

**STATEMENT OF BASIS & FACT SHEET
HOLLIDAY WATER COMPANY
CULINARY WATER TREATMENT PLANT
UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES)
MINOR INDUSTRIAL FACILITY PERMIT RENEWAL
UPDES PERMIT NUMBER: UT0025429**

FACILITY CONTACT INFORMATION

Person Name: Marlin Sundberg
Position: General Manager
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Person Name: Doug Hanson
Position: Plant Operator
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Facility Name and Address: Holliday Water Company
1887 East 4500 South (Offices)
Salt Lake City, Utah 84117
Telephone (801) 277-2893

Address of Water Treatment
Plant: 2889 E. Live oak Circle
Holliday, Utah 84117

DESCRIPTION OF FACILITY

The Holliday Water Company is a culinary water treatment plant located at 2889 E. Live Oak Circle (approximately 4590 South) in Salt Lake County. The plant has a gross capacity of 2.5 million gallons per day (MGD) of drinking water and processes spring water through microfiltration. The plant receives its water from nearby surface springs that also provide water for both the north and south forks of Spring Creek. The flow unutilized by the plant is used downstream for irrigation and aesthetic purposes.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

The renewal permit includes the addition of quarterly effluent monitoring requirements for copper, nickel, lead, and chromium.

DESCRIPTION OF DISCHARGE

The Holliday Water Company 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, Holliday Water Company has constructed a micro-filtration plant and obtained a UPDES permit for any intermittent discharges of the filter backwash water. The filters of this plant 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 to 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 ditch 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. All monthly monitoring parameters were within their respective permit limits for the past five years. Effluent data as obtained from ICIS and a wasteload analysis is appended to this Fact Sheet/Statement of Basis.

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 (please see waste load analysis attached).

- 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 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 have been developed, Best Professional Judgment (BPJ) may be used where applicable.

Effluent limitations are also derived using a waste load analysis (WLA), which is attached to this statement of basis as Addendum I. The WLA incorporates up-stream and effluent discharge rates, Secondary Treatment Standards, Water Quality Standards, 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.

For the monthly and weekly averages, limitations on total suspended solids (TSS) are based on current Utah Secondary Treatment Standards (*UAC R317-1-3.2*).

Limitations on pH are based on current Utah Secondary Treatment Standards (*UAC R317-1-3.2*).

The total residual chlorine and turbidity limits are based on the Waste Load Analysis.

The design flow for this facility was obtained from the facility operator. The design flow is 0.025 million gallons per day (MGD).

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 framework for what routine monitoring or effluent limitations are required

A quantitative RP assessment was conducted based on the fact that the organics and metals were in low concentration. There were four metals that had values above the method detection limit: copper, chromium, lead, and nickel. Based on the assessment, the concentrations of these metals are nearly 10 times lower than the water quality standards, but not high enough to require a full reasonable potential analysis. Based on this assessment there is no reasonable potential for the discharge to exceed the applicable water quality standards. However, since these metals were above the detection limit, and to collect data for future reasonable potential analysis, monitoring every three months for the four metals will be required in the renewal permit. A copy of the RP analysis is included at the end of this Fact Sheet/Statement of Basis.

The following effluent limitations will be included in the UPDES permit renewal:

| Parameter | Effluent Limitations | | | |
|-------------------------------|----------------------|--------------------|---------------|---------------|
| | Maximum Monthly Avg | Maximum Weekly Avg | Daily Minimum | Daily Maximum |
| Total Flow, MGD | NA | NA | NA | 0.025 |
| Total Suspended Solids, mg/L | 25 | 35 | NA | NA |
| pH, S.U. | NA | NA | 6.5 | 9.0 |
| Total Residual Chlorine, mg/L | 0.011 | NA | NA | 0.019 |

NA – Not Applicable

Turbidity increase (NTU) shall not be greater than 10 NTU between the source water and the effluent and shall be monitored weekly.

There shall be no visible sheen or floating solids or visible foam in other than trace amounts.

There shall be no discharge of sanitary wastes.

SELF-MONITORING AND REPORTING REQUIREMENTS

Samples are taken at the outfall pipe (Outfall 001) where it daylights to North Spring Creek, with coordinates of 40° 40' 14" north latitude and 111° 48' 34" west longitude.

The following effluent self-monitoring requirements are based on the *Utah Monitoring, Recording and Reporting Frequency Guidelines* as effective December 1, 1991. Reports shall be made on Discharge Monitoring Report (DMR) forms or through NetDMR, and are due 28 days after the end of the monitoring period month.

| Self-Monitoring and Reporting Requirements | | | |
|--|-----------|-------------|-------|
| Parameter | Frequency | Sample Type | Units |
| Total Flow | Monthly | Recorder | MGD |
| Total Suspended Solids | Monthly | Grab | mg/L |
| pH | Monthly | Grab | S.U. |
| Total Residual Chlorine | Weekly | Grab | mg/L |
| Turbidity | Weekly | Grab | NTU |
| Total Copper | Quarterly | Grab | mg/L |
| Total Chromium | Quarterly | Grab | mg/L |
| Total Nickel | Quarterly | Grab | mg/L |
| Total Lead | Quarterly | Grab | mg/L |

STORM WATER

There are no storm water requirements as the facility does not currently meet the criteria to obtain separate permitting provisions.

PRETREATMENT

With the exception of cleaning of the filtration system and bathroom usage, the permittee does not discharge to another wastewater treatment facility, but rather treats and discharges all of the facility's process wastewater. Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of *The Water Quality Act of 1987*, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at *40 CFR 403*, the State Pretreatment Requirements at *UAC R317-8-8*, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters

In addition, in accordance with *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 they discharge 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

Since Holliday Water Company essentially discharges drinking quality water, which is not an existing or potential concern, no whole effluent toxicity testing (biomonitoring) is required. However, the permit will contain a toxicity limitation-reopener provision if toxicity is believed to be present during the life of the permit.

PERMIT DURATION

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

Drafted by:
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Utah Division of Water Quality
Drafted September 15, 2016

The draft permit and FSSOB was public noticed from _____ through _____ in the Salt Lake
Tribune and Deseret News and on our website at _____ .

Addendum I: Discharge Monitoring Report (DMR) Data

PV DRAFT

Addendum II: Wasteload Allocation

PV DRAFT

Addendum III: Reasonable Potential Determination

PV DRAFT

