

The findings, determinations, and assertions contained in this document are not final and subject to change following the public comment period.

**FACT SHEET AND STATEMENT OF BASIS**  
**FACILITY NAME**  
**RENEWAL PERMIT: DISCHARGE**  
**UPDES PERMIT NUMBER: UT0203710**  
**MINOR MUNICIPAL**

**FACILITY CONTACTS**

Person Name:	Don Hartle
Position:	City Manager
Phone Number:	(435) 245-7958
Person Name:	Tom Maushan
Position:	Sewer Manager
Phone Number:	(435) 245-3686
Facility Name:	Wellsville City
Mailing and Facility Address:	75 East Main P.O. Box 6 WellsvilleUtah
Telephone:	(435) 245-3686
Actual Address:	The lagoons are located 1.61 miles northeast of downtown

**DESCRIPTION OF FACILITY**

This facility was placed into operation in 1974 with a peak design flow of 1.2 MGD and a design population equivalent of 3670. The City of Wellsville Water Reclamation Facility (WWRF) is a four cell facultative lagoon system of 56.6 acres in size. The first cell is 15.6 acres, the second cell is 20.1 acres, the third cell is 11.2 acres and the fourth cell is 9.6 acres. Ultraviolet disinfection is used after the final cell before discharging to the Little Bear River. This UV unit is capable of treating up to 800,000 gallons per day with space for additional lights if necessary. The lagoon cells have an average depth of six feet. Influent flow is measured by a 9 inch Parshall flume and a Greyline OCF III open channel flow meter. Effluent flow is measured by a 24 inch extended weir and a Greyline OCF III open channel flow monitor.

The present population of Wellsville is approximately 3,000 people with an increase of approximately 5% per year. Using an average of 0.26 lb of BOD per capita per day (taken from "Sewer Lagoon Study City of Wellsville", February 2001) the BOD load on the primary cell is projected to be 62.5 lbs of BOD per acre per day. This is greater than the State's design criteria of 35 lbs of BOD per acre per day. At this current rate of growth the City will probably need to modify their system at some time in the relatively near future. The headwork's building is equipped with room for a blower system for aeration. The last cell of the lagoon has an active spring discharging into it. The exact flow is uncertain. However, it does not appear to be large enough to cause flow measurement problems and historically has not been a problem for the City. The lagoons are functioning well. A Reconnaissance Inspection associated with permit development was completed on September 20, 2012. The cells appeared healthy and the dikes were relatively free of vegetation. There was not any sign of anaerobic conditions in the first cell or any other cell.

The Wellsville City lagoons are the only lagoon system in Utah to have phosphorus (P) limitations in their UPDES permit, due to the TMDL impairment of P into the Little Bear River. The permit allows the city to discharge 159 lbs of P during the critical warmer months of June, July, August and September, and 794 lbs of P during the other months of the year, for a total of 953 pounds a year. To date, Wellsville City is well within their allocation for the calendar year.

### **SUMMARY OF CHANGES FROM PREVIOUS PERMIT**

Wellsville has installed an irrigation system to grow crops on 16 acres of city property. The irrigation began on 9/7/12. The farmer who is leasing the land plans to grow winter wheat this fall. The irrigation system will allow Wellsville to substantially reduce the amount of phosphorus to the TMDL impaired Little Bear River.

A flow limit has been included in the renewal permit in accord with an EPA request that all permits include a flow limit.

### **DISCHARGE**

#### **DESCRIPTION OF DISCHARGE**

The wastewater treatment plant has one discharge point, known as 001. This 001 outfall has a latitude of 41° 39' 38" with a longitude of 111° 54' 82" and discharges into the Little Bear River. The average flow over the last thirty six months is 0.284 MGD per day.

#### **Outfall**

#### **Description of Discharge Point**

001	Discharge from the disinfection building to the Little Bear River. Latitude 41° 39' 38" with longitude 111° 54' 82".
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#### **RECEIVING WATERS AND STREAM CLASSIFICATION**

The Little Bear River is classified as 2B, 3A, 3D and 4 according to Utah Administrative Code (UAC) R317-2-13.3 (a).

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

Class 3A - Protected for cold-water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.

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 stock watering

#### **BASIS FOR EFFLUENT LIMITATIONS**

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD<sub>5</sub>), E. Coli bacteria, pH and percent removal requirements are based on current Utah Secondary Treatment Standards, UAC R317-1-3.2. The dissolved oxygen (D.O.), ammonia (NH<sub>3</sub>), and phosphorus limitations are based upon water quality considerations (The derivation of these are included in the addendum.). The waste load analysis indicates these limitations should be sufficiently protective of water quality, in order to meet State water quality standards in receiving waters. Based on self-monitoring data during the last permit period,

Wellsville City should be able to meet the permit limitations:

Total Phosphorus, lbs per season	Effluent Limitations Per Season
Warmer Months, June - September*	72 kilograms (159 lbs).
Cooler Months, October –May*	360 kilograms (794 lbs).

\*Shall be reported in pounds per month on the discharge monitoring report. The following formula will convert milligrams per liter, to pounds per day. Total phosphorus (mg/l) x flow (mgd) x 8.3396 = total phosphorus lbs per day.

Parameter	Effluent Limitations			
	30 Day Monthly Avg	7 Day Weekly Avg	Daily Minimum	Daily Maximum
Flow, MGD	0.7	NA	NA	NA
Dissolved Oxygen, mg/L	NA	NA	5.0	NA
BOD <sub>5</sub> , mg/L	25	35	NA	NA
BOD <sub>5</sub> Min. % Removal	85	NA	NA	NA
TSS, mg/L	25	35	NA	NA
TSS Min. % Removal	85	NA	NA	NA
Ammonia, mg/L				
Winter (Jan-Mar)	6.7	NA	NA	19.9
Spr (Apr-Jun)	62.0	NA	NA	96.4
Sum (Jul-Sept)	47.7	NA	NA	77.6
Fall (Oct-Dec)	14.1	NA	NA	24.4
E-Coli, No./100mL	126	158	NA	NA
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. The permit will require reports to be submitted monthly and annually, 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. Lab sheets for metals and toxic organics must be attached to the DMRs.

Self-Monitoring and Reporting Requirements, *a			
Parameter	Frequency	Sample Type	Units
Total Flow, *b, *c	Continuous	Recorder	MGD
Dissolved Oxygen	Monthly	Grab	mg/L
BOD <sub>5</sub> , Influent	Monthly	Grab	mg/L
BOD <sub>5</sub> , Effluent	Monthly	Grab	mg/L
TSS, Influent	Monthly	Grab	mg/L
TSS, Effluent	Monthly	Grab	mg/L
TSS, % Removal	Monthly	Grab	mg/L
pH	Monthly	Grab	SU
Ammonia	Monthly	Grab	mg/L
Total Phosphorus	Monthly	Grab	mg/L

- \*a See Definitions, *Part VIII of the permit*, 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.

### **BIOSOLIDS**

The State of Utah has adopted the *40 CFR 503* federal regulations for the disposal of sewage sludge (biosolids) by reference. However, since this facility is a lagoon, there is not any regular sludge production. Therefore *40 CFR 503* does not apply at this time. In the future, if the sludge needs to be removed from the lagoons and is disposed in some way, the Division of Water Quality must be contacted prior to the removal of the sludge to ensure that all applicable state and federal regulations are met

### **STORM WATER**

#### **STORMWATER REQUIREMENTS**

Wastewater treatment facilities, which includes treatment lagoons, 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 Wellsville City Lagoon 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.

### **PRETREATMENT REQUIREMENTS**

Wellsville 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 Wellsville 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) (example appended to this document) 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 for review any local limits that are developed to the Division of Water Quality. If local limits are developed they must be public noticed.

### **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*.

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.

Drafted by: Daniel Griffin, P.E.

Permit and FSSOB were public noticed from December 28, 2013 to January 27, 2014, comments were received and a response summary was produced and submitted to all commenters.

Daniel Griffin, P.E.

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