

**FACT SHEET STATEMENT OF BASIS
CITY OF FERRON WASTEWATER TREATMENT FACILITY
UPDES PERMIT No. UT0020052
MINOR MUNICIPAL FACILITY PERMIT RENEWAL**

FACILITY CONTACT: Jacob Sharp, District Manager
Castle Valley Special Service District
P. O. Box 877
86 South 100 East
Castle Dale, Utah 84513
(435) 381-5333

DESCRIPTION OF FACILITY AND DISCHARGES

The City of Ferron and the Castle Valley Special Service District (CVSSD) constructed a new lagoon system in 2005 to handle domestic sewage for the City of Ferron. The new lagoon system is located approximately 2.25 miles east of the City of Ferron off Highway 10 in Emery County, Utah. The Ferron lagoon system consists of four cells totaling 33 acres in area with a chlorination pond for disinfection and also provides for the addition of a future cell if needed. To date there has been no discharge from this facility and none are anticipated for at least the next five years. The Ferron facility has a design flow of 0.5 million gallons per day (MGD) with a single discharge point of Outfall 001, which is located at north latitude of 39° 04' 43.75" and west longitude of 111° 03' 42.61".

RECEIVING WATER CLASSIFICATION

The discharge will go to Ferron Creek, which is classified as 2B, 3C and 4 under *Utah Administrative Code (UAC) R317-2-13* as described below:

- 2B - Protected for secondary contact recreation such as boating, wading, or similar uses.
- 3C - Protected for non-game fish and other aquatic wildlife, including the necessary aquatic organisms in their food chain.
- 4 - Protected for agricultural uses including irrigation of crops and stock watering.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS), 5-day biochemical oxygen demand (BOD₅), E. coli, pH and percent removal for TSS and BOD₅ are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. The alternative effluent limits and percent removal requirements for TSS and BOD₅ were previously requested by CVSSD and subsequently granted by the Utah Water Quality Board in 2001 and remains unchanged. Ammonia as Nitrogen (NH₃-N), total residual chlorine (TRC), and dissolved oxygen (DO), are water quality based, and were derived by the waste load analysis attached to this fact sheet statement of basis. Flow limitations were developed from information included in the permit application.

Any future discharges from the Ferron facility would eventually reach the Colorado River, which places it in the guidance of the Colorado River Basin Salinity Control Forum (CRBSCF). Total dissolved solids (TDS) are limited in loading by the CRBSCF and in February 1977 they produced the *“Policy for Implementation of Colorado River Salinity Standards Through the NPDES Permit Program”* (Policy). This Policy is still in effect and under Part II (Municipal Discharges) it states, *“...Requirements for establishing incremental increases may be waived in those cases where the incremental salt load reaching the main stem of the Colorado River is less than one ton per day or 366 tons per year.”* The Ferron facility would be an intermittent discharger, discharging less than 366 tons per year total TDS. Therefore, the effluent will be limited to a maximum discharge of 1.0 ton per day or 366 tons per year of TDS. It is the responsibility of the permittee to maintain annual TDS loading information and upon request the permittee shall submit to the Executive Secretary the annual TDS loading information.

The TDS concentration limit of 3500 mg/L is based upon the approved Total Maximum Daily Load (TMDL) study for the San Rafael River watershed (which includes Ferron Creek), in which a site specific criterion was developed for TDS and can be found in Table A-12 of the document entitled, *“Price River, San Rafael River, and Muddy Creek TMDLs for Total Dissolved Solids, West Colorado Watershed Management Unit, Utah”*, EPA Approval Date: August 4, 2004.

Based on previous monitoring data and the existing treatment facility operations, the permittee is expected to be able to continue to comply with the following effluent limitations upon any future discharges:

Parameter	Effluent Limitations				
	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum	Minimum Monthly Average
BOD ₅ , mg/L	45	65	NA	NA	NA
BOD ₅ Min. % Removal	65	NA	NA	NA	NA
TSS, mg/L	45	65	NA	NA	NA
TSS Min. % Removal	65	NA	NA	NA	NA

E. Coli, No./100mL	126	158	NA	NA	NA
TRC, mg/L	0.034	NA	NA	0.040	NA
NH ₃ -N, mg/L:					
Spring & Summer (April-September)	NA	NA	NA	2.8	NA
Fall & Winter (October-March)	NA	NA	NA	5.8	NA
TDS, mg/L	NA	NA	NA	500	NA
TDS, tons/day	NA	NA	NA	1.0	NA
pH, Standard Units(SU)	NA	NA	6.5	9.0	NA
Dissolved Oxygen, mg/L	NA	NA	3.0	NA	5.0
Total Effluent Flow, MGD	NA	NA	NA	0.5	NA

NA – Not Applicable

mg/L – milligrams per liter

MGD – million gallons per day

WASTE LOAD ANALYSIS AND ANTIDegradation REVIEW

Effluent limitations are derived using a waste load analysis (WLA), which is appended to this statement of basis as an ADDENDUM. The WLA incorporates Secondary Treatment Standards, Water Quality Standards, Antidegradation Reviews (ADR), as appropriate and designated uses into a water quality model that projects the effects of discharge concentrations on receiving water quality. Effluent limitations are those that the model demonstrates are sufficient to meet State water quality standards in the receiving waters. During this UPDES renewal permit development, a WLA and ADR were performed. An ADR Level I review was performed and concluded that an ADR Level II review was not required. The WLA indicates that the existing effluent limitations should be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters. The potential discharge was evaluated and determined not to cause a violation of State Water Quality Standards in downstream receiving waters.

SELF MONITORING AND REPORTING REQUIREMENTS

Submission on NetDMR or hard copy discharge monitoring report (DMR) forms shall be submitted monthly and are due 28 days after the end of the monitoring period and shall include the following self-monitoring and reporting information:

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
BOD ₅ , Influent Effluent	Monthly	Grab	mg/L
	Monthly	Grab	mg/L
TSS, Influent Effluent	Monthly	Grab	mg/L
	Monthly	Grab	mg/L
E. Coli	Monthly	Grab	No./100mL
NH ₃ -N	Monthly	Grab	mg/L
TRC	Daily (only if chlorinating)	Grab	mg/L
Dissolved Oxygen	Weekly	Grab	mg/L
TDS	Monthly	Grab	mg/L, tons/day/year
pH	Monthly	Grab	SU

TRC – total residual chlorine

NH₃-N – ammonia as nitrogen

SIGNIFICANT CHANGES

Based on the wasteload analysis, ammonia limits have been lowered and are seasonal. A monthly average for total residual chlorine was included. The design flow was lowered from 1.0 MGD to 0.5 MGD based in information from the Castle Valley Special Service District. All other permit provisions remain unchanged.

STORM WATER REQUIREMENTS

Because the design flow is less than 1.0 MGD a storm water UPDES permit is not required. Therefore, storm water permit provisions have not been included with the permit renewal. However, at any time during the lifetime of this permit it may be re-opened and modified, following proper administrative procedures as per *UAC R317-8*, to include any applicable storm water provisions and requirements.

PRETREATMENT REQUIREMENTS

The permittee has not been designated for pretreatment program development because it does not meet conditions which necessitate a full program. The flow through the plant is less than five (5) MGD, there are no categorical industries discharging to the plant, industrial discharges comprise less than 10 percent of the flow through the plant, and there is no indication of pass through or interference with the operation of the plant such as upsets or violations of the POTW's UPDES permit limits. However, the permittee is required to conduct an Industrial Wastewater Survey, as described in Part I.D.2 of the draft permit, in order to assess the need for the future development of a pretreatment program.

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*.

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 R317-8-4.2, Permit Provisions, UAC R317-8-5.3* and *Water Quality Standards, UAC R317-2-5 and R317-2-7.2*.

The permittee is a minor municipal facility with no industrial users on the system and no discharges to date. Any future discharges will likely be from domestic sources and only contributing a small volume of effluent to the existing stream flow, in which toxicity is not likely to be present. Based on these considerations, there is no reasonable potential for toxicity in the permittee's discharge (*per State of Utah Permitting and Enforcement Guidance Document for WET Control*). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in future discharges.

BIOSOLIDS MANAGEMENT REQUIREMENTS

Because the permitted facility is a lagoon system, there is no regular sludge production. Therefore, the requirements of *40 CFR 503* do not apply unless or until sludge is removed from the bottom of the lagoon and used or disposed in some way. When planning sludge removal, the permittee should contact DWQ or EPA for guidance.

PERMIT DURATION

Staff recommends renewal of this permit as drafted and that the renewal permit be effective for a period of five years.

Drafted by Mike Herkimer
Environmental Scientist
Utah Division of Water Quality
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ADDENDUM TO STATEMENT OF BASIS AND FACT SHEET

Public Notice time periods and results.

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PND DRAFT