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**FACT SHEET
STATEMENT OF BASIS
PROVO WATER RECLAMATION FACILITY
RENEWAL PERMIT: DISCHARGE, BIOSOLIDS & STORMWATER
UPDES PERMIT NUMBER: UT0021717
UPDES BIOSOLIDS PERMIT NUMBER: UTL-000000
UPDES MULTI-SECTOR STORM WATER GENERAL PERMIT NUMBER: UTR000000
MAJOR MUNICIPAL**

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DESCRIPTION OF FACILITY

Provo's wastewater treatment plant was originally constructed in 1954 and was upgraded in 1978. In 1998, the tertiary filters were rehabilitated. Permanent dechlorination facilities were operational in 1999. The facility consists of two bar screens and two aerated grit chambers followed by two primary sedimentation basins, two rock media trickling filters, two secondary clarifiers, four activated sludge aeration basins, four final clarifiers, six anthracite filters, and two chlorine contact basins. One of the two mechanical influent bar screens was converted to a fine screen device. This change to the process was made because of constant repairs and the fine screen adds improved screening to the treatment process.

Solids are handled by the following: one dissolved air flotation sludge thickener tank, two primary and two secondary anaerobic sludge digesters and a centrifuge. After the solids treatment the solids are land applied and/or composted.

The facility serves the City of Provo with an average design flow of 21 MGD, and a design population equivalent of 160,000. The facility is located at 1685 South East Bay Boulevard in Provo City, Utah County, Utah, latitude 40° 12' 45" and longitude 111° 39' 00", with STORET Number 499656.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

UAC R317-1-3.3, Technology-based Phosphorus Effluent Limits (TBPEL), establishes new regulations for the discharge of phosphorus to surface waters. The TBPEL rule includes the following requirements for non-lagoon wastewater treatment plants:

1. All non-lagoon treatment works discharging wastewater to surface waters of the state shall provide treatment processes which will produce effluent less than or equal to an annual mean of 1.0 mg/L for total phosphorus. This **TBPEL shall be achieved by January 1, 2020**.
2. The Director may authorize a variance to the TBPEL under the conditions listed in *UAC R317-3.3.C*. Demonstrations that a variance is applicable must be made by **January 1, 2018**.
3. All discharging treatment works are required to implement, at a minimum, monthly monitoring of the following **beginning July 1, 2015**:
 - a. Influent for total phosphorus (as P) and total Kjeldahl nitrogen (as N) concentrations;
 - b. Effluent for total phosphorus and orthophosphate (as P), ammonia, nitrate-nitrite and total Kjeldahl nitrogen (as N);
 - c. All monitoring shall be based on 24-hour composite samples by use of an automatic sampler or a minimum of four grab samples collected a minimum of two hours apart.
 - d. Discharge Monitoring Reports for your facility will be updated by DWQ to include the above mentioned parameters prior to the July 2015 monitoring period.

Therefore, the permit will include requirements for monthly composite sampling of total ammonia, orthophosphate, phosphorus, total kjeldahl nitrogen (TKN), and nitrate-nitrate.

The QUAL2Kw model was calibrated with data collect by DWQ staff in October and November 2014. The data is summarized in Appendix A of the wasteload analysis. Due to the data used to calibrate the model limits for BOD₅, ammonia, chlorine and chronic biomonitoring changed. The permittee has completed a Level II anti-degradation review (ADR) in order to allow for the relaxation of BOD₅ and ammonia limits. The ADR documentation is included with the permit documentation. The changes to the limits were incorporated into the permit.

The chronic ammonia standard is dependent on temperature and pH, the acute ammonia standard is dependent on pH. Due to the data inputted into the model the monthly average effluent limit for ammonia have changed from 1.5 mg/L for a monthly average limit and 6.1 mg/L for a daily maximum limit, to season limits as stated in the Effluent Limitation table, on page 4 of this document.

The BOD₅ limits have changed from seasonal water quality based limits to limits based on secondary standards. This change is due to the data inputted into the model.

The total residual chlorine limit has changed. The limit for the monthly average has changed from 0.015 mg/L to 0.013 mg/L. The limit for the daily maximum has changed from 0.026 mg/L to 0.022 mg/L. Currently the permittee is changing from chlorine disinfection to UV disinfection. The permittee will be allowed to stop sampling for chlorine once the chlorine is no longer being used for disinfection.

The limit for chronic biomonitoring has changed from an IC₂₅ of 87% to an IC₂₅ of 95% from January to March, and an IC₂₅ of 94% from April to December based on the new wasteload analysis.

Due to a new wasteload analysis, a limit for weekly average minimum has been added for dissolved oxygen (DO). The DO limit for the daily minimum has changed from a seasonal limit for summer of 6.0 mg/L and a spring, fall, and winter limit of 5.5 mg/L to a non-seasonal limit of 5.0 mg/L.

DISCHARGE

DESCRIPTION OF DISCHARGE

Provo City has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. In the last five years Provo City has had a good compliance history, with minimal violations. For more information regarding Provo City's compliance history see the following website echo.epa.gov/effluent-charts#UT0021717.

Outfall Number
001

Location of Discharge Point

After the chlorine contact basins at latitude 40°12'45", longitude 111°39'00". Total residual chlorine can be sampled at the sampling port 60 feet down stream from Outfall 001 at the property boundary or at end of pipe before the effluent enters the receiving water.

RECEIVING WATERS AND STREAM CLASSIFICATION

The discharge flows into the Mill Race and thence to Utah Lake. Mill Race is Class 2B, 3B, and 4, according to Utah Administrative Code (UAC) R317-2-13.5.c.:

- Class 2B - Protected for secondary contact recreation such as boating, wading, or similar uses.
- 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 stock watering.

TOTAL MAXIMUM DAILY LOAD (TMDL) CONSIDERATIONS

This facility ultimately discharges to Utah Lake which is listed on Utah's 2006 303(d) list of impaired waterbodies. Utah Lake has been identified as impaired for total phosphorous (TP) and total dissolved solids (TDS). Due to the listing of TDS the facility will be required to self-monitor for TDS on a monthly basis in order to better quantify loading of this pollutant of concern. The TP listing was based on an indicator of 0.25 mg/L.

Currently, a Utah Lake strategy is in the process of being developed. The process will include time frames for further assessment and decision points for developing a Use Attainability Analysis, TMDL, or site specific standards for TP. This process may result in pollutant load reductions and wasteload allocations. Wasteload allocations would then be translated to effluent limits in UPDES permits. It is therefore strongly recommended that the facility's staff participate in the process.

At this time there is not a water quality based standard. Based on a qualitative reasonable potential analysis for TP, the DWQ believes that Provo will not cause or contribute to the exceedance of the narrative standard. If addition data is gathered that indicates that a TP limit is needed, then the permit will be reopened and a TP limit will be included. In 2020, Provo will be required to meet the requirements of a 1 mg/L based on the TBPEL rule.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS), e-coli, pH and percent removal for biochemical oxygen demand (BOD₅) and TSS are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. The oil and grease is based on best professional judgment (BPJ). Total residual chlorine (TRC), whole effluent toxicity (WET), BOD₅, ammonia and dissolved oxygen (DO) are based on the WLA. The permit limitations are listed in the following table:

Parameter	Effluent Limitations				
	Monthly Average	Weekly Minimum Average	Weekly Average	Daily Minimum	Daily Maximum
Flow, MGD	21.0	NA	NA	NA	NA
BOD ₅ , mg/L	25	NA	35	NA	NA
BOD ₅ Min. % Removal	85	NA	NA	NA	NA
TSS, mg/L	25	NA	35	NA	NA
TSS Min. % Removal	85	NA	NA	NA	NA
E-Coli, No./100mL	126	NA	157	NA	NA
TRC, mg/L	0.013	NA	NA	NA	0.022
Ammonia, mg/L					
Summer (July – September)	3.0	NA	NA	NA	8.0
Fall (Oct – Dec)	4.0	NA	NA	NA	12.0
Winter (Jan – Mar)	5.0	NA	NA	NA	20.0
Spring (Apr – Jun)	3.5	NA	NA	NA	12.0
WET, Chronic Biomonitoring					
January – March	NA	NA	NA	NA	Pass, IC ₂₅ > 95% effluent
April — December	NA	NA	NA	NA	Pass, IC ₂₅ > 94% effluent
Oil & Grease, mg/L	NA	NA	NA	NA	10
pH, Standard Units	NA	NA	NA	6.5	9.0
Dissolved Oxygen (DO), mg/L	NA	6.0	NA	5.0	NA

NA – Not Applicable.

SELF-MONITORING AND REPORTING REQUIREMENTS

The self-monitoring requirements stated in the following table and are the same as in the previous permit.

The permit will require reports to be submitted monthly and quarterly, as applicable, on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period. Lab sheets for biomonitoring must be attached to the biomonitoring DMR.

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Flow	Continuous	Recorder	MGD
BOD ₅ , Influent	5 x Weekly	Composite	mg/L
	5 x Weekly	Composite	mg/L
TSS, Influent	5 x Weekly	Composite	mg/L
	5 x Weekly	Composite	mg/L
E. Coli	5 x Weekly	Grab	No./100mL
TRC	Daily	Grab	mg/L
pH	5 x Weekly	Grab	SU
Total Ammonia (as N)	5 x Weekly	Grab	mg/L
DO	5 x Weekly	Grab	mg/L
WET – Biomonitoring	Quarterly	Composite	Pass/Fail
Oil & Grease	When Sheen is Observed	Grab	mg/L
Total Dissolved Solids	Monthly	Composite	mg/L
Total Ammonia	Monthly	Composite	mg/L
Orthophosphate, (as P)	Monthly	Composite	mg/L
Phosphorus, Total	Monthly	Composite	mg/L
	Monthly	Composite	mg/L
Total Kjeldahl Nitrogen, TKN (as N)	Monthly	Composite	mg/L
	Monthly	Composite	mg/L
Nitrite-Nitrate	Monthly	Composite	mg/L
Metals, Influent	Quarterly	Composite	mg/L
	Quarterly	Composite	mg/L
Organic Toxics	Yearly	Grab	mg/L

BIOSOLIDS

For clarification purposes, sewage sludge is considered solids, until treatment or testing shows that the solids are safe, and meet beneficial use standards. After the solids are tested or treated, the solids are then known as biosolids. Class A biosolids, may be used for high public contact sites, such as home lawns and gardens, parks, or playing fields, etc. Class B biosolids may be used for low public contact sites, such as farms, rangeland, or reclamation sites, etc.

DESCRIPTION OF TREATMENT AND BENEFICIAL USE

The Permittee submitted their 2014 annual biosolids report on February 21, 2015. The report states the Permittee produced 1094 dry metric tons (DMT) of solids.

The solids from the primary settlement and activated sludge aeration basins are thickened by dissolved air flotation then stabilized in primary and secondary anaerobic digesters with a mean cell residence time of at least 15 days with a minimum temperature of at least 95° F (35° C).

After stabilization the biosolids are de-watered with a high-speed centrifuge to about twenty one percent solids. The facility still maintains drying beds for storage and back up dewatering when systems are down for maintenance.

In 2014 the PWRF produced 1,094 dry metric tons (DMT) of Class B biosolids. The biosolids met the heavy metals requirements to be considered Exceptional Quality and met Class B pathogen reduction requirements through time and temperature of the anaerobic digesters.

Of the 1,094 DMT produced in 151 DMT were stored on site, 715 DMT were land applied at agronomic rates at the Farmland Reserve Incorporated farm in Utah County, and 228 DMT were transported to the South Utah Valley Solid Waste District (SUVSWD), which composts the biosolids to meet Class A standards, then sold to the public. The SUVSWD has a valid UPDES permit and is responsible for the biosolids after the PWRF releases the biosolids to the SUVSWD under *UAC R317-8-4.1 (1) Duty to Comply*.

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 (40 CFR Part 503.16, 503.26. and 503.46)		
Amount of Biosolids Disposed Per Year		Monitoring Frequency
Dry US Tons	Dry Metric Tons	Per Year or Batch
> 0 to < 320	> 0 to < 290	Once Per Year or Batch
> 320 to < 1650	> 290 to < 1,500	Once a Quarter or Four Times
> 1,650 to < 16,500	> 1,500 to < 15,000	Bi-Monthly or Six Times
> 16,500	> 15,000	Monthly or Twelve Times

In 2014, the PWRF produced of 1,094 DMT of biosolids, therefore they need to sample at least four times a year.

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)*). No biosolids were landfilled in 2014.

BIOSOLIDS LIMITATIONS

Heavy Metals

Class A Biosolids for Home Lawn and Garden Use

The intent of the heavy metals regulations of Table 3, *40 CFR 503.13* is to ensure the heavy metals do not build up in the soil in home lawn and gardens to the point where the heavy metals become phytotoxic to plants. The permittee will be required to produce an information sheet (see *Part III. C.* of the permit) to be made available to all people who are receiving and land applying Class A biosolids to their lawns and gardens. If the instructions of the information sheet are followed to any reasonable degree, the Class A biosolids will be able to be land applied year after year, to the same lawns and garden plots without any deleterious effects to the environment. The information sheet must be provided to the public, because the permittee is not required, nor able to track the quantity of Class A biosolids that are land applied to home lawns and gardens.

Class A Requirements With Regards to Heavy Metals

If the biosolids are to be applied to a lawn or home garden, the biosolids shall not exceed the maximum heavy metals in Table 1 and the monthly average pollutant concentrations in Table 3 (see Table 1 and Table 3 below). If the biosolids do not meet these requirements, the biosolids cannot be sold or given away for applications to home lawns and gardens.

Class B Requirements for Agriculture and Reclamation Sites

The intent of the heavy metals regulations of Tables 1, 2 and 3, of *40 CFR 503.13* is to ensure that heavy metals do not build up in the soil at farms, forest land, and land reclamation sites to the point where the heavy metals become phytotoxic to plants. The permittee will be required to produce an information sheet (see *Part III. C.* of the permit) to be handed out to all people who are receiving and land applying Class B biosolids to farms, ranches, and land reclamation sites (if biosolids are only applied to land owned by the permittee, the information sheet requirements are waived). If the biosolids are land applied according to the regulations of *40 CFR 503.13*, to any reasonable degree, the Class B biosolids will be able to be land applied year after year, to the same farms, ranches, and land reclamation sites without any deleterious effects to the environment.

Class B Requirements With Regards to Heavy Metals

If the biosolids are to be land applied to agricultural land, forest land, a public contact site or a reclamation site it must meet at all times:

The maximum heavy metals listed in Table 1 and the heavy metals loading rates in Table 2; or

The maximum heavy metals in Table 1 and the monthly heavy metals concentrations in Table 3.

Tables 1, 2, and 3 of Heavy Metal Limitations

Pollutant Limits, (40 CFR Part 503.13(b)) Dry Mass Basis				
Heavy Metals	Table 1	Table 2	Table 3	Table 4
	Ceiling Conc. Limits, (mg/kg) *a, *b, *c	CPLR ¹ , (mg/ha)	Pollutant Conc. Limits, (mg/kg)	APLR ² , (mg/ha-yr) *a, *b, *c
Total Arsenic	75	41	41	41
Total Cadmium	85	39	39	39
Total Copper	4300	1500	1500	1500
Total Lead	840	300	300	300
Total Mercury	57	17	17	17
Total Molybdenum	75	N/A	N/A	N/A
Total Nickel	420	420	420	420
Total Selenium	100	100	100	100
Total Zinc	7500	2800	2800	2800

*a, The limitations represent the maximum allowable levels of heavy metals in any biosolids intended for land application.

*c, Any violation of these limitations shall be reported in accordance with the requirements of Part III.F.1. of the permit.

*d, These limitations represent the maximum allowable levels of heavy metals based on an average of all samples taken during a 30-day period.

If the biosolids do not meet these requirements they cannot be land applied.

Pathogens

The Pathogen Control class listed in the table below must be met;

1 CPLR -- Cumulative Pollutant Loading Rate
2 APLR -- Annual Pollutant Loading Rate

Pathogen Control Class	
Class A	Class B
B <i>Salmonella</i> species –less than three (3) MPN ³ per four (4) grams total solids (or less than 1,000 fecal coliforms per gram total solids)	Fecal Coliforms –less than 2,000,000 colony forming units (CFU) per gram total solids
Enteric viruses –less than one (1) MPN (or plaque forming unit) per four (4) grams total solids	
Viable helminth ova –less than one (1) MPN per four (4) grams total solids	

Class A Pathogen Requirements for Home Lawn and Garden Use

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 less than 3 most probable number (MPN) of *Salmonella* per 4 grams of total solids (or less than 1,000 most probable number (MPN/g) of fecal coliform per gram of total solids) to be considered Class A biosolids. PWRF transfers the biosolids to the Southern Utah Solid Waste District (Permit #ULT-025585) for further processing to Class A through composting prior to distribution to the public.

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 cannot be sold or given away to the public, and the permittee will need find another method of beneficial use or disposal.

Class B Pathogen Requirements for Land Application

If biosolids are to be land applied for agriculture or land reclamation the solids need to be treated by a specific process to significantly reduce pathogens (PSRP). The PSRP for PWRF will be accomplished through Anaerobic Digesters:

1. Under *40 CFR 503.32 (b)(3)Appendix (B)(3)*, The PSRP may be accomplished through anaerobic digesters that have a minimum retention time of 15 days at 95° F (35° C) or 60 days at 68° F (20°C).
2. Under *40 CFR 503.32 (b)(2) - Alternative 1*, The PSRP may be accomplished through testing and the biosolids must meet a microbiological limit of less than 2,000,000 MPN of fecal coliform per gram for the biosolids to be considered Class B biosolids with respect to pathogens.

Vector Attraction Reduction (VAR)

If the biosolids are land applied PWRF will be required to meet VAR through the use of a method of listed under *40 CFR 503.33*. PWRF intends to meet the vector attraction reduction requirements through one of the methods listed below.

3 MPN –Most Probable Number

1. Under *40 CFR 503.33(b)(1)*, the solids need to be treated through anaerobic digestion for at least 15 days at a temperature of at least 35° C (95° F) with a 38% reduction of volatile solids.
2. PWRF transfers solids to another facility (Southern Utah Solid Waste District) where they are stabilized through composting to Class A, and distributed to the public and cities.

If the biosolids do not meet a method of VAR, the biosolids cannot be land applied.

If the permittee intends to use another one of the listed alternatives in *40 CFR 503.33*, the Director and the EPA must be informed at least thirty (30) days prior to its use. This change may be made without additional public notice

Landfill Monitoring

Under *40 CFR 258*, the landfill monitoring requirements include a paint filter test to determine if the biosolids exhibit free liquid. 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)*).

Record Keeping

The record keeping requirements from *40 CFR 503.17* are included under *Part III.G.* 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 be retained for a minimum of five years.

Reporting

The PWRF 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.B.* 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.

MONITORING DATA

METALS MONITORING DATA

The PWRF was required to sample for metals at least four times in 2014. All biosolids land applied in 2014 met *Table 3* of *40 CFR 503.13*, therefore the PWRF biosolids qualify as EQ with regards to metals. The monitoring data is below.

PWRF Metals Monitoring Data 2014

PERMITTEE Metals Monitoring Data, 2014 (Land Application)			
Parameter	Table 3, mg/kg (Exceptional Quality)	Average, mg/kg	Maximum, mg/kg
Arsenic	41.0	12.98	25
Cadmium	39.0	1.91	2.11
Copper	1,500.0	778.25	891
Lead	300.0	1.21	1.02
Mercury	17.0	8.97	9.5
Molybdenum	75.0	22.13	23.3
Nickel	400.0	20.15	20.4
Selenium	36.0	18.45	20.7
Zinc	2,800.0	1039.5	1170

PATHOGEN MONITORING DATA (Anaerobic Cake)

The PWRF was not required to monitor the anaerobic biosolids (sludge cake) for pathogens. Therefore, there is not any monitoring data for the Class B biosolids. All biosolids land applied in 2014 met the Class B pathogen standards through anaerobic digestion.

PATHOGEN MONITORING DATA (Centrifuge Cake)

The PWRF was required to monitor the Centrifuge Cake for pathogens at least four times in 2014. The PWRF had the choice to sample for *fecal* coliform or *salmonella*, and the PWRF chose *fecal* coliform. Each monitoring episode needs to consist of seven samples, for a total 28 samples. All biosolids land applied in 2014 met the Class B pathogen standards through anaerobic digestion and testing. The monitoring data is below.

PWRF Fecal Coliform Monitoring Data 2014 (Centrifuge Cake)

Geometric Mean of 28 Samples, Most Probable Number Per Gram (2014)	Maximum of 28 Samples, Most Probable Number Per Gram (2014)
130,210	794,000

STORM WATER REQUIREMENTS

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.

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

PRETREATMENT REQUIREMENTS

The pretreatment requirements remain the same as in the current permit with the permittee administering an approved pretreatment program. Changes to the program must be submitted to the Division of Water Quality. Authority to require a pretreatment program is provided for in *19-5-108 UCA, 1953 ann.* and *UAC R317-8-8*.

The permittee will be required to perform an annual evaluation of the need to revise or develop technically based local limits to implement the general and specific prohibitions of *40 CFR, Part 403.5(a)* and *Part 403.5(b)*. This evaluation may indicate that present local limits are sufficiently protective, or that they must be revised.

The permit requires quarterly influent and effluent monitoring for metals and yearly organic toxics listed in *R317-8-7.5* and sludge monitoring for potential pollutants listed in *40 CFR 503*. All metals testing must use a low enough MDL to insure that the metals are not above the allowable levels determined by the wastelaod analysis. A summary of the MDLs for the metals can be found in Part II of the permit. If a test method is not available then the lowest test method available must be used, following approval by the Director of the DWQ.

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 again require WET testing. A review of the past three years of WET testing results indicates that no toxicity has been reported. Therefore, the permittee will continue Chronic WET testing using one species quarterly, alternating between *Ceriodaphnia dubia* and *Pimephales promelas* (fathead minnow). The permit will contain the standard requirements for re-testing upon failure of a WET test, and for a Toxicity Reduction Evaluation (TRE) as appropriate.

Chronic toxicity occurs when the survival, growth, or reproduction for either test species, when exposed to a dilution of 95 percent effluent or lower, is significantly less (at 95% confidence level) than that of the control specimens. The 95% effluent dilution criterion is based upon the waste load analysis and is consistent with previous permit conditions. The permit will also contain a toxicity

limitation re-opener provision. This provision allows for modification of the permit at any time to include WET limitations and/or increased WET monitoring, should additional information indicate the presence of toxicity in the discharge.

PERMIT DURATION

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

Drafted by
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Mike Herkimer, WET
Utah Division of Water Quality

Began:
Ended:
Public Noticed in _____