

**STATEMENT OF BASIS
STANSBURY PARK IMPROVEMENT DISTRICT
RENEWAL PERMIT: DISCHARGE, BIOSOLIDS & STORM WATER
UPDES PERMIT NUMBER: UT0025241
UPDES BIOSOLIDS PERMIT NUMBER: UTL-025241**

FACILITY CONTACTS

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DESCRIPTION OF FACILITY

The Stansbury Park Improvement District's (Stansbury Park) lagoon treatment facilities consists of 7 facultative cells, 2 primaries, 5 secondary and one additional emergency overflow pond. The cells are contained on 164 acres. The treatment facility was operated as a total containment treatment facility until 1996 and last upgraded in 1994. The facility serves the City of Stansbury Park with a current population of about 8,500. The design flow was 1 MGD with operational flow of .75 MGD. The facility is located at latitude 40°39'30" and longitude 112°18'00", with Outfall 001 discharging from the last cell. During the drafting of the permit, the facility was undergoing a major upgrade to meet future demands for treatment. The upgraded final design flow will be 2.7 MGD, but it is not expected to achieve this until 2030.

A downstream evaluation was done by DWQ in May 2010 by Chris Bittner and Dave Wham. They reported "Stansbury Park will discharge to a Class 3E ditch. The downstream receiving water is 3D north of I-80 where the ditch diffuses into a meadow wetland and ultimately a playa south of the railroad. GSL is on the north side of the railroad. Based on our observations of the diking, the discharge will not reach GSL at an elevation of 4208'. The historic high of GSL at 4211 would likely inundate this area but we don't expect GSL to get to this elevation again because of the pumps."

They determined that no Level II ADR is required for this upgrade to 2.7 MGD because water quality will not be degraded (R317-3.5.b.1). Some of the system's component upgrades will be limited to a design flow of 1.5 MGD. As a result, this will be the flow limit in the permit. In the future, when Stansbury Park increases flow above 1.5 MGD, another evaluation by DWQ can be requested to determine if a Level II Anti-degradation Review (ADR) will then be required.

As a result of the improvements at the facility they have determined that they will not require the continuous use of the system's final three lagoon cells. They have also added a chlorination disinfection system to the system with a new outfall. This Outfall (002) is located 1600 feet (0.3 miles) south of Outfall 001, into the same ditch as Outfall 001. Stansbury Park is also working to get final approval for the use of a rapid infiltration basin (RIB) to dispose of effluent.

With these two changes Stansbury Park plans to use the last three cells as a way to further treat the effluent during periods when they cannot meet effluent limits. They will direct the flows to the additional cell(s) to allow further treatment. When the levels have decreased, they plan to discharge to the RIB or Outfall 001. An evaluation of the use of these two outfalls reveals that, as long as the combined flows of both discharges do not exceed the flow limit for the permit (1.5 MGD) during any given day, the loading will remain the same. DWQ made the determination that there will be no need to complete a Level II ADR for the new outfall until the flows increase above 1.5 MGD.

According to the *Utah Administrative Code (UAC) R317-1-3.2*, the Board may allow, on a case-by-case basis, that the BOD₅ and TSS effluent concentrations for discharging domestic wastewater lagoons shall not exceed 45mg/L for a monthly average, nor 65mg/L for a weekly average, provided certain criteria are met. Stansbury Park met all of the requirements and the Board approved the new effluent limits according to *Utah Administrative Code (UAC) R317-1-3.2*, thus, the limits were incorporated into their renewal permit.

Stansbury Park also requested a waiver from the Minimum Percent Removal Requirements for TSS. The request was based upon the significant inflow and infiltration (I&I) in the collection lines which dilutes the influent wastewater, therefore making it difficult to meet the minimum requirements consistently. In 1997, Stansbury Park overhauled their system to reduce the amount of I&I, but still are plagued with the problem. The waiver was granted and the Minimum Percent Removal Requirements for TSS have been removed from their permit.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

Stansbury Park facility has undergone a major upgrade to meet future demands for treatment. The upgraded final design flow will be 2.7 MGD, but it is not expected to achieve this till 2030. Some system component upgrades will be limited to a design flow of 1.5 MGD. As a result, this will be the flow limit in the permit. They have also added a chlorination disinfection system to the system, with a new outfall. This Outfall (002) is located 1600 feet (0.3 miles) south of Outfall 001, discharging into the same ditch as Outfall 001. Stansbury Park is also working to get final approval for the use of a rapid infiltration basin (RIB) for land disposal of the effluent. With the increase in design flow the facility will be increasing the monitoring frequency to be consistent with DWQ practices.

As a result of the improvements at the facility they have determined that they will not require the continuous use of the systems final three lagoon cells. Stansbury Park plans to use the last three cells as a way to further treat the effluent during periods of high TSS. They will direct the flows to the cell to allow further treatment and settling of the solids. When the pollutant levels have decreased, they plan to discharge from cell seven to the RIB or through Outfall 001.

The inclusion of the chlorination unit to the system requires that a total residual chlorine (TRC) limit be added to the permit. There has not previously been any monitoring for ammonia in the permits for

Stansbury Park. Monitoring is being included to help quantify what level ammonia might be discharged at.

DISCHARGE

DESCRIPTION OF DISCHARGE

The STANSBURY PARK has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. A summary of the last 3 years of data is attached. There were violations of their discharge

limits for TSS and pH, however the violations were not chronic in nature and did not require enforcement action.

Outfall

001

Description of Discharge Point

Located at latitude 40°39'30" and longitude 112°18'00". The discharge is through a gate to a flume then to an 8 inch diameter gravity flow pipe leading to an unnamed ditch which flows under I-80, and hence to a playa south of the railroad, separated from the Great Salt Lake by the railroad, or through the gate to the rapid infiltration basin.

Outfall

002

Description of Discharge Point

Located near latitude 40°39'30" and longitude 112°18'00". The discharge is 1300 feet south of outfall 001 to the same ditch. It is to an unnamed ditch which flows under I-80, and hence to a playa south of the railroad, separated from the Great Salt Lake by the railroad.

RECEIVING WATERS AND STREAM CLASSIFICATION

Stansbury Park will discharge to a Class 3E ditch. The downstream receiving water is 3D north of I-80 where the ditch diffuses into a meadow wetland and ultimately a playa south of the railroad. The Great Salt Lake (GSL), on the north side of the railroad is Class 5. Based on our observations of the diking, the discharge will not reach GSL at an elevation of 4208'. The historic high of GSL at 4211' would likely inundate this area but DWQ doesn't expect the GSL to get to this elevation during this permit term, because of the west desert pumping facility. The railroad embankment has very few penetrations (two, which are about 4 miles apart).

No Level II ADR is required because water quality will not be degraded (R317-3.5.b.1). DWQ will did a Level ADR I to conclude that water quality standards will not be violated in the receiving waters.

- Class 3D -Protected for waterfowl, shore birds and other water oriented wildlife not included in Class 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.
- Class 3E -Severely habitat-limited waters. Narrative standards will be applied to protect these waters for aquatic wildlife.
- Class 5 -The Great Salt Lake. Protected for primary and secondary contact recreation, aquatic wildlife, and mineral extraction.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on TSS, biochemical oxygen demand (BOD₅), E-coli, pH and percent removal for BOD₅ are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. Total residual chlorine (TRC) concentration is based on the waste load allocation.

Pursuant to the stream use classifications for the receiving waters, dissolved oxygen (DO), metals, and other pollutants are not limited in the permit:

Parameter	Effluent Limitations			
	Monthly Average	Weekly Max	Minimum	Maximum
Flow, MGD	1.5	NA	NA	NA
BOD ₅ , mg/L	45	65	NA	NA
BOD ₅ Min. % Removal	85	NA	NA	NA
TSS, mg/L	NA	65	NA	NA
E-Coli, No./100mL	126	158	NA	NA
TRC, mg/L	NA	NA	NA	0.73

pH, Standard Units	NA	NA	6.5	9.0
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NA – Not Applicable.

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring frequency requirements have increased since 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 Effluent	Weekly	Grab	mg/L
	Weekly	Grab	mg/L
TSS, Influent Effluent	Weekly	Grab	mg/L
	Weekly	Grab	mg/L
E-Coli, No./100mL	Weekly	Grab	No./100mL
TRC	Weekly	Grab	mg/L
pH	Weekly	Grab	SU
Total Ammonia	Monthly	Grab	mg/l
Metals, Influent Effluent	2 X Yearly	Grab	mg/L
	2 X Yearly	Grab	mg/L
Organic Toxics	2 nd and 4 th year of the permit cycle	Grab	mg/L

Land Application Requirements

Land application activities using the RIB for Stansbury Park will require monitoring of the effluent that is going to be applied to the land. The requirements are listed in the table below.

Routine Monitoring Requirements		
Parameters	Measurement Frequency	Sample Type
Flow, (GPD)	Weekly	Continuous
E-Coli.	Monthly	Grab
Total Inorganic Nitrogen (NH ₄ +NH ₃ +NO ₂ +NO ₃)	Monthly	Grab
Irrigated Acreage	Monthly	Estimated

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 Stansbury Park facility fits one of these criteria for exclusion from a UPDES Storm Water Permit by a No Exposure Certification. The Stansbury Park facility only recently became required to submit a No Exposure Certification. They have submitted a No Exposure Certification for coverage during this permit cycle and have met all requirements. Therefore, no storm water permitting requirements will be required at this time.

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 required that the permittee submit for review any local limits that are developed to the Division of Water Quality for review. If local limits are developed it is required 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.

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 reasonable 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, WET limits and testing are 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 a duration of five (5) years.

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