mean calculation.

The geometric mean can be calculated in one of the following ways:
Use a scientific calculator that can calculate the powers of numbers.
Enter the samples in Microsoft Excel and use the function "GEOMEAN" to perform the calculation.
Use the geometric mean calculator on the Iowa DNR webpage at: http://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting/NPDES-Operator-Information/Bacteria-Sampling

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Outfall #	Description
011, 801	**NITROGEN, TOTAL (AS N)**

Total nitrogen shall be determined by testing for Total Kjeldahl Nitrogen (TKN) and nitrate + nitrite nitrogen and reporting the sum of the TKN and nitrate + nitrite results (reported as N). Nitrate + nitrite can be analyzed together or separately.

801 **RAW WASTE FLOW**

Raw flow shall be calculated as the sum of the 24-hour totals from the Easton Ave facility and the Satellite facility (recirculation flow shall not be included).

RAW WASTE: BOD5, TSS, TP, TN, TKN

Samples are required at each influent line to determine the mass loadings from each line. The total influent load to the treatment facility shall then be calculated and reported under outfall 801.

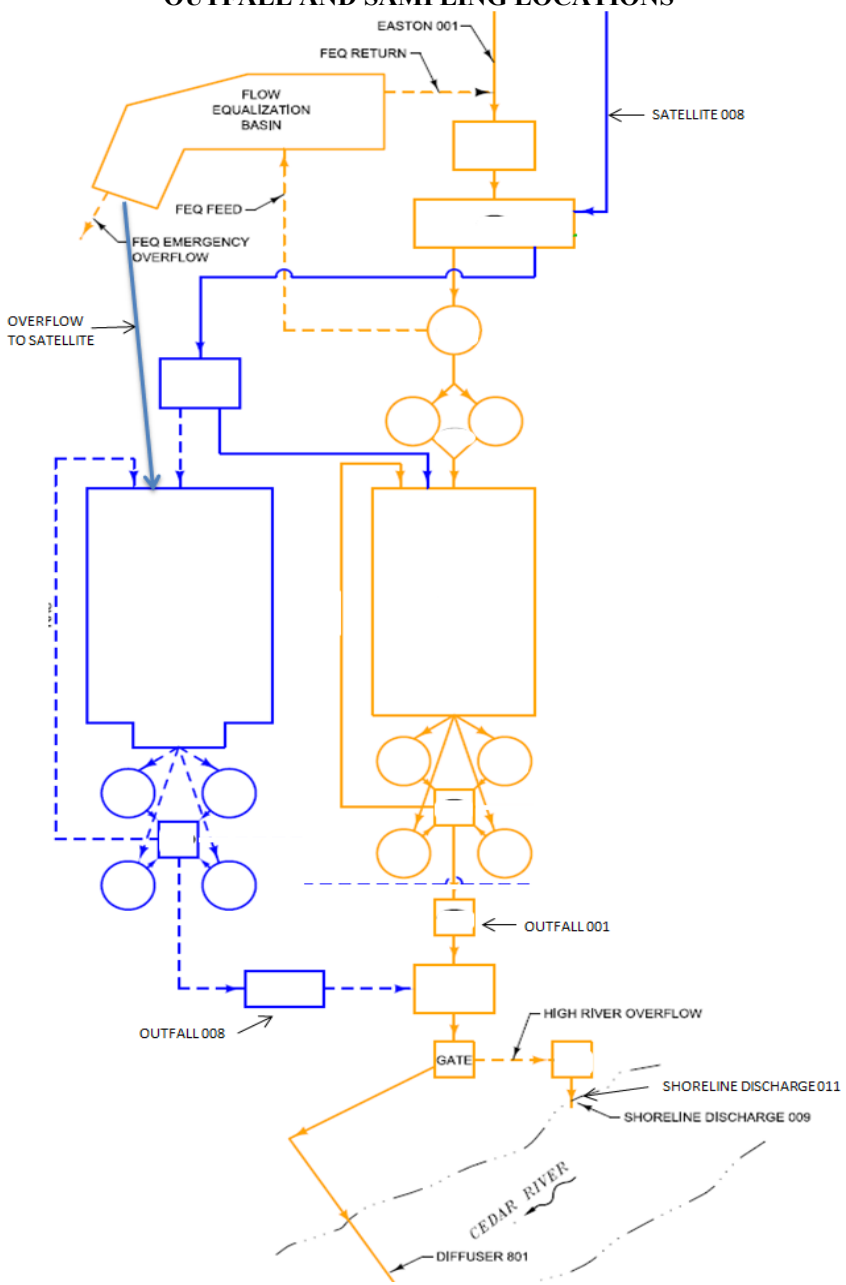
STREAM FLOW

A daily minimum value shall be reported.

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

OUTFALL AND SAMPLING LOCATIONS



Facility Name: WATERLOO CITY OF STP
Permit Number: 0790001

Blending Mode of Operation

The City of Waterloo may operate their wastewater treatment plant in the following mode during peak influent flow conditions only.

Influent flows that exceed the hydraulic capacity of the Easton Avenue plant are diverted to two-flow equalization basins (FEQ) after passing through grit removal. Flows stored in the FEQ basins are returned to the Easton Wet Well once the Easton Avenue plant regains hydraulic capacity. In the event that the Easton Avenue plant has yet to regain hydraulic capacity, the flow from the FEQ will be diverted to the Satellite plant. The flows from the FEQ will be routed through the Satellite plant and returned to the headworks of the Easton Avenue plant via portable pumps. If the biological system at the Easton Avenue Plant could be jeopardized due to excessive flows, the partially treated wastewater from the Satellite plant will be diverted to the disinfection chamber and blended with the final effluent from the Easton plant. Once the Easton Avenue plant regains hydraulic capacity the facility is no longer authorized to blend the FEQ overflow via the Satellite plant.

Effluent limits and permit conditions remain in effect during this mode of operation.

Facility Name: WATERLOO CITY OF STP
Permit Number: 0790001

Outfall Number: 011, 801

Ceriodaphnia and Pimephales Toxicity Effluent Testing

1. For facilities that have not been required to conduct toxicity testing by a previous NPDES permit, the initial annual toxicity test shall be conducted within three (3) months of permit issuance. For facilities that have been required to conduct toxicity testing by a previous NPDES permit, the initial annual toxicity test shall be conducted within twelve months (12) of the last toxicity test.

2. The test organisms that are to be used for acute toxicity testing shall be Ceriodaphnia dubia and Pimephales promelas. The acute toxicity testing procedures used to demonstrate compliance with permit limits shall be those listed in 40 CFR Part 136 and adopted by reference in rule 567 IAC 63.1(1). The method for measuring acute toxicity is specified in USEPA, October 2002, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition. USEPA, Office of Water, Washington, D.C., EPA 821-R-02-012.

3. The diluted effluent sample must contain a minimum of 11.60 % effluent and no more than 88.40 % of culture water.

4. One valid positive toxicity result will require, at a minimum, quarterly testing for effluent toxicity until three successive tests are determined not to be positive.

5. Two successive valid positive toxicity results or three positive results out of five successive valid effluent toxicity tests will require a toxicity reduction evaluation to be completed to eliminate the toxicity.

6. A non-toxic test result shall be indicated as a "1" on the monthly operation report. A toxic test result shall be indicated as a "2" on the monthly operation report. DNR Form 542-1381 shall also be submitted to the DNR field office along with the monthly operation report.

Ceriodaphnia and Pimephales Toxicity Effluent Limits

The maximum limit of "1" for the parameters Acute Toxicity, Ceriodaphnia and Acute Toxicity, Pimephales means no positive toxicity results.

Definition: "Positive toxicity result" means a statistical difference of mortality rate between the control and the diluted effluent sample. For more information, see USEPA, October 2002, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, USEPA, Office of Water, Washington, D.C., EPA 821-R-02-012.

A toxicity test performed at the dilution percentage specified in item 3 of this page shall satisfy the monitoring requirements for both outfall 011 and 801 as required on pages 12 and 13 of this permit.

Facility Name: WATERLOO CITY OF STP
Permit Number: 0790001

Design Capacity

Design:

Easton Avenue WPCF
The design capacity for the treatment works is specified in Construction Permit Number 98-361-S, issued August 21, 1998.
The treatment plant is designed to treat:
* An average dry weather (ADW) flow of 12.7 Million Gallons Per Day (MGD).
* An average wet weather (AWW) flow of 26.7 Million Gallons Per Day (MGD).
* A maximum wet weather (MWW) flow of 36.0 Million Gallons Per Day (MGD).
* A design 5-day biochemical oxygen demand (BOD5) load of 30,000 lbs/day.
* A design Total Kjeldahl Nitrogen (TKN) load of 7,500.00 lbs/day.

Satellite WPCF
The design capacity for the treatment works is specified in Construction Permit Number 95-317-S, issued July 7, 1995.
The treatment plant is designed to treat:
* An average dry weather (ADW) flow of 5.3 Million Gallons Per Day (MGD).
* An average wet weather (AWW) flow of 8.1 Million Gallons Per Day (MGD).
* A maximum wet weather (MWW) flow of 11.1 Million Gallons Per Day (MGD).
* A design 5-day biochemical oxygen demand (BOD5) load of 58,000 lbs/day.
* A design Total Kjeldahl Nitrogen (TKN) load of 13,550.00 lbs/day.

Operator Certification Type/Grade: WW/IV

Wastes in such volumes or quantities as to exceed the design capacity of the treatment works or reduce the effluent quality below that specified in the operation permit of the treatment works are considered to be a waste which interferes with the operation or performance of the treatment works and are prohibited by rule IAC 567-62.1(7).

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

SEWAGE SLUDGE HANDLING AND DISPOSAL REQUIREMENTS

"Sewage sludge" is solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge does not include the grit and screenings generated during preliminary treatment.

1. The permittee shall comply with all existing Federal and State laws and regulations that apply to the use and disposal of sewage sludge and with technical standards developed pursuant to Section 405(d) of the Clean Water Act when such standards are promulgated. If an applicable numerical limit or management practice for pollutants in sewage sludge is promulgated after issuance of this permit that is more stringent than a sludge pollutant limit or management practice specified in existing Federal or State laws or regulations, this permit shall be modified, or revoked and reissued, to conform to the regulations promulgated under Section 405(d) of the Clean Water Act. The permittee shall comply with the limitation no later than the compliance deadline specified in the applicable regulations.

2. The permittee shall provide written notice to the Department of Natural Resources prior to any planned changes in sludge disposal practices.

3. Land application of sewage sludge shall be conducted in accordance with criteria established in rule IAC 567 67.1 through 67.11 (455B).

Facility Name: WATERLOO CITY OF STP

Permit Number: 0790001

Diffuser Special Monitoring Requirements

Monthly Visual Monitoring:

At a frequency of at least once per month, the permittee shall visually observe the diffuser and record the observations in a log book. The permittee is required to visually observe and record the following items:

- Whether the diffuser and diffuser ports can be seen above or below the surface of the water;
- Whether the effluent dispersion pattern of the ports can be seen, and whether the patterns are uniform;
- Signs of non-uniform bubbling, uneven coloring or actual spraying of effluent above the water surface;
- Debris or materials that have collected on or may be obstructing the diffuser;
- General structural condition of the diffuser, diffuser ports, and protective materials;
- Condition of the shoreline outfall 011; and
- Actions taken, if applicable (i.e. corrective/ maintenance measures, adjustments of ports, removal of debris, etc.)

The log book entries shall be made available to the Department upon request. The permittee will indicate completion of the visual monitoring by entering a "1" in the "VISUAL" column on the day that the visual monitoring was completed on the Discharge Monitoring Report (DMR) spreadsheet.

Annual Diffuser Performance Analysis:

Minimum Requirements: Annually, by **[Insert Month and Day the permit was issued]**, the permittee is required to submit a Diffuser Performance Analysis report to the Department at both of the addresses shown below. The annual diffuser analysis should be performed at a stream flow as close as possible to stream critical low flow conditions.

The annual diffuser performance analysis should identify if all diffuser ports, that were active when the mixing percentage used in the current NPDES permit was established, are functioning properly. The annual diffuser performance analysis should also assess if rapid and uniform mixing is occurring within 100 feet downstream of the active diffuser ports, determined in a manner consistent with the methods that established the mixing percentage in this NPDES permit, with the stream flow as close as possible to critical low flow conditions.

If dye used in the Diffuser Performance Analysis shall meet the following requirements:

1) The Diffuser Performance Analysis shall use one of the following dyes:
   (a) Rhodamine WT dye
   (b) FWT red dye tablets
   (c) FLT Yellow/Green Liquid Concentrate dye
   (d) Green Sewer Tracing Dye
   (e) Fluorescent FLT Yellow/Green Powder
   (f) Bright Dye FWT Red Dye
   (g) FLT Yellow/Green dye tablets

   If a dye other than one listed above is used, you must obtain permission from the Department prior to use of the dye. Please contact Katie Greenstein at (515) 725-8400 or katie.greenstein@dnr.iowa.gov to request approval of dyes other than those listed above.
2) The dye shall be used according to the instructions provided by the manufacturer; and
3) The introduction of the dye into the receiving stream shall be limited to as short a time period as possible and the amount of dye used shall be as little as possible.

Video and/or pictures of the demonstration should be sent along with the diffuser analysis performance report to both addresses shown below.
The Diffuser Performance Analysis report shall describe any proposed location or discharge flow adjustments to the diffuser ports intended to comply with the designed operation of the diffuser. Any video and/or pictures of the demonstration should be included in the report. The permittee will indicate submittal of the Diffuser Performance Analysis report by entering a "1" in the "DIFFVAL" column on the Discharge Monitoring Report (DMR) spreadsheet on the day that the report is submitted. Select the No Discharge Indicator "NOT REQUIRED/MP" on the DMR spreadsheet during the months that the report is not required.

Additional Requirements: The Department will review the Diffuser Performance Analysis report. If the analysis does not show rapid and uniform mixing of the effluent within 100 feet downstream of the active diffuser ports, determined in a manner consistent with the methods that established the mixing percentage in this NPDES permit, you shall be notified of the requirement to submit a plan to correct diffuser deficiencies. The plan to correct the deficiencies shall be submitted to the Field Office address within 60 days of Department notification. A subsequent Diffuser Performance Analysis report shall be submitted to both addresses shown below no later than 60 days after implementing the plan to correct the diffuser deficiencies. If the subsequent Diffuser Performance Analysis report does not show rapid and uniform mixing of the effluent within 100 feet downstream of the active diffuser ports, determined in a manner consistent with the methods that established the mixing percentage in this NPDES permit, the permit shall be amended to include monitoring and limits necessary to be protective of the observed conditions**.**

The DNR Field Office 1 shall be notified by calling 563-927-2640 at least 48 hours prior to the use of dye.

Bathymetric Analysis:

Minimum Requirements: The permittee is required to perform a Bathymetric Analysis which shall be submitted annually, by **[Insert Month and Day the permit was issued]** to the Department at both of the addresses shown below. The bathymetric features shall be determined by measuring the receiving stream depth at a minimum of twenty (20) equidistant intervals across the entire width of the receiving stream at the location of the diffuser. The Bathymetric Analysis report shall characterize the bathymetric features and include clear documentation of the receiving stream cross section, diffuser location, and stream bottom substrate.

- Hydrologic Events: In addition, a Bathymetric Analysis must be performed if significant changes to the stream channel occur as a result of hydrologic events (such as flooding, stream channelization, reconstruction, etc.) A report of this analysis must be submitted to the Department at both of the addresses below within sixty (60) days of the event occurrence. If the Bathymetric Analysis shows that the changes to the receiving stream may alter the mixing achieved by the diffuser, a Diffuser Performance Analysis must also be performed to demonstrate the actual mixing achieved by the diffuser, determined in a manner consistent with the methods that established the mixing percentage in this NPDES permit. Modeling of the 100-foot diffuser mixing area may be used to perform the Diffuser Performance Analysis, with Department approval, if the receiving stream does not reach low flow conditions within four (4) months of the hydrologic event. The Diffuser Performance Analysis report must be submitted to the Department at both of the addresses below within ninety (90) days of the hydrologic event occurrence. A Diffuser Performance Analysis performed as a result of a hydrologic event will fulfill the annual report requirement for that year.

The permittee will indicate completion of the Bathymetric Analysis report by entering a "1" in the "BATHY" column on the Discharge Monitoring Report (DMR) spreadsheet on the day that the report is submitted. Select the No Discharge Indicator "NOT REQUIRED/MP" on the DMR spreadsheet during the months that the report is not required.

Addresses for Report Submittal:

Iowa Department of Natural Resources
Environmental Services Division
DNR Field Office 1
909 West Main St., Suite 4
Manchester, IA 52057

Iowa Department of Natural Resources
Ben Hucka
502 E. 9th Street
Des Moines, IA 50319

SIGNIFICANT INDUSTRIAL USER LIMITATIONS, MONITORING AND REPORTING REQUIREMENTS

1. You shall require all users of your facility to comply with Sections 204(b), 307, and 308 of the Clean Water Act.

   Section 204(b) requires that all users of the treatment works constructed with funds provided under Sections 201(g) or 601 of the Act to pay their proportionate share of the costs of operation, maintenance and replacement of the treatment works.

   Section 307 of the Act requires users to comply with pretreatment standards promulgated by EPA for pollutants that would cause interference with the treatment process or would pass through the treatment works.

   Section 308 of the Act requires users to allow access at reasonable times to state and EPA inspectors for the purpose of sampling the discharge, reviewing, and copying records.

2. You shall continue to implement the pretreatment program approved **March 14, 1984** and any amendments thereto.

3. An annual report in the form prescribed by the Department is to be submitted by March 1st of each year describing the pretreatment program activities for the preceding calendar year.

4. The City shall evaluate the adequacy of its local limits to meet the general prohibitions against interference and pass through listed in 40 CFR 403.5(a) and the specific prohibitions listed in 40 CFR 403.5(b). At a minimum this evaluation shall consist of the following:

   (a) Identify each pollutant with the potential to cause process inhibition, pass through the treatment plant in concentrations that will violate NPDES permit limits of water quality standards, endanger POTW worker health and safety or degrade sludge quality.

   (b) For each treatment plant, determine the maximum allowable headworks loading for each pollutant identified in item #4(a). that will prevent interference or a pass through.

   (c) After accounting for the contribution of each pollutant from uncontrolled (i.e.: domestic/commercial) sources to each treatment plant, determine the maximum allowable industrial loading for each pollutant identified in item #4(a).

   (d) Complete the evaluation and submit to the Department, by **[one year from permit issuance]** a report containing the following information:
      1) A list of pollutants identified in item #4(a). For each pollutant, state the reason(s) for its inclusion (e.g. potential to cause interference, potential to cause pass through, etc.).
      2) The report shall contain all calculations used to determine the maximum allowable headworks loadings and shall identify the source(s) of all data used (e.g. literature value, site specific measurement, etc.).
      3) The contribution of each pollutant identified in item #4(d)1 to each treatment plant from uncontrolled sources and an explanation of how each contribution was determined.
      4) The allocation of the maximum allowable headworks loading for each pollutant to each treatment plant, and an explanation of how the allowable loadings will be allocated to significant industrial users regulated by the City's pretreatment program.

5. The City shall evaluate the approved pretreatment program for compliance with 40 CFR 403 and Iowa Administrative Code 567 – Chapter 62. Complete the evaluation and submit to the Department a report containing the findings of the evaluation, including a proposal for modifications to correct any deficiencies that are identified, by **[one year from permit issuance].**

Facility Name: WATERLOO CITY OF STP
Permit Number: 0790001

Nutrient Reduction Requirements

In support of the Iowa Nutrient Reduction Strategy you shall prepare and submit a report that evaluates the feasibility and reasonableness of reducing the amounts of nitrogen and phosphorus discharged into surface water. The report shall be submitted no later than ***{Two years from permit issuance}*** and shall address the following:

- A description of the existing treatment facility with particular emphasis on its capabilities for removing nitrogen and phosphorus. The description shall include monitoring data that define the current amounts of total nitrogen (TKN+nitrate+nitrite) and total phosphorus in both the raw wastewater and the final effluent.

- A description and evaluation of operational changes to the existing treatment facility that could be implemented to reduce the amounts of total nitrogen and total phosphorus discharged in the final effluent and the feasibility and reasonableness of each. Your evaluation must discuss the projected degree of total nitrogen and total phosphorus reduction achievable for each operational change. When evaluating feasibility, you must consider what, if any, effect operational changes would have on the removal of other pollutants (e.g. $CBOD_5$, TSS). When evaluating reasonableness, you shall include estimates of the additional cost, if any, to implement such changes and for a publicly-owned treatment works the impact on user rates.

- A description and evaluation of new or additional treatment technologies that would achieve significant reductions in the amounts of total nitrogen and total phosphorus discharged in the final effluent with a goal of achieving annual average concentrations of 10 mg/L total nitrogen and 1 mg/L total phosphorus for plants treating typical domestic strength sewage. For purposes of this evaluation typical domestic sewage is considered to contain approximately 25 – 35 mg/L total nitrogen and 4 - 8 mg/L total phosphorus. For plants treating wastewater with total nitrogen and/or total phosphorus concentrations greater than typical domestic strength sewage, the evaluation shall include the projected reductions in the total nitrogen and phosphorus effluent concentrations achievable with the application of feasible and reasonable treatment technology with a goal of achieving at least a 66 % reduction in nitrogen and 75% reduction in total phosphorus. For each treatment technology the report shall assess its feasibility, reasonableness, practicability, the availability of equipment, capital costs, annual operating costs, impact on user rates and any non-water quality environmental impacts (e.g. additional air pollution, increased sludge production, etc.).

- Based on the evaluations of operational changes and new or additional treatment technologies the report must select the preferred method(s) for reducing total nitrogen and total phosphorus in the final effluent, the rationale for the selected method(s) and an estimate of the effluent quality achievable.

- In addition to selecting operational changes and/or new or additional treatment technologies, the permittee may evaluate and propose to implement practices within the watershed that may achieve greater reductions in nitrogen or phosphorus than the preferred method(s) alone. Such evaluations are particularly encouraged when no feasible or reasonable operational changes or additional treatment technologies can be identified or when the schedule for installing the selected technology exceeds ten years.

- The report must include a schedule for making operational changes and/or installing new or additional treatment technologies to achieve the concentration and/or percentage removal goals listed above. Additional financial justification must be included in the report if no operational changes or treatment technologies are feasible or reasonable.

The schedule will be incorporated into the NPDES permit by amendment. Effluent discharge limits will be based on one full year of operating data after implementation of the operational changes or completion of plant modifications and a six-month optimization period.

The report shall be sent to the following address:
Ben Hucka
NPDES Section
Iowa Department of Natural Resources
502 East 9th Street
Des Moines, IA 50319

STANDARD CONDITIONS

1. ADMINISTRATIVE RULES

Rules of this Department that govern the operation of your facility in connection with this permit are published in Part 567 of the Iowa Administrative Code (IAC) in Chapters 60-65, 67, and 121. Reference to the term "rule" in this permit means the designated provision of Part 567 of the IAC. Reference to the term "CFR" means the Code of Federal Regulations.

2. DEFINITIONS

(a) 7 day average means the sum of the total daily discharges by mass, volume, or concentration during a 7 consecutive day period, divided by the total number of days during the period that measurements were made. Four 7 consecutive day periods shall be used each month to calculate the 7-day average. The first 7-day period shall begin with the first day of the month.

(b) 30 day average means the sum of the total daily discharges by mass, volume, or concentration during a calendar month, divided by the total number of days during the month that measurements were made.

(c) Daily maximum means the total discharge by mass, volume, or concentration during a twenty-four hour period.

3. DUTY TO PROVIDE INFORMATION

You must furnish to the Director, within a reasonable time, any information the Director may request to determine compliance with this permit or determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, in accordance with 567 IAC 64.3(11)"*c*". You must also furnish to the Director, upon request, copies of any records required to be kept by this permit.

4. MONITORING AND RECORDS OF OPERATION

(a) Maintenance of records. You shall retain for a minimum of three years all paper and electronic records of monitoring activities and results including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records. ***{See 567 IAC 63.2(3)}***

(b) Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years, or both. ***{See 40 CFR 122.41(j)(5)}***

5. SIGNATORY REQUIREMENTS

Applications, reports or other information submitted to the Department in connection with this permit must be signed and certified in accordance with 567 IAC 64.3(8).

6. OTHER INFORMATION

Where you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, you must promptly submit such facts or information. Where you become aware that you failed to submit any relevant facts in the submission of in any report to the director, including records of operation, you shall promptly submit such facts or information. ***{See 567 IAC 60.4(2)"a" and 567 IAC 63.7}***

7. TRANSFER OF TITLE OR OWNER ADDRESS CHANGE

If title to your facility, or any part of it, is transferred the new owner shall be subject to this permit. You are required to notify the new owner of the requirements of this permit in writing prior to any transfer of title. The Director shall be notified in writing within 30 days of the transfer. No transfer of the authorization to discharge from the facility represented by the permit shall take place prior to notifying the department of the transfer of title. Whenever the address of the owner is changed, the department shall be notified in writing within 30 days of the address change. Electronic notification is not sufficient; all title transfers or address changes must be reported to the department by mail. ***{See 567 IAC 64.14}***

8. PROPER OPERATION AND MAINTENANCE

All facilities and control systems shall be operated as efficiently as possible and maintained in good working order. A sufficient number of staff, adequately trained and knowledgeable in the operation of your facility shall be retained at all times and adequate laboratory controls and appropriate quality assurance procedures shall be provided to maintain compliance with the conditions of this permit. ***{See 40 CFR 122.41(e) and 567 IAC 64.7(7)"f"}***

9. PERMIT MODIFICATION, SUSPENSION OR REVOCATION

(a) This permit may be modified, suspended, or revoked and reissued for cause including but not limited to those specified in 567 IAC 64.3(11).

(b) This permit may be modified due to conditions or information on which this permit is based, including any new standard the department may adopt that would change the required effluent limits. ***{See 567 IAC 64.3(11)}***

(c) If a toxic pollutant is present in your discharge and more stringent standards for toxic pollutants are established under Section 307(a) of the Clean Water Act, this permit will be modified in accordance with the new standards. ***{See 40 CFR 122.62(a)(6) and 567 IAC 64.7(7)"g"}***

The filing of a request for a permit modification, revocation or suspension, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

10. DUTY TO REAPPLY AND PERMIT CONTINUATION

If you wish to continue to discharge after the expiration date of this permit, you must file a complete application for reissuance at least 180 days prior to the expiration date of this permit. If a timely and sufficient application is submitted, this permit will remain in effect until the Department makes a final determination on the permit application. ***{See 567 IAC 64.8(1) and Iowa Code 17A.18}***

11. DUTY TO COMPLY

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Issuance of this permit does not relieve you of the responsibility to comply with all local, state and federal laws, ordinances, regulations or other legal requirements applying to the operation of your facility. ***{See 40 CFR 122.41(a) and 567 IAC 64.7(4)"e"}***

STANDARD CONDITIONS

12. DUTY TO MITIGATE

You shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. ***{See 40 CFR 122.41(d) and 567 IAC 64.7(7)"i"}***

13. TWENTY-FOUR HOUR REPORTING

You shall report any noncompliance that may endanger human health or the environment, including, but not limited to, violations of maximum daily limits for any toxic pollutant (listed as toxic under 307(a)(1) of the Clean Water Act) or hazardous substance (as designated in 40 CFR Part 116 pursuant to 311 of the Clean Water Act). Information shall be provided orally within 24 hours from the time you become aware of the circumstances. A written submission that includes a description of noncompliance and its cause; the period of noncompliance including exact dates and times, whether the noncompliance has been corrected or the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent a reoccurrence of the noncompliance must be provided within 5 days of the occurrence. ***{See 567 IAC 63.12}***

14. OTHER NONCOMPLIANCE

You shall report all instances of noncompliance not reported under Condition #13 at the time monitoring reports are submitted. You shall give advance notice to the appropriate regional field office of the department of any planned activity which may result in noncompliance with permit requirements. ***{See 567 IAC 63.14}***

15. INSPECTION OF PREMISES, RECORDS, EQUIPMENT, METHODS AND DISCHARGES

You are required to permit authorized personnel to:

(a) Enter upon the premises where a regulated facility or activity is located or conducted or where records are kept under conditions of this permit;

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

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

(d) Sample or monitor, at reasonable times, to assure compliance or as otherwise authorized by the Clean Water Act.

16. FAILURE TO SUBMIT FEES

This permit may be revoked, in whole or in part, if the appropriate permit fees are not submitted within thirty (30) days of the date of notification that such fees are due. ***{See 567 IAC 64.16(1)}***

17. NEED TO HALT OR REDUCE ACTIVITY

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. ***{See 40 CFR 122.41(c) and 567 IAC 64.7(7)"j"}***

18. NOTICE OF CHANGED CONDITIONS

You are required to notify the director of any changes in existing conditions or information on which this permit is based. This includes, but is not limited to, the following:

(a) If your facility is a publicly owned treatment works (POTW) or otherwise may accept waste for treatment from an indirect discharger or industrial contributor (See 567 IAC 64.3(5) for further notice requirements).

(b) If your facility is a POTW and there is any substantial change in the volume or character of pollutants being introduced to the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit. ***{See 40 CFR 122.42(b)}***

(c) As soon as you know or have reason to believe that any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in this permit. ***{See 40 CFR 122.42(a)}***

(d) If you have begun or will begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

19. PLANNED CHANGES

The permittee shall give notice to the appropriate regional field office of the department 30 days prior to any planned physical alterations or additions to the permitted facility. Notice is required only when:

(a) Notice has not been given to any other section of the department. (Note: Facility expansions, production increases, or process modifications which may result in new or increased discharges of pollutants must be reported to the Director in advance. If such discharges will exceed effluent limitations, your report must include an application for a new permit. If any modification of, addition to, or construction of a disposal system is to be made, you must first obtain a written permit from this Department. In addition, no construction activity that will result in disturbance of one acre or more shall be initiated without first obtaining coverage under NPDES General Permit No. 2 for "Storm water discharge associated with construction activity.") ***{See 567 IAC 64.7(7)"a" and 64.2}***

(b) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as defined in 567 IAC 60.2;

(c) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices; or

(d) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in the permit. ***{See 567 IAC 63.13 and 63.14}***

20. USE OF CERTIFIED LABORATORIES

Analyses of wastewater, groundwater or sewage sludge that are required to be submitted to the department as a result of this permit must be performed by a laboratory certified by the State of Iowa. Routine, on-site monitoring for pH, temperature, dissolved oxygen, total residual chlorine and other pollutants that must be analyzed immediately upon sample collection, settleable solids, physical measurements, and operational monitoring tests specified in 567 IAC 63.3(4) are excluded from this requirement.

STANDARD CONDITIONS

21. BYPASSES

(a) Definition. "Bypass" means the diversion of waste streams from any portion of a treatment facility or collection system. A bypass does not include internal operational waste stream diversions that are part of the design of the treatment facility, maintenance diversions where redundancy is provided, diversions of wastewater from one point in a collection system to another point in a collection system, or wastewater backups into buildings that are caused in the building lateral or private sewer line.

(b) Prohibitions.

i. Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited.

ii. Bypass is prohibited and the department may not assess a civil penalty against a permittee for bypass if the permittee has complied with all of the following:

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

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

(3) The permittee submitted notices as required by paragraph (d) of this section.

(c) The Director may approve an anticipated bypass after considering its adverse effects if the Director determines that it will meet the three conditions listed above and a request for bypass has been submitted to the Department in accordance with 567 IAC 63.6(2).

(d) Reporting bypasses. Bypasses shall be reported in accordance with 567 IAC 63.6.

22. UPSET PROVISION

(a) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

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

(c) Conditions necessary for demonstration of an upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed operating logs or other relevant evidence that;

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

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

iii. The permittee submitted notice of the upset to the Department in accordance with 567 IAC 63.6(3); and

iv. The permittee complied with any remedial measures required in accordance with 567 IAC 63.6(6)"*b*".

(d) Burden of Proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

23. PROPERTY RIGHTS

This permit does not convey any property rights of any sort or any exclusive privilege. ***{See 567 IAC 64.4(3)"b"}***

24. EFFECT OF A PERMIT

Compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301, 302, 306, 307, 318, 403 and 405(a)-(b) of the Clean Water Act, and equivalent limitations and standards set out in 567 IAC Chapters 61 and 62. ***{See 567 IAC 64.4(3)"a"}***

25. SEVERABILITY

The provisions of this permit are severable and if any provision or application of any provision to any circumstance is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding.