

Official Draft Public Notice Version – August 21, 2013

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**FACT SHEET STATEMENT OF BASIS
TREMONTON WASTEWATER TREATMENT PLANT
RENEWAL PERMIT: DISCHARGE, BIOSOLIDS & STORM WATER
UPDES PERMIT NUMBER: UT0020303
UPDES BIOSOLIDS PERMIT NUMBER: UTL-020303
UPDES MULTI-SECTOR STORM WATER GENERAL PERMIT NUMBER: UTR000000
MAJOR MUNICIPAL**

FACILITY CONTACTS

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DESCRIPTION OF FACILITY

Tremonton Wastewater Treatment Plant (TWWTP) has a design flow rate of 2.0 million gallons per day (MGD). The facility serves the cities of Tremonton and Garland in Box Elder County, UT. The facilities flow passes through: influent electronic flow meters, head works with micro-screen and grit filter, a primary clarifier, two aerator basins containing four aerators each, two secondary clarifiers operated in parallel, and ultra-violet (UV) disinfection. The outfall is located at latitude 40° 41' 57" and longitude 112° 09' 36" and STORET number 490271.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

Chronic ammonia standard is now being applied to class 3C and 3D waters; as a result ammonia limits have been added to this permit. A compliance schedule for the ammonia limits for the winter season is included. TWWTP will sample for ammonia for 2014 winter season. TWWTP will then comply with the final effluent limits for ammonia for the winter season beginning in January 2015. All other limitations will remain the same as those in the previous permit. Based on effluent

monitoring data and the capacity of the existing treatment facility, TWWTP is expected to be able to comply with the limitations.

DISCHARGE

DESCRIPTION OF DISCHARGE

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 40° 41' 57" and longitude 112° 09' 36". The discharge is through a 200-foot long 16-inch diameter gravity flow concrete pipe leading from the UV basin to the Malad River.

RECEIVING WATERS AND STREAM CLASSIFICATION

The final discharge flows into the Malad River approximately 10½ miles upstream from its confluence with the Bear River. The Malad River is classified as 2B and 3C according to *Utah Administrative Code (UAC) R317-2-12.7*.

Class 2B Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.

Class 3C Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD₅), E. Coli, pH and percent removal for BOD₅ and TSS are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. Limitations for ammonia are based on the waste load analysis. The oil and grease is based on best professional judgment (BPJ). The permit limitations are:

Effluent Limitations a/				
Parameter	Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
Total Flow, MGD	2.0	NA	NA	NA
BOD ₅ , mg/L	25	35	NA	NA
BOD ₅ , Minimum % Removal	85	NA	NA	NA
TSS, mg/L	25	35	NA	NA
TSS, Minimum % Removal	85	NA	NA	NA
E. Coli, no./100mL	126	157	NA	NA
Ammonia (mg/L) Winter (Jan-Mar) Interim Limit	NA	NA	NA	NA
Ammonia (mg/L) Winter (Jan-Mar) Final Limit b/	15	NA	NA	25
Ammonia (mg/L) Spring (April-Jun)	15	NA	NA	30
Ammonia (mg/L) Summer (July- Sep)	2.5	NA	NA	12
Ammonia (mg/L) Fall (Oct-Dec)	5	NA	NA	17
Dissolved Oxygen, mg/L	NA	NA	5.0	NA
Oil & Grease, mg/L	NA	NA	NA	10.0
pH, Standard Units	NA	NA	6.5	9.0

NA – Not Applicable.

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are the same as in the previous permit with the exception that ammonia has been added to the monitoring requirements. The reporting requirements will be submitted on Discharge Monitoring Report Form (EPA No. 3320-1) or by NetDMR, post-marked or entered into NetDMR no later than the 28th day of the month following the completed reporting period.

Self-Monitoring and Reporting Requirements a/			
Parameter	Frequency	Sample Type	Units
Total Flow c/ d/	Continuous	Recorder	MGD
BOD ₅ , Influent e/	2 x Week	Composite	mg/L
BOD ₅ , Effluent	2 x Week	Composite	mg/L
BOD ₅ , Minimum % Removal	Monthly	Calculation	%
TSS, Influent e/	2 x Week	Composite	mg/L
TSS, Effluent	2 x Week	Composite	mg/L
TSS, Minimum % Removal	Monthly	Calculation	%
E. Coli	2 x Week	Grab	mg/L
Ammonia, effluent	2 x Week	Composite	mg/L
Total Phosphorus f/	Monthly	Grab	mg/L
Oil & Grease	Monthly If Sheen is Observed	Grab	mg/L
pH	2 x Week	Grab	SU
WET, Acute Biomonitoring	2 x Year	Composite	Pass/Fail
Metals, Influent	2 x Year	Composite	mg/L
Metals, Effluent	2 x Year	Composite	mg/L
Organic Toxics	2 nd & 4 th Year	Grab	mg/L

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

b/ Ammonia Winter Limit Compliance Schedule:

Date	Milestone
March 31, 2014	Complete Ammonia Sampling for 2014 Winter Season
January 1, 2015	Comply with Final Winter Ammonia Effluent Limit

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

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

e/ 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.

- f/ Total Phosphorus is being sampled in support of the work being done for the TMDL currently underway for the Bear River. The Pollutant of Concern (POC's) will be monitored and reported by the facility on a monthly basis, but will not have a limit associated with them. Minimum sampling frequency requested is monthly, reporting the monthly average. If more sampling is done, an average value should be reported.
- g/ Testing must be performed in the second and fourth year of the permit cycle. A list of the organics to be tested can be found in 40CFR122 appendix D table II. If results of metal analysis are detectable, more frequent sampling of the metals may be required

WASTE LOAD ANALYSIS AND ANTIDegradation REVIEW

Effluent limitations may also be derived using a Wasteload Analysis (WLA). The WLA incorporated 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 the UPDES renewal 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 effluent limitations should be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters.

BIOSOLIDS

DESCRIPTION OF TREATMENT AND DISPOSAL

The solids at the TWWTP are stabilized by oxidation ditches for about 15 days, and pumped to the screw presses where the solids are de-watered to about 17% solids. The solids do not meet the pathogen reduction requirements for Class A or Class B standards as they come off the screw press, nor do they meet a requirement for vector attraction reduction (VAR). Therefore, the biosolids cannot be sold or given away to the general public for lawn and garden use unless the solids are treated to meet Class A standards for pathogen and vector attraction reduction requirements. This is accomplished at the TWWTP through the windrow method of composting to meet Class A standards for land application.

In 2012, the TWWTP sold or gave away 799 dry metric tons (DMT) of Class A compost to the general public, and has 815 dry metric tons stored to be sold or given away in the future. The TWWTP plans to continue this method of disposal for the five year life span of this permit.

SELF-MONITORING REQUIREMENTS

Under 40 CFR 503.16(a)(1), the self-monitoring requirements are based upon the amount of biosolids disposed per year and shall be monitored according to the chart below.

Minimum Frequency of Monitoring Based Upon Dry Metric Tons (DMT)	
Amount of Biosolids Produced Per Year	Monitoring Frequency
> 0 to < 290 DMT	Once Per Year
> 290 to < 1,500 DMT	Four Times Per Year

In 2012, the TWWTP sold or gave away 799 dry metric tons of biosolids, therefore they needed to sample at least four times in 2012.

LIMITATIONS

Metals

Prior to disposal, all biosolids need to be sampled and meet the metals limits of *Table 3, 40 CFR 503.13* for the biosolids to be considered Class A (exceptional quality) with respect to heavy metals. The practice of sale or giveaway to the public is an acceptable use of biosolids of this quality as long as the biosolids continue to meet exceptional quality standards. If the biosolids do not meet the exceptional quality standards for heavy metals, the biosolids cannot be sold or given away to the public. However, since all biosolids produced from the TWWTP have met exceptional quality standards with respect to heavy metals during the life of the last permit, it is expected that the TWWTP will continue to meet exceptional quality standards for the life of this permit.

Pathogens Class A

If biosolids are land applied to home lawns and gardens, the biosolids need to be treated by a specific process to further reduce pathogens (PFRP), and meet a microbiological limit of less than 1,000 most probable number (MPN/g) of fecal coliform per gram of total solids (or less than 3 MPN of *Salmonella* per 4 grams of total solids) to be considered Class A biosolids. The practice of sale or giveaway to the public is an acceptable use of biosolids of this quality as long as the biosolids continue to meet Class A standards with respect to pathogens. If the biosolids do not meet Class A pathogen standards the biosolids will need to be disposed in the landfill.

Vector Attraction Reduction

The TWWTP needs to meet a method of vector attraction reduction (VAR) if the biosolids are sold or given away to the public. The VAR will be accomplished through the windrow method of composting (*40 CFR 503.33(b)(5)*), *the solids need to be treated for at least 14 days at a temperature of at least 40° C (104° F) for at least 14 days with an average temperature of over 45° C (113° F)*. If the biosolids do not meet the VAR requirements above, the biosolids will need to be landfilled.

Landfill Monitoring

Under *40 CFR 258*, the landfill monitoring requirements include a paint filter test. If the biosolids do not pass a paint filter test, the biosolids cannot be disposed in the sanitary landfill (*40 CFR 258.28(c)(1)*).

CLASS A PATHOGEN MONITORING DATA 2012

All biosolids given away in 2012 met Class A standards for pathogens through testing. According to *40 CFR 503.26* TWWTP was required to sample at least once for fecal coliform, with each sampling

episode consisting of seven samples for fecal coliform. The TWWTP sampled the biosolids 28 times for pathogens in 2012. The Class A monitoring data is below.

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Fecal Coliform Monitoring Data 2012, Class B Biosolids

Geomean of 28 samples, Most Probable Number of Fecal Coliform Per Gram of Total Solids	Maximum of 28 Samples, Most Probable Number of Fecal Coliform Per Gram of Total Solids
146.34 MPN/g	841 MPN/g
All samples must be below 1,000 most probable number per gram of total solids	

METALS MONITORING DATA

The TWWTP was required to sample at least for heavy metals in 2012, however the TWWTP sampled four times in 2012. All heavy metal samples Table 3 of *40 CFR 503.13*, therefore the TWWTP biosolids qualify as EQ in regards to metals. The monitoring data is below.

Metals Monitoring Data 2012, Class A Biosolids Compost

Parameter	Table 3, mg/Kg (Exceptional Quality)	TWWTP, Average, mg/Kg	TWWTP, Maximum, mg/Kg
Arsenic	41.0	13.76	17.4
Cadmium	39.0	0.33	0.36
Copper	1,500.0	193.0	238.0
Lead	300.0	5.51	6.9
Mercury	17.0	0.43	0.56
Molybdenum	75.0	7.9	11.10
Nickel	420.0	12.49	16.5
Selenium	36.0	7.39	9.61
Zinc	2,800.0	259.75	297.0

RECORD KEEPING

The record keeping requirements from *40 CFR 503.17* are included under *Part III.F.* of the permit. The amount of time the records must be maintained are dependent on the quality of the biosolids in regards to the metals concentrations. If the biosolids continue to meet the metals limits of *Table 3 of 40 CFR 503.13*, and are sold or given away the records must be retained for a minimum of five years. If the biosolids are disposed in a landfill the records must retained for a minimum of five years.

REPORTING

The TWWTP must report annually as required in *40 CFR 503.18*. This report is to include the results of all monitoring performed in accordance with *Part III.E* of the permit, information on management practices, biosolids treatment, and certifications. This report is due no later than

February 19 of each year. Each report is for the previous calendar year.

STORM WATER

STORMWATER REQUIREMENTS

Storm water provisions are included in this combined UPDES permit.

The storm water requirements are based on the UPDES Multi-Sector General Permit for Storm Water Discharges for Industrial Activity, General Permit No. UTR000000 (MSGP). All sections of the MSGP that pertain to discharges from wastewater treatment plants have been included and sections which are redundant or do not pertain have been deleted.

The permit requires the preparation and implementation of a storm water pollution prevention plan for all areas within the confines of the plant. Elements of this plan are required to include:

1. The development of a pollution prevention team.
2. Development of drainage maps and materials stockpiles.
3. An inventory of exposed materials
4. Spill reporting and response procedures.
5. A preventative maintenance program.
6. Employee training.
7. Certification that storm water discharges are not mixed with non-storm water discharges.
8. Compliance site evaluations and potential pollutant source identification, and
9. Visual examinations of storm water discharges.

TWWTP is currently covered under the UPDES Multi Sector General Permit for Industrial Activities.

PRETREATMENT REQUIREMENTS

Although TWWTP 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*, TWWTP 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*.

TWWTP 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. Authority to require a pretreatment program is provided for in *19-5-108 UCA, 1953 ann.* and *UAC R317-8-8*.

The permit requires 2 x year influent and effluent monitoring for metals, organic toxics listed in R317-8-7.5 will be monitored in the 2nd and 4th year of the permit, and sludge monitoring for potential pollutants listed in 40 CFR 503. TWWTP is required to submit an industrial waste survey within 60 days of permit issuance, see Part II.B.1 of the permit for details.

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated 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*.

Since the permittee is a major municipal discharger, the renewal permit will require whole effluent toxicity (WET) testing. Acute toxicity tests will be conducted semi-annually alternating between the Ceriodaphnia dubia and Pimephales promelas (fathead minnows) species as detailed in the permit. The testing frequency was determined based on the fact that TWWTP has not violated a WET test for the previous permit cycle and there is no categorical industrial users discharging to the facility.

The permit will contain the standard requirements for accelerated testing upon failure of a WET test and a PTI (Preliminary Toxicity Investigation) and TRE (Toxicity Reduction Evaluation) as necessary.

PERMIT DURATION

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

Drafted by
Matthew Garn
Utah Division of Water Quality
July 16, 2013

PUBLIC NOTICE

Began:
Ended:
Public Noticed in