COLORADO DISCHARGE PERMIT SYSTEM (CDPS)
FACT SHEET FOR PERMIT NUMBER CO0020907
TOWN OF OLATHE, TOWN OF OLATHE WWTF
MONTROSE COUNTY

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I. TYPE OF PERMIT

A. Permit Type: Domestic - Minor Municipal, Lagoon System, Fifth Renewal

B. Discharge To: Surface Water and Diversion Ditch

II. FACILITY INFORMATION

A. SIC Code: 4952 Sewerage Systems

B. Facility Classification: Class C per Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements

C. Facility Location: Latitude: 38° 37' 18" N, Longitude: 107° 59' 31" W

D. Permitted Feature: Outfalls 001A, 001B and 001C, following disinfection and prior to mixing with the receiving stream. 38° 37' 22.1" N, 107° 59' 33.3" W

Outfall 002A, following disinfection and prior to entering the Town of Olathe Diversion Ditch. 38° 37' 19.9" N, 107° 59' 18.1" W

The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water.

E. Facility Flows: **0.73 MGD**

F. Major Changes From Last Renewal:

- Monitoring for temperature
- Compliance schedule for installation of temperature monitoring equipment
- *E Coli* has replaced fecal coliform in this permit
- Compliance schedule for *E Coli* and ammonia

III. RECEIVING STREAM

A. Waterbody Identification: *COGUUN04b, Uncompahgre River*

B. Water Quality Assessment:

An assessment of the stream standards, low flow data, and ambient stream data has been performed to determine the assimilative capacities for *Uncompahgre River* for potential pollutants of concern. This information, which is contained in the Water Quality Assessment (WQA) for this receiving stream, also includes an antidegradation review, where appropriate. The Division's Permits Section has reviewed the assimilative capacities to determine the appropriate water quality-based effluent limitations as well as potential limits based on the antidegradation evaluation, where applicable. The limitations based on the assessment and other evaluations conducted as part of this fact sheet can be found in Part I.A of the permit.

Permitted Feature 001A, 001B, 001C and 002A will continue to be the authorized discharge point to the receiving stream. Outfalls 001A, 001B and 001C are the same physical outfall.
Permitted Feature 002A is located at the SE corner of the field where the water enters the ditch. Monitoring for Outfalls 001A, 001B, 001C and 002A are from the same location just downstream of the effluent "V" notch weir at latitude is 38° 37' 18.9" and the longitude 107° 58' 23.9."

IV. FACILITY DESCRIPTION

A. Facility Outfalls

As with previous permit, the facility has the option of discharging either to surface water or to a diversion ditch. Three flow tiers were established for discharge to surface water, through a single physical Outfall 001.
Outfall 001A represents flow tier 1: 0.73 MGD (facility's design flow)
Outfall 001B represents flow tier 2: 0.49 MGD
Outfall 001C represents flow tier 3: 0.35 MGD

Outfall 002A discharges to a diversion ditch, owned by the Town of Olathe, which routes effluent to land application on property also owned by the Town of Olathe. Effluent limits for discharges to the diversion ditch are not flow dependent.

B. Infiltration/Inflow (I/I)

Infiltration/inflow problems have been documented in the service area. The facility has an ongoing I/I program that has been successful in minimizing I/I. The inspection report of April 1, 2011 specified that the new piping being installed by the Town is expected to decrease the facility's inflow problem. The Town of Olathe is making effort to address I/I issues. No additional conditions will be included in this

permit at this time for the control of I/I. The Division recommends continued improvement and progress towards addressing the I/I issues.

C. Lift Stations

There are no lift stations in the service area. There is one lift station at the wastewater treatment facility.

D. Chemical Usage

The permittee stated in the application that they utilize two chemicals in their treatment process. The MSDS sheets have been reviewed and the following chemicals have been approved for use and are summarized in the following table.

Table IV-2 – Chemical Additives

Chemical Name	Purpose	Constituents of Concern
Chlorine	Disinfection	Chlorine
Sulfur Dioxide	Chlorine reduction	Sulfur Dioxide and pH

Chemicals deemed acceptable for use in waters that will or may be discharged to waters of the State are acceptable only when used in accordance with all state and federal regulations, and in strict accordance with the manufacturer's site-specific instructions.

E. Treatment Facility, Facility Modifications and Capacities

The 3-cell aerated lagoon system was constructed in 2005 during the last permit term. The facility consists of a head works, aerated lagoons and chlorination system. The head works consists of a manual bar screen, an H-flume flow measurement device, and a lift station. A V-notch weir is used for effluent flow measurement. The first lagoon is divided into an anaerobic pit and an aerated section, separated by a baffle curtain. The second lagoon is fully aerated. The third lagoon is a polishing pond, divided by a baffle curtain. The disinfection system consists of gas chlorination, and sulfur dioxide for dechlorination. Chlorine is currently not used for disinfection.

The permittee has not performed any construction at this facility that would change the hydraulic capacity of 0.73 MGD or the organic capacity of 650 lbs BOD_5/day, which were specified in Site Approval 4657. That document should be referred to for any additional information.

Pursuant to Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements, this facility will require a Class C certified operator.

F. Biosolids Treatment and Disposal

Since the treatment facility consists of aerated lagoons, sludge removal will probably be infrequent (once every 5 to 10 years) and only take place if the ponds are drained and cleaned. If sludge is removed from the lagoons for any reason, it must be disposed of in accordance with local, State and Federal regulations.

1. EPA General Permit

   EPA Region 8 issued a General Permit (effective October 19, 2007) for Colorado facilities whose operations generate, treat, and/or use/dispose of sewage sludge by means of land application, landfill, and surface disposal under the National Pollutant Discharge Elimination System. All Colorado facilities are required to apply for and to obtain coverage under the EPA General Permit.

2. Biosolids Regulation (Regulation No. 64, Colorado Water Quality Control Commission)

   While the EPA is now the issuing agency for biosolids permits, Colorado facilities that land apply biosolids must comply with requirements of Regulation No. 64, such as the submission of annual reports as discussed later in this factsheet.

V. PERFORMANCE HISTORY

A. Monitoring Data

1. Discharge Monitoring Reports – The following tables summarize the effluent data reported on the Discharge Monitoring Reports (DMRs) for the previous permit term, from period of DMR review from January 2006 through July 2012.

Table V-1a – Summary of DMR Data for Permitted Feature 001A

Parameter	*# Samples or Reporting Periods*	*Reported Average Concentrations Avg/Min/Max*	*Reported Maximum Concentrations Avg/Min/Max*	*Previous Avg/Max/AD Permit Limit*	*Number of Limit Excursions*
Effluent Flow (MGD)	*2*	*0.29/0.28/0.31*	*0.33/0.31/0.35*	*0.73/Report*	*1*
*pH (su)**	*2*	*7.9/7.7/8*	*8/7.8/8.2*	*6.5 - 9*	
Fecal Coliform (#/100 ml)	*2*	*153/29/807*	*153/29/807*	*3612/7224*	
TRC (mg/l)	*2*	*0/0/0*	*0/0/0*	*Report/0.5*	
NH3 as N, Tot (mg/l) Jul	*1*	*14/14/14*	*14/14/14*	*7/20*	
NH3 as N, Tot (mg/l) Sep	*1*	*7.3/7.3/7.3*	*7.3/7.3/7.3*	*16/27*	
BOD5, effluent (mg/l)	*2*	*9.6/7.4/12*	*9.6/7.4/12*	*30/45/*	
BOD5, effluent (lbs/day)	*2*	*23/19/28*	*26/22/31*	*183/274/*	
TSS, effluent (mg/l)	*2*	*7.5/5/10*	*7.5/5/10*	*75/110/*	
Oil and Grease (mg/l)	*2*	*NA/NA/NA*	*0/0/0*	*NA/10/*	
TDS (mg/l)	*0*	*NA*	*NA*	*Report/Report/*	
Fe, TR (µg/l)	*0*	*NA/NA/NA*	*NA/NA/NA*	*Report/Report*	
Se, Dis (µg/l)	*0*	*NA/NA/NA*	*NA/NA/NA*	*Report/Report*	

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum" column.*

Table V-1b – Summary of DMR Data for Permitted Feature 001B

Parameter	# Samples or Reporting Periods	Reported Average Concentrations Avg/Min/Max	Reported Maximum Concentrations Avg/Min/Max	Previous Avg/Max/AD Permit Limit	Number of Limit Excursions
Effluent Flow (MGD)	16	0.38/0.3/0.48	0.47/0.34/0.57	0.49/Report	
pH (su)*	16	7.8/7.4/8.3	8/7.8/8.6	6.5 - 9	
Fecal Coliform (#/100 ml)	16	114/10/3770	114/10/3770	4138/8276	
TRC (mg/l)	15	0/0/0	0/0/0	Report/0.5	
Nitrate as N (mg/l)	0	NA/NA/NA	NA/NA/NA	0.082/0.14	
Nitrite as N (mg/l)	0	NA/NA/NA	NA/NA/NA	Report/0.023	
NH3 as N, Tot (mg/l) Jan	0	NA/NA/NA	NA/NA/NA	Report/Report	
NH3 as N, Tot (mg/l) Feb	0	NA/NA/NA	NA/NA/NA	Report/Report	
NH3 as N, Tot (mg/l) Mar	1	8.7/8.7/8.7	8.7/8.7/8.7	16/28	
NH3 as N, Tot (mg/l) Apr	0	NA/NA/NA	NA/NA/NA	18/18	
NH3 as N, Tot (mg/l) May	3	13/0/24	13/0/24	21/34	1
NH3 as N, Tot (mg/l) Jun	1	17/17/17	17/17/17	11/23	1
NH3 as N, Tot (mg/l) Jul	0	NA/NA/NA	NA/NA/NA	8/21	
NH3 as N, Tot (mg/l) Aug	4	10/4.7/16	12/4.7/22	9.2/19	3/1
NH3 as N, Tot (mg/l) Sep	3	5.9/1/11	7.2/1/11	17/30	
NH3 as N, Tot (mg/l) Oct	2	6.5/2.3/11	6.5/2.3/11	15/22	
NH3 as N, Tot (mg/l) Nov	1	8.4/8.4/8.4	8.4/8.4/8.4	18/21	
NH3 as N, Tot (mg/l) Dec	1	7.2/7.2/7.2	7.2/7.2/7.2	Report/Report	
BOD5, effluent (mg/l)	16	11/1.3/32	12/1.3/35	30/45/	1
BOD5, effluent (lbs/day)	16	34/3.4/84	43/5.4/100	123/184/	
TSS, effluent (mg/l)	16	6.8/1/40	6.8/1/40	75/110/	
Oil and Grease (mg/l)	16	NA/NA/NA	0/0/0	NA/10/	
TDS (mg/l)		//	//	Report/Report/	
PWS intake (mg/l)	6	563/132/2540	563/132/2540	Report/Report/	
WWTF effluent (mg/l)	6	1876/1668/2214	1876/1668/2214	Report/Report/	
Fe, TR (µg/l)	6	12/0.022/70	12/0.022/70	Report/Report	
Se, Dis (µg/l)	6	0.34/0.0008/2	0.34/0.0008/2	Report/Report	

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum" column.*

Table V-1c – Summary of DMR Data for Permitted Feature 001C

Parameter	# Samples or Reporting Periods	Reported Average Concentrations Avg/Min/Max	Reported Maximum Concentrations Avg/Min/Max	Previous Avg/Max/AD Permit Limit	Number of Limit Excursions
Effluent Flow (MGD)	61	0.28/0.027/0.35	0.34/0.22/0.43	0.35/Report	
pH (su)*	61	7.9/6.7/8.4	8.3/7.8/8.9	6.5 - 9	
Fecal Coliform (#/100 ml)	61	203/2.8/3620	203/2.8/3620	5374/10748	
TRC (mg/l)	50	0/0/0	0/0/0	Report/0.5	
Nitrate as N (mg/l)	0	NA/NA/NA	NA/NA/NA	0.12/0.21	
Nitrite as N (mg/l)	0	NA/NA/NA	NA/NA/NA	Report/0.026	
NH3 as N, Tot (mg/l) Jan	7	11/6.5/15	11/6.5/15	Report/Report	
NH3 as N, Tot (mg/l) Feb	7	12/8.8/17	12/8.8/17	Report/Report	
NH3 as N, Tot (mg/l) Mar	6	13/10/17	13/10/17	31/36	
NH3 as N, Tot (mg/l) Apr	7	12/6.9/21	12/6.9/21	Report/21	
NH3 as N, Tot (mg/l) May	4	12/10/14	12/10/14	26/43	
NH3 as N, Tot (mg/l) Jun	5	10/1.1/18	10/1.1/18	13/28	2
NH3 as N, Tot (mg/l) Jul	7	8.7/0/15	8.7/0/15	9.8/24	3
NH3 as N, Tot (mg/l) Aug	2	12/10/14	12/10/14	11/20	1
NH3 as N, Tot (mg/l) Sep	3	8.8/8.2/9.6	8.8/8.2/9.6	19/33	
NH3 as N, Tot (mg/l) Oct	4	11/5.8/13	11/5.8/13	19/25	
NH3 as N, Tot (mg/l) Nov	4	15/10/20	15/10/20	22/27	
NH3 as N, Tot (mg/l) Dec	5	12/8.8/18	12/8.8/18	Report/Report	
BOD5, effluent (mg/l)	61	13/1.6/30	14/1.6/37	30/45/	1
BOD5, effluent (lbs/day)	61	31/3.9/70	39/4.4/115	88/131/	
TSS, effluent (mg/l)	61	17/1/53	17/1/53	75/110/	
Oil and Grease (mg/l)	60	NA/NA/NA	0/0/0	NA/10/	
TDS (mg/l)		//	//	Report/Report/	
PWS intake (mg/l)	19	264/124/1950	264/124/1950	Report/Report/	
WWTF effluent (mg/l)	19	1895/1554/2318	1899/1554/2318	Report/Report/	
Fe, TR (µg/l)	19	106/0.03/280	106/0.03/280	Report/Report	
Se, Dis (µg/l)	19	4.1/0.004/9	4.1/0.004/9	Report/Report	

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum" column.*

Table V-1a – Summary of DMR Data for Permitted Feature 002A

Parameter	# Samples or Reporting Periods	Reported Average Concentrations Avg/Min/Max	Reported Maximum Concentrations Avg/Min/Max	Previous Avg/Max/AD Permit Limit	Number of Limit Excursions
Effluent Flow (MGD)	1	0.39/0.39/0.39	0.48/0.48/0.48	0.73/Report	
pH (su)	0	NA/NA/NA	NA/NA/NA	6.5 - 9	
Fecal Coliform (#/100 ml)	0	NA/NA/NA	NA/NA/NA	6000/12000	
TRC (mg/l)	1	0/0/0	0/0/0	Report/Report	
BOD5, effluent (mg/l)	0	NA/NA/NA	NA/NA/NA	30/45/	
BOD5, effluent (lbs/day)	0	NA/NA/NA	NA/NA/NA	183/274/	
TSS, effluent (mg/l)	0	NA/NA/NA	NA/NA/NA	75/110/	
Oil and Grease (mg/l)	1	NA/NA/NA	0/0/0	NA/10/	

2. Additional Data – The permittee submitted several pH and temperature data points for effluent samples collected between July 2005 and November 2009, for consideration in developing the

permit limitations. These data were used for the AMMOTOX model to determine the ammonia concentration for this permit.

B. Compliance With Terms and Conditions of Previous Permit

1. Effluent Limitations – The data shown in the preceding tables indicate several violations of the ammonia limitations and two BOD violations. There were also several non-numeric violations such as failure to submit DMR. Compliance advisories for failure to submit DMR were issued to the permittee on October 7, 2011 and April 12, 2011.

   In accordance with 40 CFR Part 122.41(a), any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

2. Other Permit Requirements – The permittee has not met the following conditions of the permit: The compliance schedule for a mixing zone study was not completed.

VI. DISCUSSION OF EFFLUENT LIMITATIONS

A. Regulatory Basis for Limitations

1. Technology Based Limitations

   a. Federal Effluent Limitation Guidelines – The Federal Effluent Limitation Guidelines for domestic wastewater treatment facilities are the secondary treatment standards. These standards have been adopted into, and are applied out of, Regulation 62, the Regulations for Effluent Limitations.

   b. Regulation 62: Regulations for Effluent Limitations – These Regulations include effluent limitations that apply to all discharges of wastewater to State waters and are shown in Section VIII of the WQA. These regulations are applicable to the discharge from the Town of Olathe WWTF.

2. Numeric Water Quality Standards - The WQA contains the evaluation of pollutants limited by water quality standards. The mass balance equation shown in Section VI of the WQA was used for most pollutants to calculate the potential water quality based effluent limitations (WQBELs), M_2, that could be discharged without causing the water quality standard to be violated. For ammonia, the AMMTOX Model was used to determine the maximum assimilative capacity of the receiving stream. A detailed discussion of the calculations for the maximum allowable concentrations for the relevant parameters of concern is provided in Section V of the Water Quality Assessment developed for this permitting action.

   The maximum allowable effluent pollutant concentrations determined as part of these calculations represent the calculated effluent limits that would be protective of water quality. These are also known as the water quality-based effluent limits (WQBELs). Both acute and chronic WQBELs may be calculated based on acute and chronic standards, and these may be applied as daily maximum (acute) or 30-day average (chronic) limits.

3. Narrative Water Quality Standards - Section 31.11(1)(a)(iv) of The Basic Standards and

Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.

a. Whole Effluent Toxicity - The Water Quality Control Division has established the use of WET testing as a method for identifying and controlling toxic discharges from wastewater treatment facilities. WET testing is being utilized as a means to ensure that there are no discharges of pollutants "in amounts, concentrations or combinations which are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life" as required by Section 31.11 (1) of the Basic Standards and Methodologies for Surface Waters. The requirements for WET testing are being implemented in accordance with Division policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). Note that this policy has recently been updated and the permittee should refer to this document for additional information regarding WET.

4. Water Quality Regulations, Policies, and Guidance Documents

a. Antidegradation - Since the receiving water is Use Protected an antidegradation review is not required pursuant to Section 31.8(2)(b) of The Basic Standards and Methodologies for Surface Water.

b. Antibacksliding – As the receiving water is designated Use-Protected, the antibacksliding requirements in Regulation 61.10 have been met.

c. Determination of Total Maximum Daily Loads (TMDLs) – This factsheet and the accompanying permit include TMDLs developed as specified in Total Maximum Daily Load Assessment for Gunnison River and Tributaries, Uncompahgre River and Tributaries and the corresponding waste load allocations (WLAs) for selenium. As required under the Clean Water Act Section 303(d), these TMDLs have been submitted, through the normal public notification process, to EPA Region VIII for their review and approval, and were approved on February 14, 2011.

d. Colorado Mixing Zone Regulations – Pursuant to section 31.10 of The Basic Standards and Methodologies for Surface Water, a mixing zone determination is required for this permitting action. The Colorado Mixing Zone Implementation Guidance, dated April 2002, identifies the process for determining the meaningful limit on the area impacted by a discharge to surface water where standards may be exceeded (i.e., regulatory mixing zone). This guidance document provides for certain exclusions from further analysis under the regulation, based on site-specific conditions.

The guidance document provides a mandatory, stepwise decision-making process for determining if the permit limits will not be affected by this regulation. Exclusion, based on Extreme Mixing Ratios, may be granted if the ratio of the facility design flow to the chronic low flow (30E3) is greater than 2:1 or if the ratio of the chronic low flow to the design flow is greater than 20:1. Since the ratio of the chronic low flow to the design flow is 0.6:1 the permittee must perform additional studies to determine if further requirements apply.

The remaining threshold tests require site-specific information that is currently not available and thus a determination cannot be made about how the regulation may affect the setting of effluent limits in this permit. Therefore, a compliance schedule is necessary for acquisition of this

information, which will be used to complete the testing of exclusion thresholds before the next permit renewal.

e. Salinity Regulations – In compliance with the Colorado River Salinity Standards and the Colorado Discharge Permit System Regulations, the permittee shall monitor for total dissolved solids on a **Quarterly** basis. Samples shall be taken at Permitted Feature 001A, 001B and 001C.

An evaluation of the discharge of total dissolved solids indicates that the Town of Olathe facility exceeds the threshold of 1 ton/day or 366 tons/year of salinity. To determine the TDS loading from this facility, the average reported TDS values were multiplied by the average flow, then by 8.34. The average was determined to be 2.96 tons/day with a net increase of 1313 mg/l for tier 2 (0.49 MGD) and 2.25 tons/day with a net increase of 1631 mg/l for tier 3 (0.35 MGD). There was no TDS monitoring for tier 1 (0.73 MGD).

In conformance with section 61.8(2)(l)(i)(A) of the Colorado Discharge Permit System Regulations, the permittee submitted a report during the development of previous permits, that demonstrate that achievement of zero salt loading, discharging less than 400 mg/l (incremental of the intake water supply), or discharge of less than one ton per day, is not economically feasible. Thus, **Quarterly** monitoring for total dissolved solids will be continued as part of this permit.

f. Reasonable Potential Analysis – Using the assimilative capacities contained in the WQA, an analysis must be performed to determine whether to include the calculated assimilative capacities as WQBELs in the permit. This reasonable potential (RP) analysis is based on the Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, dated December, 2002. This guidance document utilizes both quantitative and qualitative approaches to establish RP depending on the amount of available data.

A qualitative determination of RP may be made where ancillary and/or additional treatment technologies are employed to reduce the concentrations of certain pollutants. Because it may be anticipated that the limits for a parameter could not be met without treatment, and the treatment is not coincidental to the movement of water through the facility, limits may be included to assure that treatment is maintained.

A qualitative RP determination may also be made where a federal ELG exists for a parameter, and where the results of a quantitative analysis results in no RP. As the federal ELG is typically less stringent than a limitation based on the WQBELs, if the discharge was to contain concentrations at the ELG (above the WQBEL), the discharge may cause or contribute to an exceedance of a water quality standard.

To conduct a quantitative RP analysis, a minimum of 10 effluent data points from the previous 5 years, should be used. The equations set out in the guidance for normal and lognormal distribution, where applicable, are used to calculate the maximum estimated pollutant concentration (MEPC). For data sets with non-detect values, and where at least 30% of the data set was greater than the detection level, MDLWIN software is used consistent with Division guidance to generate the mean and standard deviation, which are then used to establish the multipliers used to calculate the MEPC. If the MDLWIN program cannot be used the Division's guidance prescribes the use of best professional judgment.

For some parameters, recent effluent data or an appropriate number of data points may not be

available, or collected data may be in the wrong form (dissolved vs. total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.

For other parameters, effluent data may be available to conduct a quantitative analysis, and therefore an RP analysis will be conducted to determine if there is RP for the effluent discharge to cause or contribute to exceedance of ambient water quality standards. The guidance specifies that if the MEPC exceeds the maximum allowable pollutant concentration (MAPC), limits must be established and where the MEPC is greater than half the MAPC (but less than the MAPC), monitoring must be established. Table VI-1 contains the calculated MEPC compared to the corresponding MAPC, and the results of the reasonable potential evaluation, for those parameters that met the data requirements. The RP determination is discussed for each parameter in the text below.

Table VI-1 – Reasonable Potential Analysis using result from flow tier 1.

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) March-Nov				NA	29	Monitor
Temp Daily Max (°C) Dec-Feb				NA	14	Monitor
Temp MWAT (°C) March-Nov	NA	28	Monitor			
Temp MWAT (°C) Dec-Feb	NA	14	Monitor			
E. coli (#/100 ml)	NA	316	Yes(Qual)	NA	632	Yes(Qual)
TRC (mg/l)	0	0.017	Yes(Qual)	0	0.021	Yes(Qual)
NH3 as N, Tot (mg/l) Jan	NA	184	Yes(Qual)	NA	155	Yes(Qual)
NH3 as N, Tot (mg/l) Feb	NA	99	Yes(Qual)	NA	86	Yes(Qual)
NH3 as N, Tot (mg/l) Mar	NA	3.6	Yes(Qual)	NA	4.5	Yes(Qual)
NH3 as N, Tot (mg/l) Apr	NA	3.1	Yes(Qual)	NA	5.0	Yes(Qual)
NH3 as N, Tot (mg/l) May	NA	3.0	Yes(Qual)	NA	6.5	Yes(Qual)
NH3 as N, Tot (mg/l) Jun	NA	3.3	Yes(Qual)	NA	6.7	Yes(Qual)
NH3 as N, Tot (mg/l) Jul	14	2.5	Yes(Qual)	14	4.6	Yes(Qual)
NH3 as N, Tot (mg/l) Aug	NA	2.6	Yes(Qual)	NA	5.9	Yes(Qual)
NH3 as N, Tot (mg/l) Sep	7.3	4.3	Yes(Qual)	7.3	6.2	Yes(Qual)
NH3 as N, Tot (mg/l) Oct	NA	5.1	Yes(Qual)	NA	7.2	Yes(Qual)
NH3 as N, Tot (mg/l) Nov	NA	11	Yes(Qual)	NA	26	Yes(Qual)
NH3 as N, Tot (mg/l) Dec	NA	218	Yes(Qual)	NA	190	Yes(Qual)

B. Parameter Evaluation

BOD_5 - The BOD_5 concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. The removal percentages for BOD_5 also apply based on the Regulations for Effluent Limitations.

The previous permit contained a waiver and a compliance schedule that required a study to qualify and quantify the causes other than I/I that results in failure to attain the required BOD percent removal rate.

According to the permittee, this study was not completed because effluent data indicate that the facility can meet the BOD percent removal.

The 85% removal requirement was removed after the public notice for this permit based on comments from the permittee. See comment and response 2 in the public notice comment section.

Total Suspended Solids - The TSS concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Oil and Grease – The oil and grease limitations from the Regulations for Effluent Limitations are applied as they are the most stringent limitations. This limitation is the same as those contained in the previous permit and is imposed upon the effective date of this permit.

pH - This parameter is limited by the water quality standards of 6.5-9.0 s.u., as this range is more stringent than other applicable standards. The pH limitation (6.0-9.0 s.u.) from the Regulations for Effluent Limitations is applied at Outfall 002A, which discharges to the diversion ditch. This limitation is the same as that contained in the previous permit and is imposed upon the effective date of this permit.

E. Coli – The limitation for *E. Coli* is based upon the WQBEL as described in the WQA for the three flow tiers. *E. Coli* limitation for March though November for tier 1 is 687 #/100 ml. *E. Coli* limitation for March though November for tier 2 is 903 #/100 ml. *E. Coli* limitation for March though November for tier 3 is 1187 #/100 ml. The technology based limitation for *E. Coli* (2,000 #/100ml for 30-day average) applies to Outfall 002A, which discharges to the diversion ditch. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter. The Division establishes the 7-day geometric mean limit as two times the 30-day geometric mean limit and also includes maximum limits of 2,000 colonies per 100 ml (30-day geometric mean) and 4,000 colonies per 100 ml (7-day geometric mean), these have been applied to the December through February limitations for flow tiers.

This is a new limitation and it is unknown if the permittee can meet the limit and therefore a compliance schedule has been added to the permit to give the permittee time to meet this limitation. The fecal coliform limits of the previous permit will continue as interim limitations.
For Tier 1, 0.73 MGD: A. 30-day average limitation of 3612 #/100 ml and 7-day average limitation of 7224 #/100 ml fecal coliform has been added to the permit as interim limits.
For Tier 2, 0.49 MGD: A. 30-day average limitation of 4138 #/100 ml and 7-day average limitation of 8276 #/100 ml fecal coliform has been added to the permit as interim limits.
For Tier 3, 0.35 MGD: A. 30-day average limitation of 5374 #/100 ml and 7-day average limitation of 10748 #/100 ml fecal coliform has been added to the permit as interim limits.

The *E Coli* limitation for Outfall 002A is imposed upon the effective date of this permit.

Total Residual Chlorine (TRC) - The calculated effluent limits for TRC for the December - February season, for the 3 flow tiers are greater than the 0.5 mg/l daily maximum limit that is allowed by the State Regulations for Effluent Limitations, and therefore the 0.5 mg/l limit has been added to the permit for December through February. The limitation for TRC for the March through November, are based upon the WQBELs as described in the WQA. A qualitative determination of RP has been made as chlorine may be used in the treatment process.

Technology based limitation of 0.5 mg/l (daily maximum) has been imposed on Outfall 002A.

Previous monitoring as shown in Table V-1 indicate that this limitation can be met and is therefore imposed upon the effective date of the permit.

Ammonia - The limitation for ammonia is based upon the WQBEL as described in the WQA. A qualitative determination of RP has been made as ammonia is a parameter of concern for municipal wastewater treatment facilities.

The ammonia limitations are more stringent than the previous permit limits except for the months of January, February, and December. For the 0.49 MGD and 0.35MGD design flows, the month of November is effective immediate. October (daily max) is effective immediately for the 0.35 MGD design flow. A compliance schedule has been added to the permit to give the permittee time to meet this limitation. The ammonia limitations for the previous permit will continue as interim limits except for the months of January, February, November, October (daily maximum) and December, which will be effective upon the effective date of this permit.

Potentially Dissolved Selenium - Selenium limit is being imposed in this permit due to the TMDL. The WLA for the TMDL 0.015 lbs/day (design flow of 0.35 MGD), 0.021 lbs/day (design flow of 0.49 MGD), 0.031 lbs/day (design flow of 0.73 MGD), have been included in the permit.

The temporary modification for selenium is set at "current condition" with expiration date of 12/31/2017. Based on this, the Division has set the temporary effluent limit for selenium at the limit of in the previous permit. A compliance schedule has been included in the permit beginning after the temporary modification expires and lasting through December 31, 2019.

Temperature - The MWAT is the maximum weekly average temperature, as determined by a seven day rolling average, using at least 3 equally spaced temperature readings in a 24-hour day (at least every 8 hours for a total of at least 21 data points).

The daily maximum is defined as the maximum 2 hour average, with a minimum of 12 equally spaced measurements throughout the day. As both of these temperature requirements will likely require the use of automated temperature measurements and recordings, the permittee is given until March 31, 2014, to have the proper equipment in place to take the required readings.

As it is unknown whether the facility can meet the new temperature limitation, or whether there is reasonable potential for the facility to cause or contribute to an exceedance of the water quality standard for temperature, report only conditions will be required for the duration of this permit. Upon the next permit renewal, the collected temperature data will be used to determine if there is reasonable potential, and/or if the permittee can meet the limitation.

As continuous ambient water quality data, in accordance with the definition of the standard, is not available, the permittee is encouraged to collect instream data on a continuous basis. This data may be used during the next permit renewal, so that the assimilative capacity of the receiving water (if applicable) can be calculated and used to determine a limitation based on the streams dilution potential. If such data is not available, the Division will likely set the limitation at the water quality standard (i.e. end of pipe limit, no dilution).

Organics – The effluent is not expected or known to contain organic chemicals, and therefore,

limitations for organic chemicals are not needed in this permit.

Whole Effluent Toxicity (WET) Testing – This facility does not receive a significant volume of toxic or industrial wastes, and parameters of concern are adequately controlled by specific effluent limitations.

Due to the above statements, and in accordance with Section 61.8(2)(b)(i)(B) of the Colorado Discharge Permit System Regulations, the discharge does not have the reasonable potential to cause, or measurably contribute to, an excursion above any narrative standards for water quality. Therefore, WET testing is not a requirement of this permit. However, the Division reserves the right to reopen the permit to include WET testing, should facility conditions change or if new information becomes available.

VII. ADDITIONAL TERMS AND CONDITIONS

A. Monitoring

Effluent Monitoring – Effluent monitoring will be required as shown in the permit document. Refer to the permit for locations of monitoring points. Monitoring requirements have been established in accordance with the frequencies and sample types set forth in the Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Industrial and Domestic Wastewater Treatment Facilities. This policy includes the methods for reduced monitoring frequencies based upon facility compliance as well as for considerations given in exchange for instream monitoring programs initiated by the permittee. Table VI-2 shows the results of the reduced monitoring frequency analysis for Permitted Feature 001C, based upon compliance with the previous permit. The same monitoring frequencies will apply to Permitted Features 001A and 001B. Permitted Feature 001C was used because it has the most data in the past 2 years of monitoring. Discharge from Permitted Feature 002A rarely occurs, therefore monitoring will be required once per month during discharge.

Based upon the data shown below there is no reduced monitoring for pH and ammonia.

Table VI-2 – Monitoring Reduction Evaluation

Parameter	*Proposed Permit Limit*	*Average of 30-Day (or Daily Max) Average Conc.*	*Standard Deviation*	*Long Term Characterization (LTC)*	*Reduction Potential*
pH (su) Minimum	*min 6.5*	*8*	*0.27*	*7.46*	*None*
pH (su) Maximum	*max 9.0*	*8.3*	*0.27*	*8.84*	
TRC (mg/l)	*0.023*	*0*	*0*	*0*	*3 Levels*
NH3 as N, Tot (mg/l)	*3.7*	*11*	*3.2*	*17.4*	*None*
BOD5, effluent (mg/l)	*30*	*11*	*7.5*	*26*	*1 Level*
TSS, effluent (mg/l)	*75*	*19*	*16*	*51*	*2 Levels*
Oil and Grease (mg/l)	*10*	*0*	*0*	*0*	*3 Levels*

B. Reporting

1. Discharge Monitoring Report – The Town of Olathe facility must submit Discharge Monitoring Reports (DMRs) on a monthly basis to the Division. These reports should contain the required summarization of the test results for all parameters and monitoring frequencies shown in Part I.A of the permit. See the permit, Part I.B, C and D for details on such submission.

2. Special Reports – Special reports are required in the event of an upset, bypass, or other noncompliance. Please refer to Part II.A. of the permit for reporting requirements. As above, submittal of these reports to the US Environmental Protection Agency Region VIII is no longer required.

C. **Signatory and Certification Requirements**

Signatory and certification requirements for reports and submittals are discussed in Part I.D. of the permit.

D. Compliance Schedules

The following compliance schedules are included in the permit. See Part I.B of the permit for more information.

a. Ammonia and *E. Coli* - The permittee has been given until December 31, 2017 to comply with the required limitations for ammonia and *E Coli*. The compliance schedule will give the permittee reasonable time to evaluate means to achieve the required permit limits.
b. Selenium - The permittee has been given until December 31, 2019 to comply with the required limitations for selenium. The compliance schedule will give the permittee reasonable time to evaluate means to achieve the required permit limits.
c. Temperature - Time is needed for the Permittee to install temperature monitoring equipment. The Permittee has been given until April 1, 2014 to install temperature monitoring equipment.
d. Mixing Zone Study - Time will be allowed for the permittee to collect the necessary site-specific data and perform threshold tests.

All information and written reports required by the following compliance schedules should be directed to the Permits Section for final review unless otherwise stated.

E. Economic Reasonableness Evaluation

Section 25-8-503(8) of the revised (June 1985) Colorado Water Quality Control Act required the Division to "determine whether or not any or all of the water quality standard based effluent limitations are reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons, and are in furtherance of the policies set forth in sections 25-8-192 and 25-8-104."

The Colorado Discharge Permit System Regulations, Regulation No. 61, further define this requirement under 61.11 and state: "Where economic, environmental, public health and energy impacts to the public and affected persons have been considered in the classifications and standards setting process, permits written to meet the standards may be presumed to have taken into consideration economic factors unless:

a. A new permit is issued where the discharge was not in existence at the time of the classification and standards rulemaking, or

b. In the case of a continuing discharge, additional information or factors have emerged that were not anticipated or considered at the time of the classification and standards rulemaking."

The evaluation for this permit shows that the Water Quality Control Commission, during their proceedings to adopt the Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins, considered economic reasonableness.

Furthermore, this is not a new discharger and no new information has been presented regarding the classifications and standards. Therefore, the water quality standard-based effluent limitations of this permit are determined to be reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons and are in furtherance of the policies set forth in Sections 25-8-102 and 104. If the permittee disagrees with this finding, pursuant to 61.11(b)(ii) of the Colorado Discharge Permit System Regulations, the permittee should submit all pertinent information to the Division during the public notice period.

VIII. REFERENCES

A. Colorado Department of Public Health and Environment, Water Quality Control Division Files, for Permit Number CO0020907.

B. "Design Criteria Considered in the Review of Wastewater Treatment Facilities", Policy 96-1, Colorado Department of Public Health and Environment, Water Quality Control Commission, April 2007.

C. Basic Standards and Methodologies for Surface Water, Regulation No. 31, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 31, 2013.

D. Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins, Regulation No. 35, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2013.

E. Colorado Discharge Permit System Regulations, Regulation No. 61, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 1, 2012.

F. Regulations for Effluent Limitations, Regulation No. 62, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective July 30, 2012.

G. Pretreatment Regulations, Regulation No. 63, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective April 01, 2007.

H. Biosolids Regulation, Regulation No. 64, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2010.

I. Colorado River Salinity Standards, Regulation No. 39, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective August 30, 1997.

J. Colorado's Section 303(d) List of Impaired Waters and Monitoring and Evaluation List, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective April 30, 2010.

K. Antidegradation Significance Determination for New or Increased Water Quality Impacts, Procedural Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2001.

L. Memorandum Re: First Update to (Antidegradation) Guidance Version 1.0, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 23, 2002.

M. Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December2002.

N. The Colorado Mixing Zone Implementation Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 2002.

O. Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Domestic and Industrial Wastewater Treatment Facilities, Water Quality Control Division Policy WQP-20, May 1, 2007.

P. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops, Water Quality Control Division Policy WQP-24, March 10, 2008.

Q. Implementing Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (WET) Testing. Colorado Department of Public Health and Environment, Water Quality Control Division Policy Permits-1, September 30, 2010.

R. Policy for Conducting Assessments for Implementation of Temperature Standards in Discharge Permits, Colorado Department of Public Health and Environment, Water Quality Control Division, Policy Number WQP-23, effective July 3, 2008.

S. Policy for Permit Compliance Schedules, Colorado Department Public Health and Environment, Water Quality Control Division Policy Number WQP-30, effective December 2, 2010.

T. Procedural Regulations for Site Applications for Domestic Wastewater Treatment Works, Regulation No. 22, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2009.

U. Regulation Controlling discharges to Storm Sewers, Regulation No. 65, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective May 30, 2008.

V. Water and Wastewater Facility Operator Certification Requirements, Regulation No. 100, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2007.

Abigail Ogbe
04/04/13

IX. PUBLIC NOTICE COMMENTS

The public notice period was from November 16, 2012 to January 14, 2013. Comments were received from the permittee. Topical summaries of the comments and the response of the Division are given below.

NOTE:
The Division noted during the public notice that the TMDL for selenium was not included in the draft permit. The WQA, factsheet and permit has been updated to include the TMDL developed as specified in Total Maximum Daily Load Assessment for Gunnison River and Tributaries, Uncompahgre River and Tributaries and the corresponding waste load allocations (WLAs) for selenium, approved on February 14, 2011. The permit now includes monitoring for selenium and compliance schedule for selenium beginning after the temporary modification for selenium expires on 12/31/2017. The temporary modification supersedes the TMDL. The permittee has been given until 01/01/2020 to meet the selenium limitations. Please see the WQA, factsheet and permit for details. The permittee was informed about including the TMDL in the permit.

COMMENT 1:
We do not believe that the flows at the SEO gauging station two miles upstream of the Town's discharge accurately represent the dilution that is available at the point of discharge. The Uncompahgre Valley Water Users (UVWUA) divert all the water in the river a very short distance upstream of that gauge and from the point of the UVWUA diversion to the next point of at which the UVWUA diverts the river, downstream of the Town's discharge, the river is a gaining stream. Attached is the flow data the Town has collected from the Town’s gauge station since the gauge was installed.

RESPONSE 1:
The DNR Hydrographer and water commissioner evaluated the Town’s gauge station and concluded that the readings from the gauge are not reliable because the gauge was not properly maintained. Based on the water commissioner’s assessment of the returned flow after the UNCOLACO flow gauge, and as discussed with the permittee during the meeting of February 6, 2013, the Division has decided to increase the low flow for the months of March through November by 2cfs; however, this flow increase must be verified by actual flow measurement for use in the next permit. A special condition has been included in the permit for the Town to correctly install and calibrate the gauge and ensure flow readings are taken consistently. The Division cannot guarantee the continued use of the additional 2 cfs without actual flow measurements to validate the increase.

The 2 cfs flow increase for the months of March through November has increased the WQBEL for all parameters. Please see the WQA, factsheet and permit for the updated numbers.

COMMENT 2:
In looking back over the last several years of data, the Town is concerned about their ability to meet the 85% BOD removal requirement. The Town is requesting some additional time to assess whether they can meet that requirement or if they will want to prepare the variance request. After the sewer separation project was completed about 5 years back, the Town had anticipated being able to discharge the removed I/I directly into the river and did not pursue the variance request. However, the fecal count in the I/I flow is still higher than background so the Town has continued to treat the I/I through the wastewater plant. The very dilute influent concentration at times makes meeting the 85% removal difficult.

RESPONSE 2:
The percent removal requirement has been removed. The permit now includes a mass base (lbs/day) requirement for BOD, commensurate with the previous permit.

COMMENT 3:
Pg 10 above Table 5 – The water at LaSalle Rd is not the same water as at Olathe. The river flow has all been diverted and returned a couple of times in between.

RESPONSE 3:
In the absence of ambient data immediately upstream of the discharge, data from Riverwatch station 159 (Uncompahgre River at La Salle Rd), located approximately 11 miles upstream of the discharge was used. The Division will use ambient water quality data immediately upstream of the discharge in the next permitting action, if data becomes available.

COMMENT 4:
Pg 12, Section IV, 2nd paragraph of the WQA – In our past experiences, the Division has reviewed and set water quality based limits for not only ammonia but also for other water quality based effluent limits. Cl2 and E coli/fecal have typically been done at least seasonally.

RESPONSE 4:
The limitations for TRC and *E. coli* have be split into 2 seasons (December though February and March through November) as requested by the permittee.

COMMENT 5:
We noticed reference to the Rationale For Classification of Gunnison effective March 2013 in the review. (second paragraph pg 12) What is it? Why is it being used in 2012?

RESPONSE 5:
The Water Quality Control Commission completed a preliminary final action concerning the *Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins*, effective on March 30, 2013. All WQA's for the Gunnison and Lower Dolores River Basins are being developed in conformance with the updated water quality standards for these Basins. Please see Section III of the WQA for details about the amendments and how they may affect this facility.

COMMENT 6:
The Town is concerned about whether 4 years is enough time to adapt to the more stringent ammonia standard. Depending on the limits that result after the low flows are determined, it may not be practical to meet the limits without significant change to the treatment process.

RESPONSE 6:
The compliance schedules for ammonia and E Coli have been extended to December 31, 2017 as discussed with the permittee.

COMMENT 7:
The Town's budget is extremely tight and was mostly set by the time they received the draft permit. Upgrading flow measuring equipment to include temp monitoring by 6/30/13 could be a problem.

RESPONSE 7:

The compliance schedule for temperature has been extended to March 30, 2014.

COMMENT 8:
Where are the discharge limits and monitoring requirements for discharging to the ditch?

RESPONSE 8:
The requirements for discharging to the ditch are in Part I.A.2 of the permit, under **Permitted Feature/Limit Set 002A.** The description of the outfall discharging to the ditch is in Part I.A.1 of the permit.

COMMENT 9:
Pg 24 of the permit – what does 2nd sentence in Part II.7.A. mean?

RESPONSE 9:
Part II.7.A. of the permit provides information to the permittee on what constitutes an upset and how the permittee can demonstrate that an upset occurred rather than a permit non compliance. Per Regulation 61.2(114), an upset is defined as "An exceptional incident in which there is unintentional and temporary noncompliance with the permit limit 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."

Since the permittee has the burden of proof, the 2nd sentence in Part II.7.A. "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" informs the permittee that even after an initial determination by the Division that the noncompliance was caused by upset, the decision could be revised for judicial review.

COMMENT 10:
Pg 26 #14 last paragraph of the permit – what does it mean?

RESPONSE 10:
The sentence that states that "It shall not be a defense for a permittee in an enforcement action that it would be necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit". Is to inform the permittee that the excuse that a facility would have to shut down or stop discharging in order to maintain compliance with the conditions of this permit is not permissible and cannot be used as a defense during an enforcement action. The permittee has the duty to halt or reduce any activity if necessary to maintain compliance with the effluent limitations of the permit.

Abigail Ogbe
04/04/13