

**FACT SHEET AND STATEMENT OF BASIS
HOLLIDAY WATER COMPANY
DISCHARGE RENEWAL PERMIT
UPDES PERMIT NUMBER: UT0025429
MINOR INDUSTRIAL FACILITY**

FACILITY CONTACTS

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DESCRIPTION OF FACILITY

The Holliday Water Company owns and operates the Spring Creek Drinking Water Treatment Plant (WTP) located in Salt Lake County, Utah. The WTP is a direct filtration drinking water treatment plant that was constructed in the early 1980's and was designed with a gross capacity of 2.5 million gallons per day (MGD) and falls under the *Standard Industrial Category #4941, for Water Supply*. The Holliday WTP intercepts 100% of the water from the main spring (north fork) of Spring Creek. The spring water meets drinking water standards almost year-round, except during periods of spring runoff. For this reason, the Holliday Water Company has constructed a micro-filtration plant and obtained a UPDES permit for any intermittent discharges of the filter backwash water.

The WTP filters are backwashed approximately every 45 minutes during spring runoff and approximately every 75 minutes during the rest of the year. Backwash water is discharged into a 10,000-gallon settling tank and used for irrigation during the summer months, and discharged to Spring Creek during the winter months. Water is discharged from a drain in the bottom of the settling tank into a ditch on the property which has a number of small dams over which the water cascades. This serves to aerate the water and reduces the chlorine to lower levels. Compliance samples are taken of this discharge water at Outfall 001.

The filtration system is cleaned using caustic soda and citric acid. Discharges resulting from cleaning are routed to the sanitary sewer system. None of the cleaning solution is sent to the 10,000-gallon backwash settling tank which discharges to Outfall 001. Dilute sodium hypochlorite is constantly applied to the filtration system and is therefore included in the backwash to the settling tank where it undergoes a small amount of aeration. The aeration in the settling tank and the small dams in the discharge ditch provide sufficient de-chlorination to meet the permit limits in each of the monthly monitoring periods.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

There are only two changes proposed with this renewal permit. First is the removal of Secondary Treatment Standards for Total Suspended Solids (TSS) which no longer apply to Non-POTW facilities as described further in the Self-Monitoring & Reporting Requirements section of the permit and this Fact Sheet.

However, the Turbidity monitoring and limitation remains in the permit as an appropriate parameter in lieu of the previous TSS requirement. The second change is the removal of the quarterly metals monitoring, which was included as part of the 2016-17 permit renewal so as to better evaluate Reasonable Potential (RP) during the five-year permit cycle. The results of the RP analysis confirmed the removal of these quarterly metals as described further in the Reasonable Potential Analysis section and Addendum of this Fact Sheet. All other permit provisions remain unchanged.

DISCHARGE INFORMATION

DESCRIPTION OF DISCHARGE OUTFALL

A description of the permitted discharging outfalls are as follows:

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 40°40'14" North and longitude 111°48'34" West. Discharge pipe to Spring Creek.

RECEIVING WATERS AND STREAM CLASSIFICATION

The discharge flows directly into North Fork of Spring Creek, which discharges into a storm drain on Holladay Boulevard. Most of this flow is used for irrigation with a small amount going onto a storm drain on Holladay Boulevard. The flow that enters the storm drain on Holladay Boulevard ends up in the Salt Lake Jordan Irrigation Canal which discharges to the Jordan River. In the winter season all of the flow goes to the Salt Lake Jordan Irrigation Canal. The receiving waters of the North Fork of Spring Creek are designated according to *Utah Administrative Code (UAC) R317-2-13* as 2B, 3A, and 4 as follows:

- 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 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 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

BASIS FOR EFFLUENT LIMITATIONS

In accordance with regulations promulgated in *40 Code of Federal Regulations (CFR) Part 122.44* and in *Utah Administrative Code (UAC) R317-8-4.2*, effluent limitations are derived from technology-based effluent limitations guidelines, Utah Secondary Treatment Standards (*UAC R317-1-3.2*) or Utah Water Quality Standards (*UAC R317-2*). In cases where multiple limits have been developed, those that are more stringent apply. In cases where no limits or multiple limits have been developed, Best Professional Judgment (BPJ) of the permitting authority may be used where applicable. "Best Professional Judgment" refers to a discretionary, best professional decision made by the permit writer based upon precedent, prevailing regulatory standards or other relevant information.

Permit limits can also be derived from the Wasteload Analysis (WLA), which incorporates Secondary Treatment Standards, Water Quality Standards, including Total Maximum Daily Load (TMDL) impairments as appropriate, Antidegradation Review (ADR) 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 this UPDES renewal permit development, a WLA and ADR were completed as appropriate. An ADR Level I review was performed and concluded that an ADR Level II review was not required this time since there are no proposed increases in flow or concentrations from the existing Holliday WTP operations. The WLA indicates that the effluent limitations will be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters. The WLA and ADR are attached as an addendum to this Fact Sheet.

The following list is the basis of the effluent limitations for the applicable permit parameters:

- 1) Daily minimum and daily maximum limitations for pH are derived from Utah Water Quality Standards in *UAC R317-2-14*.
- 2) Turbidity monitoring requirements are also derived from Utah Water Quality Standards in *UAC R317-2-14*.
- 3) Limitations for Total Residual Chlorine are derived from the WLA.
- 4) The flow limitation is based upon the design flow of the discharge as provided by Holliday WTP.

The parameters of concern (POCs) are the same as previous permits and are based upon the WTP process utilizing chlorine as mentioned previously. Therefore, chlorine, turbidity (in lieu of TSS) and pH as mentioned above, are the primary POCs for this renewal permit.

Total Maximum Daily Load (TMDL)

The receiving water of Spring Creek does not have either an approved TMDL, or listed impairments for any POCs. Big Cottonwood Creek (Big Cottonwood Creek-1, UT16020204-019_00) downstream of the confluence with Spring Creek is listed as impaired for *E. coli*, temperature and bioassessment (Macroinvertebrates) per Utah's Combined *2018/2020 Integrated Report*. The Jordan River downstream of the confluence with Big Cottonwood Creek (Jordan River-4, UT16020204-004_00) is listed as impaired for *E. coli*, Bioassessment (Macroinvertebrates) and Total Dissolved Solids. None of these downstream impairments are existing or potential POCs at the Holliday WTP. Therefore, no additional potential POCs are being included at this time.

Reasonable Potential Analysis

Since January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date. RP for this permit renewal was conducted following DWQ's September 10, 2015 Reasonable Potential Analysis Guidance (RP Guidance). There are four outcomes defined in the RP Guidance: Outcome A, B, C, or D. These Outcomes provide a frame work for what routine monitoring or effluent limitations are required.

A qualitative RP analysis was performed on all current permit parameters and potential POCs to determine if there was reasonable potential for the discharge to exceed the applicable water quality standards. Based on the RP analysis, it was determined that no additional effluent limits were necessary in this renewal permit. This is because all the data points reviewed did not exceed the applicable Water Quality Standards. Therefore, no RP currently exists at the facility for the existing permit parameters and/or the identified POCs and a more quantitative RP analysis was not necessary at this time. The result is *RP Outcome C: No new effluent limitation. Routine monitoring requirements maintained as they are in the permit*. Also as a result of the RP analysis, the quarterly metals monitoring, which was included as part of the 2016-17 permit renewal to better evaluate RP for these metals during the five-year permit cycle, has been omitted. The

results of the RP analysis confirmed the removal of continued monitoring for these quarterly metals as appropriate. A copy of the RP analysis is included as an Addendum to this Fact Sheet.

The permit effluent limitations are as follows:

Parameter, Untis	Effluent Limitations *a			
	Maximum Monthly Avg	Maximum Weekly Avg	Daily Minimum	Daily Maximum
Total Flow, MGD *b, *c	--	--	--	0.025
pH, S.U.	--	--	6.5	9.0
Total Residual Chlorine, mg/L *d	0.011	--	--	0.019
Turbidity, NTU *e	--	--	--	Report

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are similar as in the previous permit with a couple changes as mentioned previously. TSS secondary treatment standards have been omitted to reflect recent rule changes in *UAC R317-1-3*, which clarifies that both TSS and BOD secondary treatment standards are not required for Non-POTW facilities. Publicly Owned Treatment Works (POTWs) are facilities that receive and process domestic waste water, therefore the Holliday WTP is a Non-POTW facility as classified and secondary treatment standards do not apply. Turbidity monitoring remains in the permit however, and is an appropriate parameter in lieu of TSS. Quarterly metals monitoring has also been omitted as mentioned in the previous section. The permit requires that the self-monitoring reports are to be submitted monthly as appropriate, and on Discharge Monitoring Report (DMR) forms due 28 days after the end of each monitoring period. Effective January 1, 2017, monitoring results must be submitted electronically using NetDMR unless the permittee has successfully petitioned for an exception. Lab reports for biomonitoring, as well as lab reports for metals and toxic organics, if required in the future must be submitted with the applicable DMRs. A review of the past 5 years of DMR data reveals that the WTP has had no permit exceedances and should be able to continue complying with the permit provisions as included herein.

The self-monitoring and reporting requirements in the permit are as follows:

Self-Monitoring and Reporting Requirements *a			
Parameter	Frequency	Sample Type	Units
Total Flow *b, *c	Monthly	Recorder	MGD
pH	Monthly	Grab	S.U.
Total Residual Chlorine *d	Weekly	Grab	mg/L
Turbidity *e	Weekly	Grab	NTU

*a See Definitions, *Part VII*, 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 Analytical results less than 0.06 mg/l will not be considered out of compliance with the permit. For purposes of calculating averages and reporting on the Discharge Monitoring Report form, the following will apply:
 - 1) analytical values less than 0.02 mg/L shall be considered zero; and
 - 2) analytical values less than 0.06 mg/L and equal to or greater than 0.02 mg/L will be recorded as measured.
- *e Turbidity increase (NTU) shall not be greater than 10 NTU between the source water and the effluent and shall be monitored weekly.

STORM WATER

Separate storm water permits may be required based on the types of activities occurring on site. The Holliday WTP facility falls under the *Standard Industrial Category #4941 for Water Supply*, and there is no bulk storage exposure of any contaminants at the facility. Therefore, a separate storm water industrial UPDES permit is not required.

Permit coverage under the Construction General Storm Water Permit (CGP) is required for any construction at the facility which disturb an acre or more, or is part of a common plan of development or sale that is an acre or greater. A Notice of Intent (NOI) is required to obtain a construction storm water permit prior to the period of construction.

Information on storm water permit requirements can be found at <http://stormwater.utah.gov>

PRETREATMENT REQUIREMENTS

Wastewater is discharged by the permittee into Publicly Owned Treatment Works (POTW) from kitchen and bathroom usage. Discharge is into POTWs that are owned and operated by Mt. Olympus Improvement District (Mt. Olympus) and Central Valley Water Reclamation Facility (CVWRF). Discharge from the Mt. Olympus POTW is discharged into the CVWRF and then treated by the CVWRF Wastewater Treatment Plant. An approved pretreatment program is implemented by CVWRF, with agreements to implement the pretreatment program within the service area for Mt. Olympus. Therefore if changes occur with the discharge of process wastewater into the POTW the permittee must contact CVWRF.

Currently, process wastewater is discharged by the permittee into a water of the State. If changes occur where process wastewater from the facility is discharged to a POTW, as an Indirect Discharge, which includes hauled waste, the permittee will be subject to federal, state and local pretreatment regulations. Based on section 307 of the Clean Water Act, the permittee shall comply with all applicable Federal Pretreatment Standards and Pretreatment Requirements promulgated in 40 CFR Section 403, the State Pretreatment Standards and Pretreatment Requirements found in UAC R317-8-8, and any Pretreatment Standards and Pretreatment Requirements developed by CVWRF or the POTW accepting the hauled waste.

In addition, per *40 CFR 403.12(p)(1)*, the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if a discharge of any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under *40 CFR 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring), dated February 2018 (DWQ WET policy). 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 Holliday WTP is a minor industrial facility that discharges a relatively small, infrequent amount of effluent that is essentially drinking water, in which toxicity is neither an existing concern, nor likely to be present at any time in the foreseeable future. Based on these considerations, there is no reasonable potential for toxicity in the permittee's discharge as per the DWQ WET Policy and BPJ of the permitting authority. As such, there will be no numerical WET limitations or WET monitoring requirements once again in this renewal permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge at any time in the future.

PERMIT DURATION

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

Drafted and reviewed by
Jeff Studenka, Discharge
Lonnie Shull, Biomonitoring
Jennifer Robinson, Pretreatment
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Utah Division of Water Quality, (801) 536-4300
November 19, 2021

PUBLIC NOTICE INFORMATION (to be updated after)

Began: Month Day, Year
Ended: Month Day, Year

Written Comments will be received at: 195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

The Public Notice of the draft permit and the draft permit documents will be published on the DWQ website for at least 30 days as required per UAC R317-8-6.5.

During the public comment period provided under UAC R317-8-6.5, any interested person may submit written comments on the draft permit and/or may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments will be considered in making the final decision and shall be answered as provided in UAC R317-8-6.12.

ADDENDUM TO FSSOB

ATTACHMENTS (2): I. Wasteload Analysis and Antidegradation Review
II. Reasonable Potential Analysis Summary

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ATTACHMENT 1

Wasteload Analysis & Antidegradation Review

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ATTACHMENT 2

Reasonable Potential Analysis

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REASONABLE POTENTIAL ANALYSIS

DWQ has worked to improve our reasonable potential (RP) analysis for the inclusion of limits for parameters in the permit by utilizing an EPA approved method and RP guidance document. As a result, more parameters and/or limits may be included in a renewal permit. There are four resulting outcomes for the RP Analyses¹ as listed below;

- Outcome A: A new effluent limitation will be placed in the permit.
- Outcome B: No new effluent limitation. Routine monitoring requirements will be placed or increased from what they are in the permit,
- Outcome C: No new effluent limitation. Routine monitoring requirements maintained as they are in the permit,
- Outcome D: No limitation or routine monitoring requirements are in the permit.

The Initial RP Screening Table is included below for all existing permit parameters and/or parameters of concern (POCs), as derived from the UPDES permit and the WLA information. Note that the full RP analysis model was not necessary at this time due to the results of the initial screening results below.

**RP Initial Screening Table for Holliday WTP (UT0025429)
2017-2021 Data Summary Results & RP Analysis (Outfall 001)**

Parameter	No. of Samples	MEC* mg/L	Water Quality Standards (WQS) MAC**		Result
			Acute WQS mg/L	Chronic WQS mg/L	
Copper	10	0.0025	0.0258	0.0162	MEC ≤ MAC
Chromium	10	0.0049	0.16	0.011	MEC ≤ MAC
Nickel	10	0.0056	0.842	0.0935	MEC ≤ MAC
Lead	10	<0.0001	0.136	0.0053	MEC ≤ MAC
TSS	>60	<3	25	35	MEC ≤ MAC
TRC	>200	0.011	0.019	0.011	MEC ≤ MAC
pH, SU	>200	7.4 - 7.6 (SU)	6.5 (min)	9.0 (max)	MEC ≤ MAC

Notes:

*MEC = Maximum expected effluent concentration as determined from existing data set.

**MAC = Maximum allowable concentration from Water Quality Standards and/or Wasteload Analysis.

MEC less than or equal (≤) to MAC, no additional Acute or Chronic limits required.

MEC > MAC = RP identified, include appropriate limits, if applicable.

Result: From the table above, the RP analysis results of the discharge for the listed POCs is: MEC ≤ MAC, Therefore no additional Acute or Chronic limits required. This equates to ***RP Outcome C: No new effluent limitation. Routine monitoring requirements maintained as they are in the permit.***

Summary: Based upon the policy “Reasonable Potential Analysis Guidance” developed by the Utah Division of Water Quality on September 10, 2015 and subsequently implemented beginning January 1, 2016 for all new and renewal permits; it was determined that no additional effluent limits were warranted in this 2022 renewal permit. This is because all the data points reviewed did not exceed the applicable Water Quality Standards and in most cases were well below the standards. Also as a result of the RP analysis, the quarterly metals monitoring, which was included as part of the 2016-17 permit renewal so as to better evaluate RP for these metals during

¹ Outcome definitions taken from the 2015 DWQ Reasonable Potential Analysis Guidance.

the five-year permit cycle, has been omitted. The results of the RP analysis above confirmed the removal of quarterly metals monitoring as appropriate. Therefore, no RP currently exists at the facility for the existing permit parameters and/or identified POCs and a more quantitative RP analysis was not necessary at this time.

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