FACT SHEET STATEMENT OF BASIS
MONTICELLO CITY WASTEWATER TREATMENT PLANT
UPDES PERMIT NUMBER: UT0024503
RENEWAL PERMIT
MINOR MUNICIPAL

FACILITY CONTACTS

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DESCRIPTION OF FACILITY

The Monticello Wastewater Treatment Facility (MWTF) was designed to store the effluent during the non-irrigation months and use the water for irrigation during the cultivating season. The MWTF is a 38.5 acre, 5 cell, non-aerated, lagoon system, with the first 4 cells having a water depth from 3 to 6 feet and the water being chlorinated before entering the final cell which has a maximum water depth of 12 feet and named the winter storage pond. The average design flow is 0.32 MGD, the BOD_5 wasteload is 760 pounds per day, and the design population equivalent is 3000. The city's population is estimated to be about 2300 people. The facility is located in the SE 1/4 of section 32, T335S, R24E, approximately two (2) miles southeast of downtown Monticello in San Juan County, Utah. The facility was constructed in 1980 and went on line in 1981 to replace the antiquated wastewater treatment plant. The facility has had to discharge to waters of the State in the past because in some years the precipitation was higher than normal and the irrigation demand was less than expected. MWTF does not anticipate discharging in the next five years. The MWTF has a latitude of 38□51'30" and a longitude of 109□18'30", with outfall STORET Number 495382.

DESCRIPTION OF DISCHARGE

The MWTF has not discharged to waters of the State since 1989. Therefore, there is not any recent monitoring data.

The facility has two outfalls.

Outfall Number	Location of Discharge Point:
001	The discharge enters Montezuma Creek from a ten-inch concrete pipe approximately 1/4 mile south of the lagoons. With latitude 38° 51' 30" and longitude 109 °18' 30"
Outfall Number	Location of Effluent Reuse Discharge Outfall and Description of Area for Use
001R	Discharge to an agricultural area 3/4 a mile west of the facility, Latitude 37° 51' 31" and Longitude 109 °18' 15"

RECEIVING WATERS AND STREAM CLASSIFICATION

MWTF would discharge into Montezuma Creek should a discharge become necessary. The waters of Montezuma Creek are classified as 1C, 2B, 3B and 4, and are part of the of the San Juan River system.

Class 1C - protected for domestic purposes (drinking water) with prior treatment.

Class 2B - protected for boating, water skiing, and similar uses, excluding recreational bathing (swimming).

Class 3B - protected for warm water species of game fish and other warm water aquatic life, 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 total suspended solids (TSS), biochemical oxygen demand (BOD_5) fecal and total coliforms, and pH are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2.* Total residual chlorine (TRC), ammonia as (N) and dissolved oxygen (DO) limits are water quality limited and based on the WLA. The WLA (see ADDENDUM) also indicates that these limitations should be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters. Since the MWTF is in the Colorado River drainage, the MWTF must also conform to the Colorado River Salinity Control Forum Policy that states that the effluent shall not exceed the culinary intake water supply by more than 400 mg/L total dissolved solids (TDS). The permittee is expected to be able to comply with the limitations.

The Wasteload Analysis indicates that seasonal ammonia limits in the range of 41.3 mg/L – 53.8 mg/L should be applied (see ADDENDUM), however, since these limits are substantially higher than what is reasonably expected in the discharge, there will be no effluent limitations or monitoring requirements for this parameter.

Montezuma Creek was listed as impaired on the 303(d) list for selenium in 2014. The data for the assessment though was collected from Cross Canyon Creek (tributary to Montezuma Cr) and may not directly applicable to Monticello's.

ANTIDEGRADATION LEVEL II REVIEW

Antidegradation Reviews are intended to ensure that waters that have better quality than required by the standards are not degraded unless the degradation is necessary for important social or economic reasons.

An Antidegradation Level II was required for this facility because it discharges into Montezuma Creek. Montezuma Creek is classified as Class 1C and protected for domestic purposes (drinking water) with prior treatment. An antidegradation Level II Reviews has been completed for the discharge to Montezuma Creek. This document is appended to this Fact Sheet and Statement of Basis.

The Level II Review for the discharge noted that discharge is required because the facility is a Publicly owned treatment works and is necessary for the economic and social growth in the community. It was determined that the overall impact to the environment will be lower with the POTW than without it. The facility utilizes alternative treatment options by land applying the discharge.

The DWQ agrees with the findings of the Level II Reviews and has determined that the discharges will not cause or contribute to a violation of water quality standards.

CHANGES SINCE THE LAST PERMIT

In September 2014, the Utah Water Quality Board adopted a new rule for control of phosphorus discharges into waters of the state that became effective January 1, 2015. The Technology-Based Phosphorus Effluent Limits or TBPEL Rule, R317-1-3.3 requires that discharges having reasonable potential to discharge phosphorus implement new water quality monitoring requirements by July 1, 2015 and requires that these dischargers meet specified effluent limits by January 1, 2020.The changes are reflected in the new permit. These samples are only required when the facility is discharging to Montezuma Creek.

Specific Limitations and Self-Monitoring Requirements

Parameter	Effluent Limitations a/			
	Maximum Monthly Avg	Maximum Weekly Avg	Daily Minimum	Daily Maximum
Flow, MGD	NA	NA	NA	0.32
BOD_5, mg/L BOD_5 Min. % Removal	25 85	35 NA	NA NA	NA NA
TSS, mg/L TSS Min. % Removal	25 85	35 NA	NA NA	NA NA
TDS, mg/L b/	NA	NA	NA	NA
TDS, Culinary water mg/L	NA	NA	NA	NA
E. Coli, No./100mL	126	157	NA	NA
TRC, mg/L	NA	NA	NA	0.075
DO, mg/L	NA	NA	4.0	NA
pH, Standard Units	NA	NA	6.5	9.0
Total Phosphorus, mg/L b/	NA	NA	NA	NA
Total Kjeldahl Nitrogen, mg/L b/	NA	NA	NA	NA
Orthophosphate, mg/L	NA	NA	NA	NA
Ammonia, mg/L	NA	NA	NA	NA
Nitrate-Nitrite, mg/L	NA	NA	NA	NA

a/ See Definitions, *Part VI*, for definition of terms.

b/ The effluent shall not exceed the culinary intake water supply by more than 400 mg/L of TDS.

NA – Not Applicable

Self-Monitoring and Reporting Requirements a/			
Parameter	Frequency	Sample Type	Units
Total Flow b/ c/	Continuous	Recorder	MGD
BOD_5, Influent d/ Effluent	Monthly Monthly	Grab Grab	mg/L mg/L
TSS, Influent d/ Effluent	Monthly Monthly	Grab Grab	mg/L mg/L
TSS, mg/L	Monthly	Grab	mg/L
TDS, Culinary water mg/L	Monthly	Grab	mg/L
E. coli	Monthly	Grab	No./100mL
TRC	Daily	Grab	mg/L
DO	Monthly	Grab	mg/L
PH	Monthly	Grab	SU
Total Phosphorus, Influent d/ Effluent	Monthly Monthly	Composite Composite	mg/L mg/L
Total Kjeldahl Nitrogen, Influent d/ Effluent	Monthly Monthly	Composite Composite	mg/L mg/L
Orthophosphate	Monthly	Composite	mg/L
Ammonia	Monthly	Composite	mg/L
Nitrate-Nitrite	Monthly	Composite	mg/L

a/ See Definitions, *Part VI*, for definition of terms.

b/ Flow measurements of influent/effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.

c/ If the rate of discharge is controlled, the rate and duration of discharge shall be reported.

d/ In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for this constituent in the discharge.

Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge effluent for reuse from Outfall 001R. Such discharges shall be limited and monitored by the permittee as specified below:

Parameter	Type II Reuse Limitations a/ b/ c/				
	Maximum Monthly Avg	Max Weekly Avg	Daily Min	Daily Avg	Daily Max
BOD_5, mg/L	25	NA	NA	NA	NA
TSS, mg/L d/	25	35	NA	NA	NA
E. coli, e/ No./100mL	NA	126	NA	NA	500
pH, Standard Units	NA	NA	6.0	NA	9.0

NA – Not Applicable

Self-Monitoring and Reporting Requirements for Type II Reuse			
Parameter	Frequency	Sample Type	Units
Total Flow f/	Continuous	Recorder	MGD
BOD_5	Monthly	Grab	mg/L
TSS	Weekly	Grab	mg/L
E. coli	Weekly	Grab	No./100mL
pH	Weekly	Grab	SU

a/ See Definitions, *Part VIII*, for definition of terms.

b/ An alternative disposal option or diversion to storage must be available in case quality requirements are not met.

c/ The facility shall also have the ability to disinfect the effluent effective immediately and lasting the duration of this permit.

d/ Properly calibrated, continuous monitoring of turbidity may be substituted for the suspended solids testing.

e/ The facility is required to disinfect to destroy, inactivate or remove pathogenic microorganisms by chemical, physical or biological means. Disinfection may be accomplished by chlorination, ozonation, or other chemical disinfectants, UV radiation. Or other approved processes.

f/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.

A. Management Practices for Land Application of Treated Effluent

1. The application of treated effluent to frozen, ice-covered, or snow covered land is prohibited.
2. No person shall apply treated effluent where the slope of the site exceeds 6 percent.
3. The use should not result in a surface water runoff.
4. The use must not result in the creation of an unhealthy or nuisance condition, as determined by the local health department.
5. Any irrigation with treated effluent must be at least 300 feet from a potable well.
6. For Type I reuse, any irrigation must be at least 50 feet from any potable water well.
7. For Type II reuse, any irrigation must be at least 300 feet from any potable water well.
8. For Type II reuse, spray irrigation must be at least 100 feet from areas intended for public access. This distance may be reduced or increased by the Executive Secretary.
9. Impoundments of treated effluent, if not sealed, must be at least 500 feet from any potable well.
10. Public access to effluent storage and irrigation or disposal sites shall be restricted by a stock-tight fence or other comparable means which shall be posted and controlled to exclude the public.

BIOSOLIDS DISPOSAL REQUIREMENTS

The State of Utah became a fully delegated State for the biosolids program on June 14, 1996 and has adopted the *503 Code of Federal Regulations (CFR)* by reference. Because the permitted facility is a lagoon, there is no regular sludge production. Therefore it appears that *40 CFR 503* does not apply unless or until the sludge is removed from the bottom of the lagoon and is disposed in some way. At that time, the permittee must ensure the biosolids are managed according to applicable regulations.

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 treatment facility, industrial discharges comprise less than 1 percent of the flow through the treatment facility, and there is no indication of pass through or interference with the operation of the treatment facility such as upsets or violations of the POTW's UPDES permit limits.

Although the permittee does not have to develop a State-approved pretreatment program, any wastewater discharges to the sanitary sewer are subject to Federal, State and local 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. The permittee must submit for review, to the Division of Water Quality, any local limits that are developed.

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 MWTF facility does not meet either of the criteria, therefore a storm water permit is not required at this time. A storm water re-opener provision is included in the permit should a storm water permit be needed in the future.

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 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 nor are there any

anticipated for the duration of this permit. The waste discharge is anticipated to be household waste only. Therefore, biomonitoring is not required in this permit, however the permit will contain a WET reopener provision.

PERMIT DURATION

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

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