BEAR VALLEY WATER DISTRICT
2019 ANNUAL REPORT

ORDER # 5-01-208

JANUARY 30, 2020

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SECTION 1 - INTRODUCTION AND BACKGROUND

1.1 Introduction

The Bear Valley Water District (District) provides sanitary sewer collection, treatment and disposal services for approximately 650 residential and commercial equivalent dwelling units (EDUs) in the Alpine County community of Bear Valley. The District's service area is comprised of approximately 3000 acres located primarily north of California State Highway 4. The District serves the developed private, residential and commercial areas of the Bear Valley village as well as the developed adjoining federal recreational lands including the United States Forest Service's (USFS) Lake Alpine Resort and campgrounds, special use permit (SUP) residential cabins and the Bear Valley Mountain downhill ski resort. The District's wastewater treatment and disposal facility (WWTF) is regulated by the Central Valley Regional Water Quality Control Board (Regional Board) under Waste Discharge Requirements (WDRs) Order No. 5-01-208 and Order No. R5-2019-0078.

1.2 2018 Facility Operations - Overview

During the 2019 water year (October 2018 to September 2019), an annual daily average flow of approximately 0.069 million gallons per day (MGD) (approximately 25.20 MG total) was received at the District WWTF. WDRs Order No. 5-01-208 currently limit influent flow to 0.1 MGD (annual average basis).

Preliminary treatment at the District's main pump station (headworks) consists of shredding (comminutor) and grit removal before the influent reaches the primary sedimentation tank where the settable solids are allowed to fall to the bottom of the tank. Effluent flow is then measured through an Endress and Hauser magnetic flow tube during transfer via three, 10 horse power (HP) Paco pumps to a 14.18 million gallon (MG) two cell, aerated treatment lagoon for secondary biological nutrient removal. While in the two cell lagoon system, the constituents are largely consumed and/or sequestered. Air is delivered to the secondary treatment lagoon via one 40 HP, variable frequency drive (VFD) equipped Gardner Denver positive displacement blower to twelve (12) Triplepoint Mars T-Series Double Bubble™ fine and coarse bubble diffusers. Inline YSI sensors communicate with the VFD blower by way of the SCADA system to keep dissolved oxygen (DO) and suspended solids (TSS) at optimum levels. Treated effluent from the aerated lagoon is then disinfected by use of chlorine gas during transfer via (2) - 375 gallon per minute (GPM) Paco

pumps through a 12,000 gallon chlorine contact tank. The disinfected effluent is then placed into storage and receives further treatment in a 76.4 MG effluent polishing reservoir.

During the irrigation season, typically late spring through early autumn, the polished effluent is disposed of through spray irrigation on up to approximately 80 acres of sprayfields: 40 acres of land which is authorized by Special Use Permit (SUP) from the USFS and 40 acres under private lease through 2048. Both the leased disposal area and the permitted land have been in service since before the installation of the groundwater monitoring wells (approximately 40 years for the leased land) at the site.

Based on the volume of effluent in storage and available to apply to land at the beginning of the land application cycle, a determination is made on the number of acres of land to irrigate. At the beginning of the 2019 land disposal season, July 12, 2019, with approximately 26.07 MG of effluent in storage, spray field areas 1 through 9 (32.90 total acres) were placed into operation.

Effluent disposal via spray irrigation involves the disbursement of the effluent through low impact, high uniformity, Nelson sprinkler heads upon soils and vegetation within the disposal area. The average monthly application rates to the 32.90 acre spray field area during the peak disposal months of 2019 ranged from approximately 5.548 – 8.188 MG per month (0.169 MG – 0.249 MG per acre per month). The water is allowed to percolate into the soil and evapotranspirate into the atmosphere. WDRs Order No. 5-01-208 limit application of wastewater to reasonable rates considering soil, climate, and irrigation management system.

1.3 Regulatory Requirements

Discharge at the Bear Valley Water District WWTF is subject to requirements contained in the two wastewater permits: Order No. 5-01-208 and Order No. R5-2019-0078. These include the Standard Provisions and Reporting Requirements for Waste Discharge Requirements effective 1 March 1991, Revised Monitoring and Reporting Program No. 5-01-208 effective 1 July 2002, Monitoring and Reporting Program, NPDES, Appendix E. effective 1 August 2016, and the Water Quality Control Plan for the California Regional Water Quality Control Board, Central Valley Region and associated documents (Basin Plan).

The District's WDRs also contain monitoring and reporting requirements, which include tri-annual monitoring of groundwater. The District's Third Tri-Annual 2019 Groundwater Monitoring Report prepared by Stantec Consulting Services is submitted under separate cover. These requirements and policies are discussed below as they relate to discharges to land and groundwater limitations at the WWTF.

SECTION 2 – GROUNDWATER MONITORING

Please see the ***Bear Valley Water District Third Tri-Annual 2019 Groundwater Monitoring Report*** submitted under separate cover for an evaluation of groundwater quality beneath the wastewater facility as well as a discussion of current groundwater compliance status.

The Monitoring and Reporting Program (MRP) of WDR Order No. 5-01-208 states that the tri-annual reports shall be submitted to the Regional Board by the first day of July (1st Tri-Annual Report), September (2nd Tri-Annual Report), and February (3rd Tri-Annual Report) of each year.

However, these reporting requirements do not take into account the unique climatic factors that control when the District can access and sample their groundwater monitoring wells. Pursuant to email correspondence from Regional Board staff, Regional Board staff will not recommend enforcement to the Executive Officer so long as the 1st and 2nd tri-annual monitoring reports are submitted by September 1st and November 1st of each year, respectively, instead of the dates currently required in the MRP. The third tri-annual report will remain due by February 1st each year.

SECTION 3 - WATER CONSERVATION AND I/I REDUCTION SUMMARY

3.1 Water Conservation Activities

The District's Water Conservation Plan has been fully implemented since its development in 2002. The District is solely a wastewater service provider and does not provide potable water to its service area. Instead, the Lake Alpine Water Company (LAWC) is the water purveyor for 50-60 percent of water used in the service area.

Much of the water conservation promotion is currently being undertaken by the Lake Alpine Water Company. Most significantly, Lake Alpine Water Company installed residential water meters for all its customers in 2008 and since this period water delivered to LAWC customers has decreased dramatically. Decreases have resulted not only from decreased consumption based on new usage fees but from the ability of LAWC to identify and quickly remedy water lost through faulty winterizing of vacation homes in the area as well as through pipe breaks due to freezing.

The water conservation efforts undertaken by Lake Alpine Water Company are consistent with the intent of the District's Water Conservation Plan as a means to minimize extraneous flows into the wastewater system. The District does not believe that it is cost effective to duplicate efforts of the Lake Alpine Water Company; however, it has supplemented those efforts as warranted.

It should be noted that water conservation within homes and businesses in the District will continue to reduce the annual volume of water arriving at the WWTF but that wastewater may contain higher concentrations of contaminants, if all other factors in the homes and businesses remain the same. Thus, excessive water conservation measures have the potential to increase the risk for the District of failing to comply with effluent limitations.

3.2 I/I Reduction Activities

The Bear Valley Water District continues to implement Infiltration and Inflow (I/I) reduction activities to reduce wastewater volume. During 2019, these activities included continued annual assessments of the collection system. The assessment consists of video analysis, hydro jetting and flushing of collection lines to identify potential problem areas.

In an effort to maximize the I/I reduction program as it relates to the collection system, the District purchased a digital push camera in 2013 to conduct its own collection line CCTV video analysis. Additionally, the District purchased a trailer jetting unit in August 2018 to perform its own pipe segment cleaning. This pre-cleaning is performed prior and to enhance the quality of CCTV inspection and allows the District to rely less on costly contract jetting and CCTV services. These investments have enabled the District to increase the frequency of which the entire 83,210 linear feet (15.76 miles) of gravity collection system is assessed on a recurring basis by increasing the linear feet of collection system cleaned and assessed annually.

During 2019, 23,855 linear feet (29 %) of the gravity collection system was flushed, 6,468 linear feet (7.8 %) of the collection system was hydro-jetted, and 5,800 linear feet (6.9 %) was investigated by CCTV video using the District's sewer camera to identify collection system defects, such as root intrusion, cracked pipe, and pipe separations. In 2019, the District's video analysis found several damaged pipe segments of which all were repaired in August and September 2019.

Additionally, in June 2019 the District was informed by the United States Forest Service that the local USFS District had been awarded a contract to replace the seven full service toilet buildings at the east end of Lake Alpine with premanufactured vault toilets. Preliminary work to replace these toilets was initiated in October 2019 and once completed the BVWD lift station and related collection network in the Chickaree Day Use area will no longer be required. This elimination of a section collection system as well as a lift station in the District's service area is anticipated to generally reduce I/I into the broader collection network.

In addition to these collection system measures, the District has continued efforts to reduce the influx of storm water into the polishing reservoir. Typically, subsurface and surface flow of snowmelt storm water may contribute as much as 60 % to the storage volume of the reservoir. In late 2011, the consulting firm MWH independently evaluated the existing storm water diversion system and made recommendations for improvements. In 2012, the District re-graded the existing diversion ditch in general conformance with MWH's option 3, as found in their December 2011 Memo, "Bear Valley Water District Polishing Reservoir Influx Mitigation Study." Per MWH's Memo, this improvement is estimated to improve the ditches performance to divert storm water flow from the reservoir by 25 percent, which is an approximate reduction of 10 million gallons during a 1- in-100 water year.

SECTION 4 – HYDRAULIC CAPACITY EVALUATION

4.1 Influent Flows

During the 2019 water year (October 2018 to September 2019) total annual influent flow was approximately 25.20 million gallons (MG), with the highest influent flow months being April and May. The highest daily influent flow was 320,000 gallons per day and occurred on February 17, 2019. WY 2019 total influent flows (25.20 MG) were approximately 3.52 MG more than WY 2018 total influent flows of 21.68 MG. WY 2019 influent flows are summarized in Table 1 below.

Table 1 - WY 2019 Influent Flows

Month and Year	Influent Flow (gallons)	Peak Day Flow (gal/day)
October 2018	501,000	26,000
November 2018	464,000	35,000
December 2018	832,000	109,000
January 2019	988,000	82,000
February 2019	1,884,000	320,000
March 2019	2,275,000	100,000
April 2019	5,230,000	230,000
May 2019	5,123,000	207,000
June 2019	4,015,000	206,000
July 2019	1,973,000	105,000
August 2019	1,112,000	69,000
September 2019	799,000	72,000
Total Water Year	25,196,000	--

4.2 Projected Influent flows

As of this writing, wastewater influent flows for the 2020 water year are anticipated to be similar to the 2019 water year. This is a result of similar early water year conditions in the region and the absence to date of any large hydraulic or "atmospheric river" events which characterized more extreme water years such as WY2017 (36.46 MG) where influent flows were approximately 60 % higher than average. The increase in atmospheric river events as well as the quantity and

duration of the snowmelt period remain the controlling factors in determining if available WWTF storage is adequate and if a discharge to surface waters (Bloods Creek) will be utilized as permitted under Order R5-2019-0078.

As of this writing, it is anticipated that the 2020 water year will result in average to above average snowfall. A corresponding increase in tourism resulting in proportionally greater commercial and residential waste generation is anticipated as well as increased runoff into the polishing reservoir directly and from snowmelt on adjacent land.

4.3 Storage and Disposal Summary

Land discharge at the Bear Valley Water District WWTF is required to be maximized in order to minimize the potential for a surface water discharge to Bloods Creek. The magnitude of the discharge is largely controlled by the amount of precipitation, particularly snowfall, and the timing of the snowmelt period. In light of the significant increase in precipitation during WY2019 as well as the quantity and duration of the snowmelt period, the District experienced decreased storage capacity and surface water discharge to Bloods Creek was necessary during WY2019.

Provision IX.B of the District's Monitoring & Reporting Program (MRP) requires the District to electronically submit self-monitoring reports (eSMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site. The District submitted monthly SMR's including the results of all required monitoring on or before the due date according to the reporting schedule of the current Order. On October 15, 2019, the Central Valley Water Board staff reviewed the electronic self-monitoring reports (eSMRs) for the surface water discharge permitted by the Discharger for the May 2019 tand June 2019 monitoring periods. Central Valley Board staff identified that the Discharger violated both effluent limitations for total coliform in June 2019 as well as and Monitoring and Reporting Limitations related to MRP provision IV.A of the WDR's related to reporting the continuous flow and dilution ratio available. In response to the these violations, in its June 2019 eSMR submission, the District notified Central Valley Board staff of the corrective actions taken to avoid this violation in the future and the District's 2019 Annual Report for Order No. R5-2019-0078 further discusses this discharge and is submitted under separate cover.

Effluent land disposal began on July 12, 2019 on Fields 1 – 9 (approximately 32.90 acres) with approximately 26.07 MG in storage. Effluent disposal to land via spray irrigation involves the disbursement of the effluent through low impact, high uniformity, Nelson sprinkler heads upon soils and vegetation within the disposal area. The average monthly application rates to the 32.90 acre spray field area during the peak disposal months of 2019 ranged from approximately 5.548 – 8.188 MG per month (0.169 MG – 0.249 MG per acre per month). The water is allowed to percolate into the soil and evapotranspirate into the atmosphere.

The disposal season ended on September 22, 2019, when the effluent storage reservoir was essentially empty (e.g., no carryover) and could no longer be feasibly pumped by existing equipment. A summary of irrigation disposal operations during 2019 is presented in Table 2.

Table 2 - 2019 Land Disposal Season Summary

Month and Year	Monthly Disposal Volume (gal)	Maximum Acreage Applied	Storage Volume (Million gallons)
July 1, 2019	5,547,809	32.9	23.23
August 1, 2019	8,187,835	32.9	16.97
September 2019	5,556,907	32.9	8.8
Total 2019 Disposal Season	19,292,551	--	

Note that the naturally irregular bottom of the reservoir, coupled with limitations to measuring elevations of effluent occurring in low spots, prevents exact estimates of the small amount of wastewater remaining in storage when the reservoir is nearly empty and cannot be pumped with existing equipment.

However, District staff assessed the storage reservoir minimum pool volume on October 2, 2013, and, with the assistance of the District engineer, determined the minimum pool volume to be approximately 14,000 gallons, significantly less than the estimated volume of 5 MG derived from 1974 Construction Drawings and as reported prior to 2012. Accordingly, the volume of wastewater remaining at the end of the disposal season, and at minimum pool, is considered negligible.

As depicted in photo of the storage reservoir below, as of October 1, 2019 the reservoir was at or below minimum pool with a calculated volume of approximately 14,000 gallons. Approximate

reservoir storage volumes on October 1 for the previous 10 years dating back to 2010 are presented in Table 3 below:

Table 3 – Comparison of Reservoir Volumes on October 1 for Previous 10 Years

DATE	VOLUME (MG)
October 2010	8 MG
October 2011	50 MG
October 2012	Negligible
October 2013	0.014
October 2014	0.014
October 2015	0.014
October 2016	0.014
October 2017	0.014
October 2018	0.014
October 2019	0.014

4.4 Projected Water Balance

The District's storage reservoir was aerial surveyed on September 23, 2013 and several discrepancies were identified between the actual reservoir and the 1974 construction drawings, which previously formulated the basis for the storage reservoir size and capacity.

The 2013 aerial survey and analysis indicates that the reservoir is only 18.6 acres in gross area (not 21.3 acres) and the total storage capacity is 76.4 million gallons (not 106 million gallons). These values suggest that input from I/I into the ponds (directly and from snowmelt on adjacent land) may be less than previously estimated. The District has incorporated the 2013 surveyed storage capacity into their evaluation of maximum wastewater flows, including I/I, which will be contained during a maximum precipitation year with a 1-in-100 year return frequency.

The District Engineer revised and updated the District's water balance in August 2017 following the adoption of NPDES Order R5-2016-0045 and the collection of valid creek flow data for Bloods Creek for the entire permitted discharge period of January through June. In addition, the first successful surface discharge during the March through June 2017 period provided the District Engineer the opportunity to update its 1-in-100 year water balance to verify the assumptions, limitations and capacity determinations which were utilized in previous water balances.

Based on the updated water balance, the latest projected capacity of the District has been determined to be 1196 additional equivalent dwelling units (EDUs) assuming no infiltration associated with any new connections. Attached as Appendix A. is the District's 2019 updated water balance that provides detail on treatment and disposal calculations for this capacity determination.

SECTION 5 - LAND DISPOSAL AGREEMENTS

Current Land Disposal Agreements are as follows:

1. United States Forest Service (USFS) Special Use Permit (SUP) #1029-01
    a. 40 acres of Sprayfield - Expired July 1, 2015 (In Renewal Phase)
    b. 20 Acres of Buildings and Transmission Lines - Expired July 1, 2015 (In Renewal Phase)
2. C. Bruce Orvis and TBH Partners - 118 acres - Expires December 7, 2048.
3. C. Bruce Orvis and TBH Partners - Sewer Line Easement - Expires December 7, 2048. (Applies to surface discharge outfall facilities outside of long-term lease land)

The USFS and BVWD have been working closely to maintain continued land use within federally permitted limits. Following the June 16, 2011 expiration of the temporary 10-year, 40 additional acre amendment to SUP #1029-01 ratified in 2001, the USFS and BVWD have been working to better craft the District's remaining 40 acre SUP to better match actual land use. To this end, the USFS performed a site visit in 2012 and, together with District staff, used global positioning (GPS) technology to better identify the District's current land disposal array. This visit yielded a map which now defines the active SUP.

On May 28, 2014, the District provided a copy of communication with a USFS representative reflecting their intent to renew the special use permit in accordance with Order No. R5-2011-0053, Special Provision VI.C.2.c. Subsequently, a meeting was held with the USFS Calaveras District Ranger, Forest Supervisor, and three other USFS representatives on January 9, 2015 to further discuss District use of federal land for effluent spray field application. All indications from the USFS representatives were that the 20 year permit expiring in 2015 would be renewed in the form of a two permits: one, 40 year permit for permanent infrastructure and conveyance systems (lift stations and collection lines) and one, 10 year permit for effluent spray field application. With respect to the 10 year permit, the USFS recommended the District begin to consider purchasing the land from the federal government through the Townsite Act to ensure long term, sustainable control of these areas for spray field purposes.

On March 17, 2015, in advance of the July 1, 2015 expiration date, the District submitted Standard Form 299, "Application for Transportation and Utility Systems and Facilities on Federal Lands" to the USFS to trigger the SUP reissuance process.

As of April 2019, the USFS informed the District that the Stanislaus National Forest has pushed the project as far as they were capable and that the renewal is now on a list of projects at the USFS regional office in Vallejo to conduct and finish the NEPA review prior to permit renewal. According to officials at the Stanislaus National Forest, as resources become available the project is expected to be added to the program of work at the regional office in the next year or two. However, depending on what new projects and priorities the USFS Regional office takes on it may still take several years for this renewal project to be accepted and listed as a priority.

SECTION 6 - SLUDGE/SOLID WASTE DISPOSAL

6.1 Treatment Lagoon

Effluent is transferred from the District's headworks following preliminary treatment to a 14.18 million gallon (MG) two cell, aerated treatment lagoon for secondary biological nutrient removal. While in the two cell lagoon system, the solids are largely consumed and/or sequestered as air is delivered to the secondary treatment lagoon to twelve (12) Triplepoint Mars T-Series Double Bubble™ fine and coarse bubble diffusers. The aeration and mixing strategy employed by the District suspends solids sufficiently for successful floc formation permitting efficient biological consumption of most solids.

Limited sludge at the WWTF has accumulated at the bottom of the two cell treatment lagoon since the lagoon was brought online in 1974. The sludge depth at the bottom of the treatment pond is measured annually by District staff using a combination of a sludge judge and Secchi Disc. Sludge measurement on October 24, 2019 revealed that the sludge depth ranged from approximately 6" to as much as 34". According to the solids distribution in the lagoon, there is additional accumulation at the inlet, in the far ends and corners and half way back on the outlet side. This solids distribution pattern is reasonable based on the location of the inlet and outlet structures and the increases correspond roughly to the same areas where diffusers have become clogged or inoperable.

The District completed a comprehensive upgrade to the wastewater treatment lagoon in October 2019. The scope of this upgrade included removal of the original and failing coarse bubble diffuser network and installation of twelve (12) new Triplepoint Mars T-Series Double Bubble™ high efficiency fine and coarse bubble diffusers in both cells. Additionally, the original buried air header that carried air to the original diffusers was abandoned and a new CPVC air header was installed. Lastly, the District replaced the original cedar baffle wall that had largely disintegrated over the last 45 years and restored the lagoon to its original two cell design, increasing the lagoons retention time which is expected to produce improved effluent quality, reduce overall sludge and improve energy efficiency.

In general, the organic solids loading rate on the pond system appears to be so low compared to their natural decay and consumption rate that no material accumulation of sludge appears to have occurred over the past 45 years. At some point in the distant future, if the lagoon upgrades do not accomplish this on their own, the treatment lagoon may require sludge to be mechanically removed and disposed of at an appropriate landfill.

The following table presents results of sludge monitoring of the District's treatment lagoon performed on November 20, 2019.

Table 4 - Annual Sludge Monitoring

Sampling Date	November 20, 2019
Cadmium (mg/L)	<15
Chromium (mg/L)	<0.50
Copper (mg/L)	<15
Lead (mg/L)	<0.50
Nickel (mg/L)	<5.0
Zinc (mg/L)	13

6.2 Lift Stations

At the headworks of the WWTF, the most common materials generated generally include grease, sediment, and minor non-organic solid waste. The items not shredded during pretreatment are removed as necessary from the waste stream and disposed of in local, municipal waste transfer stations bound for landfill. Meanwhile, annual organic solids removal at all four (4) District lift stations is routinely performed each September or October and was completed this year by El Dorado Septic on October 17, 2019.

SECTION 7 - ANNUAL WATER SUPPLY AND POND MONITORING

7.1 Annual Water Supply Monitoring

Annual water supply monitoring was conducted on October 2, 2019 in which six (6) samples were taken to include all available unique sources of water used by District customers, including three (3) discrete springs, two (2) wells and the surface water treated by the Lake Alpine Water Company sourced from Bear Lake.

The following table presents results for potable water from the BVWD office served by Lake Alpine Water Company (surface water - about 5.37 % of influent), the Bear Valley Mountain Lodge spring (about 2.3 % of influent), the Lake Alpine Lodge well (about 1.59 % of influent), the USFS Lake Alpine Campground well (about 3 % of influent), the Old Subdivision spring and the Bear Valley Mountain Resort Shop spring (percentage of influent not available).

Table 4 - Annual Water Supply Monitoring

	Lake Alpine Water Co. (Surface Water)	Bear Valley Mountain Resort Lodge (Spring)	Old Subdivision Home #407 (Spring)	Lake Alpine Resort (Well)	Bear Valley Mountain Resort Shop (Spring)	USFS Lake Alpine Campgrounds (Well)
Sampling Date	10/2/19	10/2/19	10/2/19	10/2/19	10/2/19	10/2/19
% of Influent	5.34	2.3	N/A	1.59	N/A	3.00
Boron (mg/L)	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Sodium (mg/L)	4.4	7.9	3.1	2.1	8.1	5.9
Iron (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (mg/L)	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Calcium (ug/L)	23,000	10,000	8,700	4,900	14,000	14,000
Magnesium (ug/L)	560	1,600	2,900	1,600	1,500	73
Chloride (mg/L)	4.2	3.1	0.49	0.35	0.52	0.69
Hardness, Total (mg/L)	59	32	34	19	40	34
Specific Conductance (EC) (umhos/cm)	139.6	113.0	96.7	64.7	129.9	104.6
Total Dissolved Solids (mg/L)	83	69	80	53	76	81

7.2 Annual Pond Monitoring

Municipal wastewater contains numerous dissolved inorganic waste constituents which are forms of salinity that may pass through the treatment process and soil profile. Effective control of long term impacts on groundwater quality relies on monitoring and effective source control. As described in Order No. 05-01-208, even in the best of circumstances, long-term land discharge of treated municipal wastewater may potentially degrade groundwater with salt and the individual components of salts (e.g. sodium, chloride).

Order No. 05-01-208 stipulates annual pond monitoring, including sampling and analysis, of boron, chloride, iron, manganese, and sodium. Certain constituents (e.g. sodium, chloride, boron) are useful indicator parameters for evaluating the extent to which effluent reaches and potentially degrades groundwater. Other constituents (e.g. iron, manganese) are useful indicators to determine whether components of the WWTF with high-strength waste constituents, such as sludge handling facilities, may be ineffective in containing waste.

The following table summarizes the annual pond monitoring results for these constituents sampled on October 2, 2019.

TABLE 5 - Annual Pond Monitoring

CONSTITUENT	STORAGE RESERVOIR	TREATMENT POND
Boron (mg/L)	<0.060	0.066
Chloride (mg/L)	22	17
Iron (mg/L)	5.2	1.4
Manganese (mg/L)	0.55	0.092
Sodium (mg/L)	14	17

BEAR VALLEY WATER DISTRICT, 2019 ANNUAL REPORT

Appendix A. 2019 Water Balance - Prepared January 30, 2020

APPENDIX A. 2019 WATER BALANCE