

# Snyderville Basin Water Reclamation District

2800 Homestead Road, Park City, Utah

---

## Local Limits

January 29, 2013

Prepared by:



**CWA Consulting Services, LLC.**  
P.O. Box 620848  
Littleton, CO 80162  
[www.POTW.com](http://www.POTW.com)

**Curt McCormick**  
(303) 904-6049  
Fax: (720) 836-4209  
[Curt@POTW.com](mailto:Curt@POTW.com)

**Snyderville Basin Water Reclamation District  
Industrial Pretreatment Program  
Local Limits Revision**

**A. Purpose**

The General Pretreatment Regulations (40 CFR Part 403) require that each Publicly Owned Treatment Works (POTW) with a pretreatment program develop and enforce Technically-Based Local Limits (TBLLs) which will establish the maximum loading of pollutants that can be accepted from industrial users without causing a violation of applicable environmental standards. Local limits are developed and enforced to prevent Pass Through, Interference, protect sludge disposal practices and prevent impacts to the health and safety of workers or the general public (40 CFR sections 403.2 and 403.5(c)(1)). The Snyderville Basin Water Reclamation District (District) used the EPA July 2004 Local Limits Development Guidance (EPA 833-R-04-002A) as a framework for establishing limits to protect the POTW and environment (40 CFR 403.8(f)(4)). Additional guidance from the Utah Department of Environmental Quality was also used. The District has an on-going pollutant monitoring program specified in permits for the Silver Creek Water Reclamation Facility (UT0024414) and the East Canyon Creek Water Reclamation Facility (UT0020001). The Utah Department of Environmental Quality, Division of Water Quality is the Approval Authority for Pretreatment Program oversight.

**B. Municipal Organization**

The Snyderville Basin Water Reclamation District, Summit County, Utah, operates under Utah Code Annotated (UCA), Title 17A. The District provides the wastewater collection and reclamation services to western Summit County (Snyderville Basin) which includes Park City. The District collects wastewater from just under 11,000 homes and businesses in the area and encompasses approximately 102 square miles. The District operates and maintains two reclamation facilities – Silver Creek WRF and East Canyon Creek WRF. The sewerage system includes twelve pump stations and includes a collection system consisting of over 260 miles of sewer lines. The Board of Trustees is made up of four elected members from the general populace served by the District and one member appointed by the Park City Municipal Corporation.

Changes to the legal authority for the District are initiated by the wastewater operations and pretreatment program staff and managers. The Board of Trustees will review and formally approve all changes. Change to the Rules and Regulations goes through 1<sup>st</sup> reading, 2<sup>nd</sup> reading and approval. This public process is no shorter than at least 30 days. Changes to the Rules and Regulations and the supporting information for the local limits will typically be submitted to the State for formal approval after 1<sup>st</sup> reading. The District will generally submit changes to the Rules and Regulations to the UDEQ for information review prior to 1<sup>st</sup> reading. In addition, to the public process for adopting changes, the District will rely on the State to provide the required 30 day opportunity to comment in a newspaper that provides meaningful public notice.

**C. Description of POTW(s)**

The District has two Publicly-Owned Treatment Works (POTWs): Silver Creek and East Canyon Creek water reclamation facilities.

Silver Creek WRF

The Silver Creek WRF is a conventional, secondary treatment plant. The WRF has initial screening and grit removal, primary clarification, an oxidation ditch (extended aeration), final clarification, filtration and disinfection by UV light and then aerated. Sludge is sent to a filter press and out to disposal. The sludge is used for reclamation. The District is authorized under its UPDES permit to dispose of sludge by land application if the District determines this is appropriate. The District’s sludge meets all disposal requirements for “clean” sludge for metals under 40 CFR Part 503 and the UPDES permit. The local limits will assure that “clean” sludge quality is protected. This POTW receives wastewater from Significant Industrial Users (SIUs) permitted under the approved pretreatment program.

The current design loadings for the plant are:

|                                  |               |
|----------------------------------|---------------|
| Flow:                            | 2.0 mgd       |
| Design influent BOD <sub>5</sub> | 3,336 lbs/day |
| Design influent suspended solids | 3,836 lbs/day |

Effluent limitations that are applicable to the development of local limits and contained in the Utah Pollutant Discharge Elimination System (UPDES) permit are:

| Parameter                    | Monthly Average | Weekly Average | Daily Maximum |
|------------------------------|-----------------|----------------|---------------|
| CBOD <sub>5</sub> (mg/L)     | 20              | 30             |               |
| BOD (% removal)              | 85              | N/A            | N/A           |
| TSS (mg/L)                   | 25              | 35             | N/A           |
| TSS (% removal)              | 85              | N/A            | N/A           |
| Ammonia (mg/L) – Summer      | 4.0             | N/A            | 11.9          |
| Ammonia (mg/L) – Fall/Spring | 4.5             | N/A            | 10.0          |
| Ammonia – Winter             | 4.0             | N/A            | 8.5           |

East Canyon Creek WRF

The East Canyon Creek WRF is designed to provide biological and chemical phosphorus removal. Wastewater enters the treatment works and is screened, followed by grit removal, flow equalization, bioreactors (anaerobic, anoxic and an oxidation ditch), clarification, chemical phosphorus removal (alum and polymers), filtration and UV disinfection and aeration. Odor control using granular activated carbon is used. Solids are concentrated with centrifuges to approximately 18 percent solids and are used for reclamation. This POTW receives the total flow from the one Significant Industrial User (SIU) permitted under the approved pretreatment program. The District is authorized under its UPDES permit to dispose of sludge by land application if the District determines this is appropriate. The District’s sludge meets all disposal requirements for “clean” sludge for metals pursuant to 40 CFR Part 503 and the UPDES permit. The local limits will assure that “clean” sludge quality is protected. This POTW receives wastewater from Significant Industrial Users (SIUs) permitted under the approved pretreatment program.

The current design loadings for the plant are:

Flow: 4.0 mgd  
 Design influent BOD<sub>5</sub> 7,339 lbs/day  
 Design influent suspended solids 10,008 lbs/day

Effluent limitations that are applicable to the development of local limits and contained in the Utah Pollutant Discharge Elimination System (UPDES) permit are:

| Parameter                         | Monthly Average | Weekly Average | Daily Maximum | Annual Load | Seasonal Load |
|-----------------------------------|-----------------|----------------|---------------|-------------|---------------|
| CBOD <sub>5</sub> (mg/L)          | 12              | 17             |               |             |               |
| BOD (% removal)                   | 85              |                |               |             |               |
| TSS (mg/L)                        | 25              | 35             |               |             |               |
| TSS (% removal)                   | 85              |                |               |             |               |
| Ammonia (mg/L)                    |                 |                |               |             |               |
| Spring                            | 6.4             |                | 10.4          |             |               |
| Summer                            | 5.4             |                | 10.4          |             |               |
| Fall                              | 8.4             |                | 12.2          |             |               |
| Winter                            | 7.8             |                | 12.9          |             |               |
| Total Phosphorus, lbs (July-Sept) |                 |                |               |             | 322           |
| Total Phosphorus (lbs/yr)         |                 |                |               | 1969        |               |

**D. Other Municipal Contributors**

The District provides wastewater treatment services for domestic, commercial, and industrial users located in Summit County and Park City, UT. Park City has delegated all pretreatment responsibilities for implementation and enforcement of the pretreatment program to the District.

**E. Acronyms**

- BOD<sub>5</sub> Biochemical Oxygen Demand
- CBOD<sub>5</sub> Carbonaceous Biochemical Oxygen Demand
- CFR Code of Federal Regulations
- EPA Environmental Protection Agency
- IU Industrial User
- lbs/day pounds per day
- MAHL Maximum Allowable Headworks Loading
- MAIL Maximum Allowable Industrial Loading
- MDL Method Detection Limit
- mg/L milligrams per Liter
- mgd million gallons per day
- POC Pollutant of Concern
- POTW Publicly Owned Treatment Works
- QA/QC Quality Assurance/Quality Control
- SIU Significant Industrial User
- TBLL Technically-Based Local Limits
- TSS Total Suspended Solids

|       |   |
|-------|---|
| WQS   | Water Quality Standards                     |
| WRF   | Water Reclamation Facility                  |
| UPDES | Utah Pollutant Discharge Elimination System |

## **F. Definitions**

Approval Authority means the Director, Utah Department of Environmental Quality, Division of Water Quality.

Best Management Practices or BMPs means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in §403.5(a)(1) and (b). BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

Biochemical Oxygen Demand (BOD) means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five days at twenty (20) degrees Celsius expressed in milligrams per liter.

District means the Snyderville Basin Water Reclamation District, a municipal corporation of the State of Utah.

Daily Maximum means the maximum allowable discharge of a pollutant. Where daily maximum limitations are expressed in units of concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration discharged over a 24 hour period or as otherwise specified in the industrial user permit. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over a 24 hour period or as otherwise specified in the industrial user permit.

Indirect Discharge or Discharge means the introduction of pollutants into a POTW from any non-domestic source regulated under sections 307(b), (c) or (d) of the Act.

Industrial User or User means a source of Indirect Discharge.

Maximum Allowable Industrial Loading (MAIL) means the total mass of a pollutant that all Industrial Users (or a subgroup of Industrial Users as identified by the District) may discharge pursuant to the local limits developed under 40 CFR Section 403.5(c).

Maximum Allowable Headworks Loading (MAHL) means the maximum loading of a pollutant that can be received at the POTW's headworks without causing Pass Through, Interference, interfere with beneficial reuse of sludge, or cause an adverse effect on worker health and safety.

Pollutant of Concern (POC) means any pollutant that is present in concentrations or mass that may reasonably be expected to cause Pass Through, Interference or impact another environmental criterion evaluated in the development of local limits.

Pretreatment Requirements means any substantive or procedural requirement related to Pretreatment, other than a National Pretreatment Standard, imposed on an Industrial User.

Pretreatment Standard or Standard. Any regulation containing pollutant discharge limits promulgated by the EPA in accordance with section 307 (b) and (c) of the Act, which applies to Industrial Users. This

term includes prohibitive discharge limits and local limits established pursuant to 40 CFR Section 403.5 and Best Management Practices.

Publicly Owned Treatment Works or POTW means a treatment works as defined by Section 212 of the Act, which is owned by a State or municipality (as defined by Section 502(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

Significant Industrial User.

1. Except as provided in paragraph (2), "Significant Industrial User" means:
  - a. Industrial users subject to Categorical Pretreatment Standards under 40 CFR Section 403.6 and 40 CFR Chapter I, Subchapter N;
  - b. Any other industrial user that discharges an average of twenty-five thousand (25,000) gallons per day or more of process wastewater to the POTW, excluding sanitary, noncontact cooling and boiler blow down wastewater;
  - c. Industrial users contributing a process wastestream which makes up five percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or
  - d. Industrial users designated as such by the BOPU on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or Requirement.
2. Upon a finding that an industrial user meeting the criteria of subdivision (1)(b) has no reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or Requirement, the POTW may at any time, on its own initiative or in response to a petition received from an industrial user, and in accordance with 40 CFR Section 403.8(f)(6), determine that such Industrial User is not a Significant Industrial User.

## **G. Legal Authority Language**

The District is adopting these local limits through the Board of Trustees approval. The District legal authority language for local limits is part of a more comprehensive change submitted to the State with the local limits modifications. In general, the District will be incorporating local limits into their Rules and Regulations and apply the local limits to permitted industrial users. In addition, the District will be adopting technology based standards for Benzene and BTEX that reads as follows:

*The following limits shall apply to wastewaters that are discharged from the groundwater cleanup of petroleum or gasoline underground storage tanks or other remediation wastewaters containing these pollutants or where these pollutants are appropriate surrogates. It shall be unlawful for any Industrial User to discharge or cause to be discharged any waste or wastewater to the Silver Creek Water Reclamation Facility or the East Canyon Creek Water Reclamation Facility that exceeds the following limits, as applicable.*

| <i>Pollutant</i>          | <i>Daily Maximum Limit (mg/L)<sup>(a)</sup></i> |
|---------------------------|---|
| <i>Benzene</i>            | <i>0.050</i>                                    |
| <i>BTEX<sup>(b)</sup></i> | <i>0.750</i>                                    |

<sup>(a)</sup> *All pollutants shown in the Table are total.*

<sup>(b)</sup> *BTEX shall be measured as the sum of benzene, ethylbenzene, toluene and xylenes.*

## **H. Pollutants of Concern (POC)**

Local limits are based on the Maximum Allowable Headworks Loading (MAHL). The first step was to identify the pollutants that should be evaluated to allow the District to determine whether or not a pollutant should be evaluated further. These initial pollutants of concern were sampled to determine whether or not they should be included in local limits calculations. This process was completed consistent with the 2004 EPA Local Limits Guidance.

The following criteria/data considerations were used to evaluate an initial POC list:

1. Pollutants of Concern established by EPA, including Arsenic, Cadmium, Chromium, Copper, Cyanide, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Zinc, BOD<sub>5</sub>, Total Suspended Solids and Ammonia.
2. Historical data included a review of POTW influent, effluent and sludge data (organics, metals and conventional pollutants).
3. POTW influent Priority Pollutant analyses, as required by the UPDES permits, was reviewed.
4. NPDES Permit Limited Pollutants were reviewed and included in the sampling program, as appropriate (e.g. BOD, TSS, Ammonia).
5. Water Quality Standards (WQS) applicable to the receiving water were identified and screened against POTW effluent sampling. Aquatic life standards and fish consumption WQS were evaluated.
6. Inhibition was evaluated. However, no inhibition has been experienced for at least the past five years. Consistent with the 2004 EPA Local Limits guidance, site-specific inhibition data has not been evaluated further.
7. Sludge quantity and quality was compiled for 2010 to the present. No pollutant poses a threat to interfering with the land disposal option as compared to the Clean Sludge Standards (Table 3) and the Ceiling Concentration (Table 1). The regulated pollutants are already pollutants that have been identified for additional commercial and residential sampling.
8. Pollutants that may cause adverse worker health and safety affects were evaluated.

## I. Pollutants of Concern

The following list has been evaluated based upon the data and EPA guidance to allow the District to establish what pollutants are to be sampled for local limits development (e.g. residential and commercial sampling) and carried through the local limits evaluation process.

| 2009 to Present                               | Pollutant of Concern for Local Limits? | Silver Creek  | East Canyon  |
|---|--|---|--|
| Flow  | No                                     | 2.0 mgd Design (2.24 mgd projected permit basis).<br>Influent: 0.025 mg/L<br>WQS (3A)-Acute - 0.75 mg/L<br>WQS (3A)-Chronic – 0.087 mg/L<br>Seasonal limits: 8.5 mg/L is most stringent | 4.0 mgd Design (3.7 mgd projected: permit basis).<br><br>N/A   |
| Aluminum                                      | No                                     | Influent: 26 mg/L (n=15)<br>Effluent: 0.6 mg/L (n=139)<br>Monitor-only (Infl/Eff).  | Seasonal limits: 10.4 mg/L is most stringent<br>Influent: 22.4 mg/L (n=14)<br>Effluent: 0.52 mg/L (n=139)  |
| Ammonia                                       | No                                     | Influent: 0.003 mg/L<br>Effluent: 0.0017<br>85% removal.  | Monitor-only (Infl/Eff)<br>Influent: 0.0013 mg/L<br>Effluent: 0.0007 mg/L  |
| Arsenic                                       | Yes Recommended by State               | Influent: 166 mg/L (n=140)<br>Effluent: 5.0 mg/L (n=140)<br>Monitor-only (Infl/Eff).  | 85% removal.<br>Influent: 172 mg/L (n=140)<br>Effluent: 3.3 (n=140)  |
| Biochemical Oxygen Demand (BOD <sub>5</sub> ) | Yes Recommended by State               | Influent: 0.0025 mg/L<br>Effluent: 0.0005 mg/L  | Monitor-only (Infl/Eff)<br>Influent: 0.0004 mg/L<br>Effluent: 0.00025 mg/L   |
| Cadmium                                       | Yes Recommended by State               | CBOD * 1.2 to estimate BOD. Only needed if BOD will be adopted as a local limit or a surcharge level calculated. Limited.<br>Influent: 151 mg/L<br>Effluent: 4.5 mg/L                   | CBOD * 1.2 to estimate BOD. Only needed if BOD will be adopted as a local limit or a surcharge level calculated. Limited<br>Influent: 156 mg/L (n=140)<br>Effluent: 3.0 mg/L (n=140) |
| CBOD <sub>5</sub>                             |  |   |  |

|                  |  |   |  |
|------------------|--|---|--|
| 2009 to Present  | Pollutant of Concern for Local Limits? | Silver Creek  | East Canyon  |
| Chromium (total) | Yes Recommended by State               | <p>Monitor-only (Inf/Eff).<br/>           Influent: 0.0038 mg/L<br/>           Effluent: 0.002 mg/L</p>                               | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.016 mg/L<br/>           Effluent: 0.0026 mg/L</p>                                   |
| Copper           | Yes Recommended by State               | <p>Monitor-only (Inf/Eff).<br/>           Influent: 0.077 mg/L<br/>           Effluent: 0.015 mg/L</p>                                | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.0832 mg/L<br/>           Effluent: 0.0048 mg/L</p>                                  |
| Cyanide (Total)  | No                                     | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.003 mg/L (n=7, 5&lt;MDL)<br/>           Effluent: 0.001 mg/L (n=6, 4&lt;MDL)</p> | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.002 mg/L (n=14, 10&lt;MDL)<br/>           Effluent: 0.0013 mg/L (n=8, 7&lt;MDL)</p> |
| Lead             | Yes Recommended by State               | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.003 mg/L<br/>           Effluent: 0.0005 mg/L</p>                                | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.0015 mg/L<br/>           Effluent: 0.0003 mg/L</p>                                  |
| Mercury          | Yes Recommended by State               | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.0000467 mg/L<br/>           Effluent: 0.0000025 mg/L</p>                         | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.0000234 mg/L<br/>           Effluent: 0.0000077 mg/L</p>                            |
| Molybdenum       | Yes Recommended by State               | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.0027 mg/L<br/>           Effluent: 0.0023 mg/L</p>                               | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.0018 mg/L<br/>           Effluent: 0.0013 mg/L</p>                                  |
| Nickel           | Yes Recommended by State               | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.012 mg/L<br/>           Effluent: 0.0117 mg/L</p>                                | <p>Monitor-only (Inf/Eff)<br/>           Influent: 0.011 mg/L<br/>           Effluent: 0.012 mg/L</p>                                    |
| Oil and Grease   | No                                     | <p>Maintaining existing FOG program. SIUs are not a source of Oil and Grease.</p>   | <p>Maintaining existing FOG program. SIUs are not a source of Oil and Grease.</p>  |

|                              |  |  |  |
|------------------------------|--|--|--|
| 2009 to Present              | Pollutant of Concern for Local Limits? | Silver Creek   | East Canyon  |
| Phosphorus                   | No-Silver Creek<br>Yes-East Canyon.    | Monitor-only (Inf/Eff)<br>Influent: 5.1 mg/L (n=70)<br>Effluent: 2.2 mg/L (n=70)   | 0.1 mg/L Limit.<br>Influent: 5.6 mg/L (n=78)<br>Effluent: 0.08 mg/L (n=81)                   |
| Priority Pollutants          | None Present                           | POTW is implementing a sampling and source control program.<br>Monitor-only (Inf/Eff)  | Monitor-only (Inf/Eff)<br>No Detected Pollutants for Organics                                |
| Selenium                     | Yes Recommended by State               | No Detected Pollutants for Organics<br>Monitor-only (Inf/Eff)<br>Influent: 0.003 mg/L<br>Effluent: 0.0019 mg/L<br>Monitor-only (Inf/Eff) | Monitor-only (Inf/Eff)<br>Influent: 0.0023 mg/L<br>Effluent: 0.0017 mg/L                     |
| Silver                       | Yes Recommended by State               | Influent: 0.0034 mg/L<br>Effluent: 0.0003 mg/L<br>WQS: 1200 mg/L   | Monitor-only (Inf/Eff)<br>Influent: 0.00035 mg/L<br>Effluent: 0.00025 mg/L<br>WQS: 1200 mg/L |
| Total Dissolved Solids (TDS) | No                                     | Insufficient long-term data. POTW is implementing a sampling and source identification program.<br>Permit Limited                        | POTW is implementing a sampling and source identification program.<br>Permit Limited         |
| Total Suspended Solids (TSS) | Yes Recommended by State               | Influent: 185 mg/L (n=142)<br>Effluent: 6.2 (n=142)<br>Monitor-only (Inf/Eff)  | Influent: 181 mg/L (n=142)<br>Effluent: 3.6 mg/L (n=142)                                     |
| Zinc                         | Yes Recommended by State               | Influent: 0.606 mg/L<br>Effluent: 0.212 mg/L   | Monitor-only (Inf/Eff)<br>Influent: 0.192 mg/L<br>Effluent: 0.08 mg/L                        |

Important note: The District intends to adopt local limits for the EPA recommended metals whether or not they are specifically required to do so under 40 CFR Section 403.8(f)(4).

**J. SILVER CREEK WATER RECLAMATION FACILITY**

| Pollutant        | Existing Local Limits | Existing Local Limits<br>mg/L or lbs/day | SIUs and Permitted Industrial Users  |                          |               |
|------------------|-----------------------|--|--------------------------------------|--------------------------|---------------|
|                  |                       |  | Proposed Daily Maximum<br>(as total) | Units<br>mg/L or lbs/day | Type of Limit |
| Arsenic          | 1.2222                | mg/L                                     | 0.09                                 | mg/L                     | Daily Maximum |
| Cadmium          | 0.0374                | mg/L                                     | 0.05                                 | mg/L                     | Daily Maximum |
| Chromium (Total) | 1.0193                | mg/L                                     | 1.36                                 | mg/L                     | Daily Maximum |
| Copper           | 3.6339                | mg/L                                     | 0.80                                 | mg/L                     | Daily Maximum |
| Lead             | 0.7955                | mg/L                                     | 0.49                                 | mg/L                     | Daily Maximum |
| Mercury          | 0.0005                | mg/L                                     | 0.0031                               | mg/L                     | Daily Maximum |
| Molybdenum       | 11.5472               | mg/L                                     | 0.38                                 | mg/L                     | Daily Maximum |
| Nickel           | 4.8802                | mg/L                                     | 1.23                                 | mg/L                     | Daily Maximum |
| Selenium         | 0.1535                | mg/L                                     | 0.07                                 | mg/L                     | Daily Maximum |
| Silver           | 2.7422                | mg/L                                     | 6.99                                 | mg/L                     | Daily Maximum |
| Zinc             | 30.4370               | mg/L                                     | 0.43                                 | mg/L                     | Daily Maximum |
| BOD              | 3336                  | lbs/day                                  | 472                                  | lbs/day                  | Daily Maximum |
| TSS              | 3836                  | lbs/day                                  | 759                                  | lbs/day                  | Daily Maximum |

### Summary of all Local Limits Input Data

|  |                   |  |
|--|-------------------|--|
| POTW NAME:   | Silver Creek      |  |
| POTW Flow for Local Limits (mgd)                         | 2.0               |  |
| SIU Flow for Local Limits (mgd):                         | 0.10              |  |
| Flow for Permitted Non-SIU Industrial Users (mgd)        | 0.02              |  |
| Combined plus Domestic + Commercial Flow (mgd):          | 1.88              |  |
| Trucked and Hauled Wastewater Flow (mgd):                | 0.0               |  |
| Specific Gravity of Sludge to Disposal (kg/L)            | 1.05              | See Appendix S of 2004 EPA Local Limits Guidance   |
| Sludge Flow to Disposal (mgd):                           | 0.0013            | Average of 2010-2011                               |
| % Solids to Disposal (%):                                | 14.8              | Average of 2010-2011                               |
| Sludge Table (1,3 OR "O" THER) Based on Disposal Option: | 3                 | District is evaluating land application options    |
| Acute Receiving Water Flow (mgd):                        | 0.001             | From State WLA-Fact Sheet                          |
| Chronic Receiving Water Flow (mgd):                      | 0.001             | From State WLA-Fact Sheet                          |
| Hardness for Metals Calculations (mg/L):                 | 400               | From State WLA-Fact Sheet                          |
| Is the Receiving Water a Drinking Water Supply (Y/N)?:   | N                 | Protected as Class 1C – See Criteria and Standards |
| Applicable Standards:                                    | Acute and Chronic |  |

Silver Creek

| Daily/Acute<br>Criteria and Standards<br><br>Pollutant | Daily Max/7 Day<br>NPDES Permit<br>Limit<br>mg/L | Class 3A<br>State<br>Acute<br>WQ Stds<br>mg/L | POTW<br>Design Capacity<br>for BOD and<br>TSS<br>lbs/day | Most Stringent<br>State 1C and 4<br>mg/L |
|--|--|---|--|--|
| Arsenic  |  | 0.34  |  | 0.01                                     |
| Cadmium  |  | 0.0087  |  | 0.01                                     |
| Chromium (Total)                                       |  | 5.612   |  | 0.05                                     |
| Copper   |  | 0.0517  |  | 0.2                                      |
| Lead   |  | 0.4768  |  | 0.015                                    |
| Mercury  |  | 0.0024 <sup>(a)</sup>                         |  | 0.002                                    |
| Molybdenum   |  |   |  |  |
| Nickel   |  | 1.5159  |  | 0.1                                      |
| Selenium   |  | 0.0184  |  | 0.05                                     |
| Silver   |  | 0.0411  |  | 0.05                                     |
| Zinc   |  | 0.3878  |  | 7.4                                      |
| BOD  |  |   | 3336   |  |
| TSS  |  |   | 3836   |  |

(a) Mercury value used in Waste Load Allocation.

Silver Creek

| Monthly/Chronic<br>Criteria and Standards<br><br>Pollutant | Monthly<br>NPDES Permit<br>Limit<br>mg/L | State<br>Chronic<br>Water Quality<br>Standards<br>mg/L | State<br>Water and Fish<br>Consumption<br>mg/L | State<br>Fish Consumption<br>mg/L |
|--|--|--|--|-----------------------------------|
| Arsenic  |  | 0.15   |  |                                   |
| Cadmium  |  | 0.0008   |  |                                   |
| Chromium (Total)   |  | 0.2682   |  |                                   |
| Copper   |  | 0.0305   | 1.3  |                                   |
| Lead   |  | 0.0186   |  |                                   |
| Mercury  |  | 0.000012   |  |                                   |
| Molybdenum   |  |  |  |                                   |
| Nickel   |  | 0.1685   | 0.1  | 4.6                               |
| Selenium   |  | 0.0046   |  | 4.2                               |
| Silver   |  |  |  |                                   |
| Zinc   |  | 0.3878   | 7.4  | 26                                |
| BOD  |  |  |  |                                   |
| TSS  |  |  |  |                                   |

Silver Creek

| Sewage Sludge<br><br>Pollutant | Maximum<br>POTW<br>Sludge<br>to Disposal<br>mg/kg<br>Dry Weight | Table 3<br>"Clean"<br>Land Application<br>Sludge<br>Criteria<br>mg/kg |
|--------------------------------|---|---|
| Arsenic                        | 22.6  | 41  |
| Cadmium                        | 17.2  | 39  |
| Chromium (Total)               |   |   |
| Copper                         | 883   | 1500  |
| Lead                           | 81.7  | 300   |
| Mercury                        | 1.15  | 17  |
| Molybdenum                     | 6.07  | 75  |
| Nickel                         | 12.5  | 420   |
| Selenium                       | 17.6  | 100   |
| Silver                         | 17.8  |   |
| Zinc                           | 2950 <sup>(a)</sup>   | 2800  |
| BOD                            |   |   |
| TSS                            |   |   |

- (a) Snyderville is evaluating options. The source of zinc is from the drinking water supply from Park City, UT.

Silver Creek

| Influent and Effluent Data<br>Pollutant | Average POTW Influent mg/L | Comment and Notes | POTW Influent lbs/day | Average POTW Effluent mg/L | Comment and Notes | POTW Effluent lbs/day |
|---|----------------------------|-------------------|-----------------------|----------------------------|-------------------|-----------------------|
| Arsenic                                 | 0.003                      | n=9, 0<MDL        | 0.050                 | 0.0017                     | n=8, 1<MDL        | 0.0284                |
| Cadmium                                 | 0.0025                     | n=9, 1<MDL        | 0.0417                | 0.0004                     | n=8, 4<MDL        | 0.0067                |
| Chromium (Total)                        | 0.0038                     | n=7, 0<MDL        | 0.0634                | 0.002                      | n=6, 0<MDL        | 0.033                 |
| Copper                                  | 0.077                      | n=7, 0<MDL        | 1.284                 | 0.0145                     | n=6, 0<MDL        | 0.2419                |
| Lead                                    | 0.003                      | n=9, 0<MDL        | 0.050                 | 0.0005                     | n=8, 4<MDL        | 0.0083                |
| Mercury                                 | 0.0000467                  | n=7, 1<MDL        | 0.000779              | 0.0000025                  | n=7, 2<MDL        | 0.000042              |
| Molybdenum                              | 0.0027                     | n=7, 0<MDL        | 0.0450                | 0.002                      | n=6, 0<MDL        | 0.033                 |
| Nickel                                  | 0.012                      | n=7, 0<MDL        | 0.200                 | 0.012                      | n=6, 0<MDL        | 0.200                 |
| Selenium                                | 0.003                      | n=7, 0<MDL        | 0.050                 | 0.0019                     | n=6, 0<MDL        | 0.0317                |
| Silver                                  | 0.0034                     | n=7, 2<MDL        | 0.0567                | 0.0003                     | n=6, 5<MDL        | 0.0050                |
| Zinc                                    | 0.606                      | n=9, 1<MDL        | 10.108                | 0.212                      | n=8, 0<MDL        | 3.536                 |
| BOD                                     | 181                        | n=140             | 3019                  | 5.4                        | n=140             | 90                    |
| TSS                                     | 185                        | n=142             | 3086                  | 6.2                        | n=142             | 103                   |

Silver Creek

| Domestic<br>Commercial<br>Data Entry<br><br>Pollutant | Domestic+Commercial<br>Contribution<br>to POTW<br>mg/L | Comment<br>and<br>Notes | Calculated<br>Domestic+Commercial<br>+ Hauled Waste<br>Contribution<br>lbs/Day |
|---|--|-------------------------|--|
| Arsenic   | 0.0034   | n=18, 1<MDL             | 0.0533   |
| Cadmium   | 0.001  | n=18, 8<MDL             | 0.016  |
| Chromium (Total)                                      | 0.004  | n=6, 0<MDL              | 0.063  |
| Copper  | 0.104  | n=18, 0<MDL             | 1.631  |
| Lead  | 0.0023   | n=18, 1<MDL             | 0.0361   |
| Mercury   | 0.000019   | n=12, 1<MDL             | 0.000298   |
| Molybdenum  | 0.0028   | n=18, 4<MDL             | 0.0439   |
| Nickel  | 0.0084   | n=18, 1<MDL             | 0.1317   |
| Selenium  | 0.0028   | n=18, 0<MDL             | 0.0439   |
| Silver  | 0.0003   | n=18, 17<MDL            | 0.0047   |
| Zinc  | 0.375  | n=18, 0<MDL             | 5.880  |
| BOD   | 172  | n=140                   | 2697   |
| TSS   | 184  | n=11                    | 2885   |

Silver Creek

| Removal Efficiency Calculations<br><br>POLLUTANT | <b>MRE</b><br>Mean<br>Removal<br>Efficiency<br>% | <b>LIT</b><br>Literature<br>Removal<br>Efficiency<br>% | Source of<br>Literature<br>Removal<br>Efficiency<br>Data | Enter the Name<br>of the Removal<br>Efficiency to be<br>Used: <b>MRE,</b><br>or <b>LIT</b> | Final<br>POTW<br>Removal<br>% |
|--|--|--|--|--|-------------------------------|
| Arsenic  | 43   |  |  | MRE  | 43                            |
| Cadmium  | 84   |  |  | MRE  | 84                            |
| Chromium (Total)                                 | 47   |  |  | MRE  | 47                            |
| Copper   | 81   |  |  | MRE  | 81                            |
| Lead   | 83   |  |  | MRE  | 83                            |
| Mercury  | 95   |  |  | MRE  | 95                            |
| Molybdenum                                       | 26   |  |  | MRE  | 26                            |
| Nickel   | 0  | 45   | EPA  | LIT  | 45                            |
| Selenium   | 37   |  |  | MRE  | 37                            |
| Silver   | 91   |  |  | MRE  | 91                            |
| Zinc   | 65   |  |  | MRE  | 65                            |
| BOD  | 97   |  |  | MRE  | 97                            |
| TSS  | 97   |  |  | MRE  | 97                            |

Silver Creek

| <b>Daily/Acute MAHL Calculations</b> |                                   |                                |  |  |                                 |                                   |
|--------------------------------------|-----------------------------------|--------------------------------|--|--|---------------------------------|-----------------------------------|
| Pollutant                            | Daily/7 day NPDES Loading lbs/day | Acute Toxicity Loading lbs/day | Design Loading for BOD, TSS, NH3 lbs/day | Other Criteria FROM Daily Criteria & Stds State 1C and 4 lbs/day | Most Stringent Criteria lbs/day | Name of MAHL for Daily Max Limits |
| Arsenic                              |                                   | 10.0130                        |  | 0.2945   | 0.2945                          | State 1C and 4                    |
| Cadmium                              |                                   | 0.9074                         |  | 1.0430   | 0.9074                          | WQ-Acute                          |
| Chromium (Total)                     |                                   | 177.9444                       |  | 1.5854   | 1.5854                          | State 1C and 4                    |
| Copper                               |                                   | 4.5817                         |  | 17.7242  | 4.5817                          | WQ-Acute                          |
| Lead                                 |                                   | 47.7420                        |  | 1.5019   | 1.5019                          | State 1C and 4                    |
| Mercury                              |                                   |                                |  | 0.6235   | 0.6235                          | State 1C and 4                    |
| Molybdenum                           |                                   |                                |  |  | No Criteria                     | No Criteria                       |
| Nickel                               |                                   | 45.9961                        |  | 3.0342   | 3.0342                          | State 1C and 4                    |
| Selenium                             |                                   | 0.4848                         |  | 1.3175   | 0.4848                          | WQ-Acute                          |
| Silver                               |                                   | 7.7734                         |  | 9.4567   | 7.7734                          | WQ-Acute                          |
| Zinc                                 |                                   | 18.4994                        |  | 353.0056   | 18.4994                         | WQ-Acute                          |
| BOD                                  |                                   |                                | 3336                                     |  | 3336                            | POTW Design                       |
| TSS                                  |                                   |                                | 3836                                     |  | 3836                            | POTW Design                       |

Silver Creek

| Monthly/Chronic MAHL Calculations<br>Pollutant | Monthly NPDES Loading lbs/day | Chronic Toxicity Loading lbs/day | Loading for Water and Fish Consumption Human Health lbs/day | Loading for Fish Consumption Human Health lbs/day | Table 1, 2, 3 or Other Sludge Loading lbs/day | Most Stringent Criteria lbs/day | Name of MAHL For Monthly Limits |
|--|-------------------------------|----------------------------------|---|---|---|---------------------------------|---------------------------------|
| Arsenic  |                               | 4.4175                           |   |   | 0.1539  | 0.1539                          | Sludge                          |
| Cadmium  |                               | 0.0834                           |   |   | 0.0755  | 0.0755                          | Sludge                          |
| Chromium (Total)                               |                               | 8.5040                           |   |   |   | 8.5040                          | WQ-Chronic                      |
| Copper   |                               | 2.7029                           | 115.2071  |   | 3.0063  | 2.7029                          | WQ-Chronic                      |
| Lead   |                               | 1.8624                           |   |   | 0.5856  | 0.5856                          | Sludge                          |
| Mercury  |                               | 0.0037                           |   |   | 0.0292  | 0.0037                          | WQ-Chronic                      |
| Molybdenum                                     |                               |                                  |   |   | 0.4706  | 0.4706                          | Sludge                          |
| Nickel   |                               | 5.1127                           | 3.0342  | 139.5752  | 1.5183  | 1.5183                          | Sludge                          |
| Selenium                                       |                               | 0.1212                           |   | 110.6700  | 0.4437  | 0.1212                          | WQ-Chronic                      |
| Silver   |                               |                                  |   |   |   | No Criteria                     | No Criteria                     |
| Zinc   |                               | 18.4994                          | 353.0056  | 1240.2900   | 7.0059  | 7.0059                          | Sludge                          |
| BOD  |                               |                                  |   |   |   | No Criteria                     | No Criteria                     |
| TSS  |                               |                                  |   |   |   | No Criteria                     | No Criteria                     |

Silver Creek

| Pollutant        | MAHL<br>lbs/day | Controlling<br>Criteria<br>or Standard<br>for MAHL | Safety<br>Factor<br>% | Expansion<br>Factor<br>% | MAIL<br><br>lbs/day |
|------------------|-----------------|--|-----------------------|--------------------------|---------------------|
| Arsenic          | 0.1539          | Sludge   | 10                    | 0                        | 0.08522             |
| Cadmium          | 0.0755          | Sludge   | 10                    | 0                        | 0.05230             |
| Chromium (Total) | 1.5854          | State 1C and 4                                     | 10                    | 0                        | 1.36414             |
| Copper           | 2.7029          | WQ-Chronic   | 10                    | 0                        | 0.80201             |
| Lead             | 0.5856          | Sludge   | 10                    | 0                        | 0.49102             |
| Mercury          | 0.0037          | WQ-Chronic   | 10                    | 0                        | 0.00307             |
| Molybdenum       | 0.4706          | Sludge   | 10                    | 0                        | 0.37964             |
| Nickel           | 1.5183          | Sludge   | 10                    | 0                        | 1.23479             |
| Selenium         | 0.1212          | WQ-Chronic   | 10                    | 0                        | 0.06519             |
| Silver           | 7.7734          | WQ-Acute   | 10                    | 0                        | 6.99138             |
| Zinc             | 7.0059          | Sludge   | 10                    | 0                        | 0.42562             |
| BOD              | 3336            | POTW Design  | 5                     | 0                        | 472                 |
| TSS              | 3836            | POTW Design  | 5                     | 0                        | 759                 |

Silver Creek

| <b>Local Limit<br/>Summary</b> | MAHL     | MAIL     | Proposed<br>Local Limits for<br>Permitted Industrial Users<br>Daily Maximum<br>as Totals | Units   |
|--------------------------------|----------|----------|--|---------|
| Pollutant                      | lbs/day  | lbs/day  |  |         |
| Arsenic                        | 0.15392  | 0.0852   | 0.09   | mg/L    |
| Cadmium                        | 0.07553  | 0.0523   | 0.05   | mg/L    |
| Chromium (Total)               | 1.58539  | 1.3641   | 1.36   | mg/L    |
| Copper                         | 2.70294  | 0.8020   | 0.80   | mg/L    |
| Lead                           | 0.58564  | 0.4910   | 0.49   | mg/L    |
| Mercury                        | 0.003741 | 0.003069 | 0.0031   | mg/L    |
| Molybdenum                     | 0.47061  | 0.3796   | 0.38   | mg/L    |
| Nickel                         | 1.51833  | 1.2348   | 1.23   | mg/L    |
| Selenium                       | 0.12121  | 0.0652   | 0.07   | mg/L    |
| Silver                         | 7.77343  | 6.9914   | 6.99   | mg/L    |
| Zinc                           | 7.00591  | 0.4256   | 0.43   | mg/L    |
| BOD                            | 3336     | 472      | 472  | lbs/day |
| TSS                            | 3836     | 759      | 759  | lbs/day |

Reported as total and in mg/L. All pollutants not shown were <MDL in all samples.

| <b>Silver Creek</b>     |           |          |          |       |           |
|-------------------------|-----------|----------|----------|-------|-----------|
| <b>Influent</b>         | Average   | Maximum  | Minimum  | Count | #<br><MDL |
| Aluminum                | 0.025000  | 0.025    | 0.025    | 1     | 1         |
| Ammonia                 | 26.0      |          |          | 15    | 0         |
| Arsenic (total) mg/L    | 0.003067  | 0.0043   | 0.0019   | 9     | 0         |
| BOD5                    | 181       |          |          | 140   | 0         |
| Cadmium (total) mg/L    | 0.002472  | 0.0102   | 0.00025  | 9     | 1         |
| CBOD                    | 151       |          |          | 140   | 0         |
| Chromium (total) mg/L   | 0.003814  | 0.0091   | 0.0018   | 7     | 0         |
| Copper (total) mg/L     | 0.077357  | 0.133    | 0.038    | 7     | 0         |
| Cyanide (total) mg/L    | 0.002857  | 0.009    | 0.001    | 7     | 5         |
| Lead (total) mg/L       | 0.002967  | 0.0052   | 0.0009   | 9     | 0         |
| Mercury (total) mg/L    | 0.0000467 | 0.000145 | 0.000005 | 7     | 1         |
| Molybdenum (total) mg/L | 0.002729  | 0.0055   | 0.0009   | 7     | 0         |
| Nickel (total) mg/L     | 0.012057  | 0.015    | 0.0062   | 7     | 0         |
| Phosphorus              | 5.1       |          |          | 70    | 0         |
| Selenium (total) mg/L   | 0.003086  | 0.0052   | 0.0013   | 7     | 0         |
| Silver (total) mg/L     | 0.003407  | 0.01     | 0.00025  | 7     | 2         |
| Total Suspended Solids  | 185       |          |          | 142   | 0         |
| Zinc (total) mg/L       | 0.606111  | 1.55     | 0.005    | 9     | 1         |

Reported as total and in mg/L. All pollutants not shown were <MDL in all samples.

| <b>Silver Creek</b>     |           |           |            |       |           |
|-------------------------|-----------|-----------|------------|-------|-----------|
| <b>Effluent</b>         | Average   | Maximum   | Minimum    | Count | #<br><MDL |
| Ammonia                 | 0.6       |           |            | 139   |           |
| Arsenic (total) mg/L    | 0.0016938 | 0.0033    | 0.00025    | 8     | 1         |
| BOD5                    | 5.4       |           |            | 140   |           |
| Cadmium (total) mg/L    | 0.0004563 | 0.001     | 0.00025    | 8     | 4         |
| CBOD                    | 4.5       |           |            | 140   |           |
| Chromium (total) mg/L   | 0.0021667 | 0.0036    | 0.0015     | 6     | 0         |
| Copper (total) mg/L     | 0.0145833 | 0.0321    | 0.0091     | 6     | 0         |
| Cyanide (total) mg/L    | 0.0013333 | 0.002     | 0.001      | 6     | 4         |
| Lead (total) mg/L       | 0.0005000 | 0.0013    | 0.00025    | 8     | 4         |
| Mercury (total) mg/L    | 0.0000025 | 0.0000105 | 0.00000013 | 7     | 2         |
| Molybdenum (total) mg/L | 0.0023333 | 0.0029    | 0.0019     | 6     | 0         |
| Nickel (total) mg/L     | 0.0116667 | 0.0131    | 0.0087     | 6     | 0         |
| Phosphorus              | 2.2       |           |            | 70    |           |
| Selenium (total) mg/L   | 0.0018833 | 0.0029    | 0.0009     | 6     | 0         |
| Silver (total) mg/L     | 0.0002917 | 0.0005    | 0.00025    | 6     | 5         |
| Total Dissolved Solids  | 1243      |           |            | 16    | 0         |
| Total Suspended Solids  | 6.2       |           |            | 142   |           |
| Zinc (total) mg/L       | 0.2125000 | 0.61      | 0.11       | 8     | 0         |

Reported as total and in mg/L. All pollutants not shown were <MDL in all samples.

| Silver Creek               | Average   | Maximum   | Minimum   | Count | #<br><MDL |
|----------------------------|-----------|-----------|-----------|-------|-----------|
| <b>Commercial/Domestic</b> |           |           |           |       |           |
| Aluminum                   | 0.3       | 1.2       | 0.08      | 12    | 0         |
| Ammonia mg/L               | 18.0      | 24.9      | 11.3      | 12    | 0         |
| Arsenic (total) mg/L       | 0.0034    | 0.0061    | 0.00025   | 18    | 1         |
| Cadmium (total) mg/L       | 0.00101   | 0.0022    | 0.00025   | 18    | 8         |
| CBOD                       | 329.1     | 562       | 154       | 11    | 0         |
| Chromium (total) mg/L      | 0.00400   | 0.005     | 0.002     | 6     | 0         |
| Copper (total) mg/L        | 0.1042    | 0.236     | 0.0411    | 18    | 0         |
| Cyanide (total) mg/L       | 0.00272   | 0.013     | 0.001     | 18    | 13        |
| Lead (total) mg/L          | 0.00232   | 0.0041    | 0.00025   | 18    | 1         |
| Mercury (total) mg/L       | 0.0000190 | 0.0000545 | 0.0000005 | 12    | 1         |
| Molybdenum (total) mg/L    | 0.0028    | 0.005     | 0.0008    | 18    | 4         |
| Nickel (total) mg/L        | 0.0084    | 0.0157    | 0.0025    | 18    | 1         |
| Oil and Grease mg/L        | 68.7      | 144       | 5         | 12    | 0         |
| Phosphorus                 | 6.8       | 17        | 0.25      | 18    | 0         |
| Selenium (total) mg/L      | 0.00283   | 0.0054    | 0.0012    | 18    | 0         |
| Silver (total) mg/L        | 0.00028   | 0.0007    | 0.00025   | 18    | 17        |
| Total Dissolved Solids     | 1067.3    | 1710      | 10        | 11    | 0         |
| Total Suspended Solids     | 183.9     | 304       | 10        | 11    | 0         |
| Zinc (total) mg/L          | 0.375     | 0.73      | 0.01      | 18    | 0         |

| Silver Creek<br>Sludge | Average<br>% Solids<br>from Press | Specific<br>Gravity | Total<br>Wet<br>Tons | Gallons applied<br>mgd |
|------------------------|-----------------------------------|---------------------|----------------------|------------------------|
|                        |                                   |                     |                      |                        |
| 1/1/2010               | 15                                | 1.05                | 197.5                | 0.0015278              |
| Feb                    | 14.6                              | 1.05                | 181                  | 0.0015502              |
| Mar                    | 14.5                              | 1.04                | 189.4                | 0.0014652              |
| Apr                    | 14.9                              | 1.05                | 199.3                | 0.0015931              |
| May                    | 14.5                              | 1.04                | 149.81               | 0.0011589              |
| Jun                    | 15                                | 1.05                | 129.15               | 0.0010324              |
| Jul                    | 15.1                              | 1.05                | 108.5                | 0.0008393              |
| Aug                    | 15.1                              | 1.05                | 104.9                | 0.0008115              |
| Sep                    | 14.9                              | 1.05                | 95.21                | 0.0007611              |
| Oct                    | 15.2                              | 1.05                | 96.2                 | 0.0007442              |
| Nov                    | 14.9                              | 1.05                | 101                  | 0.0008074              |
| Dec                    | 15.1                              | 1.05                | 161.67               | 0.0012506              |
| 1/1/2011               | 16                                | 1.05                | 179.5                | 0.0013886              |
| Feb                    | 14.6                              | 1.05                | 243.8                | 0.0020880              |
| Mar                    | 15                                | 1.05                | 241.68               | 0.0018696              |
| Apr                    | 14.5                              | 1.04                | 198.4                | 0.0015859              |
| May                    | 15.8                              | 1.05                | 122.3                | 0.0009461              |
| Jun                    | 15.5                              | 1.05                | 141.5                | 0.0011311              |
| Jul                    | 15.3                              | 1.05                | 153.2                | 0.0011851              |
| Aug                    | 14.3                              | 1.04                | 161.6                | 0.0012501              |
| Sep                    | 14                                | 1.04                | 135.8                | 0.0010855              |
| Oct                    | 14.9                              | 1.05                | 94.1                 | 0.0007279              |
| Nov                    | 15.1                              | 1.05                | 77.1                 | 0.0006163              |
| Dec                    | 14.5                              | 1.04                | 172.6                | 0.0013352              |
| 1/1/2012               | 14                                | 1.04                | 175.7                | 0.0013592              |
| Feb                    | 13.8                              | 1.04                | 212.9                | 0.0017605              |
| Mar                    | 14.2                              | 1.04                | 213.4                | 0.0016508              |
| Apr                    | 14.8                              | 1.05                | 204.4                | 0.0016339              |

**K. EAST CANYON CREEK WATER RECLAMATION FACILITY**

| Local Limit Summary<br><br>Pollutant | Existing Local Limits | Existing Local Limits<br>mg/L or lbs/day | Permitted IUs                       |                          |               |
|--------------------------------------|-----------------------|--|-------------------------------------|--------------------------|---------------|
|                                      |                       |  | Proposed Local Limits<br>(as Total) | Units<br>mg/L or lbs/day | Type of Limit |
| Arsenic                              | 0.7964                | lbs/day                                  | 0.31                                | mg/L                     | Daily Maximum |
| Cadmium                              | 0.1629                | lbs/day                                  | 0.10                                | mg/L                     | Daily Maximum |
| Chromium (Total)                     | 1.13.62               | lbs/day                                  | 15.72                               | mg/L                     | Daily Maximum |
| Copper                               | 2.9729                | lbs/day                                  | 3.56                                | mg/L                     | Daily Maximum |
| Lead                                 | 0.6638                | lbs/day                                  | 1.42                                | mg/L                     | Daily Maximum |
| Mercury                              | 0.0012                | lbs/day                                  | 0.0038                              | mg/L                     | Daily Maximum |
| Molybdenum                           | 11.5472               | lbs/day                                  | 1.00                                | mg/L                     | Daily Maximum |
| Nickel                               | 9.0098                | lbs/day                                  | 3.31                                | mg/L                     | Daily Maximum |
| Selenium                             | 0.1162                | lbs/day                                  | 0.41                                | mg/L                     | Daily Maximum |
| Silver                               | 2.0576                | lbs/day                                  | 8.66                                | mg/L                     | Daily Maximum |
| Zinc                                 | 36.4577               | lbs/day                                  | 12.64                               | mg/L                     | Daily Maximum |
| BOD                                  | 4894                  | lbs/day                                  | 1406                                | lbs/day                  | Daily Maximum |
| TSS                                  | 7396                  | lbs/day                                  | 3651                                | lbs/day                  | Daily Maximum |
| Phosphorus                           |                       |  | 40.6                                | mg/L                     | Daily Maximum |

**Summary of all Local Limits Input Data**

| <b>Snyderville East Canyon</b>                           |          | <b>Comments</b>  |
|--|----------|--|
| POTW Flow for Local Limits (mgd):                        | 4.00     |  |
| SIU Flow for Local Limits (mgd):                         | 0.100    |  |
| Flow for Permitted Non-SIU Industrial Users (mgd):       | 0.02     |  |
| Combined plus Domestic + Commercial Flow (mgd):          | 3.88     |  |
| Trucked and Hauled Wastewater Flow (mgd):                | 0        |  |
| Specific Gravity of Sludge to Disposal (kg/L)            | 1.04     | See Appendix S of 2004 EPA Local Limits Guidance       |
| Sludge Flow to Disposal (mgd):                           | 0.003648 | Average of 2010-2011                                   |
| % Solids to Disposal (%):                                | 13.80    | Average of 2010-2011                                   |
| Sludge Table (1,3 OR "O" THER) Based on Disposal Option: | 3        | District is evaluating land application options        |
| Acute Receiving Water Flow (mgd):                        | 3.036    | From State WLA-Fact Sheet - 2011                       |
| Chronic Receiving Water Flow (mgd):                      | 3.036    | From State WLA-Fact Sheet - 2011                       |
| Hardness for Metals Calculations (mg/L):                 | 400      | From State WLA-Fact Sheet                              |
| Is the Receiving Water a Drinking Water Supply:          | N        | Protected under Class 1C – See Criteria and Standards. |
| Applicable Standards (ACUTE, CHRONIC, BOTH):             | B        |  |

East Canyon

| Daily/Acute<br>Criteria and Standards<br><br>Pollutant | Daily Max/7 Day<br>NPDES Permit<br>Limit<br>mg/L | Class 3A<br>State<br>Acute<br>WQ Stds<br>mg/L | POTW<br>Design Capacity<br>for BOD and<br>TSS<br>lbs/day | Other Criteria<br><br>mg/L |
|--|--|---|--|----------------------------|
| Arsenic  |  | 0.34  |  |                            |
| Cadmium  |  | 0.0087  |  |                            |
| Chromium (Total)                                       |  | 5.612   |  |                            |
| Copper   |  | 0.0517  |  |                            |
| Lead   |  | 0.4768  |  |                            |
| Mercury  |  | 0.0024 <sup>(a)</sup>                         |  |                            |
| Molybdenum   |  |   |  |                            |
| Nickel   |  | 1.5159  |  |                            |
| Selenium   |  | 0.0184  |  |                            |
| Silver   |  | 0.0411  |  |                            |
| Zinc   |  | 0.3878  |  |                            |
| BOD  |  |   | 7339   |                            |
| TSS  |  |   | 10008  |                            |
| Phosphorus   | 0.1  |   |  |                            |

(a) Mercury value used in Waste Load Allocation – 2011.

East Canyon

| Monthly/Chronic<br>Criteria and<br>Standards<br><br>Pollutant | Monthly<br>NPDES<br>Permit<br>Limit<br>mg/L | State<br>Chronic<br>Water<br>Quality<br>Standards<br>mg/L | State 1C, 2B and<br>4<br>mg/L | State<br>Water and<br>Fish<br>Human<br>Health<br>mg/L | State<br>Fish<br>Consumption<br>Human<br>Health<br>mg/L |
|---|---|---|-------------------------------|---|---|
| Arsenic   |   | 0.15  | 0.01                          |   |   |
| Cadmium   |   | 0.0008  | 0.01                          |   |   |
| Chromium (Total)  |   | 0.2682  | 0.05                          |   |   |
| Copper  |   | 0.0305  | 0.2                           | 1.3   |   |
| Lead  |   | 0.0186  | 0.015                         |   |   |
| Mercury   |   | 0.000012  | 0.002                         |   |   |
| Molybdenum  |   |   |                               |   |   |
| Nickel  |   | 0.1685  | 0.1                           | 0.1   | 4.6   |
| Selenium  |   | 0.0046  | 0.05                          |   | 4.2   |
| Silver  |   |   | 0.05                          |   |   |
| Zinc  |   | 0.3878  | 7.4                           | 7.4   | 26  |
| BOD   |   |   |                               |   |   |
| TSS   |   |   |                               |   |   |
| Phosphorus  |   |   |                               |   |   |

East Canyon

| <p><b>Sewage Sludge</b></p> <p>Pollutant</p>                        | <p>Maximum<br/>POTW<br/>Sludge<br/>to Disposal<br/>mg/kg<br/>Dry Weight</p> | <p>Table 3<br/>"Clean"<br/>Land Application<br/>Sludge<br/>Criteria<br/>mg/kg</p> |
|---|---|---|
| <p>Arsenic</p> <p>Cadmium</p> <p>Chromium (Total)</p> <p>Copper</p> | <p>22.3</p> <p>4.56</p> <p>770</p>  | <p>41</p> <p>39</p> <p>1500</p>   |
| <p>Lead</p> <p>Mercury</p> <p>Molybdenum</p>                        | <p>21.6</p> <p>0.37</p> <p>5.12</p>   | <p>300</p> <p>17</p> <p>75</p>  |
| <p>Nickel</p> <p>Selenium</p> <p>Silver</p> <p>Zinc</p>             | <p>11</p> <p>12.9</p> <p>2.72</p> <p>1520</p>                               | <p>420</p> <p>100</p> <p>2800</p>   |
| <p>BOD</p> <p>TSS</p> <p>Phosphorus</p>                             |   |   |

East Canyon

| <b>Influent and Effluent Data</b> | Average POTW Influent mg/L | Comment and Notes | POTW Influent lbs/day | Average POTW Effluent mg/L | Comment and Notes | POTW Effluent lbs/day |
|-----------------------------------|----------------------------|-------------------|-----------------------|----------------------------|-------------------|-----------------------|
| Pollutant                         |                            |                   |                       |                            |                   |                       |
| Arsenic                           | 0.0013                     | n=13, 0<MDL       | 0.043                 | 0.0007                     | n=7, 3<MDL        | 0.0234                |
| Cadmium                           | 0.00041                    | n=13, 8<MDL       | 0.0137                | 0.0003                     | n=7, 7<MDL        | 0.0083                |
| Chromium (Total)                  | 0.016                      | n=13, 0<MDL       | 0.5338                | 0.0026                     | n=7, 0<MDL        | 0.087                 |
| Copper                            | 0.0832                     | n=13, 0<MDL       | 2.776                 | 0.0048                     | n=7, 0<MDL        | 0.1601                |
| Lead                              | 0.0015                     | n=13, 0<MDL       | 0.050                 | 0.0003                     | n=7, 6<MDL        | 0.0100                |
| Mercury                           | 0.0000234                  | n=7, 1<MDL        | 0.000781              | 0.0000077                  | n=12, 1<MDL       | 0.000257              |
| Molybdenum                        | 0.0018                     | n=13, 0<MDL       | 0.0600                | 0.0013                     | n=7, 0<MDL        | 0.043                 |
| Nickel                            | 0.011                      | n=13, 1<MDL       | 0.367                 | 0.012                      | n=7, 0<MDL        | 0.400                 |
| Selenium                          | 0.0023                     | n=13, 0<MDL       | 0.077                 | 0.0017                     | n=7, 0<MDL        | 0.0567                |
| Silver                            | 0.00035                    | n=13, 11>MDL      | 0.0117                | 0.00025                    | n=7, 7<MDL        | 0.0083                |
| Zinc                              | 0.192                      | n=13, 0<MDL       | 6.405                 | 0.080                      | n=7, 0<MDL        | 2.669                 |
| BOD                               | 188                        | n=140             | 6272                  | 3.7                        | n=140             | 123                   |
| TSS                               | 181                        | n=142             | 6038                  | 3.6                        | n=142             | 120                   |
| Phosphorus                        | 5.6                        | n=78              | 186.8                 | 0.08                       | n=81              | 2.7                   |

East Canyon

| Domestic<br>Commercial<br>Data Entry<br><br>Pollutant | Domestic+Commercial<br>Contribution<br>to POTW<br>mg/L | Comment<br>and<br>Notes | Calculated<br>Domestic+Commercial<br>+ Hauled Waste<br>Contribution<br>lbs/Day |
|---|--|-------------------------|--|
| Arsenic   | 0.0013   | n=13, 0<MDL             | 0.0421   |
| Cadmium   | 0.00041  | n=13, 8<MDL             | 0.013  |
| Chromium (Total)                                      | 0.016  | n=13, 0<MDL             | 0.518  |
| Copper  | 0.0832   | n=13, 0<MDL             | 2.692  |
| Lead  | 0.0015   | n=13, 0<MDL             | 0.0485   |
| Mercury   | 0.0000234  | n=7, 1<MDL              | 0.000757   |
| Molybdenum  | 0.0018   | n=13, 0<MDL             | 0.0582   |
| Nickel  | 0.011  | n=13, 1<MDL             | 0.3560   |
| Selenium  | 0.0023   | n=13, 0<MDL             | 0.0744   |
| Silver  | 0.00035  | n=13, 11>MDL            | 0.0113   |
| Zinc  | 0.192  | n=13, 0<MDL             | 6.213  |
| BOD   | 172  | n=140                   | 5566   |
| TSS   | 181  | n=142                   | 5857   |
| Phosphorus  | 5.6  | n=78                    | 181.2  |

East Canyon

| REMOVAL EFFICIENCY<br>Calculations<br><br>POLLUTANT | MRE<br>Mean<br>Removal<br>Efficiency<br>% | LIT<br>Literature<br>Removal<br>Efficiency<br>% | Source of<br>Literature<br>Removal<br>Efficiency<br>Data | Enter the Name<br>of the Removal<br>Efficiency to be<br>Used: MRE<br>or LIT | Final<br>POTW<br>Removal<br>% |
|---|---|---|--|---|-------------------------------|
| Arsenic   | 46  |   |  | MRE   | 46                            |
| Cadmium   | 39  | 65  | EPA  | LIT   | 65                            |
| Chromium (Total)                                    | 84  |   |  | MRE   | 84                            |
| Copper  | 94  |   |  | MRE   | 94                            |
| Lead  | 80  |   |  | MRE   | 80                            |
| Mercury   | 67  | 86  | EPA  | LIT   | 86                            |
| Molybdenum  | 28  |   |  | MRE   | 28                            |
| Nickel  | -9  | 45  | EPA  | LIT   | 45                            |
| Selenium  | 26  | 50  | EPA  | LIT   | 50                            |
| Silver  | 29  | 75  | EPA  | LIT   | 75                            |
| Zinc  | 58  |   |  | MRE   | 58                            |
| BOD   | 98  |   |  | MRE   | 98                            |
| TSS   | 98  |   |  | MRE   | 98                            |
| Phosphorus  | 99  |   |  | MRE   | 99                            |

East Canyon

| <b>Daily/Acute MAHL Calculations</b> |                                   |                                |  |                        |                                 |                                   |
|--------------------------------------|-----------------------------------|--------------------------------|--|------------------------|---------------------------------|-----------------------------------|
| Pollutant                            | Daily/7 day NPDES Loading lbs/day | Acute Toxicity Loading lbs/day | Design Loading for BOD, TSS, NH3 lbs/day | Other Criteria lbs/day | Most Stringent Criteria lbs/day | Name of MAHL for Daily Max Limits |
| Arsenic                              |                                   | 37.0524                        |  |                        | 37.05248                        | WQ-Acute                          |
| Cadmium                              |                                   | 1.4586                         |  |                        | 1.4586                          | WQ-Acute                          |
| Chromium (Total)                     |                                   | 2026.5447                      |  |                        | 2026.5447                       | WQ-Acute                          |
| Copper                               |                                   | 52.5853                        |  |                        | 52.5853                         | WQ-Acute                          |
| Lead                                 |                                   | 139.8937                       |  |                        | 139.8937                        | WQ-Acute                          |
| Mercury                              |                                   | 1.0059                         |  |                        | 1.0060                          | WQ-Acute                          |
| Molybdenum                           |                                   |                                |  |                        | No Criteria                     | No Criteria                       |
| Nickel                               |                                   | 161.7334                       |  |                        | 161.7334                        | WQ-Acute                          |
| Selenium                             |                                   | 2.1594                         |  |                        | 2.1594                          | WQ-Acute                          |
| Silver                               |                                   | 9.6470                         |  |                        | 9.6470                          | WQ-Acute                          |
| Zinc                                 |                                   | 54.6149                        |  |                        | 54.6149                         | WQ-Acute                          |
| BOD                                  |                                   |                                | 7339                                     |                        | 7339                            | POTW Design                       |
| TSS                                  |                                   |                                | 10008                                    |                        | 10008                           | POTW Design                       |
| Phosphorus                           | 233.52                            |                                |  |                        | 233.5                           | NPDES Daily                       |

East Canyon

| Monthly/Chronic MAHL Calculations | Monthly UPDES Loading lbs/day | Chronic Toxicity Loading lbs/day | Loading for Water and Fish Consumption Human Health lbs/day | State 1C, 2B and 4 | Loading for Fish Consumption Human Health lbs/day | Table 1, 2, 3 or Other Sludge Loading lbs/day | Most Stringent Criteria lbs/day | Name of MAHL For Monthly Limits |
|-----------------------------------|-------------------------------|----------------------------------|---|--------------------|---|---|---------------------------------|---------------------------------|
| Pollutant                         |                               |                                  |   |                    |   |   |                                 |                                 |
| Arsenic                           |                               | 16.3466                          |   | 1.090              |   | 0.3879  | 0.3879                          | Sludge                          |
| Cadmium                           |                               | 0.1274                           |   | 1.677              |   | 0.2620  | 0.1274                          | WQ-Chronic                      |
| Chromium (Total)                  |                               | 96.8495                          |   | 18.055             |   | 6.9508  | 18.0555                         | State 1C, 2B and 4              |
| Copper                            |                               | 31.0223                          |   | 203.425            |   | 6.9508  | 6.9508                          | Sludge                          |
| Lead                              |                               | 5.4573                           |   | 4.401              |   | 1.6374  | 1.6374                          | Sludge                          |
| Mercury                           |                               | 0.0050                           |   | 0.838              |   | 0.0863  | 0.0050                          | WQ-Chronic                      |
| Molybdenum                        |                               |                                  |   |                    |   | 1.1790  | 1.1790                          | Sludge                          |
| Nickel                            |                               | 17.97749                         |   | 10.669             |   | 4.0754  | 4.0754                          | Sludge                          |
| Selenium                          |                               | 0.53986                          |   | 5.868              |   | 0.8733  | 0.5399                          | WQ-Chronic                      |
| Silver                            |                               |                                  |   | 11.736             |   |   | 11.7360                         | State 1C, 2B and 4              |
| Zinc                              |                               | 54.6149                          |   | 1042.161           |   | 20.9592                                       | 20.9592                         | Sludge                          |
| BOD                               |                               |                                  |   |                    |   |   | No Criteria                     | No Criteria                     |
| TSS                               |                               |                                  |   |                    |   |   | No Criteria                     | No Criteria                     |
| Phosphorus                        |                               |                                  |   |                    |   |   | No Criteria                     | No Criteria                     |

East Canyon

| Calculating the Maximum Allowable Loading (MAL) for all Non-Domestic User Pollutant | MAHL lbs/day | Controlling Criteria or Standard for MAHL | Safety Factor % | Expansion Factor % | MAIL lbs/day |
|---|--------------|---|-----------------|--------------------|--------------|
| Arsenic   | 0.38789      | Sludge                                    | 10              | 0                  | 0.3070       |
| Cadmium   | 0.12742      | WQ-Chronic                                | 10              | 0                  | 0.1014       |
| Chromium (Total)  | 18.05546     | State 1C, 2B and 4                        | 10              | 0                  | 15.7322      |
| Copper  | 6.95075      | Sludge                                    | 10              | 0                  | 3.5634       |
| Lead  | 1.63744      | Sludge                                    | 10              | 0                  | 1.4252       |
| Mercury   | 0.00503      | WQ-Chronic                                | 10              | 0                  | 0.003770     |
| Molybdenum  | 1.17895      | Sludge                                    | 10              | 0                  | 1.0028       |
| Nickel  | 4.07540      | Sludge                                    | 10              | 0                  | 3.3119       |
| Selenium  | 0.53986      | WQ-Chronic                                | 10              | 0                  | 0.4114       |
| Silver  | 9.64703      | WQ-Acute                                  | 10              | 0                  | 8.6710       |
| Zinc  | 20.95919     | Sludge                                    | 10              | 0                  | 12.6503      |
| BOD   | 7339         | POTW Design                               | 5               | 0                  | 1406         |
| TSS   | 10008        | POTW Design                               | 5               | 0                  | 3651         |
| Phosphorus  | 233.5        | NPDES Daily                               | 5               | 0                  | 40.6         |

The District has adequate data to support a decrease in the safety factor for BOD, TSS and Phosphorus and is opting to reduce the recommended safety factor.

East Canyon

| Local Limit Summary<br><br>Pollutant | MAHL<br><br>lbs/day | MAIL<br><br>lbs/day | Permitted IUs                    |                              |               |
|--------------------------------------|---------------------|---------------------|----------------------------------|------------------------------|---------------|
|                                      |                     |                     | Proposed Local Limits (as Total) | Units<br><br>mg/L or lbs/day | Type of Limit |
| Arsenic                              | 0.38789             | 0.3070              | 0.31                             | mg/L                         | Daily Maximum |
| Cadmium                              | 0.12742             | 0.1014              | 0.10                             | mg/L                         | Daily Maximum |
| Chromium (Total)                     | 18.05546            | 15.7322             | 15.72                            | mg/L                         | Daily Maximum |
| Copper                               | 6.95075             | 3.5634              | 3.56                             | mg/L                         | Daily Maximum |
| Lead                                 | 1.63744             | 1.4252              | 1.42                             | mg/L                         | Daily Maximum |
| Mercury                              | 0.005030            | 0.003770            | 0.0038                           | mg/L                         | Daily Maximum |
| Molybdenum                           | 1.17895             | 1.0028              | 1.00                             | mg/L                         | Daily Maximum |
| Nickel                               | 4.07540             | 3.3119              | 3.31                             | mg/L                         | Daily Maximum |
| Selenium                             | 0.53986             | 0.4114              | 0.41                             | mg/L                         | Daily Maximum |
| Silver                               | 9.64703             | 8.6710              | 8.66                             | mg/L                         | Daily Maximum |
| Zinc                                 | 20.95919            | 12.6503             | 12.64                            | mg/L                         | Daily Maximum |
| BOD                                  | 7339                | 1406                | 1406                             | lbs/day                      | Daily Maximum |
| TSS                                  | 10008               | 3651                | 3651                             | lbs/day                      | Daily Maximum |
| Phosphorus                           | 233.5               | 40.6                | 40.6                             | mg/L                         | Daily Maximum |

Reported as total and in mg/L. All pollutants not shown were <MDL in all samples. Note: There was no SIU discharge to the POTW during sampling. The POTW influent also represents the Domestic + Commercial flow.

| <b>East Canyon Influent<br/>and<br/>Domestic+Commercial</b> | Average   | Maximum   | Minimum   | Count | #<br><MDL |
|---|-----------|-----------|-----------|-------|-----------|
| Ammonia   | 22.4      |           |           | 14    | 0         |
| Arsenic (total) mg/L  | 0.0013    | 0.0028    | 0.0005    | 13    | 0         |
| BOD5  | 188       |           |           | 140   | 0         |
| Cadmium (total) mg/L  | 0.00041   | 0.0009    | 0.00025   | 13    | 8         |
| CBOD  | 156       |           |           | 140   | 0         |
| Chromium (total) mg/L                                       | 0.016     | 0.161     | 0.002     | 13    | 0         |
| Copper (total) mg/L   | 0.0832    | 0.128     | 0.0486    | 13    | 0         |
| Cyanide (total) mg/L  | 0.002     | 0.013     | 0.001     | 14    | 10        |
| Lead (total) mg/L   | 0.0015    | 0.0026    | 0.0008    | 13    | 0         |
| Mercury (total) mg/L  | 0.0000234 | 0.0000668 | 0.0000025 | 7     | 1         |
| Molybdenum (total) mg/L                                     | 0.0018    | 0.0038    | 0.0011    | 13    | 0         |
| Nickel (total) mg/L   | 0.011     | 0.0201    | 0.0025    | 13    | 1         |
| Phosphorus  | 5.6       |           |           | 78    | 0         |
| Selenium (total) mg/L                                       | 0.0023    | 0.0068    | 0.0015    | 13    | 0         |
| Silver (total) mg/L   | 0.00035   | 0.001     | 0.00025   | 13    | 11        |
| Total Suspended Solids                                      | 181.000   |           |           | 142   | 0         |
| Zinc (total) mg/L   | 0.192     | 0.38      | 0.09      | 13    | 0         |

Reported as total and in mg/L. All pollutants not shown were <MDL in all samples.

| <b>East Canyon Effluent</b> | Average    | Maximum   | Minimum    | Count | #<br><MDL |
|-----------------------------|------------|-----------|------------|-------|-----------|
| Ammonia                     | 0.520      |           |            | 139   |           |
| Arsenic (total) mg/L        | 0.0007     | 0.0016    | 0.00025    | 7     | 3         |
| BOD5                        | 3.7        |           |            | 140   | 0         |
| Cadmium (total) mg/L        | 0.00025    | 0.00025   | 0.00025    | 7     | 7         |
| CBOD                        | 3.0        |           |            | 140   |           |
| Chromium (total) mg/L       | 0.0026     | 0.005     | 0.0012     | 7     | 0         |
| Copper (total) mg/L         | 0.0048     | 0.0066    | 0.0031     | 7     | 0         |
| Cyanide (total) mg/L        | 0.0013     | 0.003     | 0.001      | 8     | 7         |
| Lead (total) mg/L           | 0.0003     | 0.0007    | 0.00025    | 7     | 6         |
| Mercury (total) mg/L        | 0.0000077  | 0.0000224 | 0.00000013 | 12    | 1         |
| Molybdenum (total) mg/L     | 0.0013     | 0.0019    | 0.0008     | 7     | 0         |
| Nickel (total) mg/L         | 0.012      | 0.0288    | 0.0055     | 7     | 0         |
| Phosphorus                  | 0.080      |           |            | 81    |           |
| Selenium (total) mg/L       | 0.0017     | 0.0042    | 0.0009     | 7     | 0         |
| Silver (total) mg/L         | 0.00025    | 0.00025   | 0.00025    | 7     | 7         |
| Total Dissolved Solids      | 1021.00000 |           |            | 9     | 0         |
| Total Suspended Solids      | 3.6        |           |            | 142   | 0         |
| Zinc (total) mg/L           | 0.080      | 0.36      | 0.02       | 7     | 0         |

**L. ANALYICAL and SAMPLING METHODS**

1. Analytical Methods and Sample Preservation

All wastewater samples were collected, preserved and analyzed using methods approved under 40 CFR Part 136 and 40 CFR Part 403, Appendix E and were of such quality as to be legally defensible. Sludge sampling and analyses were performed in accordance with 40 CFR Section 503.8 and methods approved pursuant to 40 CFR parts 261 and 268. The BOPU uses a mix of in-house and external support for analytical work performed under its pretreatment program.

2. Sample Types

POTW influent and effluent samples were collected as required by the UPDES permit. If sampling for oil and grease, cyanide, pH, sulfides, phenols or volatile organic compounds, the District would use grab samples.

### 3. Example Liquid Matrix Sampling Criteria

| Pollutant                        | Sample Type     | Sample Hold Time | Sample Preservation                                      | Analytical Method           |
|----------------------------------|-----------------|------------------|--|-----------------------------|
| Arsenic                          | 24 hr Composite | 6 Months         | HNO <sub>3</sub> to pH <2                                | EPA 200.8                   |
| Biochemical Oxygen Demand (BOD5) | 24 hr Composite | 48 Hours         | Cool to 6°C  | Standard Methods 5210B      |
| Cadmium                          | 24 hr Composite | 6 Months         | HNO <sub>3</sub> to pH <2                                | EPA 200.8                   |
| Chromium (total)                 | 24 hr Composite | 6 Months         | HNO <sub>3</sub> to pH <2                                | EPA 200.8                   |
| Copper                           | 24 hr Composite | 6 Months         | HNO <sub>3</sub> to pH <2                                | EPA 200.8                   |
| Cyanide                          | Grab            | 14 Days          | Cool to 6°C, 1:1 NaOH to pH >12                          | SM-4500-CN C,E              |
| Lead                             | 24 hr Composite | 6 Months         | HNO <sub>3</sub> to pH <2                                | EPA 200.8                   |
| Mercury                          | Grab            | 28 Days          | HNO <sub>3</sub> to pH <2                                | CVAA                        |
|                                  |                 | 90 Days          | 5 mL/L 12N HCl or 5 mL/L BrCl                            | CVAFS                       |
| Molybdenum                       | 24 hr Composite | 6 Months         | HNO <sub>3</sub> to pH <2                                | EPA 200.8                   |
| Nickel                           | 24 hr Composite | 6 Months         | HNO <sub>3</sub> to pH <2                                | EPA 200.8                   |
| Phosphorus                       | Grab            | 28 days          | Cool to 6°C, 1:1 H <sub>2</sub> SO <sub>4</sub> to pH <2 | EPA 365.1 or 365.4 or 365.3 |
| Selenium                         | 24 hr Composite | 6 Months         | Cool to 6°C, 1:1 HNO <sub>3</sub> to pH <2               | EPA 200.8                   |
| Silver                           | 24 hr Composite | 6 Months         | HNO <sub>3</sub> to pH <2                                | EPA 200.8                   |
| Total Suspended Solids (TSS)     | 24 hr Composite | 7 Days           | Cool to 6°C  | Standard Methods 2540D      |
| Zinc                             | 24 hr Composite | 6 Months         | HNO <sub>3</sub> to pH <2                                | EPA 200.8                   |

Note: Any conflict between this sample plan and 40 CFR Part 136, 40 CFR Part 403 Appendix E, 40 CFR Section 503.8 and/or 40 CFR parts 261 and 268 for sampling and analyses then 40 CFR will be used.

### 4. Chain of Custody (COC)

All sampled included a COC for sample identification (sample location) and tracking. COC information and records are maintained at the East Canyon Creek WRF. Quality Assurance/Quality Control for sampling is provided with each sample report by the contract laboratory.

**M. RECORD KEEPING**

All records that are the basis for the local limits developed shall be maintained for at least three years beyond when the local limits are no longer implemented and enforced. The records will be kept at the East Canyon Creek WRF pretreatment office as a hardcopy and/or in electronic (.pdf) format.

**N. IMPLEMENTATION OF REVISED LOCAL LIMITS**

Industrial users are not expected to be impacted by the new local limits. The District did not have an issue with over allocating the MAIL. The District intends to revoke and reissue permit to incorporate revised local limits and to add the new language from the updated Rules and Regulations. The SIU permits will be reissued within 3 months of approval by the State of the local limits and Rules and Regulations.