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FACT SHEET/STATEMENT OF BASIS
GREEN RIVER WASTEWATER TREATMENT PLANT
UPDES PERMIT NUMBER: UT0025771
RENEWAL PERMIT
MINOR MUNICIPAL

FACILITY CONTACT

Pat Brady, Mayor
Bryan Meadows, Public Works Director
Green River City Offices
P.O. Box 620
Green River, Utah 84525
Telephone (435)-564-3448
FAX: (435)-564-3347

DESCRIPTION OF FACILITY

The Green River Wastewater Treatment Facility (GRWTF) serves the town of Green River. This facility has a total design population equivalent of 4,125 people and an influent organic loading of 701 lbs. per day for BOD_5. The original facility was built to be a total containment system comprised of facultative lagoons, winter storage, and land application. However, the modifications needed to land apply the wastewater, and use it for the irrigation of crops was never installed. Up until 1996 the GRWTF has not needed to discharge water from this system, but because of growth in the late nineties, the GRWTF was issued a Utah Pollutant Discharge Elimination System (UPDES) permit and discharged to waters of the State. After a series of upgrades were made to stop the infiltration and inflow (I and I), the City no longer needed to discharge, and let the permit lapse. However, due to the some failures of some of the upgrades for I and I prevention, and recent precipitation in the area, the City has reapplied for a discharge permit. Some of the upgrades in the late 1990's besides the upgrades to reduce infiltration and inflow, included a discharge outlet, and a Biolac system (diffused air). This system helped with evaporation and introducing oxygen into the lagoons to help with odor problems. This facility has a grinder (at the fourth and final lift station), one primary cell, two secondary cells and a winter storage pond. The total surface area of the lagoons is 30 acres. The design flow is 0.56 MGD with projected average operating flow of 0.19 MGD. The facility is located in the City of Green River, approximately one mile south of the downtown city offices just off Airport Road, west of the Green River, and north of the I-70 Interstate Highway, in Emery County, Utah.

On May 11, 2009, the City of Green River applied for the exemption of the 85% removal requirements for BOD_5 and TSS, and for the adoption of alternative permit limits for BOD_5 and TSS under *Utah Administrative Code, (UAC) R317-1.3.G.* The Division of Water Quality granted the request from the City of Green River and modified the UPDES permit after the 30 day public notice period where no substantial comments were received.

DESCRIPTION OF DISCHARGE

The POTW currently treats domestic wastewater from the City of Green River. The discharge is through a 12" concrete pipe, directly into the Green River.

CHANGES FROM PREVIOUS PERMIT

Green River will finish a construction project shortly before this permit is issued. The project will include adding chlorination to the effluent. In order for Green River to complete this project the discharge location was moved about 400 feet upstream of the current location. Since the effluent discharges to a Class 1 C water and the outfall was relocated, Green River submitted to the Division of Water Quality an antidegradation review (ADR). The ADR is included with the permit package.

RECEIVING WATERS AND STREAM CLASSIFICATION

The discharge flows into the Green River which is classified 1C, 2B, 3D, and 4, according to *Utah Administrative Code (UAC) R317-2-13*:

Class 1C	-protected for domestic use purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water.
Class 2B	-protected for secondary contact recreation (boating, wading and similar uses).
Class 3D	-Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.
Class 4	-protected for agricultural uses including irrigation of crops and stockwatering.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on E-coli, and pH are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2.* Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD_5) are based on *UAC R317-1-3.G.* (alternative permit limits for lagoon systems). The oil and grease (O&G) limit is based upon best professional judgement (BPJ). The dissolved oxygen (DO) limit is water quality based, and derived by Wasteload Analysis (see ADDENDUM). In the past the GRWTF has not needed to chlorinate for disinfection, however should the situation change, a total residual chlorine (TRC) limit has been included in this permit. The permit limit for TRC will remain consistent with the current permit limit.

Since the GRWTF is in the Colorado River drainage, the permittee must also conform to the Colorado River Salinity Control Forum Policy which states that the effluent shall not exceed the culinary intake water supply by more than a 400 mg/L incremental increase for TDS or cannot discharge more than one ton of salt a day, or 366 tons per year. In the past the City of Green River has exceeded the policy, a study by Sunrise Engineering conducted in 1998 helped eliminate most of the inflow and infiltration (I and I). It is expected that the elimination of most of this ground water I and I will bring the GRWTF into compliance with the policy.

Parameter	Effluent Limitations			
	30 Day Monthly Avg	7 Day Weekly Avg	Daily Minimum	Daily Maximum
BOD_5, mg/L	45	65	NA	NA
TSS, mg/L	45	65	NA	NA
E-Coli, No./100mL	126	158	NA	NA
pH, Standard Units	NA	NA	6.5	9.0
Dissolved Oxygen	NA	NA	5.0	NA
TRC, mg/L	NA	NA	NA	0.011
Oil & Grease, mg/L	NA	NA	NA	10
TDS, mg/L, Tons/Day, (1)	<400 Increase	NA	NA	1 Ton/Day

(1) If the permittee cannot meet the <400 mg/L of TDS incremental increase, the permittee should meet the <1 ton of TDS per day, if the permittee cannot meet the <one ton of TDS per day, the permittee must meet the <366 tons of TDS per year.

SELF-MONITORING AND REPORTING REQUIREMENTS

The following effluent self-monitoring requirements are based on the *Utah Monitoring, Recording and Reporting Frequency Guidelines* as effective December 1, 1991. Reports shall be made on Discharge Monitoring Report (DMR) forms, and are due 28 days after the end of the monitoring month.

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
BOD_5, Influent Effluent	Monthly Monthly	Grab Grab	mg/L mg/L
TSS, Influent Effluent	Monthly Monthly	Grab Grab	mg/L mg/L
E-Coli,No./100mL	Monthly	Grab	No./100mL
pH	Monthly	Grab	SU
Dissolved Oxygen	Monthly	Grab	mg/L
TRC, mg/L	Monthly	Grab	mg/L
TDS, Influent Effluent	Monthly Monthly	Grab	mg/L
Oil & Grease	Monthly	Grab	mg/L

STORM WATER REQUIREMENTS

Wastewater Treatment Facilities, which includes Lagoon Systems, are required to comply with storm water

permit requirements if they meet one or both of the following criteria,

1. The facility has an approved pretreatment program as described in 40 CFR Part 403.
2. The facility has a design flow of 1.0 MGD or greater.

The GRWTF does not meet either of the criteria, therefore a storm water permit is not required at this time. If storm water permit is needed in the future the permit can be re-opened or the permittee may be required to apply for coverage under the General Storm Water Sector Permit.

PRETREATMENT REQUIREMENTS

GRWTF has not been designated for a pretreatment program development because it does not meet conditions which necessitate a full program. The flow through the plant is less than one (1) MGD, and there are no categorical industries discharging to the plant.

Although the permittee does not have a State-approved pretreatment program, any wastewater discharges to the sanitary sewer by industrial users are subject to Federal, State and local pretreatment regulations. Pursuant to *Section 307* of the *Clean Water Act*, the permittee shall comply with all applicable Federal General Pretreatment Regulations promulgated, found in *40 CFR 403* and the State Pretreatment Requirements found in *UAC R317-8-8*.

An industrial waste survey (IWS) is required of the permittee as stated in Part II of the permit. The IWS is to assess the needs of the permittee regarding pretreatment assistance. The IWS is required to be submitted within sixty (60) days after the issuance of the permit. If an Industrial User begins to discharge or an existing Industrial User changes their discharge the permittee must resubmit an IWS no later than sixty days following the introduction or change as stated in Part II of the permit.

It is recommended that the permittee perform an annual evaluation of the need to revise or develop technically based local limits for pollutants of concern, to implement the general and specific prohibitions *40 CFR, Part 403.5(a)* and *Part 403.5(b)*. This evaluation may indicate that present local limits are sufficiently protective, need to be revised or should be developed. It is required that the permittee submit any local limits that are developed to the Division of Water Quality for review and if needed public notice.

BIOMONITORING REQUIREMENTS

As part of a nationwide effort to control toxic discharges, biomonitoring requirements are being included in permits for facilities where effluent toxicity is an existing or potential concern. In Utah, this is done in accordance with the *State of Utah Permitting and Enforcement Guidance Document for Whole Effluent. Toxicity Control (Biomonitoring)*. Authority to require effluent biomonitoring is provided in *Permit Conditions, UAC R317-8, UPDES Rules, UAC-4.2, Permit Provisions, UAC R317-8, UPDES Rules, UAC-5.3, and Water Quality Standards, UAC R317-2-5 and R317-2-7.2*.

The potential for toxicity is not deemed sufficient to require biomonitoring or whole effluent toxicity (WET) limits because there are no present or anticipated industrial dischargers on the system. The waste water discharge is anticipated to be from household waste only. Therefore, biomonitoring will not be required in this permit; however the permit can be reopened to include WET provisions if toxicity is believed to be present at any time in the future.

BIOSOLIDS MANAGEMENT REQUIREMENTS

Because the permitted facility is a lagoon, there is not any regular sludge production. Therefore, the requirements of *40 CFR 503* do not apply unless the biosolids are removed from the bottom of the lagoon and beneficially used or disposed in some way. When planning sludge removal, the permittee should contact the Division of Water Quality for guidance.

PERMIT DURATION

It is recommended that this permit be effective for a period of five (5) years.

Drafted by Jennifer Robinson
Utah Division of Water Quality
Drafted October 29, 2013