Sunnyslope Water District

Annual Report

2020

Sunnyslope County Water District

3570 Airline Highway
Hollister, California 95023-9702

Phone (831) 637-4670
Fax (831) 637-1399

January 29, 2021

California Regional Water Quality Control Board
Central Coast Region
Attn: Monitoring and Reporting Review Section
895 Aerovista Pl Ste 101
San Luis Obispo CA 93401-8725

RE: Ridgemark Estates Wastewater Treatment Facilities – Annual Monitoring Report

Dear Review Section,

Enclosed please find the Sunnyslope County Water Districts 2020 Fourth Quarter Monitoring Report and the 2020 Annual Wastewater Report for Ridgemark Estates Wastewater Treatment Facilities WDR R3-2004-0065 in a searchable PDF Format.

- 2020 Fourth Quarter Monitoring Report
- 2020 Annual Wastewater Report including,
- 2020 Annual Salt Management Report
- 2020 Annual Engineering Technical Report

If you have any questions, or need further information, please do not hesitate to contact this office.

Sincerely

Drew A. Lander; P.E.
General Manager

DAL/jjr

Sunnyslope County Water District

January 29, 2021

California Regional Water Quality Control Board
Central Coast Region
Attn: Monitoring and Reporting Review Section
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Dear Monitoring and Reporting Review Section:

Facility Name:	Sunnyslope County Water District Ridgemark Estates Subdivision
Address:	3570 Airline Highway Hollister, CA 95023
Contact Person:	Drew A. Lander P.E
Job Title:	General Manager
Phone Number:	831-637-4670
WDR/NPDES Order Number:	WDR R3-2004-0065
WDID Number:	________________
Type of Report (circle one):	Monthly Quarterly Semi-Annual **Annual**
Month(s) (circle applicable months*):	**JAN FEB MAR APR MAY JUN** **JUL AUG SEP OCT NOV DEC** *Annual Reports (circle the first month of the reporting period)
Year:	**2020**

Violation(s)
(Place an X by the appropriate choice): ___ **No** (there are no violations to report)
X__ **Yes** (*If Yes is marked (complete a-g)*)

a) Parameter(s) in Violation:	**RMI SBR:**	Sodium, Chloride	
b) Section(s) of WDR/NPDES Violated:	**RMI SBR:**	Section B) item 2, Table 6 6=Sodium, Chloride	
c) Reported Value(s):	**RMI SBR:**	Sodium	- 220, 230
		Chloride	- 260, 230, 240, 260, 240, 250, 280, 255, 270, 310, 280, 270
d) WDR/NPDES Limit/Condition:	**RMI SBR:**	Sodium	- 200
		Chloride	- 200

e) Dates of Violations(s)
(reference page of report/data sheet): **RMI SBR:** Sodium - 09/20, 10/20
Chloride- 01/20, 2/20, 3/20, 4/20, 5/20, 6/20, 7/20, 8/20, 9/20, 10/20, 11/20, 12/20

Data Sheet – RMI SBR Effluent Monitoring

f) Explanation of Cause(s):
Chlorides and Sodium,
The Hollister Urban Area Water Plan (HUAWP) has been completed and included the upgrade of the existing Lessalt Water Treatment Plant and the construction of a new surface water treatment plant called the West Hills Water Treatment Plant. These two facilities, associated pipelines, and pump stations will allow high quality drinking water to be delivered throughout the Hollister Urban Area. Sunnyslope County Water District (SSCWD) has meet all other discharge requirements, yet it has not been able to meet the discharge requirements for chlorides due to the continued use of brine discharging water softeners within the district. Sodium levels where exceeded in the month of September and October due to water quality and minor maintenance issues at the Lessalt Water Treatment Facility. Those issues caused the Lessalt Water Treatment Facility to be off for half of the month. Sequentially the districts wells operated longer than anticipated causing higher salinity water throughout the districts distribution system.

g) Corrective Actions(s):

Chlorides and Sodium
Sunnyslope continues to make progress with meeting the salinity requirements of the WDRs. The addition of higher quality surface water deliveries to customers, providing rebates for the removal of salt discharging water softeners, and adopting an ordinance banning the installation of new salt discharging water softeners is bringing the District closer to compliance. The District is in compliance for Sodium annual rolling average. As previously stated, the wells where operated for extended periods of time causing higher Sodium levels in the previous mentioned months. The surface waters facility is now back in operation, which has brought down those levels in the subsequent months. The District will continue its outreach and education of customers in partnership with the City of Hollister and San Benito County Water District to promote the improvement of drinking water quality and the removal of salt discharging water softeners which will further help in meeting salinity requirements.

In accordance with the Standard Provisions and Reporting Requirements, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

If you have any questions or require additional information, please contact me at the number provided above.

Sincerely,

Drew A Lander P.E.
General Manager

Jose J. Rodriguez
Water/Wastewater Superintendent
Chief Plant Operator

California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obsipo, CA 93401
Submit this Self Monitoring Report to: centralcoast@waterboards.ca.gov

Document Date: 1/29/2021

FACILITY NAME: RidgeMark Estates Wastewater

FACILITY ADDRESS: 10 Georges Dr.
~~Hollister CA 95023~~

CONTACT PERSON: Jose J. Rodriguez

JOB TITLE: Water/Wastewater Superintendent

PHONE NUMBER: 831-637-4670

EMAIL: jose@sscwd.org

WDR ORDER (Permit) Number: WDR# R3-2004-0065

WDID NUMBER: ____________

PERMITTED FLOW (see facility WDR Permit): 370,000 gpd

AVERAGE WASTEWATER FLOW (over monitoring period): 167,226 gpd

TYPE OF REPORT: ■ **Annual** ☐ **Semiannual** ☐ **Quarterly** ☐ **Monthly** ☐ **Other:** ____________

REPORTING PERIOD: 1-1-2020 **TO** 12-31-2020

MONITORING PERFORMED DURING THIS PERIOD (check all that apply):

■ **Groundwater**
■ **Treatment System Effluent**
■ **Treatment System Influent**
■ **Source Water Monitoring**
■ **Lab Reports**
■ **Solids Disposal**
■ **Water Supply**
☐ **Other:** ____________
☐ **Recycled Water**
■ **Disposal Area**
☐ **Use Area**

Violation(s) during this monitoring period? ■ **YES** ☐ **NO**

Parameter(s) in Violation: *Pursuant to Standard Provisions[1] see footnote on next page, monitoring reports must contain date of violation, explanation of cause and corrective actions planned or taken to prevent recurrence. Please include parameter(s) and date(s) of violation in space provided below. If space is insufficient, include an independent discussion containing explanation of cause and corrective action within monitoring report.*

SSCWD has not been able to meet the discharge requirements for chlorides due to the continued use of brine discharging water softeners within the district. At times, Sodium levels are exceeded due to source water being the main water source in part of facility maintenance..

Discharger Comments:

Sunnyslope continues to make progress with meeting the salinity requirements of the WDRs. The District will continue its outreach and education of customers in partnership with the City of Hollister and San Benito County Water District to promote the improvement of drinking water quality and the removal of salt discharging water softeners.

Submit this self-monitoring report to centralcoast@waterboards.ca.gov in search-able PDF format. Include attached cover sheet and signature page. DO NOT submit via US mail.

In accordance with the Standard Provisions[1] and Reporting Requirements, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Print Name: Drew A. Lander Title: General Manager

Signature:* [signature] Date: 1/29/2021

*All reports shall be signed by one of the following:

a. For a corporation: by a principle executive officer of at least the level of vice president.

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

c. For a public agency: by either a principle executive officer or ranking elected official.

d. For a LLC: either a member or manager given signing authority by the operating agreement of LLC.

e. a "duly authorized representative" of one of the above.

[1] Electronic access to Standard Provisions: https://www.waterboards.ca.gov/centralcoast/board_decisions/docs/wdr_standard_provisions_2013.pdf

Sunnyslope Water District

Introduction

Sunnyslope County Water District

3570 Airline Highway
Hollister, California 95023-9702
Phone (831) 637-4670
Fax (831) 637-1399

Treatment Objectives

The main goal of the Ridgemark Area Wastewater Treatment is to meet a series of effluent quality criteria specified by a new WDR permit from the RWQCB. The permit requirements also apply to the RM II WWTP. The nature of these requirements required an upgrade to secondary treatment with biological nutrient removal. Table 1 summarizes the effluent water quality requirements for discharge.

Table 1 - RWQCB Discharge Requirements

Parameter	WDR Discharge Requirement
Nitrate as Nitrogen (mg/L) [a]	5
Ammonia as Nitrogen (mg/L)	5
BOD5 (mg/L)	30
TSS (mg/L)	30
pH	6.5 – 8.4
TDS (mg/L)	1,200
Sodium (mg/L)	200
Chloride (mg/L)	200

The first five parameters listed in Table 1 are standard wastewater treatment constituents that are addressed through biological/secondary treatment process. The secondary treatment process is a biochemical oxidation process that uses microorganism to stabilize organic matter, measured by a reduction in BOD. The secondary treatment process was also designed to remove nitrogen by converting ammonia to nitrate (nitrification) and then to nitrogen gas (denitrification) which is released to the atmosphere. TSS (including biomass) will settle out of the wastewater and are removed as a waste solids product.

Dissolved solids, sodium, and chloride were not addressed through the wastewater treatment improvements project but will instead be addressed through improvements to the potable water supply. Removal of dissolved solids and hardness from potable water will reduce the reliance on home water softeners. Through the regeneration process, water softeners discharge a concentrated solution of sodium chloride to the sewer system further increasing the concentrations at the wastewater treatment plant. The improvements in the potable water quality are expected to result in improved wastewater quality that will meet the WDR permit requirements for TDS, sodium, and chloride.

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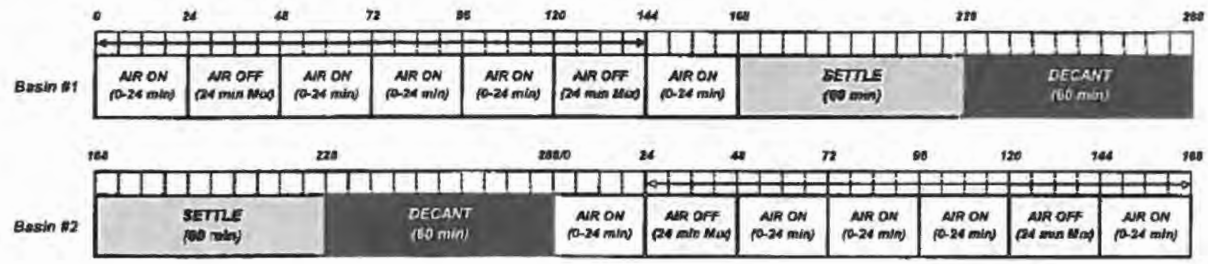
Sequence Batch Reactor

An SBR provides secondary treatment to remove BOD, TSS, and nitrogen to meet WDR effluent limitations. The SBR performs as an equalization, biological treatment, and secondary clarification in one basin compared to conventional processes with separate basins for each process. A typical SBR process includes multiple operational phases including mixed-fill, aerated-fill, reaction, settling, and decant. Figure 1 shows an example of the sequential phases of the SBR process.

Figure 1: SBR Cycle

Dual Mode 2-Basin NDN Normal Cycle: 288 minutes (4.8 hours)



The SBR system has been designed to meet the RWQCB WDR effluent limits allowing for disposal to the percolation ponds.

Existing Pond Disposal
The principal objective of pond disposal is to percolate secondary effluent into the ground. The historic RMK I site consisted of 5 ponds, labeled Pond 1 thru Pond 5. Pond 1 and Pond 2 were used as treatment ponds while Ponds 3-5 were used for disposal. A sixth pond 6 is located to the northwest of the facility and provides additional disposal. The wastewater treatment improvements constructed new treatment facilities in Pond 2 and a portion of Pond 3. A portion of Pond 3 can be used for percolation.
Pond 4, Pond 5, and Pond 6 will continue to provide disposal capacity. Pond 1 is still filled with solids and is ultimately envisioned to be decommissioned and turned into a disposal pond.

Solids Storage Tank and Drying Bed
The solids generated by the SBR is transferred to the solids storage tank using a waste activated sludge (WAS) pump that discharge into a solids storage tank. The storage tank has a surface aerator and is operated like a facultative pond with an aerobic zone up top and an anaerobic zone below.
The concrete tank provides approximately 60 days of solids retention time at buildout flow (note: retention time is longer initially) allowed solids to be stored during the winter months when air drying in the drying beds would be minimal. Solids will settle from the fluid and the supernatant will be removed from the top of the basin through a decant mechanism while the solids will be removed from the bottom of the basin using a fixed pipe system that allow solids to be discharged to an adjoining pump well.
A vertical progressive cavity pump can then convey solids to the drying beds for air drying.

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As acknowledged in the Waste Discharge Requirement Order R3-2004-0065 the Ridgemark Estate Subdivision Wastewater Treatment Plant is a sequencing batch reactor (SBR) facility which can treats up to 370,000 gallons per day. The SBR process allows the unit processes of react, settle, and discharge to occur sequentially in one basin. The treated effluent is discharged into one of four percolation ponds. The wastewater facility limits and parameters are:

ADWF (Average Day Flow)	-	370,000 gpd
Maximum Day Flow	-	430,000 gpd
PDWF	-	725,156 gpd
PWWF (Peak 3 Hour Flow*)	-	967,000 gpd
Design BODs Cone. (at 20°C)	-	338 mg/L
Design BOD Loading	-	987 lbs./day
Design TSS Cone.	-	338 mg/L
Design TSS Loading	-	987 lb./day
Design TKN Cone.	-	54 mg/L
Design TKN Loading	-	158 lb./day
Alkalinity required (minimum)	-	159 mg/L
Wastewater Temperature, Min	-	16 °C
Wastewater Temperature, Max	-	20 °C
Ambient Air Temperature	-	0 to 32 °C
pH Range	-	6.5 to 8.5 SU
Site Elevation - above sea level	-	520 ft

Sunnyslope Water District

Section A

Data Tables and Graphs

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision
Wastewater Treatment Plant
Sequencing Batch Reactor (SBR) INFLUENT MONITORING

	RM # 1 SBR		RM # 2		COMBINED
		30 Day		30 Day	30 Day
DATE	DAILY FLOW METERED GPD	Running Average GPD	DAILY FLOW METERED GPD	Running Average GPD	Running Average GPD
January 1, 2020	158,000	155,233	Flowing to RM I SBR for Treatment		
January 2, 2020	151,000	155,333	Flowing to RM I SBR for Treatment		
January 3, 2020	145,000	155,300	Flowing to RM I SBR for Treatment		
January 4, 2020	155,000	155,200	Flowing to RM I SBR for Treatment		
January 5, 2020	172,000	155,700	Flowing to RM I SBR for Treatment		
January 6, 2020	147,000	156,967	Flowing to RM I SBR for Treatment		
January 7, 2020	139,000	156,700	Flowing to RM I SBR for Treatment		
January 8, 2020	149,000	155,333	Flowing to RM I SBR for Treatment		
January 9, 2020	134,000	155,467	Flowing to RM I SBR for Treatment		
January 10, 2020	143,000	155,233	Flowing to RM I SBR for Treatment		
January 11, 2020	158,000	155,233	Flowing to RM I SBR for Treatment		
January 12, 2020	179,000	155,900	Flowing to RM I SBR for Treatment		
January 13, 2020	146,000	156,633	Flowing to RM I SBR for Treatment		
January 14, 2020	144,000	157,000	Flowing to RM I SBR for Treatment		
January 15, 2020	149,000	155,767	Flowing to RM I SBR for Treatment		
January 16, 2020	155,000	155,867	Flowing to RM I SBR for Treatment		
January 17, 2020	127,000	156,333	Flowing to RM I SBR for Treatment		
January 18, 2020	150,000	155,433	Flowing to RM I SBR for Treatment		
January 19, 2020	170,000	155,800	Flowing to RM I SBR for Treatment		
January 20, 2020	159,000	156,133	Flowing to RM I SBR for Treatment		
January 21, 2020	141,000	156,400	Flowing to RM I SBR for Treatment		
January 22, 2020	140,000	155,733	Flowing to RM I SBR for Treatment		
January 23, 2020	138,000	155,067	Flowing to RM I SBR for Treatment		
January 24, 2020	140,000	152,833	Flowing to RM I SBR for Treatment		
January 25, 2020	149,000	151,767	Flowing to RM I SBR for Treatment		
January 26, 2020	181,000	150,833	Flowing to RM I SBR for Treatment		
January 27, 2020	148,000	151,733	Flowing to RM I SBR for Treatment		
January 28, 2020	140,000	151,267	Flowing to RM I SBR for Treatment		
January 29, 2020	140,000	150,100	Flowing to RM I SBR for Treatment		
January 30, 2020	141,000	149,900	Flowing to RM I SBR for Treatment		
January 31, 2020	145,000	149,600	Flowing to RM I SBR for Treatment		
February 1, 2020	160,000	149,167	Flowing to RM I SBR for Treatment		
February 2, 2020	172,000	149,467	Flowing to RM I SBR for Treatment		
February 3, 2020	153,000	150,367	Flowing to RM I SBR for Treatment		
February 4, 2020	146,000	150,300	Flowing to RM I SBR for Treatment		
February 5, 2020	141,000	149,433	Flowing to RM I SBR for Treatment		
February 6, 2020	149,000	149,233	Flowing to RM I SBR for Treatment		
February 7, 2020	124,000	149,567	Flowing to RM I SBR for Treatment		
February 8, 2020	152,000	148,733	Flowing to RM I SBR for Treatment		
February 9, 2020	181,000	149,333	Flowing to RM I SBR for Treatment		
February 10, 2020	145,000	150,600	Flowing to RM I SBR for Treatment		
February 11, 2020	151,000	150,167	Flowing to RM I SBR for Treatment		
February 12, 2020	134,000	149,233	Flowing to RM I SBR for Treatment		
February 13, 2020	152,000	148,833	Flowing to RM I SBR for Treatment		
February 14, 2020	128,000	149,100	Flowing to RM I SBR for Treatment		
February 15, 2020	146,000	148,400	Flowing to RM I SBR for Treatment		
February 16, 2020	152,000	148,100	Flowing to RM I SBR for Treatment		
February 17, 2020	157,000	148,933	Flowing to RM I SBR for Treatment		
February 18, 2020	146,000	149,167	Flowing to RM I SBR for Treatment		
February 19, 2020	138,000	148,367	Flowing to RM I SBR for Treatment		
February 20, 2020	140,000	147,667	Flowing to RM I SBR for Treatment		
February 21, 2020	133,000	147,633	Flowing to RM I SBR for Treatment		
February 22, 2020	147,000	147,400	Flowing to RM I SBR for Treatment		
February 23, 2020	174,000	147,700	Flowing to RM I SBR for Treatment		
February 24, 2020	148,000	148,833	Flowing to RM I SBR for Treatment		
February 25, 2020	136,000	148,800	Flowing to RM I SBR for Treatment		
February 26, 2020	130,000	147,300	Flowing to RM I SBR for Treatment		
February 27, 2020	137,000	146,700	Flowing to RM I SBR for Treatment		
February 28, 2020	133,000	146,600	Flowing to RM I SBR for Treatment		
February 29, 2020	151,000	146,367	Flowing to RM I SBR for Treatment		
March 1, 2020	179,000	146,700	Flowing to RM I SBR for Treatment		
March 2, 2020	147,000	147,833	Flowing to RM I SBR for Treatment		
March 3, 2020	141,000	147,400	Flowing to RM I SBR for Treatment		
March 4, 2020	140,000	146,367	Flowing to RM I SBR for Treatment		
March 5, 2020	154,000	145,933	Flowing to RM I SBR for Treatment		
March 6, 2020	131,000	146,200	Flowing to RM I SBR for Treatment		
March 7, 2020	150,000	145,867	Flowing to RM I SBR for Treatment		
March 8, 2020	177,000	145,900	Flowing to RM I SBR for Treatment		
March 9, 2020	152,000	147,667	Flowing to RM I SBR for Treatment		
March 10, 2020	149,000	147,667	Flowing to RM I SBR for Treatment		
March 11, 2020	154,000	146,600	Flowing to RM I SBR for Treatment		
March 12, 2020	141,000	146,900	Flowing to RM I SBR for Treatment		
March 13, 2020	144,000	146,567	Flowing to RM I SBR for Treatment		
March 14, 2020	171,000	146,900	Flowing to RM I SBR for Treatment		
March 15, 2020	187,000	147,533	Flowing to RM I SBR for Treatment		
March 16, 2020	144,000	149,500	Flowing to RM I SBR for Treatment		
March 17, 2020	165,000	149,433	Flowing to RM I SBR for Treatment		
March 18, 2020	158,000	149,867	Flowing to RM I SBR for Treatment		
March 19, 2020	158,000	149,900	Flowing to RM I SBR for Treatment		
March 20, 2020	169,000	150,300	Flowing to RM I SBR for Treatment		
March 21, 2020	155,000	151,333	Flowing to RM I SBR for Treatment		
March 22, 2020	171,000	151,833	Flowing to RM I SBR for Treatment		
March 23, 2020	169,000	153,100	Flowing to RM I SBR for Treatment		
March 24, 2020	156,000	153,833	Flowing to RM I SBR for Treatment		
March 25, 2020	154,000	153,233	Flowing to RM I SBR for Treatment		
March 26, 2020	161,000	153,433	Flowing to RM I SBR for Treatment		
March 27, 2020	163,000	154,267	Flowing to RM I SBR for Treatment		
March 28, 2020	158,000	155,367	Flowing to RM I SBR for Treatment		
March 29, 2020	175,000	156,067	Flowing to RM I SBR for Treatment		
March 30, 2020	172,000	157,467	Flowing to RM I SBR for Treatment		
March 31, 2020	155,000	158,167	Flowing to RM I SBR for Treatment		

RMK1

127,000	Daily Flow Minimum GPD
181,000	Daily Flow Maximum GPD
149,452	Daily Flow Average GPD
4,633,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

RMK1

124,000	Daily Flow Minimum GPD
181,000	Daily Flow Maximum GPD
146,759	Daily Flow Average GPD
4,256,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

RMK1

131,000	Daily Flow Minimum GPD
187,000	Daily Flow Maximum GPD
158,065	Daily Flow Average GPD
4,900,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision
Wastewater Treatment Plant
Sequencing Batch Reactor (SBR) INFLUENT MONITORING

	RM # 1 SBR		RM # 2		COMBINED
		30 Day		30 Day	30 Day
DATE	DAILY FLOW METERED GPD	Running Average GPD	DAILY FLOW METERED GPD	Running Average GPD	Running Average GPD
April 1, 2020	151,000	157,367	Flowing to RM I SBR for Treatment		
April 2, 2020	173,000	157,500	Flowing to RM I SBR for Treatment		
April 3, 2020	157,000	158,567	Flowing to RM I SBR for Treatment		
April 4, 2020	166,000	159,133	Flowing to RM I SBR for Treatment		
April 5, 2020	172,000	159,533	Flowing to RM I SBR for Treatment		
April 6, 2020	166,000	160,900	Flowing to RM I SBR for Treatment		
April 7, 2020	154,000	161,433	Flowing to RM I SBR for Treatment		
April 8, 2020	166,000	160,667	Flowing to RM I SBR for Treatment		
April 9, 2020	164,000	161,133	Flowing to RM I SBR for Treatment		
April 10, 2020	157,000	161,633	Flowing to RM I SBR for Treatment		
April 11, 2020	174,000	161,733	Flowing to RM I SBR for Treatment		
April 12, 2020	178,000	162,833	Flowing to RM I SBR for Treatment		
April 13, 2020	168,000	163,967	Flowing to RM I SBR for Treatment		
April 14, 2020	156,000	163,867	Flowing to RM I SBR for Treatment		
April 15, 2020	161,000	162,833	Flowing to RM I SBR for Treatment		
April 16, 2020	160,000	163,400	Flowing to RM I SBR for Treatment		
April 17, 2020	166,000	163,233	Flowing to RM I SBR for Treatment		
April 18, 2020	173,000	163,500	Flowing to RM I SBR for Treatment		
April 19, 2020	179,000	164,000	Flowing to RM I SBR for Treatment		
April 20, 2020	164,000	164,333	Flowing to RM I SBR for Treatment		
April 21, 2020	158,000	164,633	Flowing to RM I SBR for Treatment		
April 22, 2020	161,000	164,200	Flowing to RM I SBR for Treatment		
April 23, 2020	161,000	163,933	Flowing to RM I SBR for Treatment		
April 24, 2020	172,000	164,100	Flowing to RM I SBR for Treatment		
April 25, 2020	169,000	164,700	Flowing to RM I SBR for Treatment		
April 26, 2020	177,000	164,967	Flowing to RM I SBR for Treatment		
April 27, 2020	158,000	165,433	Flowing to RM I SBR for Treatment		
April 28, 2020	160,000	165,433	Flowing to RM I SBR for Treatment		
April 29, 2020	162,000	164,933	Flowing to RM I SBR for Treatment		
April 30, 2020	158,000	164,600	Flowing to RM I SBR for Treatment		
May 1, 2020	157,000	164,700	Flowing to RM I SBR for Treatment		
May 2, 2020	173,000	164,900	Flowing to RM I SBR for Treatment		
May 3, 2020	186,000	164,900	Flowing to RM I SBR for Treatment		
May 4, 2020	167,000	165,867	Flowing to RM I SBR for Treatment		
May 5, 2020	163,000	165,900	Flowing to RM I SBR for Treatment		
May 6, 2020	179,000	165,600	Flowing to RM I SBR for Treatment		
May 7, 2020	162,000	166,033	Flowing to RM I SBR for Treatment		
May 8, 2020	167,000	166,300	Flowing to RM I SBR for Treatment		
May 9, 2020	181,000	166,333	Flowing to RM I SBR for Treatment		
May 10, 2020	177,000	166,900	Flowing to RM I SBR for Treatment		
May 11, 2020	174,000	167,567	Flowing to RM I SBR for Treatment		
May 12, 2020	162,000	167,567	Flowing to RM I SBR for Treatment		
May 13, 2020	164,000	167,033	Flowing to RM I SBR for Treatment		
May 14, 2020	164,000	166,900	Flowing to RM I SBR for Treatment		
May 15, 2020	166,000	167,167	Flowing to RM I SBR for Treatment		
May 16, 2020	174,000	167,333	Flowing to RM I SBR for Treatment		
May 17, 2020	186,000	167,800	Flowing to RM I SBR for Treatment		
May 18, 2020	167,000	168,467	Flowing to RM I SBR for Treatment		
May 19, 2020	155,000	168,267	Flowing to RM I SBR for Treatment		
May 20, 2020	175,000	167,467	Flowing to RM I SBR for Treatment		
May 21, 2020	145,000	167,833	Flowing to RM I SBR for Treatment		
May 22, 2020	164,000	167,400	Flowing to RM I SBR for Treatment		
May 23, 2020	167,000	167,500	Flowing to RM I SBR for Treatment		
May 24, 2020	168,000	167,700	Flowing to RM I SBR for Treatment		
May 25, 2020	177,000	167,567	Flowing to RM I SBR for Treatment		
May 26, 2020	149,000	167,833	Flowing to RM I SBR for Treatment		
May 27, 2020	162,000	166,900	Flowing to RM I SBR for Treatment		
May 28, 2020	159,000	167,033	Flowing to RM I SBR for Treatment		
May 29, 2020	167,000	167,000	Flowing to RM I SBR for Treatment		
May 30, 2020	169,000	167,167	Flowing to RM I SBR for Treatment		
May 31, 2020	178,000	167,533	Flowing to RM I SBR for Treatment		
June 1, 2020	155,000	168,233	Flowing to RM I SBR for Treatment		
June 2, 2020	160,000	167,633	Flowing to RM I SBR for Treatment		
June 3, 2020	159,000	166,767	Flowing to RM I SBR for Treatment		
June 4, 2020	160,000	166,500	Flowing to RM I SBR for Treatment		
June 5, 2020	155,000	166,400	Flowing to RM I SBR for Treatment		
June 6, 2020	170,000	165,600	Flowing to RM I SBR for Treatment		
June 7, 2020	185,000	165,867	Flowing to RM I SBR for Treatment		
June 8, 2020	159,000	166,467	Flowing to RM I SBR for Treatment		
June 9, 2020	154,000	165,733	Flowing to RM I SBR for Treatment		
June 10, 2020	153,000	164,967	Flowing to RM I SBR for Treatment		
June 11, 2020	166,000	164,267	Flowing to RM I SBR for Treatment		
June 12, 2020	157,000	164,400	Flowing to RM I SBR for Treatment		
June 13, 2020	165,000	164,167	Flowing to RM I SBR for Treatment		
June 14, 2020	172,000	164,200	Flowing to RM I SBR for Treatment		
June 15, 2020	157,000	164,400	Flowing to RM I SBR for Treatment		
June 16, 2020	158,000	163,833	Flowing to RM I SBR for Treatment		
June 17, 2020	160,000	162,900	Flowing to RM I SBR for Treatment		
June 18, 2020	154,000	162,667	Flowing to RM I SBR for Treatment		
June 19, 2020	151,000	162,633	Flowing to RM I SBR for Treatment		
June 20, 2020	163,000	161,833	Flowing to RM I SBR for Treatment		
June 21, 2020	178,000	162,433	Flowing to RM I SBR for Treatment		
June 22, 2020	162,000	162,900	Flowing to RM I SBR for Treatment		
June 23, 2020	157,000	162,733	Flowing to RM I SBR for Treatment		
June 24, 2020	157,000	162,367	Flowing to RM I SBR for Treatment		
June 25, 2020	154,000	161,700	Flowing to RM I SBR for Treatment		
June 26, 2020	155,000	161,867	Flowing to RM I SBR for Treatment		
June 27, 2020	170,000	161,633	Flowing to RM I SBR for Treatment		
June 28, 2020	178,000	162,000	Flowing to RM I SBR for Treatment		
June 29, 2020	167,000	162,367	Flowing to RM I SBR for Treatment		
June 30, 2020	162,000	162,300	Flowing to RM I SBR for Treatment		

RMK1

151,000	Daily Flow Minimum GPD
179,000	Daily Flow Maximum GPD
164,700	Daily Flow Average GPD
4,941,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

RMK1

145,000	Daily Flow Minimum GPD
186,000	Daily Flow Maximum GPD
167,871	Daily Flow Average GPD
5,204,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

RMK1

151,000	Daily Flow Minimum GPD
185,000	Daily Flow Maximum GPD
161,767	Daily Flow Average GPD
4,853,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision
Wastewater Treatment Plant
Sequencing Batch Reactor (SBR) INFLUENT MONITORING

	RM # 1 SBR		RM # 2		COMBINED
DATE	DAILY FLOW METERED GPD	30 Day Running Average GPD	DAILY FLOW METERED GPD	30 Day Running Average GPD	30 Day Running Average GPD
July 1, 2020	163,000	161,767	Flowing to RM I SBR for Treatment		
July 2, 2020	166,000	162,033	Flowing to RM I SBR for Treatment		
July 3, 2020	162,000	162,233	Flowing to RM I SBR for Treatment		
July 4, 2020	170,000	162,333	Flowing to RM I SBR for Treatment		
July 5, 2020	168,000	162,667	Flowing to RM I SBR for Treatment		
July 6, 2020	165,000	163,100	Flowing to RM I SBR for Treatment		
July 7, 2020	154,000	162,933	Flowing to RM I SBR for Treatment		
July 8, 2020	164,000	161,900	Flowing to RM I SBR for Treatment		
July 9, 2020	161,000	162,067	Flowing to RM I SBR for Treatment		
July 10, 2020	169,000	162,300	Flowing to RM I SBR for Treatment		
July 11, 2020	170,000	162,833	Flowing to RM I SBR for Treatment		
July 12, 2020	164,000	162,967	Flowing to RM I SBR for Treatment		
July 13, 2020	162,000	163,200	Flowing to RM I SBR for Treatment		
July 14, 2020	155,000	163,100	Flowing to RM I SBR for Treatment		
July 15, 2020	165,000	162,533	Flowing to RM I SBR for Treatment		
July 16, 2020	158,000	162,800	Flowing to RM I SBR for Treatment		
July 17, 2020	162,000	162,800	Flowing to RM I SBR for Treatment		
July 18, 2020	166,000	162,867	Flowing to RM I SBR for Treatment		
July 19, 2020	171,000	163,267	Flowing to RM I SBR for Treatment		
July 20, 2020	161,000	163,933	Flowing to RM I SBR for Treatment		
July 21, 2020	160,000	163,867	Flowing to RM I SBR for Treatment		
July 22, 2020	157,000	163,267	Flowing to RM I SBR for Treatment		
July 23, 2020	155,000	163,100	Flowing to RM I SBR for Treatment		
July 24, 2020	152,000	163,033	Flowing to RM I SBR for Treatment		
July 25, 2020	164,000	162,867	Flowing to RM I SBR for Treatment		
July 26, 2020	187,000	163,200	Flowing to RM I SBR for Treatment		
July 27, 2020	162,000	164,267	Flowing to RM I SBR for Treatment		
July 28, 2020	158,000	164,000	Flowing to RM I SBR for Treatment		
July 29, 2020	161,000	163,333	Flowing to RM I SBR for Treatment		
July 30, 2020	170,000	163,133	Flowing to RM I SBR for Treatment		
July 31, 2020	145,000	163,400	Flowing to RM I SBR for Treatment		
August 1, 2020	166,000	162,800	Flowing to RM I SBR for Treatment		
August 2, 2020	181,000	162,800	Flowing to RM I SBR for Treatment		
August 3, 2020	160,000	163,433	Flowing to RM I SBR for Treatment		
August 4, 2020	156,000	163,100	Flowing to RM I SBR for Treatment		
August 5, 2020	161,000	162,700	Flowing to RM I SBR for Treatment		
August 6, 2020	160,000	162,567	Flowing to RM I SBR for Treatment		
August 7, 2020	192,000	162,767	Flowing to RM I SBR for Treatment		
August 8, 2020	141,000	163,700	Flowing to RM I SBR for Treatment		
August 9, 2020	175,000	163,033	Flowing to RM I SBR for Treatment		
August 10, 2020	172,000	163,233	Flowing to RM I SBR for Treatment		
August 11, 2020	154,000	163,300	Flowing to RM I SBR for Treatment		
August 12, 2020	173,000	162,967	Flowing to RM I SBR for Treatment		
August 13, 2020	157,000	163,333	Flowing to RM I SBR for Treatment		
August 14, 2020	161,000	163,400	Flowing to RM I SBR for Treatment		
August 15, 2020	155,000	163,267	Flowing to RM I SBR for Treatment		
August 16, 2020	179,000	163,167	Flowing to RM I SBR for Treatment		
August 17, 2020	147,000	163,733	Flowing to RM I SBR for Treatment		
August 18, 2020	150,000	163,100	Flowing to RM I SBR for Treatment		
August 19, 2020	160,000	162,400	Flowing to RM I SBR for Treatment		
August 20, 2020	154,000	162,367	Flowing to RM I SBR for Treatment		
August 21, 2020	156,000	162,167	Flowing to RM I SBR for Treatment		
August 22, 2020	167,000	162,133	Flowing to RM I SBR for Treatment		
August 23, 2020	182,000	162,533	Flowing to RM I SBR for Treatment		
August 24, 2020	158,000	163,533	Flowing to RM I SBR for Treatment		
August 25, 2020	157,000	163,333	Flowing to RM I SBR for Treatment		
August 26, 2020	155,000	162,333	Flowing to RM I SBR for Treatment		
August 27, 2020	150,000	162,100	Flowing to RM I SBR for Treatment		
August 28, 2020	146,000	161,833	Flowing to RM I SBR for Treatment		
August 29, 2020	162,000	161,333	Flowing to RM I SBR for Treatment		
August 30, 2020	179,000	161,067	Flowing to RM I SBR for Treatment		
August 31, 2020	159,000	162,200	Flowing to RM I SBR for Treatment		
September 1, 2020	158,000	161,967	Flowing to RM I SBR for Treatment		
September 2, 2020	153,000	161,200	Flowing to RM I SBR for Treatment		
September 3, 2020	154,000	160,967	Flowing to RM I SBR for Treatment		
September 4, 2020	161,000	160,900	Flowing to RM I SBR for Treatment		
September 5, 2020	164,000	160,900	Flowing to RM I SBR for Treatment		
September 6, 2020	143,000	161,033	Flowing to RM I SBR for Treatment		
September 7, 2020	158,000	159,400	Flowing to RM I SBR for Treatment		
September 8, 2020	164,000	159,967	Flowing to RM I SBR for Treatment		
September 9, 2020	151,000	159,600	Flowing to RM I SBR for Treatment		
September 10, 2020	157,000	158,900	Flowing to RM I SBR for Treatment		
September 11, 2020	165,000	159,000	Flowing to RM I SBR for Treatment		
September 12, 2020	161,000	158,733	Flowing to RM I SBR for Treatment		
September 13, 2020	183,000	158,867	Flowing to RM I SBR for Treatment		
September 14, 2020	158,000	159,600	Flowing to RM I SBR for Treatment		
September 15, 2020	152,000	159,700	Flowing to RM I SBR for Treatment		
September 16, 2020	152,000	158,800	Flowing to RM I SBR for Treatment		
September 17, 2020	156,000	158,967	Flowing to RM I SBR for Treatment		
September 18, 2020	150,000	159,167	Flowing to RM I SBR for Treatment		
September 19, 2020	168,000	158,833	Flowing to RM I SBR for Treatment		
September 20, 2020	182,000	159,300	Flowing to RM I SBR for Treatment		
September 21, 2020	158,000	160,167	Flowing to RM I SBR for Treatment		
September 22, 2020	153,000	159,867	Flowing to RM I SBR for Treatment		
September 23, 2020	146,000	158,900	Flowing to RM I SBR for Treatment		
September 24, 2020	151,000	158,500	Flowing to RM I SBR for Treatment		
September 25, 2020	154,000	158,300	Flowing to RM I SBR for Treatment		
September 26, 2020	163,000	158,267	Flowing to RM I SBR for Treatment		
September 27, 2020	167,000	158,700	Flowing to RM I SBR for Treatment		
September 28, 2020	156,000	159,400	Flowing to RM I SBR for Treatment		
September 29, 2020	153,000	159,200	Flowing to RM I SBR for Treatment		
September 30, 2020	148,000	158,333	Flowing to RM I SBR for Treatment		

RMK1

145,000	Daily Flow Minimum GPD
187,000	Daily Flow Maximum GPD
162,806	Daily Flow Average GPD
5,047,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

RMK1

141,000	Daily Flow Minimum GPD
192,000	Daily Flow Maximum GPD
162,097	Daily Flow Average GPD
5,025,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

RMK1

143,000	Daily Flow Minimum GPD
183,000	Daily Flow Maximum GPD
157,967	Daily Flow Average GPD
4,739,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision
Wastewater Treatment Plant

Sequencing Batch Reactor (SBR) INFLUENT MONITORING

	RM # 1 SBR		RM # 2		COMBINED
DATE	DAILY FLOW METERED GPD	30 Day Running Average GPD	DAILY FLOW METERED GPD	30 Day Running Average GPD	30 Day Running Average GPD
October 1, 2020	152,000	157,967	Flowing to RM I SBR for Treatment		
October 2, 2020	155,000	157,767	Flowing to RM I SBR for Treatment		
October 3, 2020	154,000	157,833	Flowing to RM I SBR for Treatment		
October 4, 2020	173,000	157,833	Flowing to RM I SBR for Treatment		
October 5, 2020	160,000	158,233	Flowing to RM I SBR for Treatment		
October 6, 2020	159,000	158,100	Flowing to RM I SBR for Treatment		
October 7, 2020	152,000	158,633	Flowing to RM I SBR for Treatment		
October 8, 2020	155,000	158,433	Flowing to RM I SBR for Treatment		
October 9, 2020	166,000	158,133	Flowing to RM I SBR for Treatment		
October 10, 2020	162,000	158,633	Flowing to RM I SBR for Treatment		
October 11, 2020	173,000	158,800	Flowing to RM I SBR for Treatment		
October 12, 2020	157,000	159,067	Flowing to RM I SBR for Treatment		
October 13, 2020	151,000	158,933	Flowing to RM I SBR for Treatment		
October 14, 2020	158,000	157,867	Flowing to RM I SBR for Treatment		
October 15, 2020	160,000	157,867	Flowing to RM I SBR for Treatment		
October 16, 2020	171,000	158,133	Flowing to RM I SBR for Treatment		
October 17, 2020	173,000	158,767	Flowing to RM I SBR for Treatment		
October 18, 2020	175,000	159,333	Flowing to RM I SBR for Treatment		
October 19, 2020	159,000	160,167	Flowing to RM I SBR for Treatment		
October 20, 2020	154,000	159,867	Flowing to RM I SBR for Treatment		
October 21, 2020	152,000	158,933	Flowing to RM I SBR for Treatment		
October 22, 2020	159,000	158,733	Flowing to RM I SBR for Treatment		
October 23, 2020	150,000	158,933	Flowing to RM I SBR for Treatment		
October 24, 2020	168,000	159,067	Flowing to RM I SBR for Treatment		
October 25, 2020	183,000	159,633	Flowing to RM I SBR for Treatment		
October 26, 2020	159,000	160,600	Flowing to RM I SBR for Treatment		
October 27, 2020	157,000	160,467	Flowing to RM I SBR for Treatment		
October 28, 2020	155,000	160,133	Flowing to RM I SBR for Treatment		
October 29, 2020	158,000	160,100	Flowing to RM I SBR for Treatment		
October 30, 2020	155,000	160,267	Flowing to RM I SBR for Treatment		
October 31, 2020	178,000	160,500	Flowing to RM I SBR for Treatment		
November 1, 2020	172,000	161,367	Flowing to RM I SBR for Treatment		
November 2, 2020	175,000	161,933	Flowing to RM I SBR for Treatment		
November 3, 2020	155,000	162,633	Flowing to RM I SBR for Treatment		
November 4, 2020	151,000	162,033	Flowing to RM I SBR for Treatment		
November 5, 2020	154,000	161,733	Flowing to RM I SBR for Treatment		
November 6, 2020	178,000	161,567	Flowing to RM I SBR for Treatment		
November 7, 2020	154,000	162,433	Flowing to RM I SBR for Treatment		
November 8, 2020	167,000	162,400	Flowing to RM I SBR for Treatment		
November 9, 2020	158,000	162,433	Flowing to RM I SBR for Treatment		
November 10, 2020	164,000	162,300	Flowing to RM I SBR for Treatment		
November 11, 2020	151,000	162,000	Flowing to RM I SBR for Treatment		
November 12, 2020	155,000	161,800	Flowing to RM I SBR for Treatment		
November 13, 2020	153,000	161,933	Flowing to RM I SBR for Treatment		
November 14, 2020	155,000	161,767	Flowing to RM I SBR for Treatment		
November 15, 2020	179,000	161,600	Flowing to RM I SBR for Treatment		
November 16, 2020	155,000	161,867	Flowing to RM I SBR for Treatment		
November 17, 2020	156,000	161,267	Flowing to RM I SBR for Treatment		
November 18, 2020	151,000	160,633	Flowing to RM I SBR for Treatment		
November 19, 2020	159,000	160,367	Flowing to RM I SBR for Treatment		
November 20, 2020	150,000	160,533	Flowing to RM I SBR for Treatment		
November 21, 2020	166,000	160,467	Flowing to RM I SBR for Treatment		
November 22, 2020	180,000	160,700	Flowing to RM I SBR for Treatment		
November 23, 2020	183,000	161,700	Flowing to RM I SBR for Treatment		
November 24, 2020	165,000	162,200	Flowing to RM I SBR for Treatment		
November 25, 2020	162,000	161,600	Flowing to RM I SBR for Treatment		
November 26, 2020	192,000	161,700	Flowing to RM I SBR for Treatment		
November 27, 2020	168,000	162,867	Flowing to RM I SBR for Treatment		
November 28, 2020	176,000	163,300	Flowing to RM I SBR for Treatment		
November 29, 2020	181,000	163,900	Flowing to RM I SBR for Treatment		
November 30, 2020	160,000	164,767	Flowing to RM I SBR for Treatment		
December 1, 2020	158,000	164,167	Flowing to RM I SBR for Treatment		
December 2, 2020	159,000	163,700	Flowing to RM I SBR for Treatment		
December 3, 2020	152,000	163,167	Flowing to RM I SBR for Treatment		
December 4, 2020	163,000	163,067	Flowing to RM I SBR for Treatment		
December 5, 2020	164,000	163,467	Flowing to RM I SBR for Treatment		
December 6, 2020	172,000	163,800	Flowing to RM I SBR for Treatment		
December 7, 2020	158,000	163,600	Flowing to RM I SBR for Treatment		
December 8, 2020	150,000	163,733	Flowing to RM I SBR for Treatment		
December 9, 2020	156,000	163,167	Flowing to RM I SBR for Treatment		
December 10, 2020	158,000	163,100	Flowing to RM I SBR for Treatment		
December 11, 2020	158,000	162,900	Flowing to RM I SBR for Treatment		
December 12, 2020	161,000	163,133	Flowing to RM I SBR for Treatment		
December 13, 2020	186,000	163,333	Flowing to RM I SBR for Treatment		
December 14, 2020	165,000	164,433	Flowing to RM I SBR for Treatment		
December 15, 2020	156,000	164,767	Flowing to RM I SBR for Treatment		
December 16, 2020	156,000	164,000	Flowing to RM I SBR for Treatment		
December 17, 2020	162,000	164,033	Flowing to RM I SBR for Treatment		
December 18, 2020	158,000	164,233	Flowing to RM I SBR for Treatment		
December 19, 2020	170,000	164,467	Flowing to RM I SBR for Treatment		
December 20, 2020	186,000	164,833	Flowing to RM I SBR for Treatment		
December 21, 2020	167,000	166,033	Flowing to RM I SBR for Treatment		
December 22, 2020	166,000	166,067	Flowing to RM I SBR for Treatment		
December 23, 2020	178,000	165,600	Flowing to RM I SBR for Treatment		
December 24, 2020	191,000	165,433	Flowing to RM I SBR for Treatment		
December 25, 2020	177,000	166,300	Flowing to RM I SBR for Treatment		
December 26, 2020	179,000	166,800	Flowing to RM I SBR for Treatment		
December 27, 2020	193,000	166,367	Flowing to RM I SBR for Treatment		
December 28, 2020	170,000	167,200	Flowing to RM I SBR for Treatment		
December 29, 2020	170,000	167,000	Flowing to RM I SBR for Treatment		
December 30, 2020	164,000	166,633	Flowing to RM I SBR for Treatment		
December 31, 2020	181,000	166,767	Flowing to RM I SBR for Treatment		

RMK1

150,000	Daily Flow Minimum GPD
183,000	Daily Flow Maximum GPD
161,065	Daily Flow Average GPD
4,993,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

RMK1

150,000	Daily Flow Minimum GPD
192,000	Daily Flow Maximum GPD
164,167	Daily Flow Average GPD
4,925,000	Total Monthly Flow Gallons

RMK2

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

RMK1

150,000	Daily Flow Minimum GPD
193,000	Daily Flow Maximum GPD
167,226	Daily Flow Average GPD
5,184,000	Total Monthly Flow Gallons

RMK2

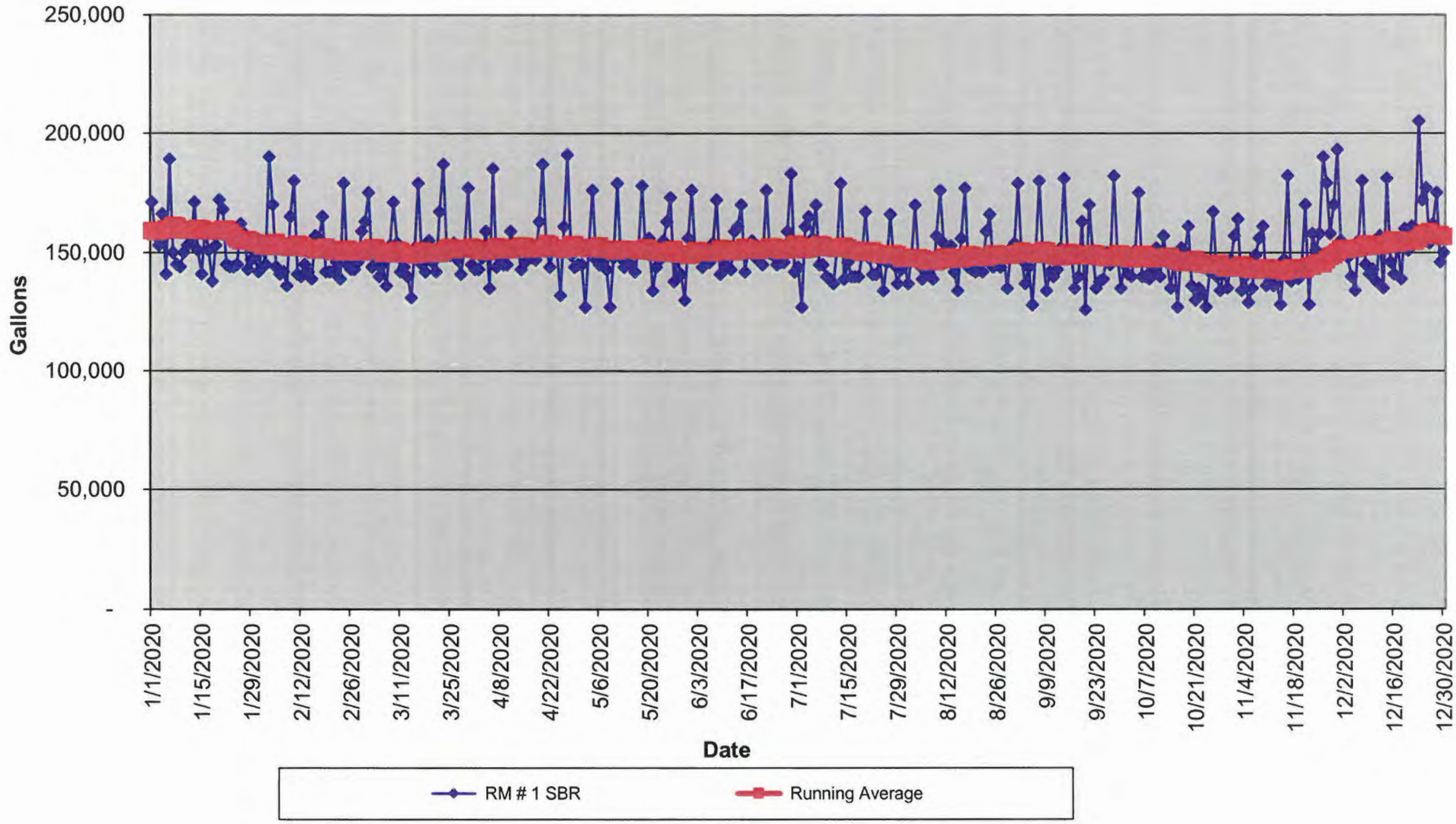
-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
	Daily Flow Average GPD
-	Total Monthly Flow Gallons

COMBINED 30 DAY RUNNING AVERAGE

-	Daily Flow Maximum GPD

GPD	Daily Flow Limit
300,000	May through October
310,000	November through April

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment
Influent Sequencing Batch Reactor (SBR)
Flow Totals Chart



MRP # R3-2004-0065
1/23/2021

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I Sequencing Batch Reactor (SBR) Wastewater Treatment Plant

POND # 6 WASTEWATER FLOW - RM-I PERCOLATION & EVAPORATION

DATE	RMK # 1 SBR INFLUENT FLOW		POND # 6 EFFLUENT FLOW		PERCOLATED and EVAPORATED	HISTORICAL EVAPORATION ESTIMATE	PERCOLATION ESTIMATE
	DAILY FLOW METERED GPD	30 Day Running Average GPD	DAILY FLOW METERED GPD	30 Day Running Average GPD	30 Day Running Average RM-I Calculated Daily Percolation and Evaporation GPD	MONTHLY AVERAGE RM-I GALLONS OF EVAPORATION PER DAY GPD	ESTIMATED GALLONS OF PERCOLATION PER DAY GPD
January 1, 2020	158,000	155,233	0	0	155,233	3,109	152,124
January 2, 2020	151,000	155,333	0	0	155,333	3,109	152,224
January 3, 2020	145,000	155,300	0	0	155,300	3,109	152,191
January 4, 2020	155,000	155,200	0	0	155,200	3,109	152,091
January 5, 2020	172,000	155,700	0	0	155,700	3,109	152,591
January 6, 2020	147,000	156,967	0	0	156,967	3,109	153,857
January 7, 2020	139,000	156,700	0	0	156,700	3,109	153,591
January 8, 2020	149,000	155,333	0	0	155,333	3,109	152,224
January 9, 2020	134,000	155,467	0	0	155,467	3,109	152,357
January 10, 2020	143,000	155,233	0	0	155,233	3,109	152,124
January 11, 2020	158,000	155,233	0	0	155,233	3,109	152,124
January 12, 2020	179,000	155,900	0	0	155,900	3,109	152,791
January 13, 2020	146,000	156,633	0	0	156,633	3,109	153,524
January 14, 2020	144,000	157,000	0	0	157,000	3,109	153,891
January 15, 2020	149,000	155,767	0	0	155,767	3,109	152,657
January 16, 2020	155,000	155,867	0	0	155,867	3,109	152,757
January 17, 2020	127,000	156,333	0	0	156,333	3,109	153,224
January 18, 2020	150,000	155,433	0	0	155,433	3,109	152,324
January 19, 2020	170,000	155,800	0	0	155,800	3,109	152,691
January 20, 2020	159,000	156,133	0	0	156,133	3,109	153,024
January 21, 2020	141,000	156,400	0	0	156,400	3,109	153,291
January 22, 2020	140,000	155,733	0	0	155,733	3,109	152,624
January 23, 2020	138,000	155,067	0	0	155,067	3,109	151,957
January 24, 2020	140,000	152,833	0	0	152,833	3,109	149,724
January 25, 2020	149,000	151,767	0	0	151,767	3,109	148,657
January 26, 2020	181,000	150,833	0	0	150,833	3,109	147,724
January 27, 2020	148,000	151,733	0	0	151,733	3,109	148,624
January 28, 2020	140,000	151,267	0	0	151,267	3,109	148,157
January 29, 2020	140,000	150,100	0	0	150,100	3,109	146,991
January 30, 2020	141,000	149,900	0	0	149,900	3,109	146,791
January 31, 2020	145,000	149,600	0	0	149,600	3,109	146,491
February 1, 2020	160,000	149,167	0	0	149,167	3,109	146,057
February 2, 2020	172,000	149,467	0	0	149,467	3,109	146,357
February 3, 2020	153,000	150,367	0	0	150,367	3,109	147,257
February 4, 2020	146,000	150,300	0	0	150,300	3,109	147,191
February 5, 2020	141,000	149,433	0	0	149,433	3,109	146,324
February 6, 2020	149,000	149,233	0	0	149,233	3,109	146,124
February 7, 2020	124,000	149,567	0	0	149,567	3,109	146,457
February 8, 2020	152,000	148,733	0	0	148,733	3,109	145,624
February 9, 2020	181,000	149,333	0	0	149,333	3,109	146,224
February 10, 2020	145,000	150,600	0	0	150,600	3,109	147,491
February 11, 2020	151,000	150,167	0	0	150,167	3,109	147,057
February 12, 2020	134,000	149,233	0	0	149,233	3,109	146,124
February 13, 2020	152,000	148,833	0	0	148,833	3,109	145,724
February 14, 2020	128,000	149,100	0	0	149,100	3,109	145,991
February 15, 2020	146,000	148,400	0	0	148,400	3,109	145,291
February 16, 2020	152,000	148,100	0	0	148,100	3,109	144,991
February 17, 2020	157,000	148,933	0	0	148,933	3,109	145,824
February 18, 2020	146,000	149,167	0	0	149,167	3,109	146,057
February 19, 2020	138,000	148,367	0	0	148,367	3,109	145,257
February 20, 2020	140,000	147,667	0	0	147,667	3,109	144,557
February 21, 2020	133,000	147,633	0	0	147,633	3,109	144,524
February 22, 2020	147,000	147,400	0	0	147,400	3,109	144,291
February 23, 2020	174,000	147,700	0	0	147,700	3,109	144,591
February 24, 2020	148,000	148,833	0	0	148,833	3,109	145,724
February 25, 2020	136,000	148,800	0	0	148,800	3,109	145,691
February 26, 2020	130,000	147,300	0	0	147,300	3,109	144,191
February 27, 2020	137,000	146,700	0	0	146,700	3,109	143,591
February 28, 2020	133,000	146,600	0	0	146,600	3,109	143,491
February 29, 2020	151,000	146,367	0	0	146,367	3,109	143,257
March 1, 2020	179,000	146,700	0	0	146,700	3,109	143,591
March 2, 2020	147,000	147,833	0	0	147,833	3,109	144,724
March 3, 2020	141,000	147,400	0	0	147,400	3,109	144,291
March 4, 2020	140,000	146,367	0	0	146,367	3,109	143,257
March 5, 2020	154,000	145,933	0	0	145,933	3,109	142,824
March 6, 2020	131,000	146,200	0	0	146,200	3,109	143,091
March 7, 2020	150,000	145,867	0	0	145,867	3,109	142,757
March 8, 2020	177,000	145,900	0	0	145,900	3,109	142,791
March 9, 2020	152,000	147,667	0	0	147,667	3,109	144,557
March 10, 2020	149,000	147,667	0	0	147,667	3,109	144,557
March 11, 2020	154,000	146,600	0	0	146,600	3,109	143,491
March 12, 2020	141,000	146,900	0	0	146,900	3,109	143,791
March 13, 2020	144,000	146,567	0	0	146,567	3,109	143,457
March 14, 2020	171,000	146,900	0	0	146,900	3,109	143,791
March 15, 2020	187,000	147,533	0	0	147,533	3,109	144,424
March 16, 2020	144,000	149,500	0	0	149,500	3,109	146,391
March 17, 2020	165,000	149,433	0	0	149,433	3,109	146,324
March 18, 2020	158,000	149,867	0	0	149,867	3,109	146,757
March 19, 2020	158,000	149,900	0	0	149,900	3,109	146,791
March 20, 2020	169,000	150,300	0	0	150,300	3,109	147,191
March 21, 2020	155,000	151,333	0	0	151,333	3,109	148,224
March 22, 2020	171,000	151,833	0	0	151,833	3,109	148,724
March 23, 2020	169,000	153,100	0	0	153,100	3,109	149,991
March 24, 2020	156,000	153,833	0	0	153,833	3,109	150,724
March 25, 2020	154,000	153,233	0	0	153,233	3,109	150,124
March 26, 2020	161,000	153,433	0	0	153,433	3,109	150,324
March 27, 2020	163,000	154,267	0	0	154,267	3,109	151,157
March 28, 2020	158,000	155,367	0	0	155,367	3,109	152,257
March 29, 2020	175,000	156,067	0	0	156,067	3,109	152,957
March 30, 2020	172,000	157,467	0	0	157,467	3,109	154,357
March 31, 2020	155,000	158,167	0	0	158,167	3,109	155,057

RMK1

127,000	Daily Flow Minimum GPD
181,000	Daily Flow Maximum GPD
149,452	Daily Flow Average GPD
4,633,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
-	Daily Flow Average GPD
-	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

-	Maximum GPD

PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

149,600	Daily Minimum GPD
157,000	Daily Maximum GPD
154,574	Daily Average GPD
4,791,800	Total Monthly Gallons

PERCOLATION ESTIMATE

146,491	Daily Minimum GPD
153,891	Daily Maximum GPD
151,465	Daily Average GPD
4,695,409	Total Monthly Gallons

RMK1

124,000	Daily Flow Minimum GPD
181,000	Daily Flow Maximum GPD
146,759	Daily Flow Average GPD
4,256,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
-	Daily Flow Average GPD
-	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

-	Maximum GPD

PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

146,367	Daily Minimum GPD
150,600	Daily Maximum GPD
148,672	Daily Average GPD
4,311,500	Total Monthly Gallons

PERCOLATION ESTIMATE

143,257	Daily Minimum GPD
147,491	Daily Maximum GPD
145,563	Daily Average GPD
4,221,328	Total Monthly Gallons

RMK1

131,000	Daily Flow Minimum GPD
187,000	Daily Flow Maximum GPD
158,065	Daily Flow Average GPD
4,900,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
-	Daily Flow Average GPD
-	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

-	Maximum GPD

PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

145,867	Daily Minimum GPD
158,167	Daily Maximum GPD
149,972	Daily Average GPD
4,649,133	Total Monthly Gallons

PERCOLATION ESTIMATE

142,757	Daily Minimum GPD
155,057	Daily Maximum GPD
146,863	Daily Average GPD
4,552,742	Total Monthly Gallons

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I Sequencing Batch Reactor (SBR) Wastewater Treatment Plant

POND # 6 WASTEWATER FLOW - RM-I PERCOLATION & EVAPORATION

DATE	RMK # 1 SBR INFLUENT FLOW		POND # 6 EFFLUENT FLOW		PERCOLATED and EVAPORATED	HISTORICAL EVAPORATION ESTIMATE	PERCOLATION ESTIMATE
	DAILY FLOW METERED GPD	30 Day Running Average GPD	DAILY FLOW METERED GPD	30 Day Running Average GPD	30 Day Running Average RM-I Calculated Daily Percolation and Evaporation GPD	MONTHLY AVERAGE RM-I GALLONS OF EVAPORATION PER DAY GPD	ESTIMATED GALLONS OF PERCOLATION PER DAY GPD
April 1, 2020	151,000	157,367	0	0	157,367	3,109	154,257
April 2, 2020	173,000	157,500	0	0	157,500	3,109	154,391
April 3, 2020	157,000	158,567	0	0	158,567	3,109	155,457
April 4, 2020	166,000	159,133	0	0	159,133	3,109	156,024
April 5, 2020	172,000	159,533	0	0	159,533	3,109	156,424
April 6, 2020	166,000	160,900	0	0	160,900	3,109	157,791
April 7, 2020	154,000	161,433	0	0	161,433	3,109	158,324
April 8, 2020	166,000	160,667	0	0	160,667	3,109	157,557
April 9, 2020	164,000	161,133	0	0	161,133	3,109	158,024
April 10, 2020	157,000	161,633	0	0	161,633	3,109	158,524
April 11, 2020	174,000	161,733	0	0	161,733	3,109	158,624
April 12, 2020	178,000	162,833	0	0	162,833	3,109	159,724
April 13, 2020	168,000	163,967	0	0	163,967	3,109	160,857
April 14, 2020	156,000	163,867	0	0	163,867	3,109	160,757
April 15, 2020	161,000	162,833	0	0	162,833	3,109	159,724
April 16, 2020	160,000	163,400	0	0	163,400	3,109	160,291
April 17, 2020	166,000	163,233	0	0	163,233	3,109	160,124
April 18, 2020	173,000	163,500	0	0	163,500	3,109	160,391
April 19, 2020	179,000	164,000	0	0	164,000	3,109	160,891
April 20, 2020	164,000	164,333	0	0	164,333	3,109	161,224
April 21, 2020	158,000	164,633	0	0	164,633	3,109	161,524
April 22, 2020	161,000	164,200	0	0	164,200	3,109	161,091
April 23, 2020	161,000	163,933	0	0	163,933	3,109	160,824
April 24, 2020	172,000	164,100	0	0	164,100	3,109	160,991
April 25, 2020	169,000	164,700	0	0	164,700	3,109	161,591
April 26, 2020	177,000	164,967	0	0	164,967	3,109	161,857
April 27, 2020	158,000	165,433	0	0	165,433	3,109	162,324
April 28, 2020	160,000	165,433	0	0	165,433	3,109	162,324
April 29, 2020	162,000	164,933	0	0	164,933	3,109	161,824
April 30, 2020	158,000	164,600	0	0	164,600	3,109	161,491
May 1, 2020	157,000	164,700	0	0	164,700	3,109	161,591
May 2, 2020	173,000	164,900	0	0	164,900	3,109	161,791
May 3, 2020	186,000	164,900	0	0	164,900	3,109	161,791
May 4, 2020	167,000	165,867	0	0	165,867	3,109	162,757
May 5, 2020	163,000	165,900	0	0	165,900	3,109	162,791
May 6, 2020	179,000	165,600	0	0	165,600	3,109	162,491
May 7, 2020	162,000	166,033	0	0	166,033	3,109	162,924
May 8, 2020	167,000	166,300	0	0	166,300	3,109	163,191
May 9, 2020	181,000	166,333	0	0	166,333	3,109	163,224
May 10, 2020	177,000	166,900	0	0	166,900	3,109	163,791
May 11, 2020	174,000	167,567	0	0	167,567	3,109	164,457
May 12, 2020	162,000	167,567	0	0	167,567	3,109	164,457
May 13, 2020	164,000	167,033	0	0	167,033	3,109	163,924
May 14, 2020	164,000	166,900	0	0	166,900	3,109	163,791
May 15, 2020	166,000	167,167	0	0	167,167	3,109	164,057
May 16, 2020	174,000	167,333	0	0	167,333	3,109	164,224
May 17, 2020	186,000	167,800	0	0	167,800	3,109	164,691
May 18, 2020	167,000	168,467	0	0	168,467	3,109	165,357
May 19, 2020	155,000	168,267	0	0	168,267	3,109	165,157
May 20, 2020	175,000	167,467	0	0	167,467	3,109	164,357
May 21, 2020	145,000	167,833	0	0	167,833	3,109	164,724
May 22, 2020	164,000	167,400	0	0	167,400	3,109	164,291
May 23, 2020	167,000	167,500	0	0	167,500	3,109	164,391
May 24, 2020	168,000	167,700	0	0	167,700	3,109	164,591
May 25, 2020	177,000	167,567	0	0	167,567	3,109	164,457
May 26, 2020	149,000	167,833	0	0	167,833	3,109	164,724
May 27, 2020	162,000	166,900	0	0	166,900	3,109	163,791
May 28, 2020	159,000	167,033	0	0	167,033	3,109	163,924
May 29, 2020	167,000	167,000	0	0	167,000	3,109	163,891
May 30, 2020	169,000	167,167	0	0	167,167	3,109	164,057
May 31, 2020	178,000	167,533	0	0	167,533	3,109	164,424
June 1, 2020	155,000	168,233	0	0	168,233	3,109	165,124
June 2, 2020	160,000	167,633	0	0	167,633	3,109	164,524
June 3, 2020	159,000	166,767	0	0	166,767	3,109	163,657
June 4, 2020	160,000	166,500	0	0	166,500	3,109	163,391
June 5, 2020	155,000	166,400	0	0	166,400	3,109	163,291
June 6, 2020	170,000	165,600	0	0	165,600	3,109	162,491
June 7, 2020	185,000	165,867	0	0	165,867	3,109	162,757
June 8, 2020	159,000	166,467	0	0	166,467	3,109	163,357
June 9, 2020	154,000	165,733	0	0	165,733	3,109	162,624
June 10, 2020	153,000	164,967	0	0	164,967	3,109	161,857
June 11, 2020	166,000	164,267	0	0	164,267	3,109	161,157
June 12, 2020	157,000	164,400	0	0	164,400	3,109	161,291
June 13, 2020	165,000	164,167	0	0	164,167	3,109	161,057
June 14, 2020	172,000	164,200	0	0	164,200	3,109	161,091
June 15, 2020	157,000	164,400	0	0	164,400	3,109	161,291
June 16, 2020	158,000	163,833	0	0	163,833	3,109	160,724
June 17, 2020	160,000	162,900	0	0	162,900	3,109	159,791
June 18, 2020	154,000	162,667	0	0	162,667	3,109	159,557
June 19, 2020	151,000	162,633	0	0	162,633	3,109	159,524
June 20, 2020	163,000	161,833	0	0	161,833	3,109	158,724
June 21, 2020	178,000	162,433	0	0	162,433	3,109	159,324
June 22, 2020	162,000	162,900	0	0	162,900	3,109	159,791
June 23, 2020	157,000	162,733	0	0	162,733	3,109	159,624
June 24, 2020	157,000	162,367	0	0	162,367	3,109	159,257
June 25, 2020	154,000	161,700	0	0	161,700	3,109	158,591
June 26, 2020	155,000	161,867	0	0	161,867	3,109	158,757
June 27, 2020	170,000	161,633	0	0	161,633	3,109	158,524
June 28, 2020	178,000	162,000	0	0	162,000	3,109	158,891
June 29, 2020	167,000	162,367	0	0	162,367	3,109	159,257
June 30, 2020	162,000	162,300	0	0	162,300	3,109	159,191

RMK1

151,000	Daily Flow Minimum GPD
179,000	Daily Flow Maximum GPD
164,700	Daily Flow Average GPD
4,941,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
-	Daily Flow Average GPD
-	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

-	Maximum GPD

PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

157,367	Daily Minimum GPD
165,433	Daily Maximum GPD
162,617	Daily Average GPD
4,878,500	Total Monthly Gallons

PERCOLATION ESTIMATE

154,257	Daily Minimum GPD
162,324	Daily Maximum GPD
159,507	Daily Average GPD
4,785,218	Total Monthly Gallons

RMK1

145,000	Daily Flow Minimum GPD
186,000	Daily Flow Maximum GPD
167,871	Daily Flow Average GPD
5,204,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
-	Daily Flow Average GPD
-	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

-	Maximum GPD

PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

164,700	Daily Minimum GPD
168,467	Daily Maximum GPD
166,918	Daily Average GPD
5,174,467	Total Monthly Gallons

PERCOLATION ESTIMATE

161,591	Daily Minimum GPD
165,357	Daily Maximum GPD
163,809	Daily Average GPD
5,078,076	Total Monthly Gallons

RMK1

151,000	Daily Flow Minimum GPD
185,000	Daily Flow Maximum GPD
161,767	Daily Flow Average GPD
4,853,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
-	Daily Flow Maximum GPD
-	Daily Flow Average GPD
-	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

-	Maximum GPD

PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

161,633	Daily Minimum GPD
168,233	Daily Maximum GPD
164,059	Daily Average GPD
4,921,767	Total Monthly Gallons

PERCOLATION ESTIMATE

158,524	Daily Minimum GPD
165,124	Daily Maximum GPD
160,950	Daily Average GPD
4,828,485	Total Monthly Gallons

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I Sequencing Batch Reactor (SBR) Wastewater Treatment Plant

POND # 6 WASTEWATER FLOW - RM-I PERCOLATION & EVAPORATION

	RMK # 1 SBR INFLUENT FLOW		POND # 6 EFFLUENT FLOW		PERCOLATED and EVAPORATED	HISTORICAL EVAPORATION ESTIMATE	PERCOLATION ESTIMATE
DATE	DAILY FLOW METERED GPD	30 Day Running Average GPD	DAILY FLOW METERED GPD	30 Day Running Average GPD	30 Day Running Average RM-I Calculated Daily Percolation and Evaporation GPD	MONTHLY AVERAGE RM-I GALLONS OF EVAPORATION PER DAY GPD	ESTIMATED GALLONS OF PERCOLATION PER DAY GPD
August 1, 2020	166,000	162,800	0	700	162,100	3,109	158,991
August 2, 2020	181,000	162,800	36000	700	162,100	3,109	158,991
August 3, 2020	160,000	163,433	9000	1900	161,533	3,109	158,424
August 4, 2020	156,000	163,100	96000	2200	160,900	3,109	157,791
August 5, 2020	161,000	162,700	19000	5400	157,300	3,109	154,191
August 6, 2020	160,000	162,567	0	6033	156,533	3,109	153,424
August 7, 2020	192,000	162,767	0	6033	156,733	3,109	153,624
August 8, 2020	141,000	163,700	0	6033	157,667	3,109	154,557
August 9, 2020	175,000	163,033	0	6033	157,000	3,109	153,891
August 10, 2020	172,000	163,233	27000	6033	157,200	3,109	154,091
August 11, 2020	154,000	163,300	50000	6933	156,367	3,109	153,257
August 12, 2020	173,000	162,967	15000	8600	154,367	3,109	151,257
August 13, 2020	157,000	163,333	22000	9100	154,233	3,109	151,124
August 14, 2020	161,000	163,400	0	9833	153,567	3,109	150,457
August 15, 2020	155,000	163,267	0	9833	153,433	3,109	150,324
August 16, 2020	179,000	163,167	0	9833	153,333	3,109	150,224
August 17, 2020	147,000	163,733	59000	9833	153,900	3,109	150,791
August 18, 2020	150,000	163,100	31000	11800	151,300	3,109	148,191
August 19, 2020	160,000	162,400	12000	12833	149,567	3,109	146,457
August 20, 2020	154,000	162,367	0	13233	149,133	3,109	146,024
August 21, 2020	156,000	162,167	0	13233	148,933	3,109	145,824
August 22, 2020	167,000	162,133	0	13233	148,900	3,109	145,791
August 23, 2020	182,000	162,533		13233	149,300	3,109	146,191
August 24, 2020	158,000	163,533	52000	13690	149,844	3,109	146,734
August 25, 2020	157,000	163,333	42000	15483	147,851	3,109	144,741
August 26, 2020	155,000	162,333	45000	16931	145,402	3,109	142,293
August 27, 2020	150,000	162,100	38000	18483	143,617	3,109	140,508
August 28, 2020	146,000	161,833	0	19793	142,040	3,109	138,931
August 29, 2020	162,000	161,333	0	19793	141,540	3,109	138,431
August 30, 2020	179,000	161,067	0	19069	141,998	3,109	138,888
August 31, 2020	159,000	162,200	0	19069	143,131	3,109	140,022
September 1, 2020	158,000	161,967		19069	142,898	3,109	139,788
September 2, 2020	153,000	161,200	0	18464	142,736	3,109	139,626
September 3, 2020	154,000	160,967		18143	142,824	3,109	139,714
September 4, 2020	161,000	160,900	0	15259	145,641	3,109	142,531
September 5, 2020	164,000	160,900	0	14556	146,344	3,109	143,235
September 6, 2020	143,000	161,033	0	14556	146,478	3,109	143,368
September 7, 2020	158,000	159,400	57000	14556	144,844	3,109	141,735
September 8, 2020	164,000	159,967	38000	16667	143,300	3,109	140,191
September 9, 2020	151,000	159,600	15000	18074	141,526	3,109	138,417
September 10, 2020	157,000	158,900	14000	17630	141,270	3,109	138,161
September 11, 2020	165,000	159,000	0	16296	142,704	3,109	139,594
September 12, 2020	161,000	158,733	0	15741	142,993	3,109	139,883
September 13, 2020	183,000	158,867		14926	143,941	3,109	140,831
September 14, 2020	158,000	159,600	34000	15500	144,100	3,109	140,991
September 15, 2020	152,000	159,700	44000	16808	142,892	3,109	139,783
September 16, 2020	152,000	158,800	30000	18500	140,300	3,109	137,191
September 17, 2020	156,000	158,967	44000	17385	141,582	3,109	138,473
September 18, 2020	150,000	159,167	0	17885	141,282	3,109	138,173
September 19, 2020	168,000	158,833	0	17423	141,410	3,109	138,301
September 20, 2020	182,000	159,300		17423	141,877	3,109	138,768
September 21, 2020	158,000	160,167	52000	18120	142,047	3,109	138,937
September 22, 2020	153,000	159,867	39000	20200	139,667	3,109	136,557
September 23, 2020	146,000	158,900	0	20923	137,977	3,109	134,868
September 24, 2020	151,000	158,500		18923	139,577	3,109	136,468
September 25, 2020	154,000	158,300	0	18000	140,300	3,109	137,191
September 26, 2020	163,000	158,267	0	16200	142,067	3,109	138,957
September 27, 2020	167,000	158,700		14680	144,020	3,109	140,911
September 28, 2020	156,000	159,400	0	15292	144,108	3,109	140,999
September 29, 2020	153,000	159,200		15292	143,908	3,109	140,799
September 30, 2020	148,000	158,333	19000	15957	142,377	3,109	139,267

RMK1

141,000	Daily Flow Minimum GPD
192,000	Daily Flow Maximum GPD
162,097	Daily Flow Average GPD
5,025,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
96,000	Daily Flow Maximum GPD
18,433	Daily Flow Average GPD
553,000	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

19,793	Maximum GPD

PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

141,540	Daily Minimum GPD
162,100	Daily Maximum GPD
152,285	Daily Average GPD
4,720,823	Total Monthly Gallons

PERCOLATION ESTIMATE

138,431	Daily Minimum GPD
158,991	Daily Maximum GPD
149,175	Daily Average GPD
4,624,432	Total Monthly Gallons

RMK1

143,000	Daily Flow Minimum GPD
183,000	Daily Flow Maximum GPD
157,967	Daily Flow Average GPD
4,739,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
57,000	Daily Flow Maximum GPD
16,783	Daily Flow Average GPD
386,000	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

20,923	Maximum GPD

PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

137,977	Daily Minimum GPD
146,478	Daily Maximum GPD
142,566	Daily Average GPD
4,276,989	Total Monthly Gallons

PERCOLATION ESTIMATE

134,868	Daily Minimum GPD
143,368	Daily Maximum GPD
139,457	Daily Average GPD
4,183,707	Total Monthly Gallons

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I Sequencing Batch Reactor (SBR) Wastewater Treatment Plant

POND # 6 WASTEWATER FLOW - RM-I PERCOLATION & EVAPORATION

DATE	RMK # 1 SBR INFLUENT FLOW: DAILY FLOW METERED GPD	RMK # 1 SBR INFLUENT FLOW: 30 Day Running Average GPD	POND # 6 EFFLUENT FLOW: DAILY FLOW METERED GPD	POND # 6 EFFLUENT FLOW: 30 Day Running Average GPD	PERCOLATED and EVAPORATED: 30 Day Running Average RM-I Calculated Daily Percolation and Evaporation GPD	HISTORICAL EVAPORATION ESTIMATE: MONTHLY AVERAGE RM-I GALLONS OF EVAPORATION PER DAY GPD	PERCOLATION ESTIMATE: ESTIMATED GALLONS OF PERCOLATION PER DAY GPD
October 1, 2020	152,000	157,967	119000	16783	141,184	3,109	138,075
October 2, 2020	155,000	157,767	175000	21042	136,725	3,109	133,616
October 3, 2020	154,000	157,833	0	28333	129,500	3,109	126,391
October 4, 2020	173,000	157,833	57000	27200	130,633	3,109	127,524
October 5, 2020	160,000	158,233	213000	29480	128,753	3,109	125,644
October 6, 2020	159,000	158,100	220000	38000	120,100	3,109	116,991
October 7, 2020	152,000	158,633	175000	46800	111,833	3,109	108,724
October 8, 2020	155,000	158,433	0	51520	106,913	3,109	103,804
October 9, 2020	166,000	158,133	0	50000	108,133	3,109	105,024
October 10, 2020	162,000	158,633	0	49400	109,233	3,109	106,124
October 11, 2020	173,000	158,800	146000	48840	109,960	3,109	106,851
October 12, 2020	157,000	159,067	257000	54680	104,387	3,109	101,277
October 13, 2020	151,000	158,933	168000	64960	93,973	3,109	90,864
October 14, 2020	158,000	157,867	99000	68923	88,944	3,109	85,834
October 15, 2020	160,000	157,867	138000	71423	86,444	3,109	83,334
October 16, 2020	171,000	158,133	164000	75038	83,095	3,109	79,985
October 17, 2020	173,000	158,767	0	80192	78,574	3,109	75,465
October 18, 2020	175,000	159,333	83000	78500	80,833	3,109	77,724
October 19, 2020	159,000	160,167	114000	81692	78,474	3,109	75,365
October 20, 2020	154,000	159,867	288000	86077	73,790	3,109	70,680
October 21, 2020	152,000	158,933	36000	93556	65,378	3,109	62,268
October 22, 2020	159,000	158,733	0	92963	65,770	3,109	62,661
October 23, 2020	150,000	158,933	0	91519	67,415	3,109	64,305
October 24, 2020	168,000	159,067	0	91519	67,548	3,109	64,439
October 25, 2020	183,000	159,633	189000	88250	71,383	3,109	68,274
October 26, 2020	159,000	160,600	242000	95000	65,600	3,109	62,491
October 27, 2020	157,000	160,467	111000	103643	56,824	3,109	53,714
October 28, 2020	155,000	160,133	0	103897	56,237	3,109	53,127
October 29, 2020	158,000	160,100	0	103897	56,203	3,109	53,094
October 30, 2020	155,000	160,267	0	100433	59,833	3,109	56,724
October 31, 2020	178,000	160,500	0	99800	60,700	3,109	57,591
November 1, 2020	172,000	161,367	0	95833	65,533	3,109	62,424
November 2, 2020	175,000	161,933	376000	90000	71,933	3,109	68,824
November 3, 2020	155,000	162,833	0	102533	60,100	3,109	56,991
November 4, 2020	151,000	162,033	149000	100633	61,400	3,109	58,291
November 5, 2020	154,000	161,733	106000	98500	63,233	3,109	60,124
November 6, 2020	178,000	161,567	0	94700	66,867	3,109	63,757
November 7, 2020	154,000	162,433	0	88867	73,567	3,109	70,457
November 8, 2020	167,000	162,400	315000	88867	73,533	3,109	70,424
November 9, 2020	158,000	162,433	91000	99367	63,067	3,109	59,957
November 10, 2020	164,000	162,300	0	102400	59,900	3,109	56,791
November 11, 2020	151,000	162,000	214000	97533	64,467	3,109	61,357
November 12, 2020	155,000	161,800	212000	96100	65,700	3,109	62,591
November 13, 2020	153,000	161,933	0	97567	64,367	3,109	61,257
November 14, 2020	155,000	161,767	0	94267	67,500	3,109	64,391
November 15, 2020	179,000	161,600	0	89667	71,933	3,109	68,824
November 16, 2020	155,000	161,867	125000	84200	77,667	3,109	74,557
November 17, 2020	156,000	161,267	0	88367	72,900	3,109	69,791
November 18, 2020	151,000	160,633	217000	85600	75,033	3,109	71,924
November 19, 2020	159,000	160,367	0	89033	71,333	3,109	68,224
November 20, 2020	150,000	160,533	0	79433	81,100	3,109	77,991
November 21, 2020	166,000	160,467	0	78233	82,233	3,109	79,124
November 22, 2020	180,000	160,700	0	78233	82,467	3,109	79,357
November 23, 2020	183,000	161,700	526000	78233	83,467	3,109	80,357
November 24, 2020	165,000	162,200	278000	95767	66,433	3,109	63,324
November 25, 2020	162,000	161,600	0	98733	62,867	3,109	59,757
November 26, 2020	192,000	161,700	0	90667	71,033	3,109	67,924
November 27, 2020	168,000	162,867	0	86967	75,900	3,109	72,791
November 28, 2020	176,000	163,300	188000	86967	76,333	3,109	73,224
November 29, 2020	161,000	163,900	162000	93233	70,667	3,109	67,557
November 30, 2020	160,000	164,767	215000	98633	66,133	3,109	63,024
December 1, 2020	158,000	164,167	254000	105800	58,367	3,109	55,257
December 2, 2020	159,000	163,700	111000	114267	49,433	3,109	46,324
December 3, 2020	152,000	163,167	133000	105433	57,733	3,109	54,624
December 4, 2020	163,000	163,067	0	109867	53,200	3,109	50,091
December 5, 2020	164,000	163,467	0	104900	58,567	3,109	55,457
December 6, 2020	172,000	163,800	120000	101367	62,433	3,109	59,324
December 7, 2020	158,000	163,600	66000	105367	58,233	3,109	55,124
December 8, 2020	150,000	163,733	153000	107567	56,167	3,109	53,057
December 9, 2020	156,000	163,167	241000	102167	61,000	3,109	57,891
December 10, 2020	158,000	163,100	172000	107167	55,933	3,109	52,824
December 11, 2020	158,000	162,900	0	112900	50,000	3,109	46,891
December 12, 2020	161,000	163,133	0	105767	57,367	3,109	54,257
December 13, 2020	186,000	163,333	0	98700	64,633	3,109	61,524
December 14, 2020	165,000	164,433	223000	98700	65,733	3,109	62,624
December 15, 2020	156,000	164,767	6000	106133	58,633	3,109	55,524
December 16, 2020	156,000	164,000	0	106333	57,667	3,109	54,557
December 17, 2020	162,000	164,033	0	102167	61,867	3,109	58,757
December 18, 2020	158,000	164,233	0	102167	62,067	3,109	58,957
December 19, 2020	170,000	164,467	0	94933	69,533	3,109	66,424
December 20, 2020	186,000	164,833	0	94933	69,900	3,109	66,791
December 21, 2020	167,000	166,033	0	94933	71,100	3,109	67,991
December 22, 2020	166,000	166,067	0	94933	71,133	3,109	68,024
December 23, 2020	178,000	165,600	0	94933	70,667	3,109	67,557
December 24, 2020	191,000	165,433	0	77400	88,033	3,109	84,924
December 25, 2020	177,000	166,300	0	68133	98,167	3,109	95,057
December 26, 2020	179,000	166,800	0	68133	98,667	3,109	95,557
December 27, 2020	193,000	166,367	0	68133	98,233	3,109	95,124
December 28, 2020	170,000	167,200	0	68133	99,067	3,109	95,957
December 29, 2020	170,000	167,000	0	61867	105,133	3,109	102,024
December 30, 2020	164,000	166,633	0	56467	110,167	3,109	107,057
December 31, 2020	181,000	166,767	0	49300	117,467	3,109	114,357

RMK1

150,000	Daily Flow Minimum GPD
183,000	Daily Flow Maximum GPD
161,065	Daily Flow Average GPD
4,993,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
288,000	Daily Flow Maximum GPD
96,581	Daily Flow Average GPD
2,994,000	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

103,897	Maximum GPD

PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

56,203	Daily Minimum GPD
141,184	Daily Maximum GPD
90,141	Daily Average GPD
2,794,375	Total Monthly Gallons

PERCOLATION ESTIMATE

53,094	Daily Minimum GPD
138,075	Daily Maximum GPD
87,032	Daily Average GPD
2,697,984	Total Monthly Gallons

RMK1

150,000	Daily Flow Minimum GPD
192,000	Daily Flow Maximum GPD
164,167	Daily Flow Average GPD
4,925,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
526,000	Daily Flow Maximum GPD
105,800	Daily Flow Average GPD
3,174,000	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

102,533	Maximum GPD

PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

59,900	Daily Minimum GPD
83,467	Daily Maximum GPD
70,289	Daily Average GPD
2,108,667	Total Monthly Gallons

PERCOLATION ESTIMATE

56,791	Daily Minimum GPD
80,357	Daily Maximum GPD
67,180	Daily Average GPD
2,015,385	Total Monthly Gallons

RMK1

150,000	Daily Flow Minimum GPD
193,000	Daily Flow Maximum GPD
167,226	Daily Flow Average GPD
5,184,000	Total Monthly Flow Gallons

POND # 6

-	Daily Flow Minimum GPD
254,000	Daily Flow Maximum GPD
47,710	Daily Flow Average GPD
1,479,000	Total Monthly Flow Gallons

POND # 6 - 30 DAY RUN AVG

114,267	Maximum GPD

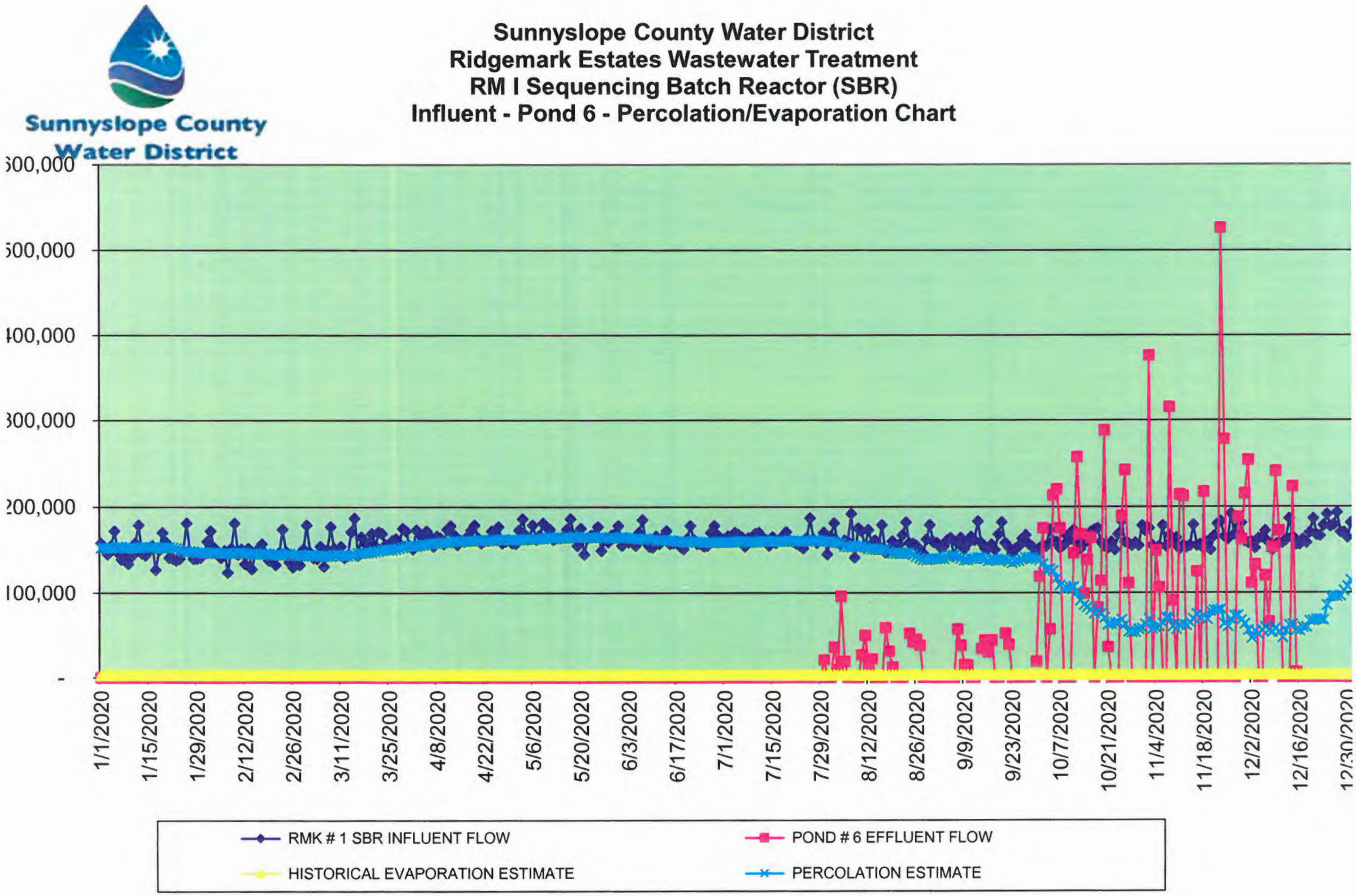
PERCOLATION AND EVAPORATION (5.3 Acre Surface Area)

49,433	Daily Minimum GPD
117,467	Daily Maximum GPD
71,494	Daily Average GPD
2,216,300	Total Monthly Gallons

PERCOLATION ESTIMATE

46,324	Daily Minimum GPD
114,357	Daily Maximum GPD
68,384	Daily Average GPD
2,119,909	Total Monthly Gallons

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment
RM I Sequencing Batch Reactor (SBR)
Influent - Pond 6 - Percolation/Evaporation Chart



MRP # R3-2004-0065
1/23/2021

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Effluent Limits	
6.5	Minimum
8.4	Maximum

Ridgemark Estates Subdivision

RM - I Wastewater Treatment Plant

Ponds pH MONITORING

Grab Samples

See RM - I Lab Sample Site Sheet		
A	=	Effluent Site
B	=	Influent Site
C	=	Third Site

	Results in mg/l Pond 1 pH Sample Site			Results in mg/l Pond 3 pH Sample Site			Results in mg/l Pond 4 pH Sample Site			Results in mg/l Pond 5 pH Sample Site		
Date	A	B	C	A	B	C	A	B	C	A	B	C
January 1, 2020												
January 2, 2020												
January 3, 2020												
January 4, 2020												
January 5, 2020	7.68	7.65	7.70	Empty			7.43	7.41	7.42	Empty		
January 6, 2020												
January 7, 2020												
January 8, 2020												
January 9, 2020												
January 10, 2020												
January 11, 2020												
January 12, 2020	7.56	7.55	7.62	Empty			7.52	7.44	7.40	Empty		
January 13, 2020												
January 14, 2020												
January 15, 2020												
January 16, 2020												
January 17, 2020												
January 18, 2020												
January 19, 2020	7.69	7.69	7.68	Empty			7.48	7.44	7.49	Empty		
January 20, 2020												
January 21, 2020												
January 22, 2020												
January 23, 2020												
January 24, 2020												
January 25, 2020												
January 26, 2020	7.61	7.66	7.66	Empty			7.46	7.40	7.42	Empty		
January 27, 2020												
January 28, 2020												
January 29, 2020												
January 30, 2020												
January 31, 2020												
February 1, 2020												
February 2, 2020	7.66	7.64	7.67	Empty			7.46	7.42	7.43	Empty		
February 3, 2020												
February 4, 2020												
February 5, 2020												
February 6, 2020												
February 7, 2020												
February 8, 2020												
February 9, 2020	7.71	7.74	7.73	Empty			7.47	7.39	7.44	Empty		
February 10, 2020												
February 11, 2020												
February 12, 2020												
February 13, 2020												
February 14, 2020												
February 15, 2020												
February 16, 2020	7.79	7.86	7.92	Empty			7.47	7.42	7.42	Empty		
February 17, 2020												
February 18, 2020												
February 19, 2020												
February 20, 2020												
February 21, 2020												
February 22, 2020												
February 23, 2020	8.17	8.12	8.27	Empty			7.43	7.35	7.33	Empty		
February 24, 2020												
February 25, 2020												
February 26, 2020												
February 27, 2020												
February 28, 2020												
February 29, 2020												
March 1, 2020	8.24	8.44	8.40	Empty			7.51	7.44	7.41	Empty		
March 2, 2020												
March 3, 2020												
March 4, 2020												
March 5, 2020												
March 6, 2020												
March 7, 2020												
March 8, 2020	8.40	8.53	8.49	Empty			7.56	7.45	7.51	Empty		
March 9, 2020												
March 10, 2020												
March 11, 2020												
March 12, 2020												
March 13, 2020												
March 14, 2020	8.11	8.10	8.32	Empty			7.41	7.37	7.36	Empty		
March 15, 2020												
March 16, 2020												
March 17, 2020												
March 18, 2020												
March 19, 2020												
March 20, 2020												
March 21, 2020												
March 22, 2020	7.92	7.96	7.99	Empty			7.47	7.41	7.36	Empty		
March 23, 2020												
March 24, 2020												
March 25, 2020												
March 26, 2020												
March 27, 2020												
March 28, 2020	7.89	7.87	7.89	Empty			7.61	7.57	7.56	Empty		
March 29, 2020												
March 30, 2020												
March 31, 2020												

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	0

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	0

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	3

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Effluent Limits	
6.5	Minimum
8.4	Maximum

Ridgemark Estates Subdivision

RM - I Wastewater Treatment Plant

Ponds pH MONITORING

Grab Samples

See RM - I Lab Sample Site Sheet		
A	=	Effluent Site
B	=	Influent Site
C	=	Third Site

Date	Results in mg/l Pond 1 pH Sample Site			Results in mg/l Pond 3 pH Sample Site			Results in mg/l Pond 4 pH Sample Site			Results in mg/l Pond 5 pH Sample Site		
	A	B	C	A	B	C	A	B	C	A	B	C
April 1, 2020												
April 2, 2020												
April 3, 2020												
April 4, 2020												
April 5, 2020												
April 6, 2020	8.00	8.03	8.05	Empty			7.67	7.74	7.67	Empty		
April 7, 2020												
April 8, 2020												
April 9, 2020												
April 10, 2020												
April 11, 2020	8.19	8.28	8.26	Epmty			7.67	7.61	7.64	Empty		
April 12, 2020												
April 13, 2020												
April 14, 2020												
April 15, 2020												
April 16, 2020												
April 17, 2020												
April 18, 2020												
April 19, 2020	8.70	8.24	8.52	Empty			7.50	7.47	7.45	Empty		
April 20, 2020												
April 21, 2020												
April 22, 2020												
April 23, 2020												
April 24, 2020												
April 25, 2020												
April 26, 2020	8.76	8.75	7.67	Empty			7.73	7.65	7.65	Empty		
April 27, 2020												
April 28, 2020												
April 29, 2020												
April 30, 2020												
May 1, 2020												
May 2, 2020												
May 3, 2020												
May 4, 2020												
May 5, 2020	8.59	8.62	8.73	Empty			7.25	7.21	7.26	Empty		
May 6, 2020												
May 7, 2020												
May 8, 2020												
May 9, 2020												
May 10, 2020	8.70	8.80	8.84	Empty			7.45	7.38	7.45	Empty		
May 11, 2020												
May 12, 2020												
May 13, 2020												
May 14, 2020												
May 15, 2020												
May 16, 2020												
May 17, 2020	8.76	8.81	8.86	Empty			7.42	7.35	7.39	Empty		
May 18, 2020												
May 19, 2020												
May 20, 2020												
May 21, 2020												
May 22, 2020												
May 23, 2020												
May 24, 2020	9.26	9.22	9.29	Empty			7.40	7.33	7.36	Empty		
May 25, 2020												
May 26, 2020												
May 27, 2020												
May 28, 2020												
May 29, 2020												
May 30, 2020												
May 31, 2020	9.53	9.60	9.62	Empty			7.48	7.44	7.51	Empty		
June 1, 2020												
June 2, 2020												
June 3, 2020												
June 4, 2020												
June 5, 2020												
June 6, 2020												
June 7, 2020	9.72	9.77	9.71	Empty			7.77	7.85	7.82	Empty		
June 8, 2020												
June 9, 2020												
June 10, 2020												
June 11, 2020												
June 12, 2020												
June 13, 2020												
June 14, 2020	10.35	10.36	10.38	Empty			7.90	8.08	8.14	Empty		
June 15, 2020												
June 16, 2020												
June 17, 2020												
June 18, 2020												
June 19, 2020												
June 20, 2020												
June 21, 2020	11.12	11.24	11.20	Empty			8.35	8.51	8.51	Empty		
June 22, 2020												
June 23, 2020												
June 24, 2020												
June 25, 2020												
June 26, 2020												
June 27, 2020												
June 28, 2020	7.18	8.21	7.29	7.56	7.56	7.62	8.75	8.78	9.23	Empty		
June 29, 2020												
June 30, 2020												

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	4

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	15

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	14

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report

Effluent Limits	
6.5	Minimum
8.4	Maximum

Ridgemark Estates Subdivision
RM - I Wastewater Treatment Plant
Ponds pH MONITORING

Grab Samples

Date	Results in mg/l Pond 1 pH Sample Site			Results in mg/l Pond 3 pH Sample Site			Results in mg/l Pond 4 pH Sample Site			Results in mg/l Pond 5 pH Sample Site		
	A	B	C	A	B	C	A	B	C	A	B	C
July 1, 2020												
July 2, 2020												
July 3, 2020												
July 4, 2020												
July 5, 2020	8.66	8.74	8.77	7.74	7.71	7.82	8.81	8.88	8.95	Empty		
July 6, 2020												
July 7, 2020												
July 8, 2020												
July 9, 2020												
July 10, 2020												
July 11, 2020												
July 12, 2020	10.37	9.13	9.96	7.94	7.84	7.83	7.84	8.31	8.25	Empty		
July 13, 2020												
July 14, 2020												
July 15, 2020												
July 16, 2020												
July 17, 2020												
July 18, 2020												
July 19, 2020	10.06	10.12	9.99	7.66	7.62	7.59	8.30	8.30	8.34	Empty		
July 20, 2020												
July 21, 2020												
July 22, 2020												
July 23, 2020												
July 24, 2020												
July 25, 2020												
July 26, 2020	9.94	9.99	9.97	7.60	7.58	7.62	8.41	8.36	8.41	Empty		
July 27, 2020												
July 28, 2020												
July 29, 2020												
July 30, 2020												
July 31, 2020												
August 1, 2020												
August 2, 2020	10.05	10.10	10.13	7.81	7.77	7.77	8.29	8.50	8.35	Empty		
August 3, 2020												
August 4, 2020												
August 5, 2020												
August 6, 2020												
August 7, 2020												
August 8, 2020												
August 9, 2020	10.13	10.11	10.04	7.67	7.69	7.68	8.36	8.54	8.45	Empty		
August 10, 2020												
August 11, 2020												
August 12, 2020												
August 13, 2020												
August 14, 2020												
August 15, 2020												
August 16, 2020	9.83	8.61	9.82	7.70	7.72	7.68	8.48	8.48	8.51	Empty		
August 17, 2020												
August 18, 2020												
August 19, 2020												
August 20, 2020												
August 21, 2020												
August 22, 2020												
August 23, 2020	9.71	9.72	6.69	7.57	7.57	7.55	8.24	8.28	8.14	Empty		
August 24, 2020												
August 25, 2020												
August 26, 2020												
August 27, 2020												
August 28, 2020												
August 29, 2020												
August 30, 2020	9.72	9.74	9.69	7.57	7.58	7.63	8.46	8.50	8.54	Empty		
August 31, 2020												
September 1, 2020												
September 2, 2020												
September 3, 2020												
September 4, 2020												
September 5, 2020												
September 6, 2020	9.59	9.68	9.53	7.58	7.54	7.56	8.23	8.72	8.76	Empty		
September 7, 2020												
September 8, 2020												
September 9, 2020												
September 10, 2020												
September 11, 2020												
September 12, 2020												
September 13, 2020	9.52	9.56	9.53	7.62	7.67	7.64	8.22	8.50	8.46	Empty		
September 14, 2020												
September 15, 2020												
September 16, 2020												
September 17, 2020												
September 18, 2020												
September 19, 2020												
September 20, 2020	9.70	9.73	9.63	7.56	7.53	7.53	8.39	8.25	8.38	Empty		
September 21, 2020												
September 22, 2020												
September 23, 2020												
September 24, 2020												
September 25, 2020												
September 26, 2020												
September 27, 2020	9.65	9.67	9.61	7.53	7.53	7.55	8.29	8.24	8.24	Empty		
September 28, 2020												
September 29, 2020												
September 30, 2020												

See RM - I Lab Sample Site Sheet		
A	=	Effluent Site
B	=	Influent Site
C	=	Third Site

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	17

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	23

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	16

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Ridgemark Estates Subdivision

RM - I Wastewater Treatment Plant

Ponds pH MONITORING

Effluent Limits	
6.5	Minimum
8.4	Maximum

See RM - I Lab Sample Site Sheet

A	=	Effluent Site
B	=	Influent Site
C	=	Third Site

Grab Samples

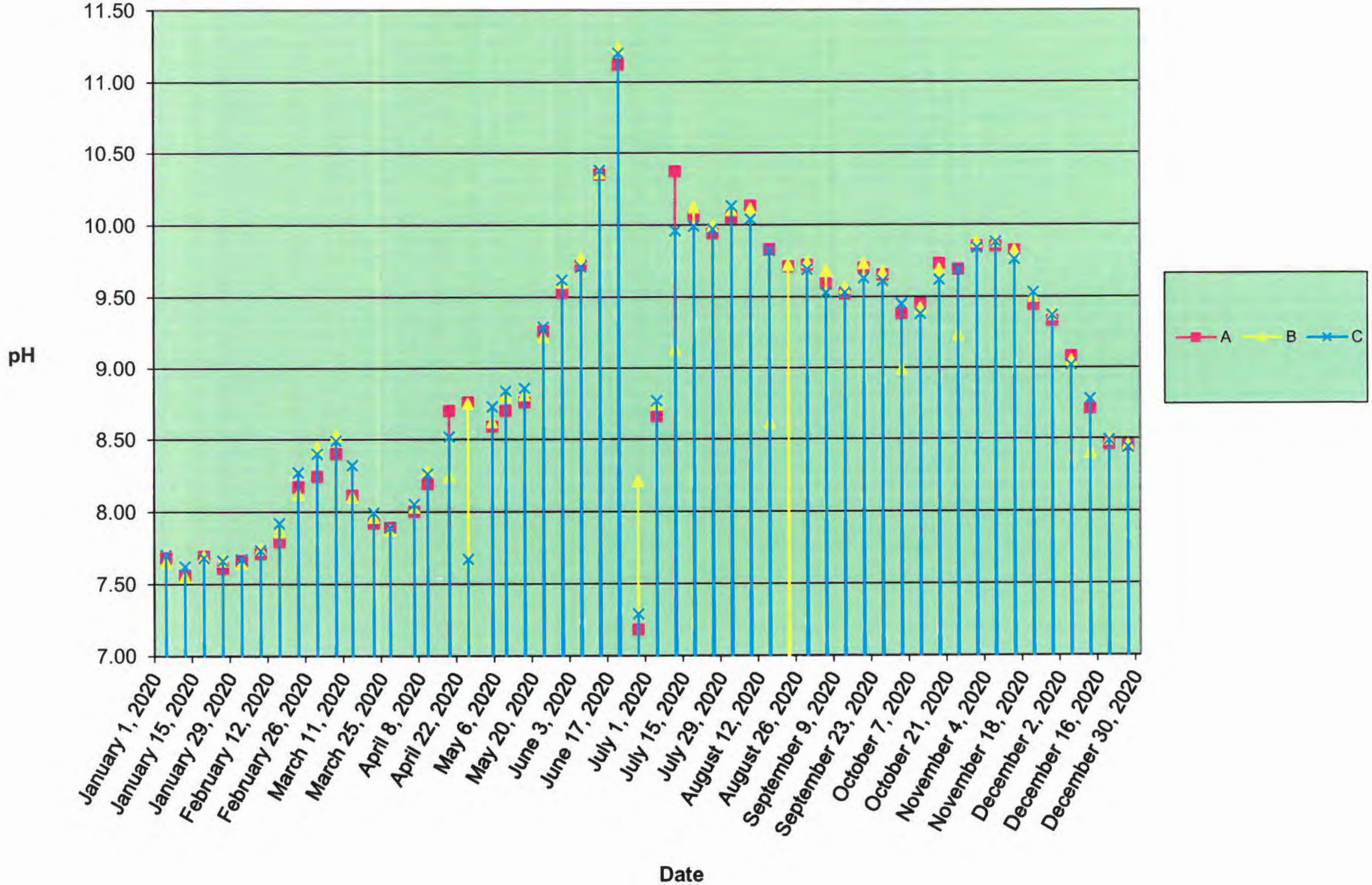
Date	Pond 1 (Results in mg/l) pH Sample Site			Pond 3 (Results in mg/l) pH Sample Site			Pond 4 (Results in mg/l) pH Sample Site			Pond 5 (Results in mg/l) pH Sample Site		
	A	B	C	A	B	C	A	B	C	A	B	C
October 1, 2020												
October 2, 2020												
October 3, 2020												
October 4, 2020	9.38	8.99	9.45	7.65	7.62	7.64	8.15	8.14	8.17	Empty		
October 5, 2020												
October 6, 2020												
October 7, 2020												
October 8, 2020												
October 9, 2020												
October 10, 2020												
October 11, 2020	9.45	9.42	9.38	7.62	7.63	7.63	Empty			Empty		
October 12, 2020												
October 13, 2020												
October 14, 2020												
October 15, 2020												
October 16, 2020												
October 17, 2020												
October 18, 2020	9.73	9.69	9.62	7.60	7.59	7.57	Empty			Empty		
October 19, 2020												
October 20, 2020												
October 21, 2020												
October 22, 2020												
October 23, 2020												
October 24, 2020												
October 25, 2020	9.69	9.23	9.69	7.63	7.64	7.63	Empty			Empty		
October 26, 2020												
October 27, 2020												
October 28, 2020												
October 29, 2020												
October 30, 2020												
October 31, 2020												
November 1, 2020	9.85	9.88	9.84	7.66	7.64	7.64	Empty			Empty		
November 2, 2020												
November 3, 2020												
November 4, 2020												
November 5, 2020												
November 6, 2020												
November 7, 2020												
November 8, 2020	9.85	9.88	9.88	7.64	7.62	7.59	Empty			Empty		
November 9, 2020												
November 10, 2020												
November 11, 2020												
November 12, 2020												
November 13, 2020												
November 14, 2020												
November 15, 2020	9.82	9.82	9.76	7.61	7.62	7.64	Empty			Empty		
November 16, 2020												
November 17, 2020												
November 18, 2020												
November 19, 2020												
November 20, 2020												
November 21, 2020												
November 22, 2020	9.44	9.50	9.53	7.65	7.67	7.63	Empty			Empty		
November 23, 2020												
November 24, 2020												
November 25, 2020												
November 26, 2020												
November 27, 2020												
November 28, 2020												
November 29, 2020	9.33	9.37	9.37	7.64	7.67	7.69	Empty			Empty		
November 30, 2020												
December 1, 2020												
December 2, 2020												
December 3, 2020												
December 4, 2020												
December 5, 2020												
December 6, 2020	9.08	9.05	9.02	7.59	7.60	7.64	Empty			Empty		
December 7, 2020												
December 8, 2020												
December 9, 2020												
December 10, 2020												
December 11, 2020												
December 12, 2020												
December 13, 2020	8.71	8.40	8.76	7.70	7.67	7.71	Empty			Empty		
December 14, 2020												
December 15, 2020												
December 16, 2020												
December 17, 2020												
December 18, 2020												
December 19, 2020												
December 20, 2020	8.46	8.49	8.49	9.32	9.29	9.29	Empty			Empty		
December 21, 2020												
December 22, 2020												
December 23, 2020												
December 24, 2020												
December 25, 2020												
December 26, 2020												
December 27, 2020	8.45	8.46	8.44	9.38	9.40	9.41	Empty			Empty		
December 28, 2020												
December 29, 2020												
December 30, 2020												
December 31, 2020												

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	12

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	15

	pH Limit		Exceeded
All Pond Samples	Minimum	6.5	0
All Pond Samples	Maximum	8.4	17

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment
RM I - Pond 1 - pH

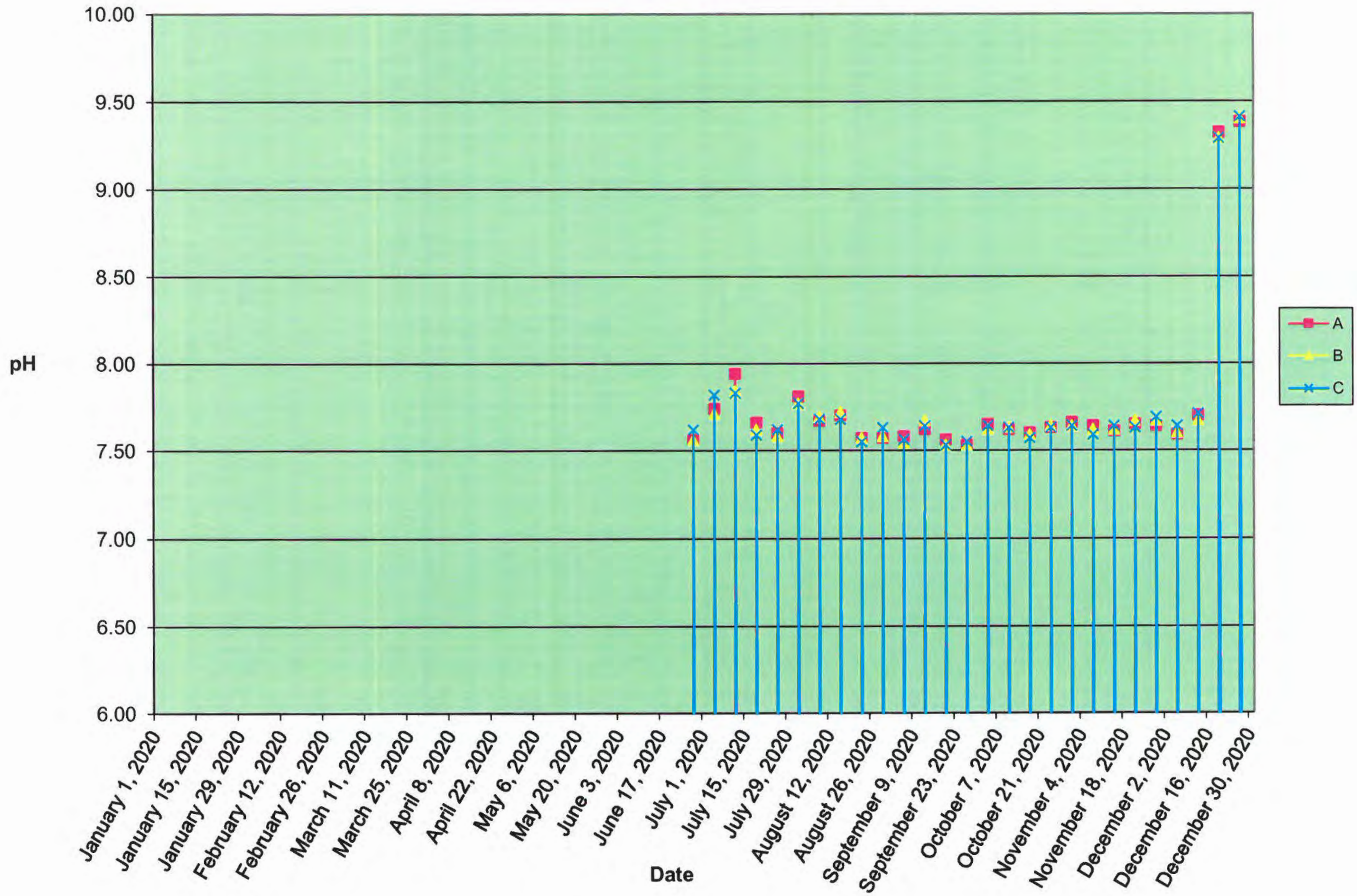


Grab Samples Influent
Pond Sites A - B - C

MRP # R3-2004-0065
1/23/2021

Certified Laboratory Analysis

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment
RM I - Pond 3 - pH



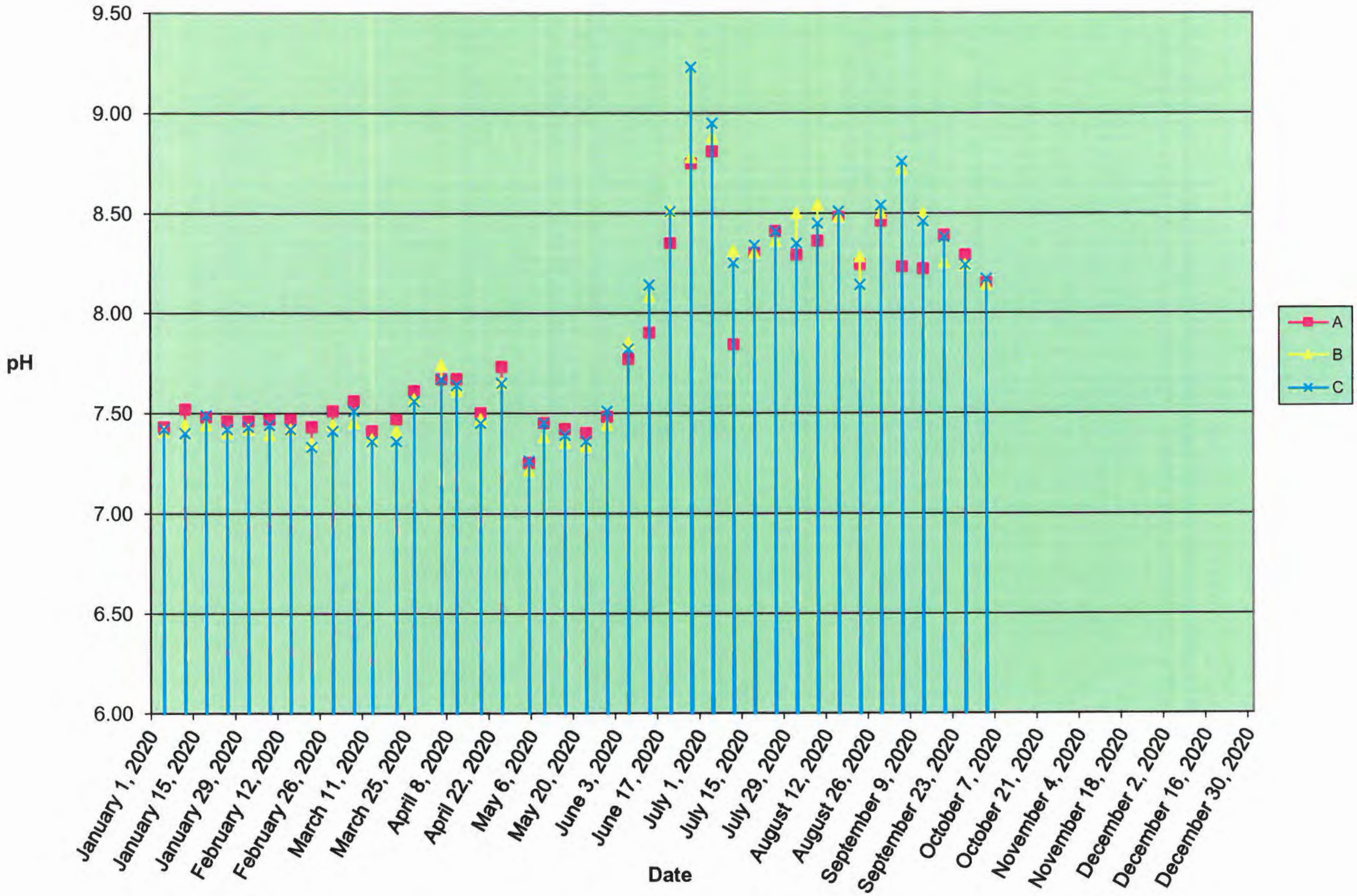
Grab Samples from Sites A - B - C

MRP # R3-2004-0065
1/23/2021

Certified Laboratory Analysis

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment

RM I - Pond 4 - pH



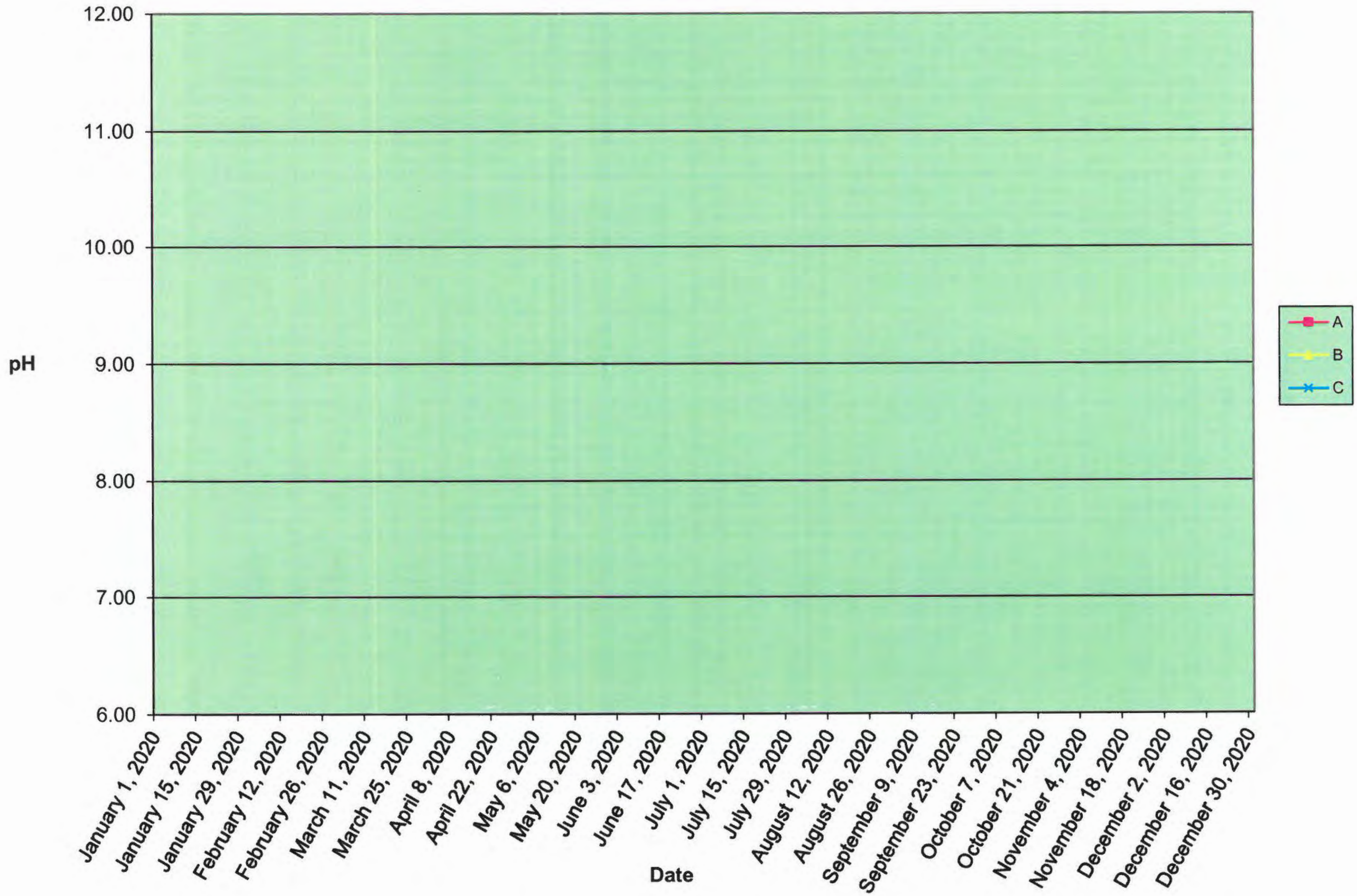
Grab Samples from Sites A - B - C

MRP # R3-2004-0065
1/23/2021

Certified Laboratory Analysis

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment

RM I - Pond 5 - pH



Grab Samples from Sites A - B - C

MRP # R3-2004-0065
1/23/2021

Certified Laboratory Analysis

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I Wastewater Treatment Plant Ponds

DISSOLVED OXYGEN MONITORING

See RM - I Lab Sample Site Sheet		
A	=	Effluent Site
B	=	Influent Site
C	=	Third Site

Grab Samples

DATE	Results in mg/l Pond 1 DO Sample Site A	B	C	Results in mg/l Pond 3 DO Sample Site A	B	C	Results in mg/l Pond 4 DO Sample Site A	B	C	Results in mg/l Pond 5 DO Sample Site A	B	C
January 1, 2020												
January 2, 2020												
January 3, 2020												
January 4, 2020												
January 5, 2020	5	5	6	Empty			6	6	6	Empty		
January 6, 2020												
January 7, 2020												
January 8, 2020												
January 9, 2020												
January 10, 2020												
January 11, 2020												
January 12, 2020	5	5	5	Empty			6	6	7	Empty		
January 13, 2020												
January 14, 2020												
January 15, 2020												
January 16, 2020												
January 17, 2020												
January 18, 2020												
January 19, 2020	5	4	5	Empty			7	7	7	Empty		
January 20, 2020												
January 21, 2020												
January 22, 2020												
January 23, 2020												
January 24, 2020												
January 25, 2020												
January 26, 2020	4	5	4	Empty			7	7	7	Empty		
January 27, 2020												
January 28, 2020												
January 29, 2020												
January 30, 2020												
January 31, 2020												
February 1, 2020												
February 2, 2020	3	3	3	Empty			6	6	6	Empty		
February 3, 2020												
February 4, 2020												
February 5, 2020												
February 6, 2020												
February 7, 2020												
February 8, 2020												
February 9, 2020	5	5	5	Empty			7	7	7	Empty		
February 10, 2020												
February 11, 2020												
February 12, 2020												
February 13, 2020												
February 14, 2020												
February 15, 2020												
February 16, 2020	7	7	7	Empty			7	6	7	Empty		
February 17, 2020												
February 18, 2020												
February 19, 2020												
February 20, 2020												
February 21, 2020												
February 22, 2020												
February 23, 2020	10	12	12	Empty			7	6	7	Empty		
February 24, 2020												
February 25, 2020												
February 26, 2020												
February 27, 2020												
February 28, 2020												
February 29, 2020												
March 1, 2020	7	9	9	Empty			6	7	6	Empty		
March 2, 2020												
March 3, 2020												
March 4, 2020												
March 5, 2020												
March 6, 2020												
March 7, 2020												
March 8, 2020	7	7	9	Empty			7	7	7	Empty		
March 9, 2020												
March 10, 2020												
March 11, 2020												
March 12, 2020												
March 13, 2020												
March 14, 2020	8	9	9	Empty			7	7	7	Empty		
March 15, 2020												
March 16, 2020												
March 17, 2020												
March 18, 2020												
March 19, 2020												
March 20, 2020												
March 21, 2020												
March 22, 2020	7	7	7	Empty			5	6	6	Empty		
March 23, 2020												
March 24, 2020												
March 25, 2020												
March 26, 2020												
March 27, 2020												
March 28, 2020	7	7	8	Empty			7	6	7	Empty		
March 29, 2020												
March 30, 2020												
March 31, 2020												

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I Wastewater Treatment Plant Ponds

DISSOLVED OXYGEN MONITORING

See RM - I Lab Sample Site Sheet		
A	=	Effluent Site
B	=	Influent Site
C	=	Third Site

Grab Samples

DATE	Pond 1 DO Sample Site (Results in mg/l) A	B	C	Pond 3 DO Sample Site (Results in mg/l) A	B	C	Pond 4 DO Sample Site (Results in mg/l) A	B	C	Pond 5 DO Sample Site (Results in mg/l) A	B	C
April 1, 2020												
April 2, 2020												
April 3, 2020												
April 4, 2020												
April 5, 2020												
April 6, 2020	6	5	6	Empty			7	7	6	Empty		
April 7, 2020												
April 8, 2020												
April 9, 2020												
April 10, 2020												
April 11, 2020	6	7	6	Empty			7	6	6	Empty		
April 12, 2020												
April 13, 2020												
April 14, 2020												
April 15, 2020												
April 16, 2020												
April 17, 2020												
April 18, 2020												
April 19, 2020	7	6	7	Empty			5	5	4	Empty		
April 20, 2020												
April 21, 2020												
April 22, 2020												
April 23, 2020												
April 24, 2020												
April 25, 2020												
April 26, 2020	4	5	5	Empty			5	5	5	Empty		
April 27, 2020												
April 28, 2020												
April 29, 2020												
April 30, 2020												
May 1, 2020												
May 2, 2020												
May 3, 2020												
May 4, 2020												
May 5, 2020	7	7	8	Empty			5	5	5	Empty		
May 6, 2020												
May 7, 2020												
May 8, 2020												
May 9, 2020												
May 10, 2020	5	6	7	Empty			6	5	5	Empty		
May 11, 2020												
May 12, 2020												
May 13, 2020												
May 14, 2020												
May 15, 2020												
May 16, 2020												
May 17, 2020	6	7	7	Empty			3	6	4	Empty		
May 18, 2020												
May 19, 2020												
May 20, 2020												
May 21, 2020												
May 22, 2020												
May 23, 2020												
May 24, 2020	9	11	12	Empty			6	6	5	Empty		
May 25, 2020												
May 26, 2020												
May 27, 2020												
May 28, 2020												
May 29, 2020												
May 30, 2020												
May 31, 2020	9	9	10	Empty			5	4	6	Empty		
June 1, 2020												
June 2, 2020												
June 3, 2020												
June 4, 2020												
June 5, 2020												
June 6, 2020												
June 7, 2020	6	7	7	Empty			4	5	5	Empty		
June 8, 2020												
June 9, 2020												
June 10, 2020												
June 11, 2020												
June 12, 2020												
June 13, 2020												
June 14, 2020	8	10	10	Empty			4	5	5	Empty		
June 15, 2020												
June 16, 2020												
June 17, 2020												
June 18, 2020												
June 19, 2020												
June 20, 2020												
June 21, 2020	8	9	9	Empty			4	5	5	Empty		
June 22, 2020												
June 23, 2020												
June 24, 2020												
June 25, 2020												
June 26, 2020												
June 27, 2020												
June 28, 2020	10	4	9	4	4	4	5	4	5	Empty		
June 29, 2020												
June 30, 2020												

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

See RM - I Lab Sample Site Sheet		
A	=	Effluent Site
B	=	Influent Site
C	=	Third Site

Ridgemark Estates Subdivision

RM - I Wastewater Treatment Plant Ponds

DISSOLVED OXYGEN MONITORING

Grab Samples

DATE	Results in mg/l Pond 1 DO Sample Site			Results in mg/l Pond 3 DO Sample Site			Results in mg/l Pond 4 DO Sample Site			Results in mg/l Pond 5 DO Sample Site		
	A	B	C	A	B	C	A	B	C	A	B	C
July 1, 2020												
July 2, 2020												
July 3, 2020												
July 4, 2020												
July 5, 2020	6	4	5	7	6	7	5	4	4	Empty		
July 6, 2020												
July 7, 2020												
July 8, 2020												
July 9, 2020												
July 10, 2020												
July 11, 2020												
July 12, 2020	7	4	9	7	7	7	4	4	3	Empty		
July 13, 2020												
July 14, 2020												
July 15, 2020												
July 16, 2020												
July 17, 2020												
July 18, 2020												
July 19, 2020	6	6	5	4	4	4	4	5	6	Empty		
July 20, 2020												
July 21, 2020												
July 22, 2020												
July 23, 2020												
July 24, 2020												
July 25, 2020												
July 26, 2020	5	4	4	4	3	4	4	5	5	Empty		
July 27, 2020												
July 28, 2020												
July 29, 2020												
July 30, 2020												
July 31, 2020												
August 1, 2020												
August 2, 2020	7	7	5	4	4	5	6	5	4	Empty		
August 3, 2020												
August 4, 2020												
August 5, 2020												
August 6, 2020												
August 7, 2020												
August 8, 2020												
August 9, 2020	8	8	6	5	5	6	4	5	6	Empty		
August 10, 2020												
August 11, 2020												
August 12, 2020												
August 13, 2020												
August 14, 2020												
August 15, 2020												
August 16, 2020	6	3	6	6	7	6	5	5	4	Empty		
August 17, 2020												
August 18, 2020												
August 19, 2020												
August 20, 2020												
August 21, 2020												
August 22, 2020												
August 23, 2020	4	4	4	5	4	6	3	3	3	Empty		
August 24, 2020												
August 25, 2020												
August 26, 2020												
August 27, 2020												
August 28, 2020												
August 29, 2020												
August 30, 2020	7	7	5	6	5	6	4	6	5	Empty		
August 31, 2020												
September 1, 2020												
September 2, 2020												
September 3, 2020												
September 4, 2020												
September 5, 2020												
September 6, 2020	3	4	3	5	4	5	3	6	5	Empty		
September 7, 2020												
September 8, 2020												
September 9, 2020												
September 10, 2020												
September 11, 2020												
September 12, 2020												
September 13, 2020	6	6	5	4	5	4	3	5	5	Empty		
September 14, 2020												
September 15, 2020												
September 16, 2020												
September 17, 2020												
September 18, 2020												
September 19, 2020												
September 20, 2020	7	6	6	4	5	5	5	6	5	Empty		
September 21, 2020												
September 22, 2020												
September 23, 2020												
September 24, 2020												
September 25, 2020												
September 26, 2020												
September 27, 2020	4	5	5	4	4	5	4	5	5	Empty		
September 28, 2020												
September 29, 2020												
September 30, 2020												

SUNNYSLOPE COUNTY WATER DISTRICT

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I Wastewater Treatment Plant Ponds
DISSOLVED OXYGEN MONITORING

See RM - I Lab Sample Site Sheet

A	=	Effluent Site
B	=	Influent Site
C	=	Third Site

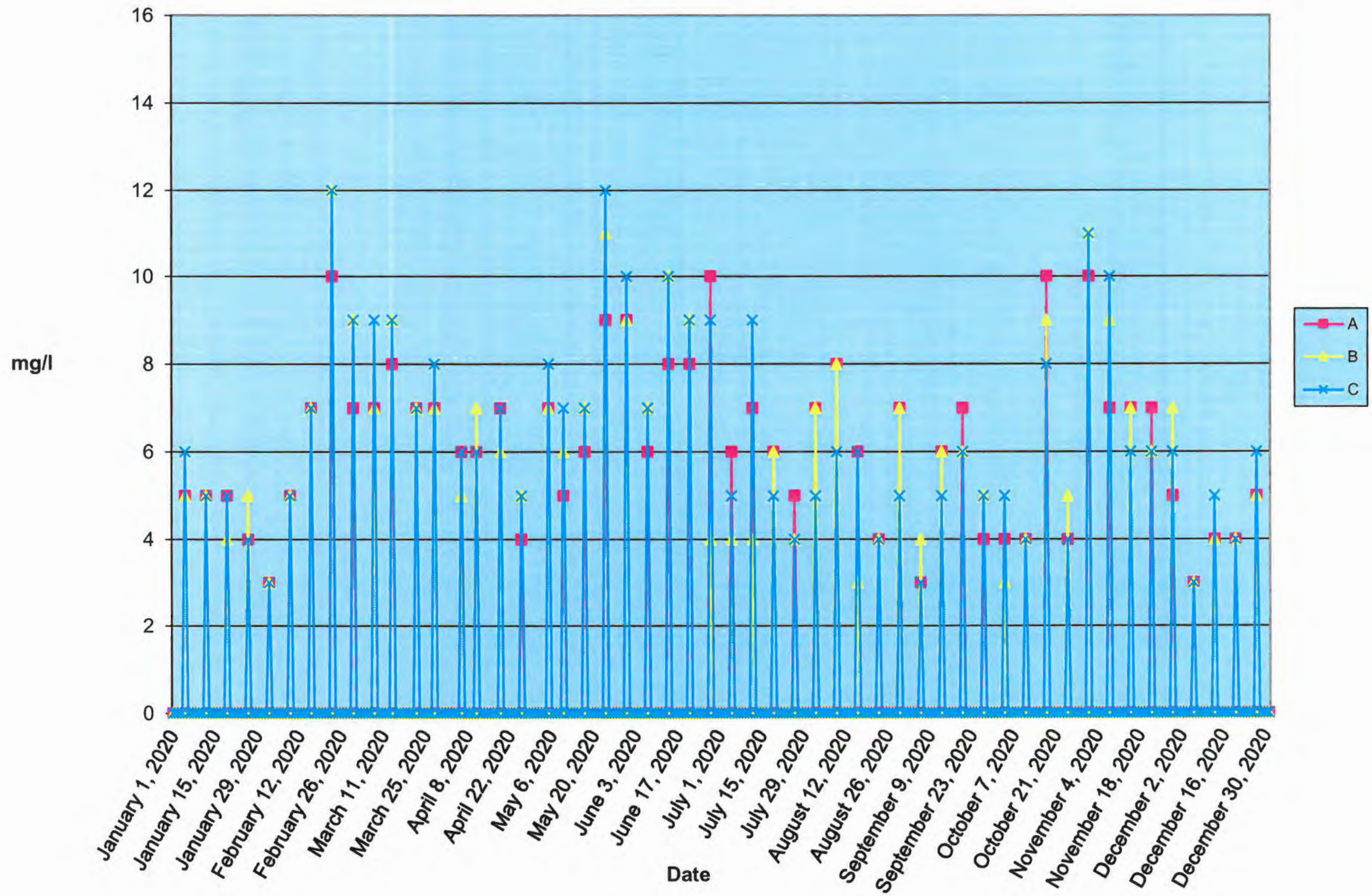
Grab Samples

DATE	Results in mg/l Pond 1 DO Sample Site			Results in mg/l Pond 3 DO Sample Site			Results in mg/l Pond 4 DO Sample Site			Results in mg/l Pond 5 DO Sample Site		
	A	B	C	A	B	C	A	B	C	A	B	C
October 1, 2020												
October 2, 2020												
October 3, 2020												
October 4, 2020	4	3	5	4	4	5	3	4	4	Empty		
October 5, 2020												
October 6, 2020												
October 7, 2020												
October 8, 2020												
October 9, 2020												
October 10, 2020												
October 11, 2020	4	4	4	6	7	7	Empty			Emoty		
October 12, 2020												
October 13, 2020												
October 14, 2020												
October 15, 2020												
October 16, 2020												
October 17, 2020												
October 18, 2020	10	9	8	3	3	4	Empty			Empty		
October 19, 2020												
October 20, 2020												
October 21, 2020												
October 22, 2020												
October 23, 2020												
October 24, 2020												
October 25, 2020	4	5	4	5	4	5	Empty			Empty		
October 26, 2020												
October 27, 2020												
October 28, 2020												
October 29, 2020												
October 30, 2020												
October 31, 2020												
November 1, 2020	10	11	11	6	6	7	Empty			Empty		
November 2, 2020												
November 3, 2020												
November 4, 2020												
November 5, 2020												
November 6, 2020												
November 7, 2020												
November 8, 2020	7	9	10	4	4	5	Empty			Empty		
November 9, 2020												
November 10, 2020												
November 11, 2020												
November 12, 2020												
November 13, 2020												
November 14, 2020												
November 15, 2020	7	7	6	5	5	5	Empty			Empty		
November 16, 2020												
November 17, 2020												
November 18, 2020												
November 19, 2020												
November 20, 2020												
November 21, 2020												
November 22, 2020	7	6	6	7	7	7	Empty			Empty		
November 23, 2020												
November 24, 2020												
November 25, 2020												
November 26, 2020												
November 27, 2020												
November 28, 2020												
November 29, 2020	5	7	6	5	6	6	Empty			Empty		
November 30, 2020												
December 1, 2020												
December 2, 2020												
December 3, 2020												
December 4, 2020												
December 5, 2020												
December 6, 2020	3	3	3	5	5	7	Empty			Empty		
December 7, 2020												
December 8, 2020												
December 9, 2020												
December 10, 2020												
December 11, 2020												
December 12, 2020												
December 13, 2020	4	4	5	8	8	8	Empty			Empty		
December 14, 2020												
December 15, 2020												
December 16, 2020												
December 17, 2020												
December 18, 2020												
December 19, 2020												
December 20, 2020	4	4	4	13	16	17	Empty			Empty		
December 21, 2020												
December 22, 2020												
December 23, 2020												
December 24, 2020												
December 25, 2020												
December 26, 2020												
December 27, 2020	5	5	6	14	9	10	Empty			Empty		
December 28, 2020												
December 29, 2020												
December 30, 2020												
December 31, 2020												

Sunnyslope County Water District

Ridgemark Estates Wastewater Treatment

RM I - Pond 1 - DO



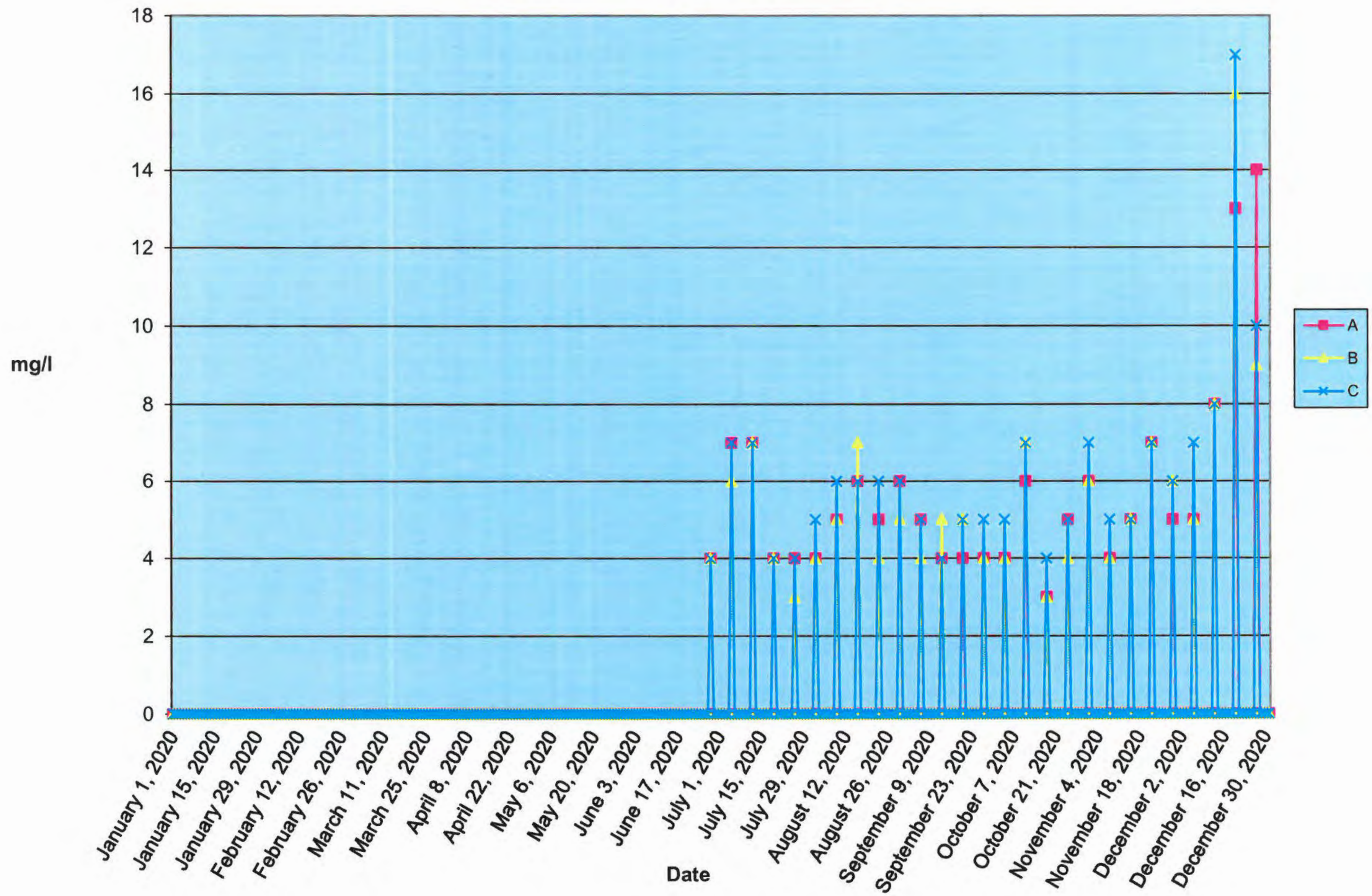
Grab Samples from Sites A - B - C

MRP # R3-2004-0065
1/23/2021

Certified Laboratory Analysis

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment

RM I - Pond 3 - DO

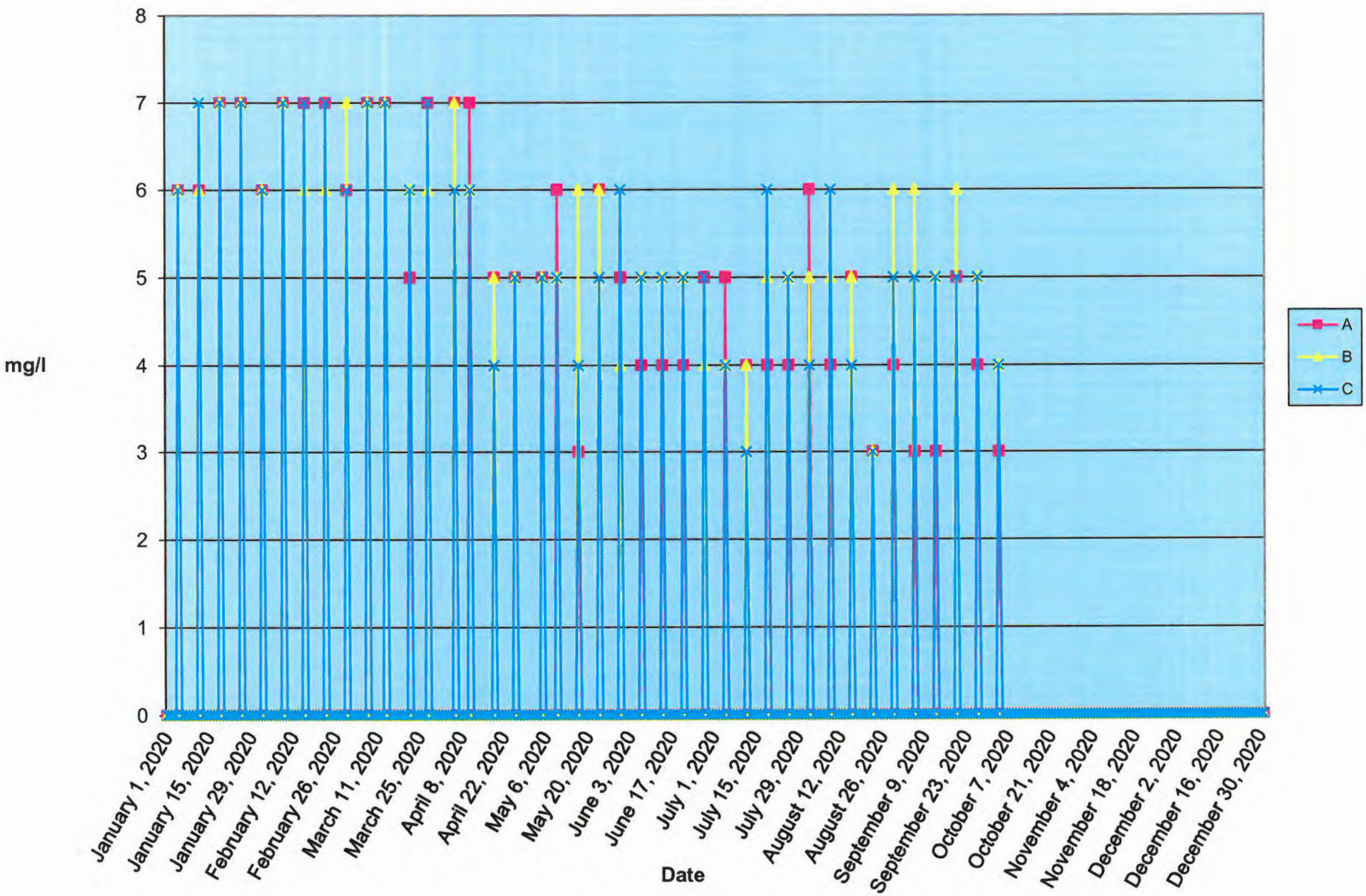


Grab Samples from Sites A - B - C

MRP # R3-2004-0065
1/23/2021

Certified Laboratory Analysis

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment
RM I - Pond 4 - DO



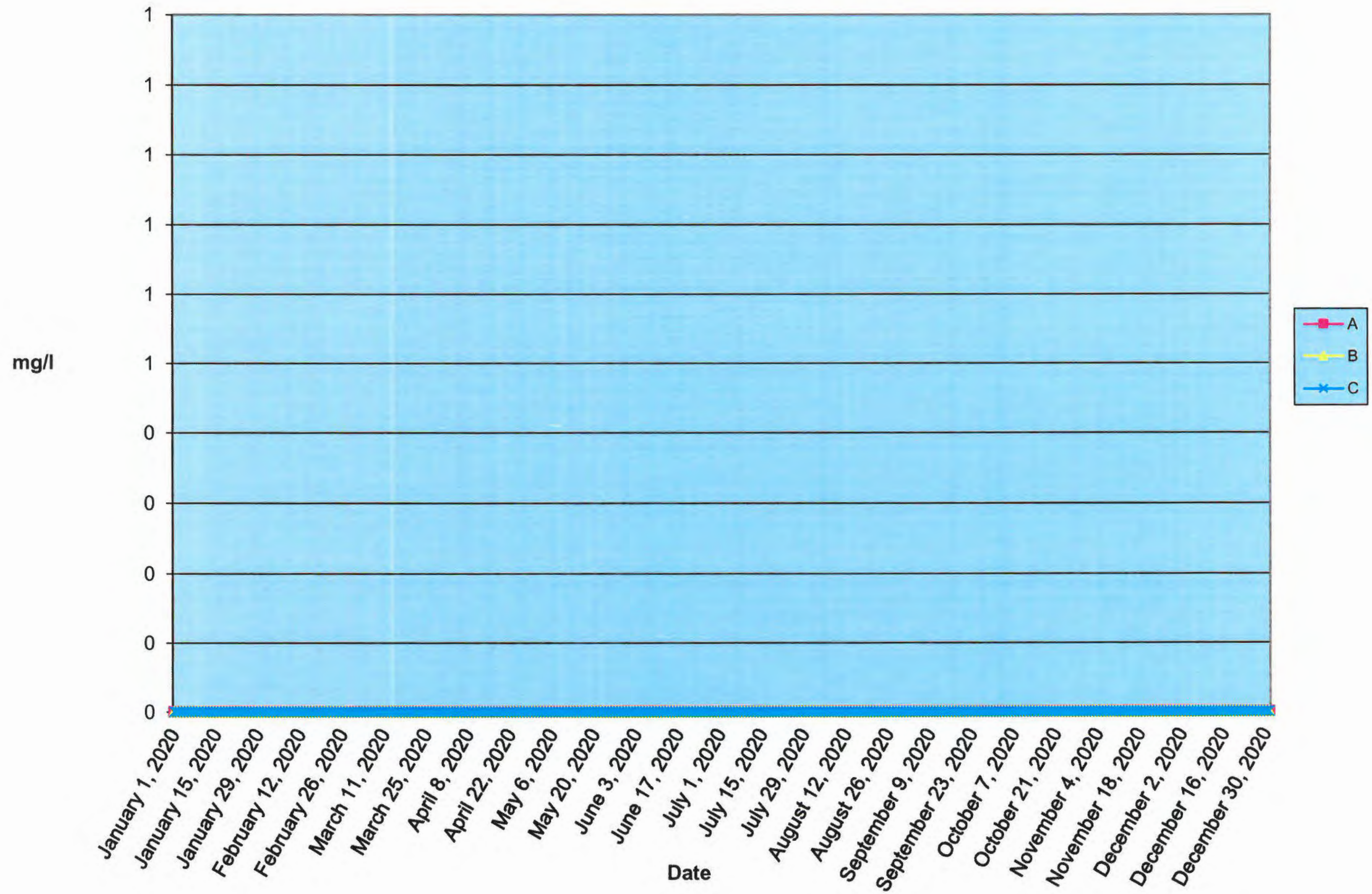
Grab Samples from Sites A - B - C

MRP # R3-2004-0065
1/23/2021

Certified Laboratory Analysis

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment

RM I - Pond 5 - DO



Grab Samples from Sites A - B - C

MRP # R3-2004-0065
1/23/2021

Certified Laboratory Analysis

Sunnyslope County Water District

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I Sequencing Batch Reactor (SBR) WWTP

Influent Monitoring Results - 24 Hour Composite Sample - mg/l

	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average	Influent 30 Day Average
	Lab	Lab	Lab	Lab	Lab	Lab	Lab	Lab	Lab	Lab	Lab	Lab	Lab
	30 Day Average pH Influent	30 Day Average BOD5 Influent mg/l	30 Day Average Ammonia NH3-N Influent mg/l	30 Day Average Nitrate NO3-N Influent mg/l	30 Day Average Total Kjeldahl TKN Influent mg/l	30 Day Average Total Nitrogen Influent mg/l	30 Day Average Total Suspended Solids TSS Influent mg/l	30 Day Average Sodium Influent mg/l	30 Day Average Chloride Influent mg/l	30 Day Average Total Dissolved Solids TDS Influent mg/l	30 Day Average Nitrite as N Influent mg/l	30 Day Average Sulfate Influent mg/l	30 Day Average Boron Influent mg/l
1/31/2020	7.40	290	NA	NA	54.00	54.00	390	200	330	1400	NA	NA	NA
2/29/2020	7.54	160	NA	NA	69.00	NA	340	170	240	730	NA	NA	NA
3/31/2020	7.53	170	NA	NA	58.00	58.00	140	160	240	750	NA	60.00	0.50
4/30/2020	7.81	360	NA	NA	68.00	68.00	270	200	320	840	NA	NA	NA
5/31/2020	7.48	160	NA	NA	54.00	54.00	100	210	260	890	NA	NA	NA
6/30/2020	7.71	260	NA	NA	54.00	54.00	280	230	320	1000	NA	NA	NA
7/31/2020	7.92	410	NA	NA	61.00	61.00	410	210	330	960	NA	NA	NA
8/31/2020	7.79	200	NA	NA	58.50	58.50	123	230	335	960	NA	NA	NA
9/30/2020	7.84	160	NA	NA	57.00	57.00	110	220	270	1100	NA	180.00	1.10
10/31/2020	7.83	300	NA	NA	53.00	53.00	310	230	290	1100	NA	NA	NA
11/30/2020	7.92	240	NA	NA	72.00	72.00	290	300	490	1200	NA	NA	NA
12/31/2020	7.65	200	NA	NA	62.00	62.00	110	190	290	880	NA	NA	NA
Average	**7.70**	**243**	NA	NA	**60.04**	**59.23**	**239**	**213**	**310**	**984**	NA	**120.00**	**0.80**

Sunnyslope County Water District

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

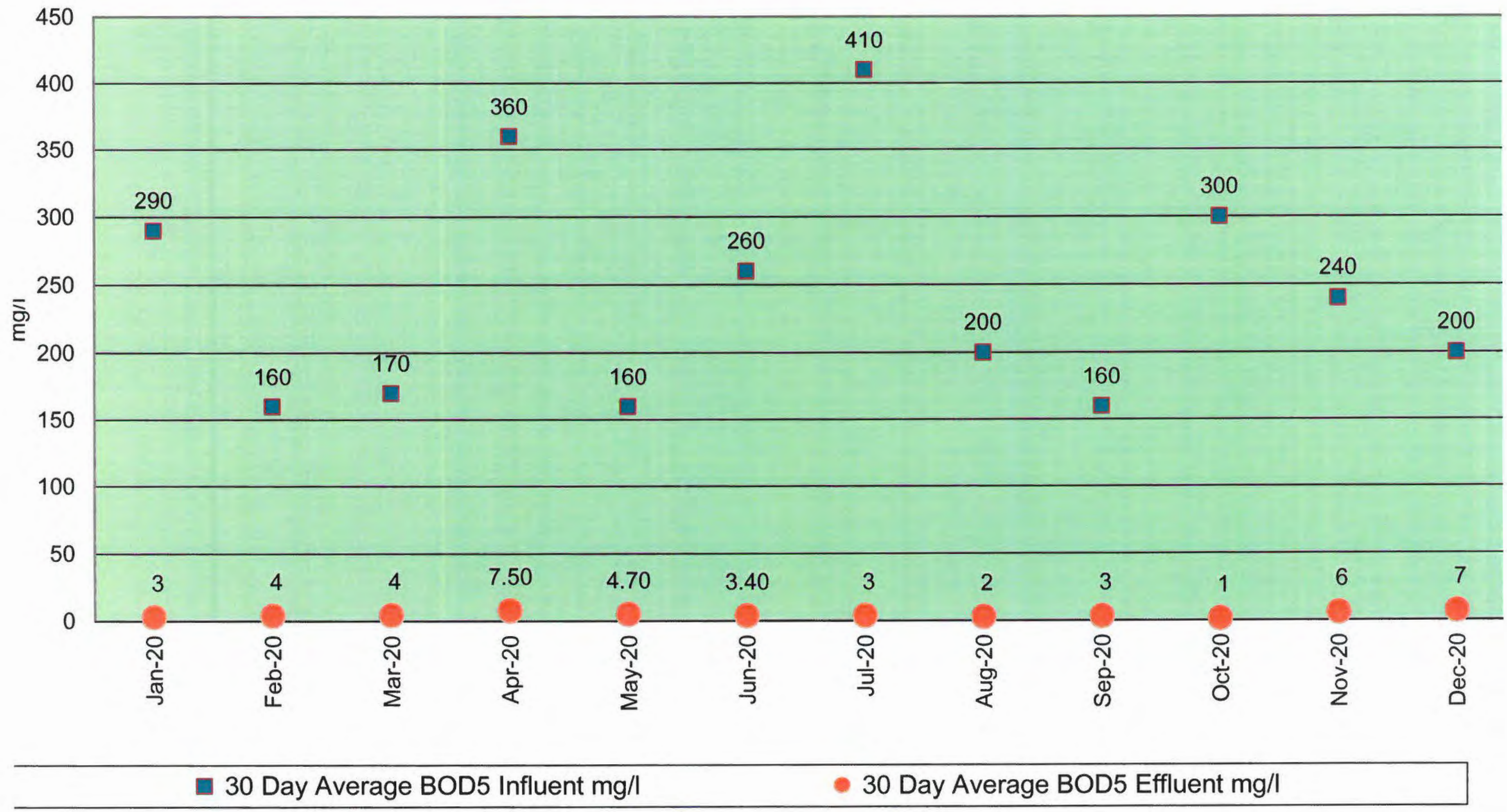
Ridgemark Estates Subdivision

RM - I Sequencing Batch Reactor (SBR) WWTP

Effluent Monitoring Results - 24 Hour Composite Sample - mg/l

	Effluent Limits												
	pH	BOD5	Ammonia	Nitrate	TSS			Sodium	Chloride	TDS			
	6.5 - 8.4	30	5	5	30			200	200	1,200			
	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average	Effluent 30 Day Average
	30 Day Average pH Effluent	30 Day Average BOD5 Effluent mg/l	30 Day Average Ammonia NH3-N Effluent mg/l	30 Day Average Nitrate NO3-N Effluent mg/l	30 Day Average Total Suspended Solids TSS Effluent mg/l	30 Day Average Total Kjeldahl TKN Effluent mg/l	30 Day Average Total Nitrogen Effluent mg/l	30 Day Average Sodium Effluent mg/l	30 Day Average Chloride Effluent mg/l	30 Day Average Total Dissolved Solids (TDS) Effluent mg/l	30 Day Average Nitrite as N Effluent mg/l	30 Day Average Sulfate Effluent mg/l	30 Day Average Boron Effluent mg/l
1/31/2020	7.60	2.70	0.53	0.29	ND	NA	NA	180	260	730	NA	NA	NA
2/29/2020	7.37	3.70	0.60	0.26	ND	1.90	NA	180	230	670	NA	NA	NA
3/31/2020	7.38	4.00	1.20	0.38	ND	2.90	3.60	160	240	690	NA	64	NA
4/30/2020	7.52	7.50	2.40	0.25	ND	3.80	4.00	180	260	780	NA	NA	NA
5/31/2020	7.48	4.70	1.50	0.32	ND	2.50	2.80	190	240	850	NA	NA	NA
6/30/2020	7.70	3.40	0.53	0.60	ND	1.60	2.20	200	250	820	NA	NA	NA
7/31/2020	7.64	3.40	0.34	0.60	ND	2.00	2.70	200	280	640	0.10	NA	NA
8/31/2020	7.72	2.45	0.44	0.81	ND	1.35	2.25	180	255	845	0.03	NA	NA
9/30/2020	7.76	2.80	0.24	0.67	ND	1.50	2.40	220	270	970	0.22	150	0.83
10/31/2020	7.77	1.00	0.40	0.82	ND	3.00	3.90	230	310	1100	NA	NA	NA
11/30/2020	7.74	5.50	2.30	0.73	6.80	3.70	4.40	190	280	910	NA	NA	NA
12/31/2020	7.51	6.70	0.81	0.54	5.00	3.50	4.20	200	270	880	0.13	NA	NA
Average	**7.60**	**3.99**	**0.94**	**0.52**	**5.90**	**2.52**	**3.25**	**193**	**262**	**824**	**0.12**	**107**	**0.83**

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment
RM I Sequencing Batch Reactor (SBR)
Lab Results 30 Day Average
Chart



MRP # R3-2004-0065
1/23/2021

Sunnyslope County Water District
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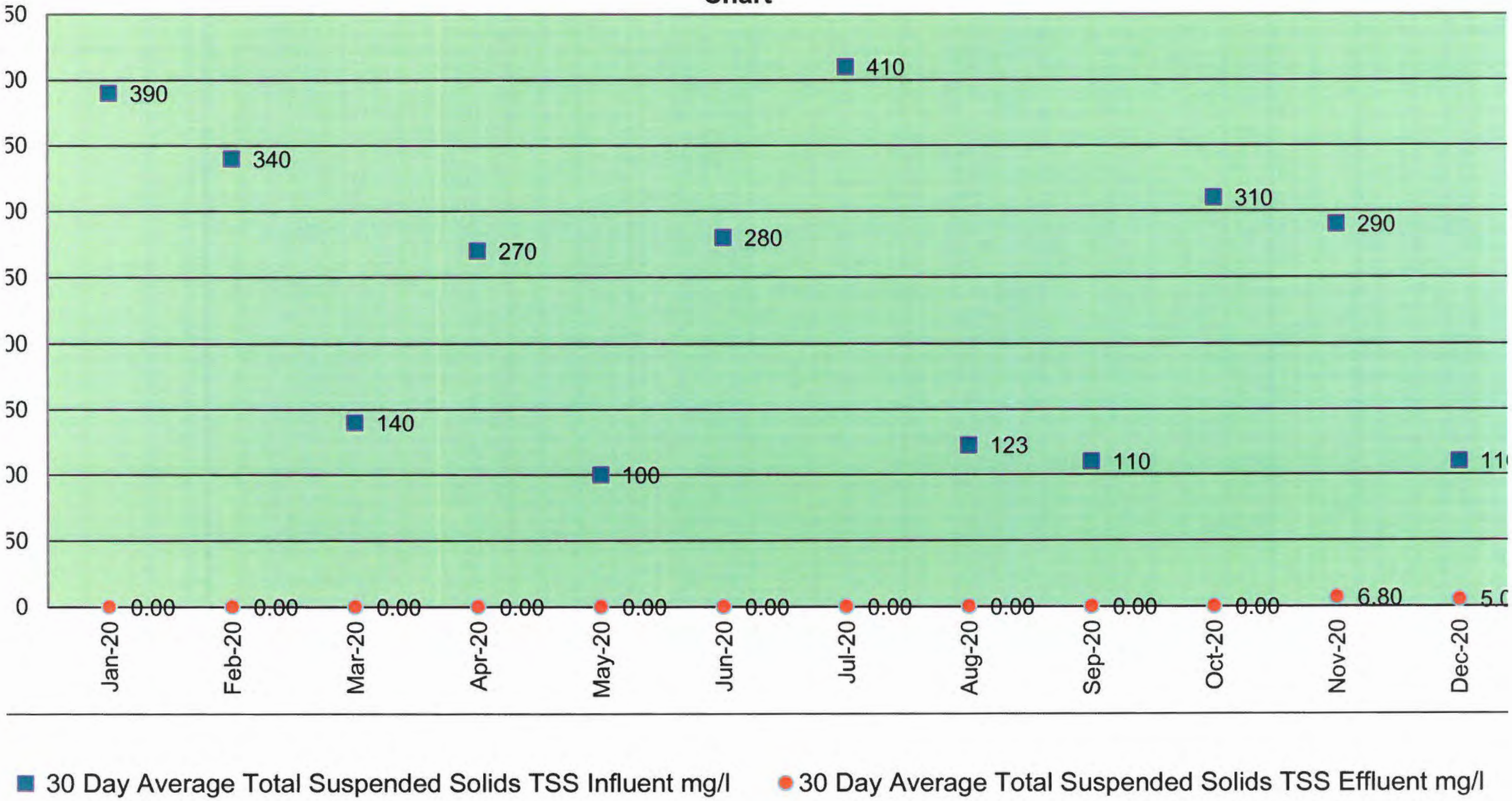

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1/23/2021

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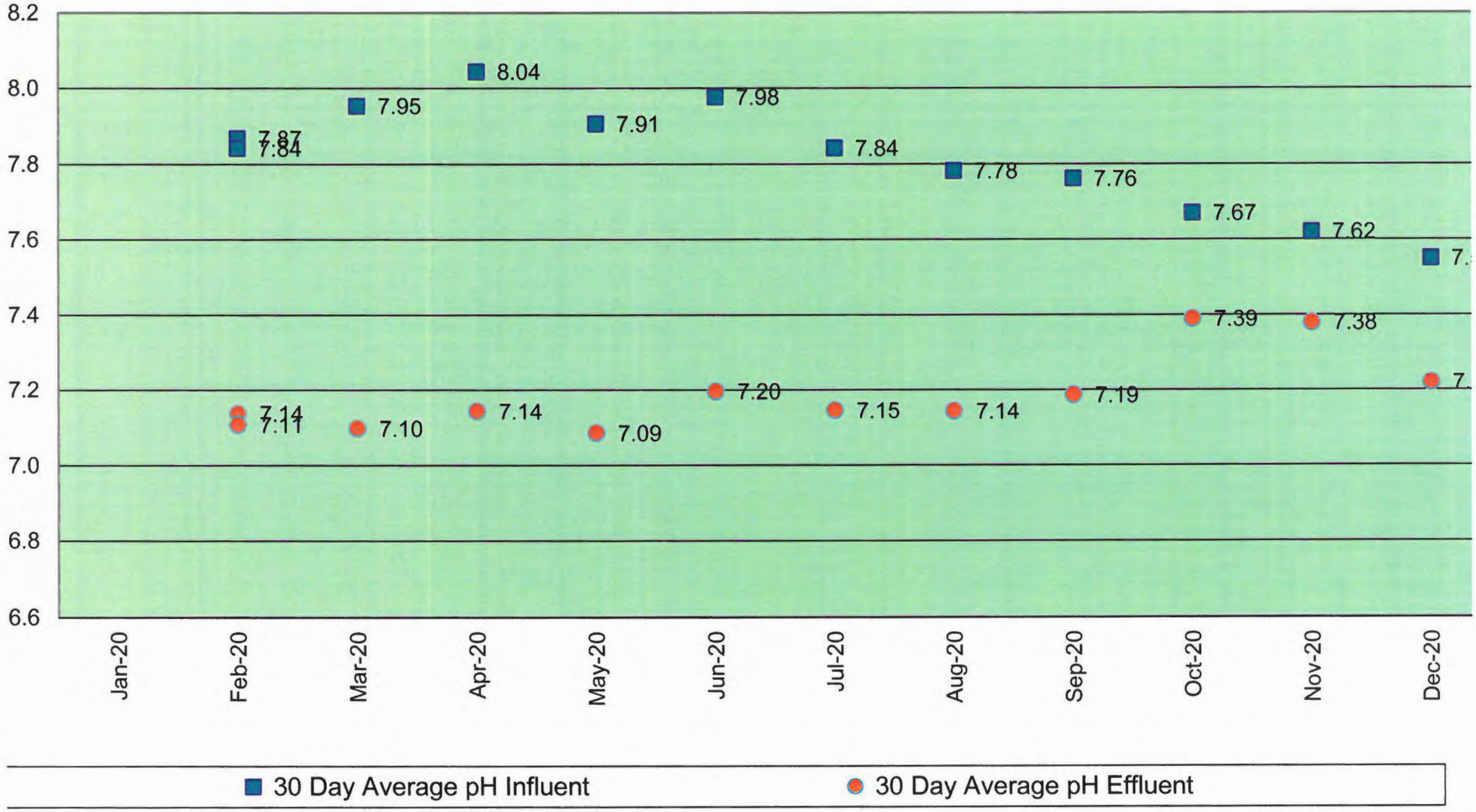

MRP # R3-2004-0065
1/23/2021

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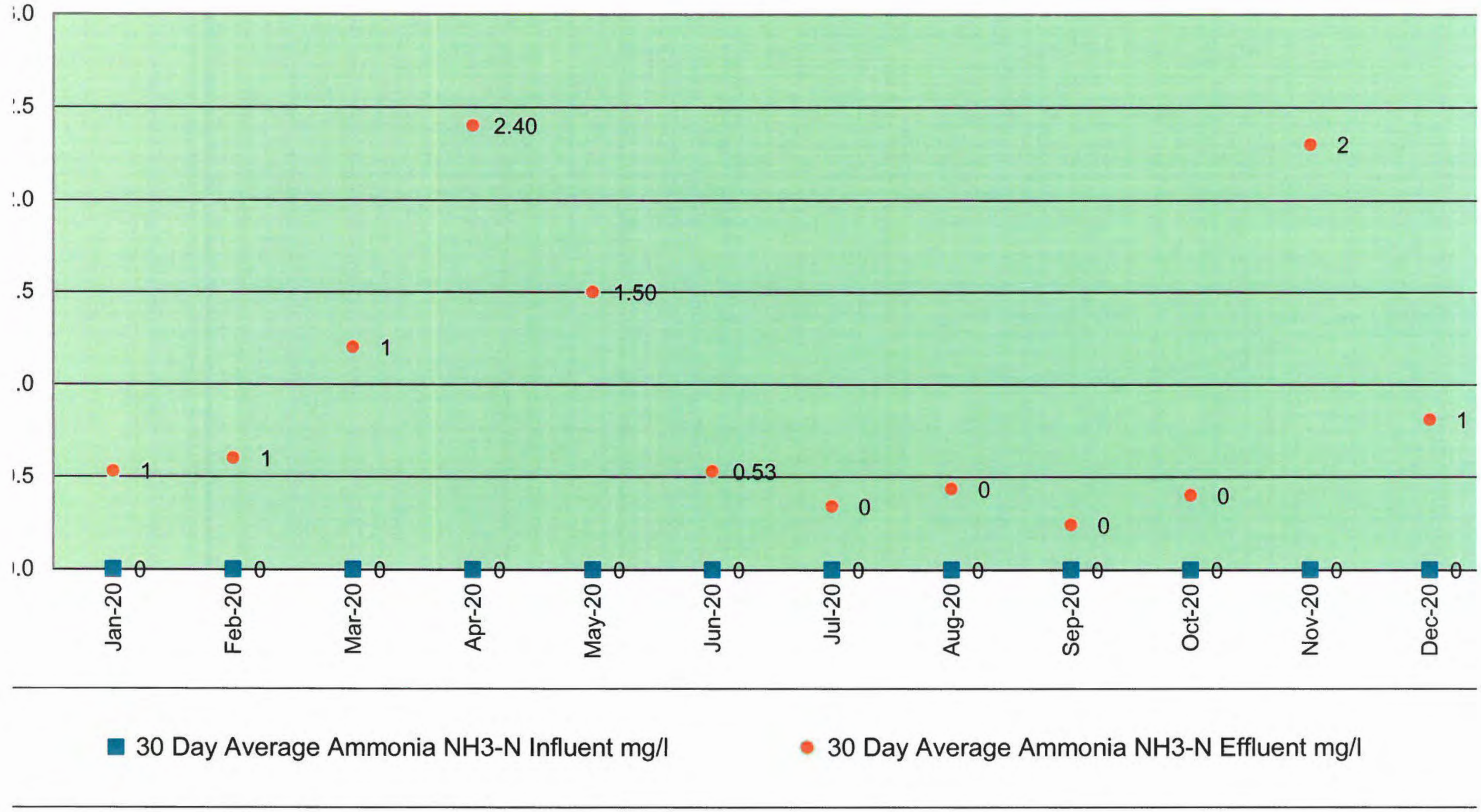

MRP # R3-2004-0065
1/23/2021

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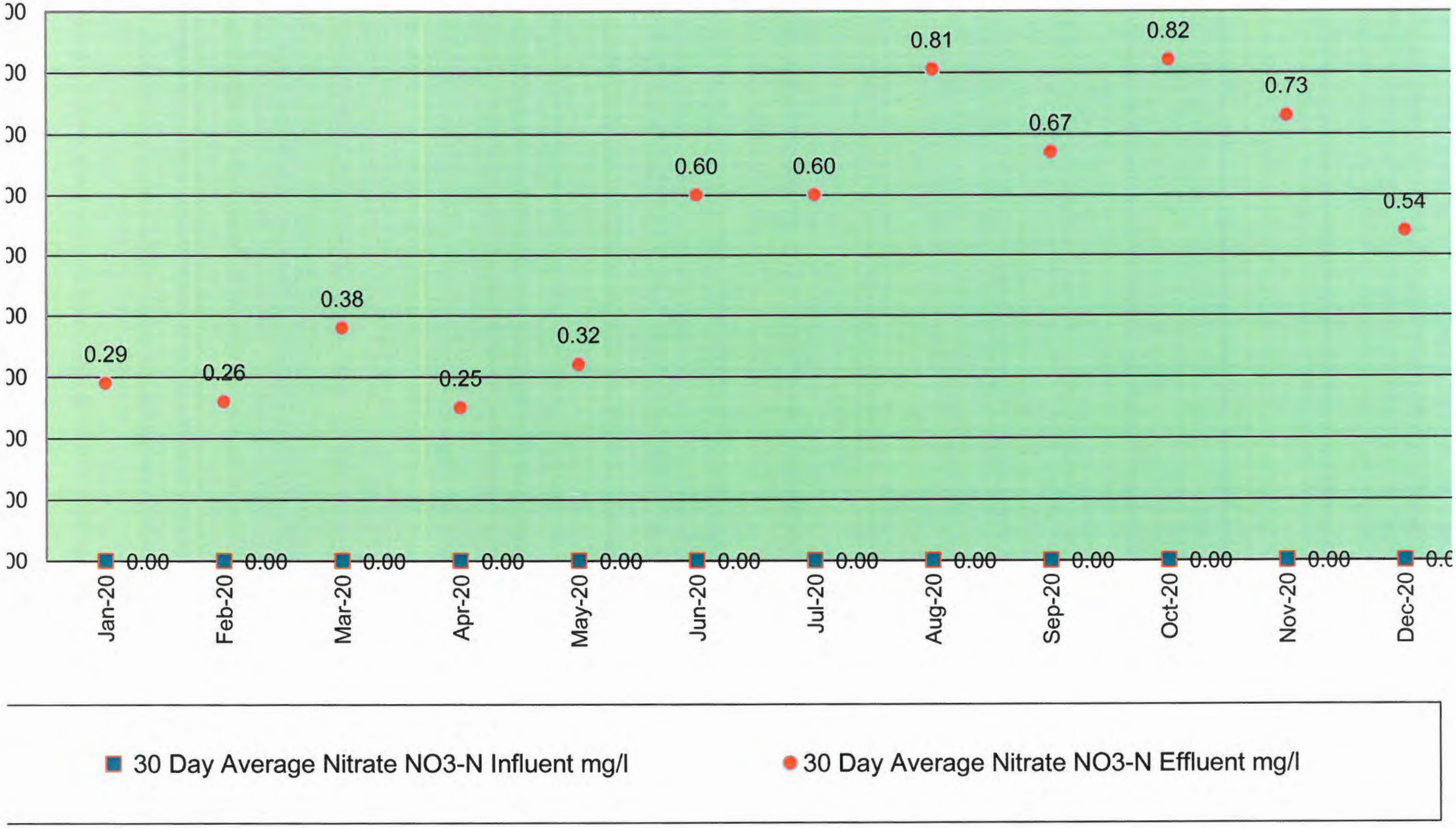

MRP # R3-2004-0065
1/23/2021

Sunnyslope County Water District
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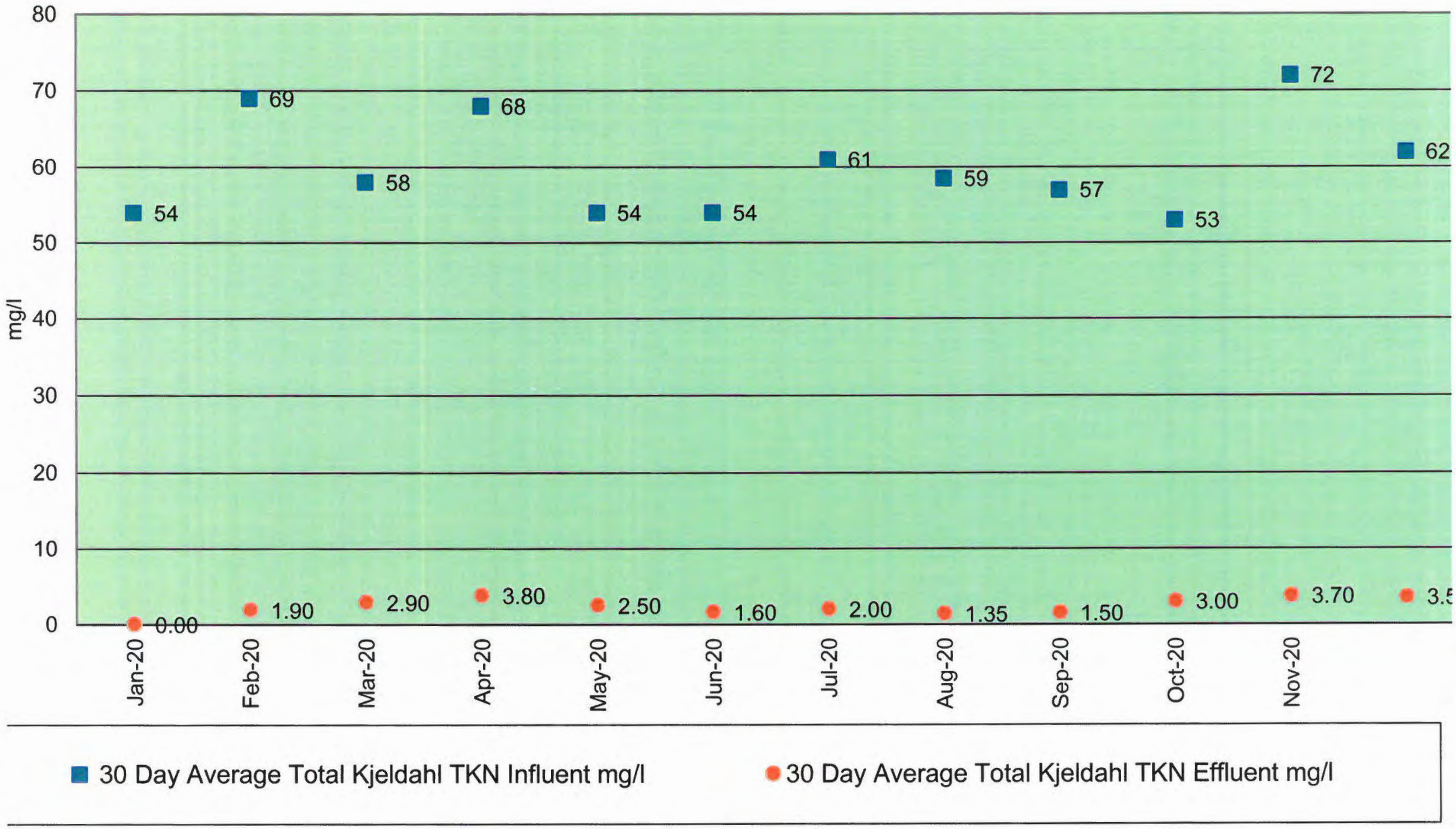

MRP # R3-2004-0065
1/23/2021

Sunnyslope County Water District
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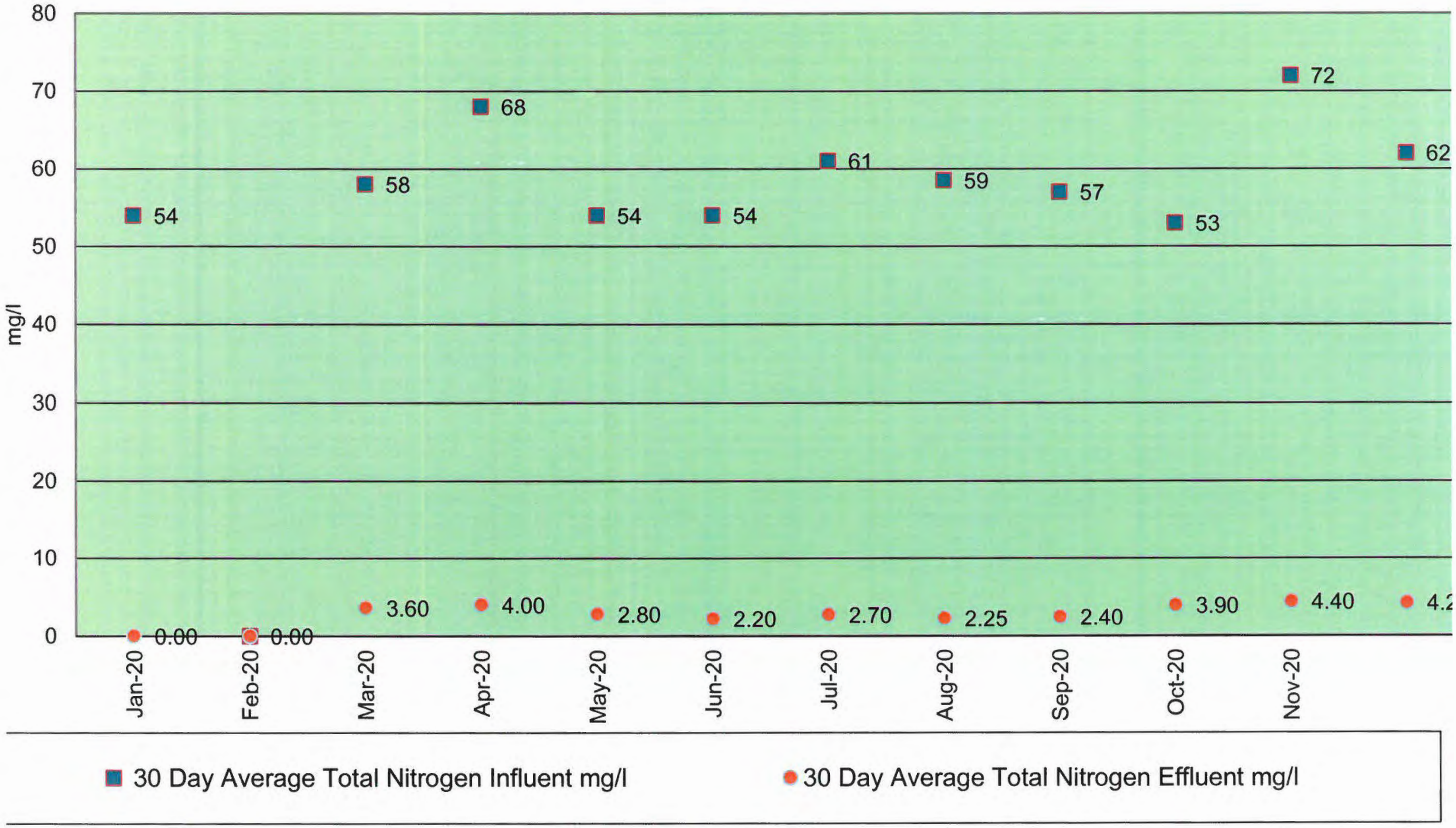

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1/23/2021

Sunnyslope County Water District
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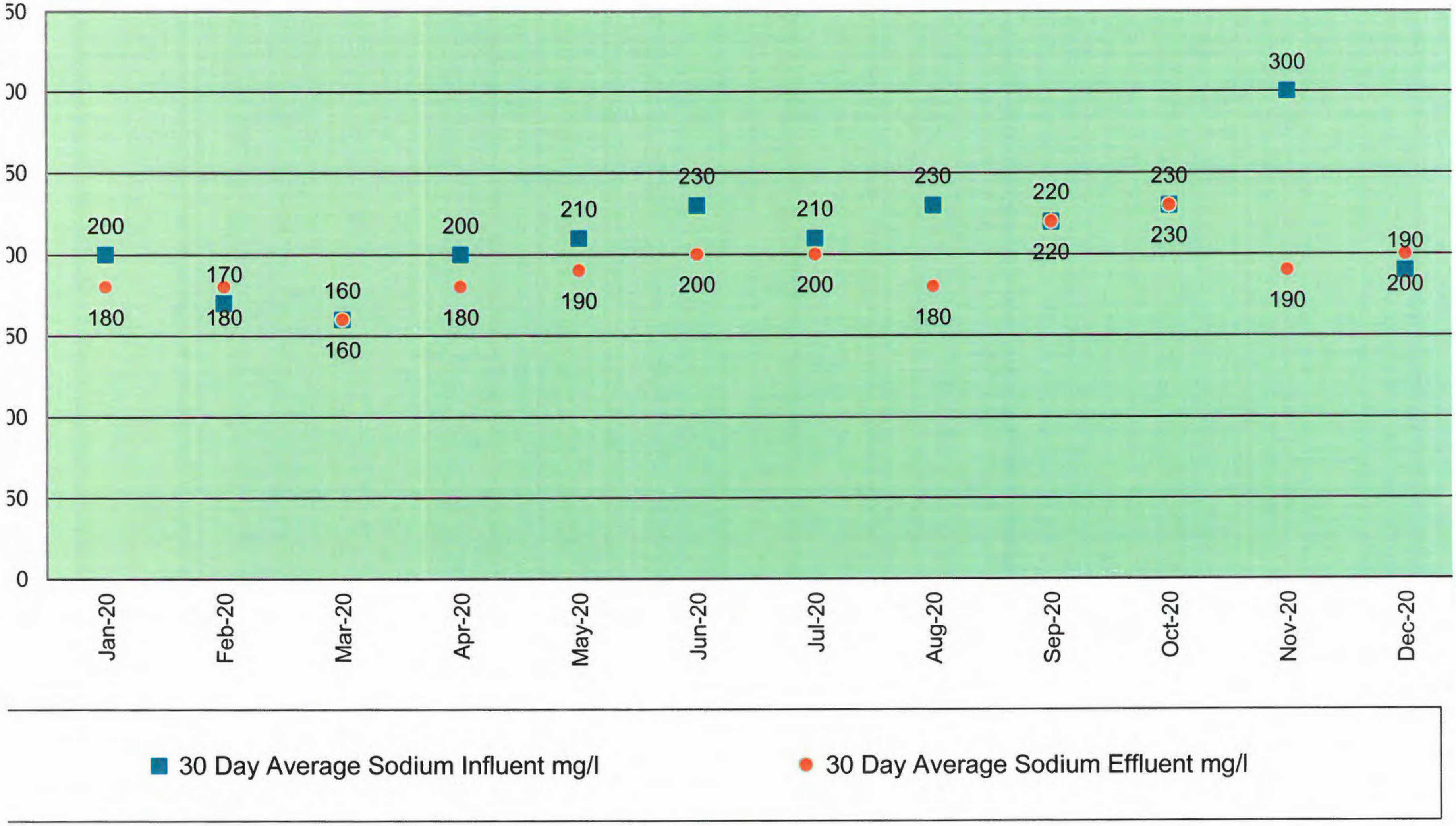

MRP # R3-2004-0065
1/23/2021

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment
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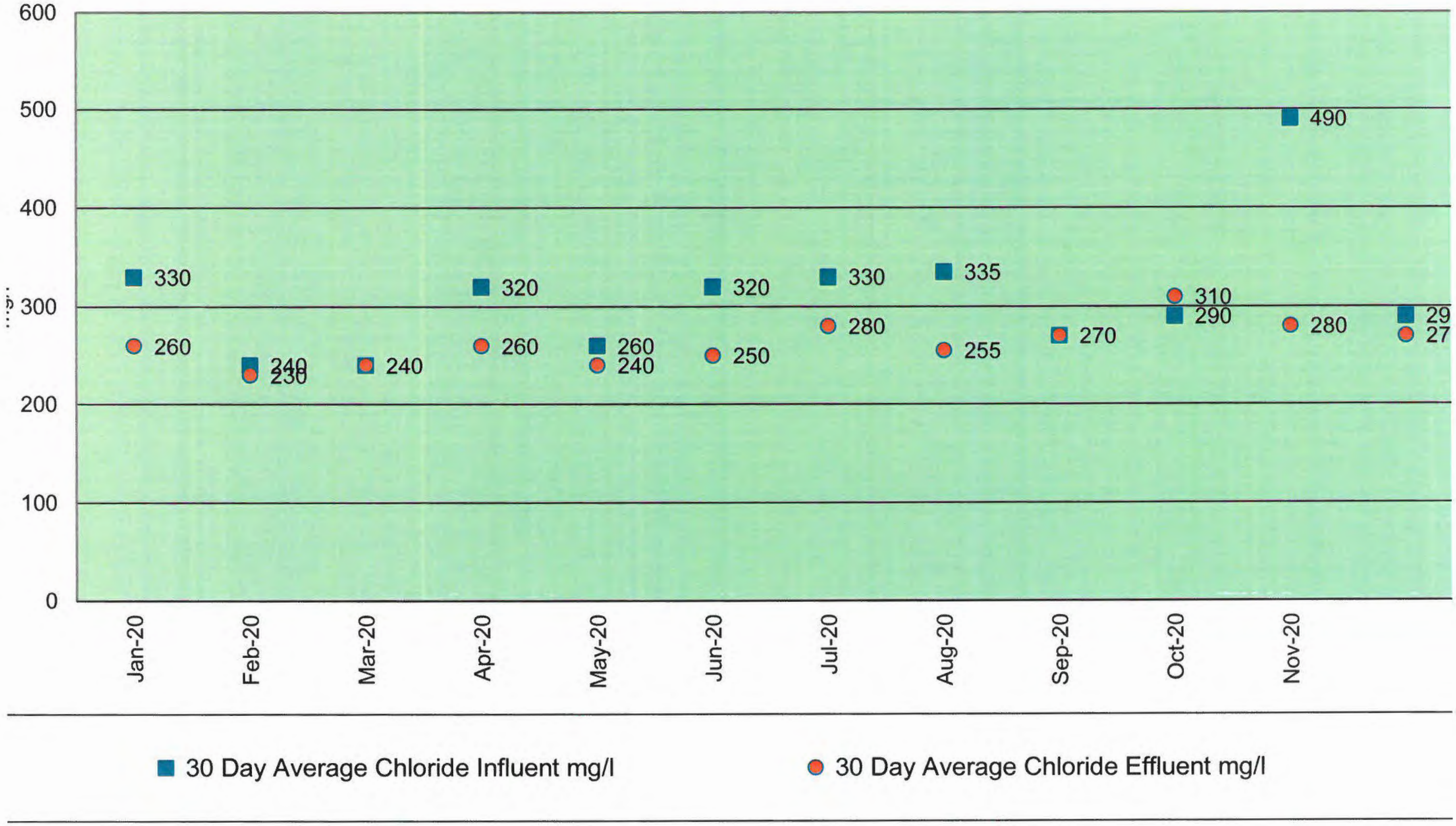

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1/23/2021

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment
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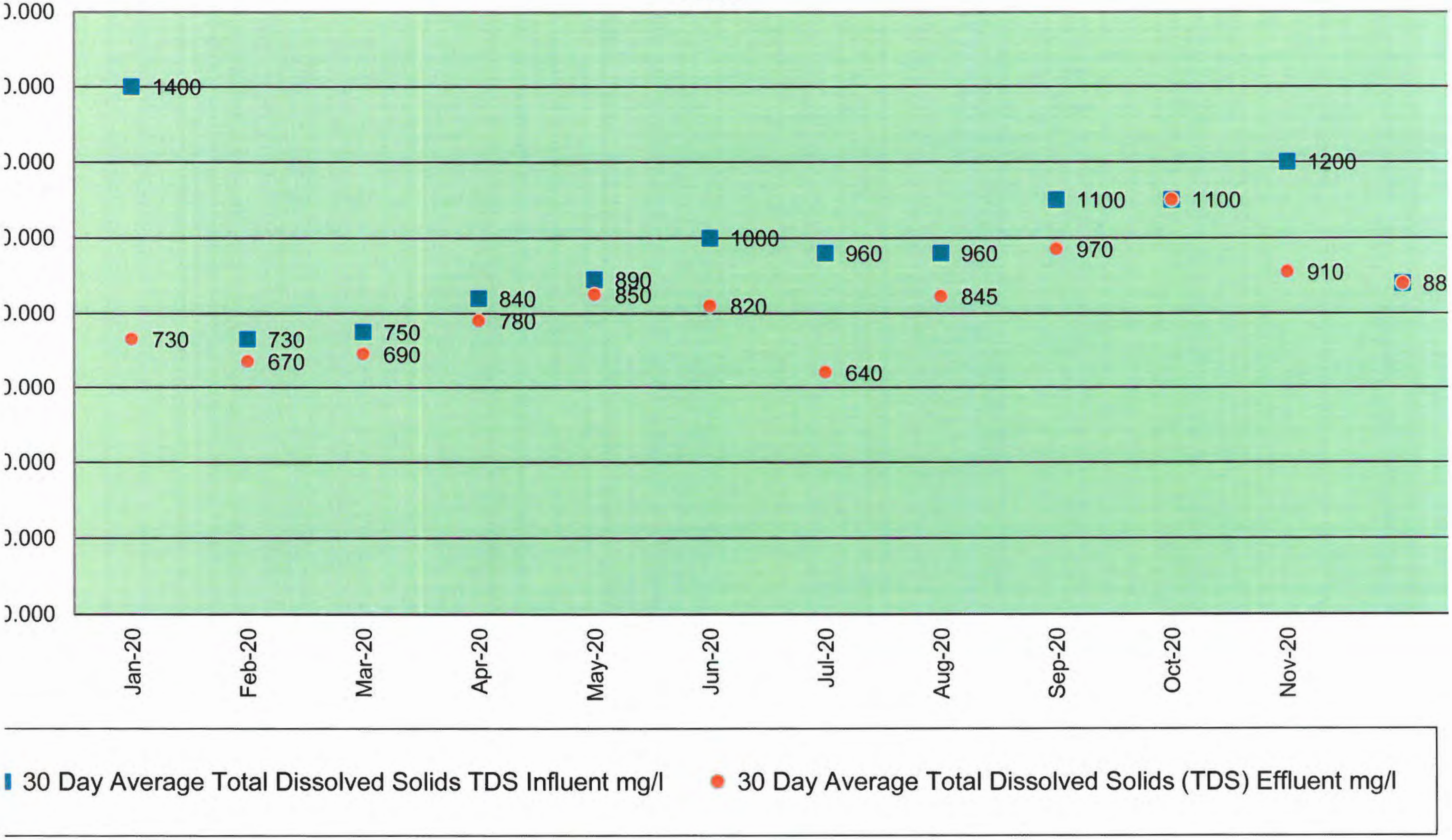

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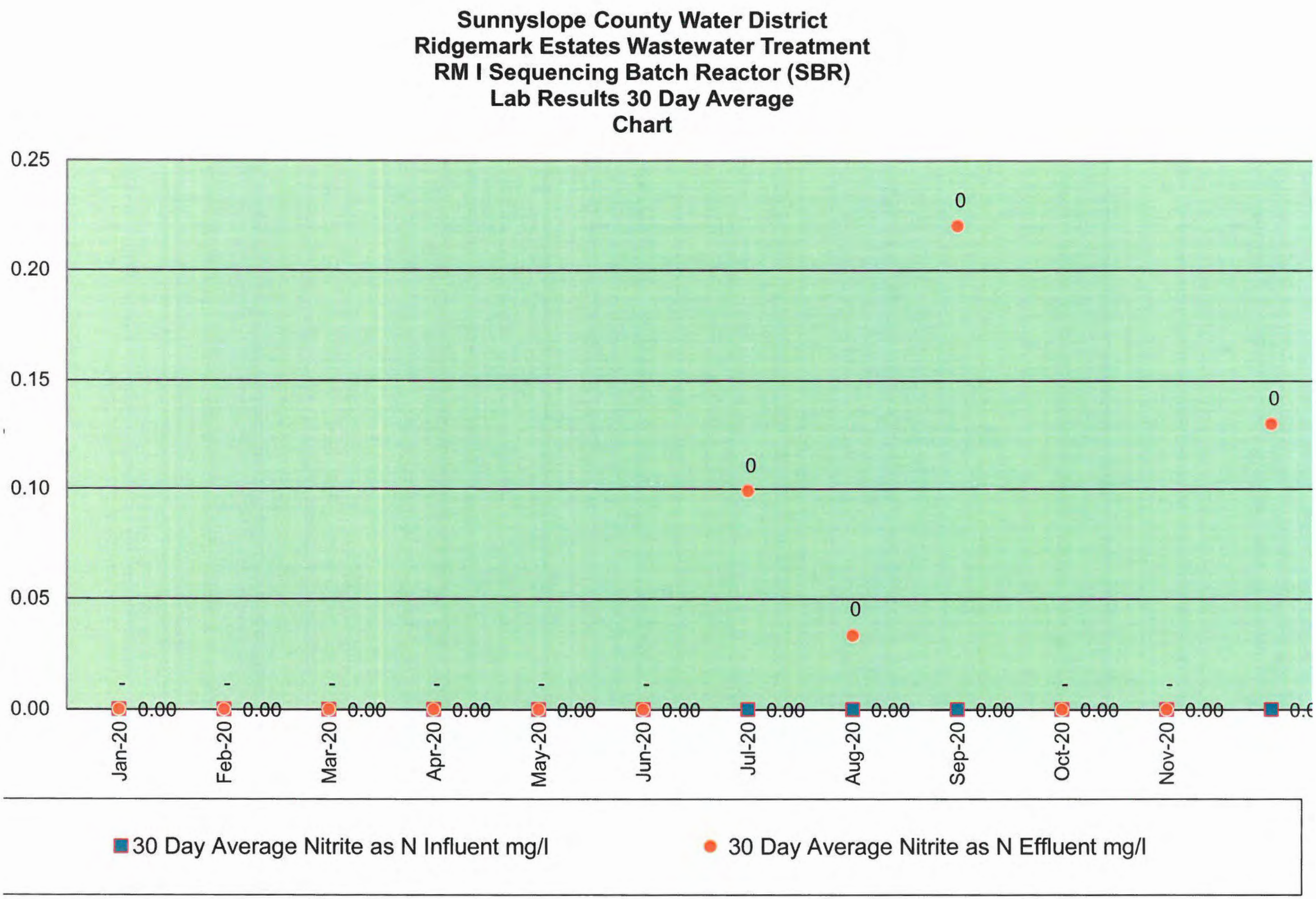
1/23/2021



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1/23/2021

Sunnyslope County Water District
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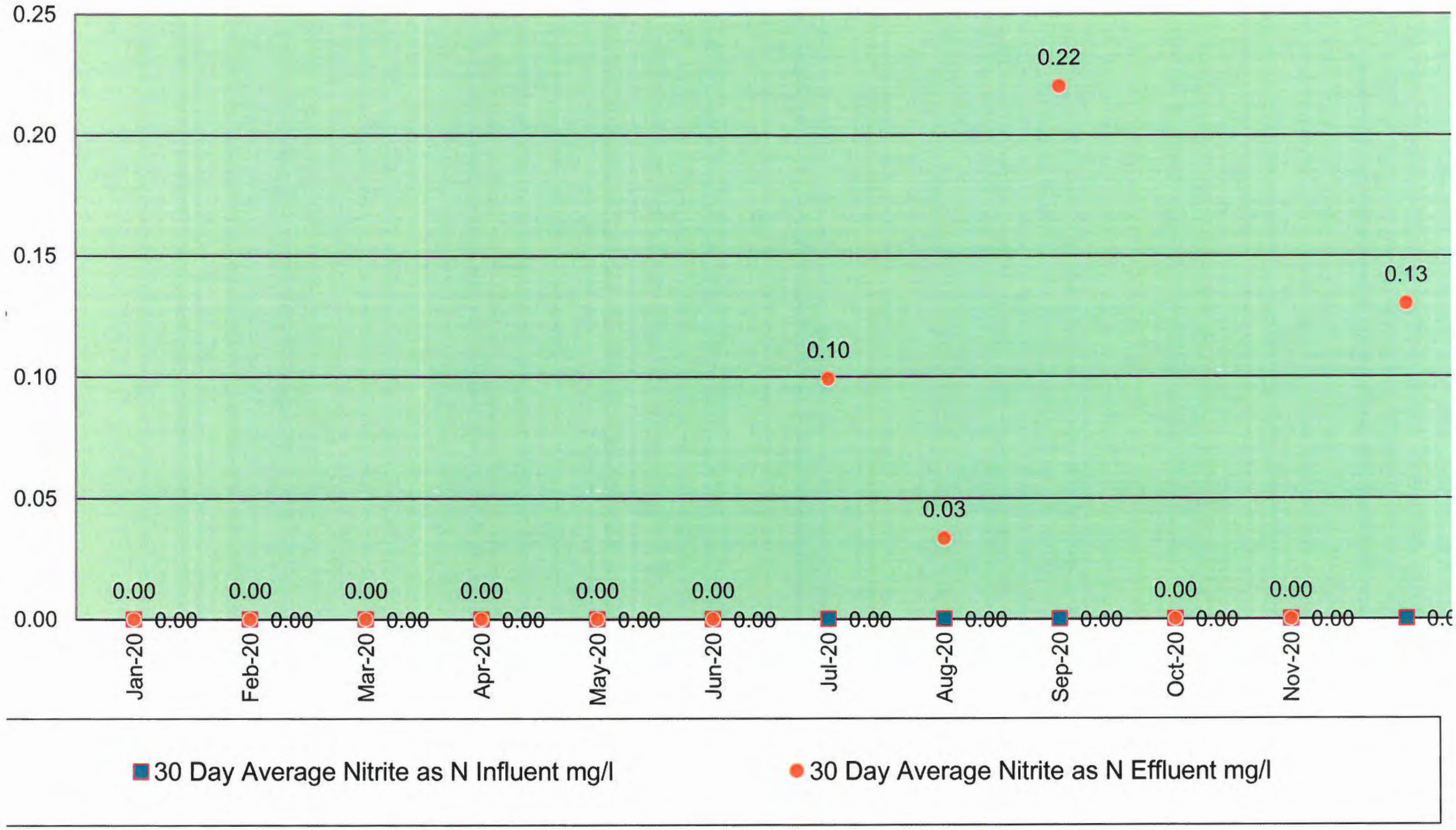

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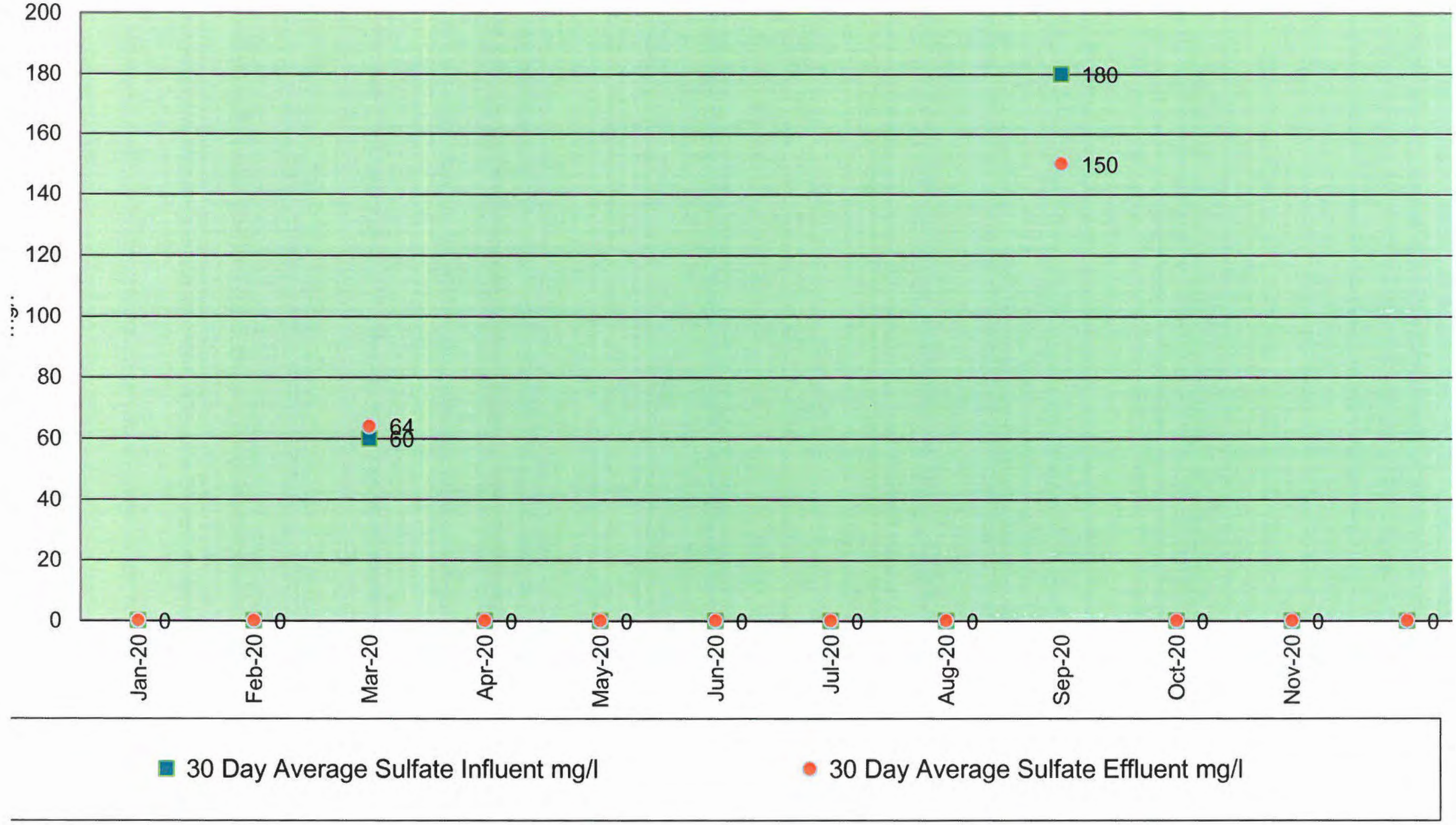

MRP # R3-2004-0065
1/23/2021

Sunnyslope County Water District
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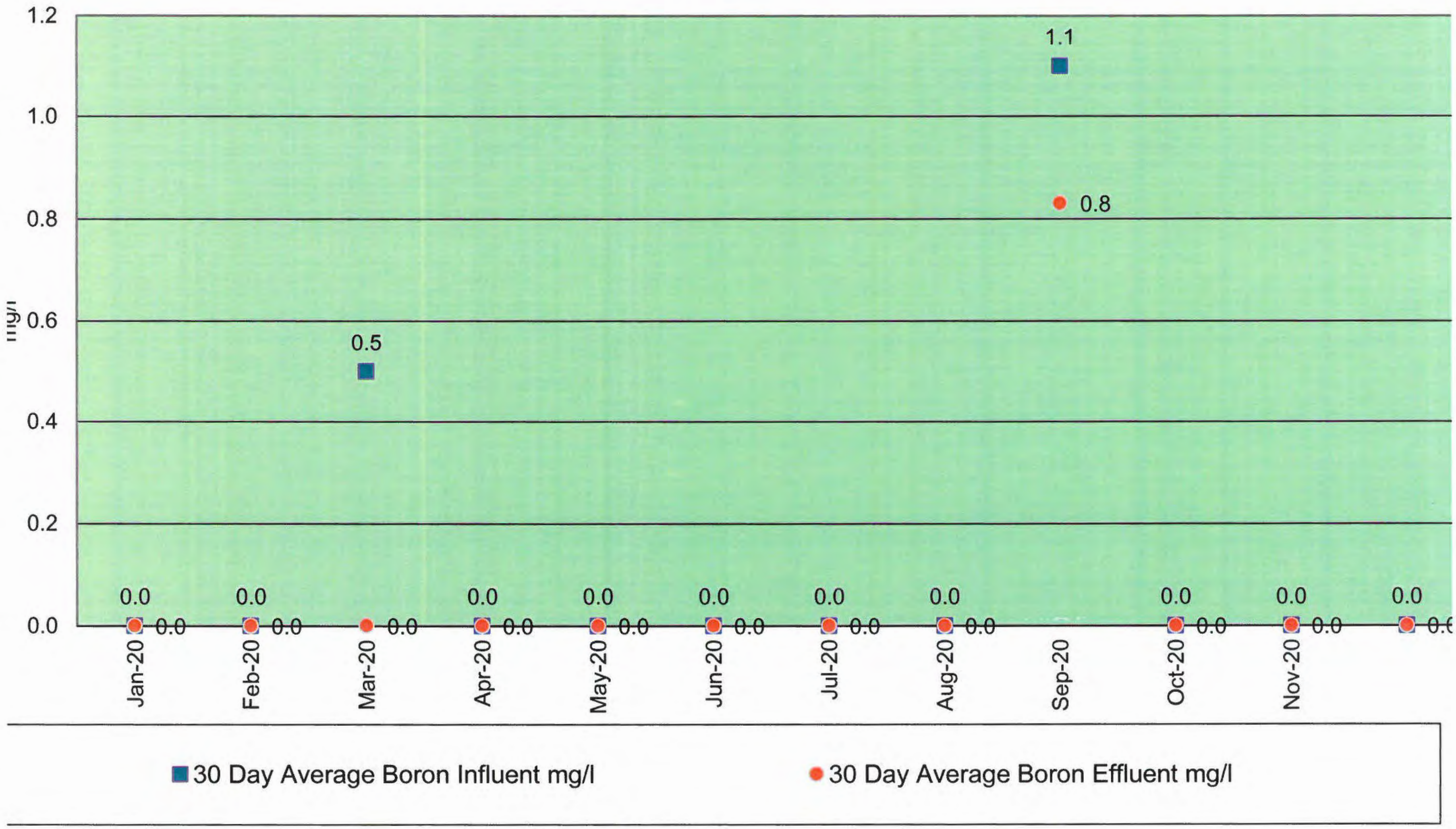


MRP # R3-2004-0065
1/23/2021

Sunnyslope County Water District

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Effluent Limits									
30 Day Avg- mg/l	TDS	Sodium	Chloride	Nitrate	Ammonia	BOD₅	TSS	pH Lower	pH Upper
Current Limits	No Interim Limits	No Interim Limits	No Interim Limits	No Interim Limits	No Interim Limits	No Interim Limits	No Interim Limits	6.50	9.50
1/30/08	1,500	300.00	300	10.00	10	60.00	60.00	6.50	9.00
1/30/10	1,200	200.00	200	5.00	5	30.00	30.00	6.50	8.40

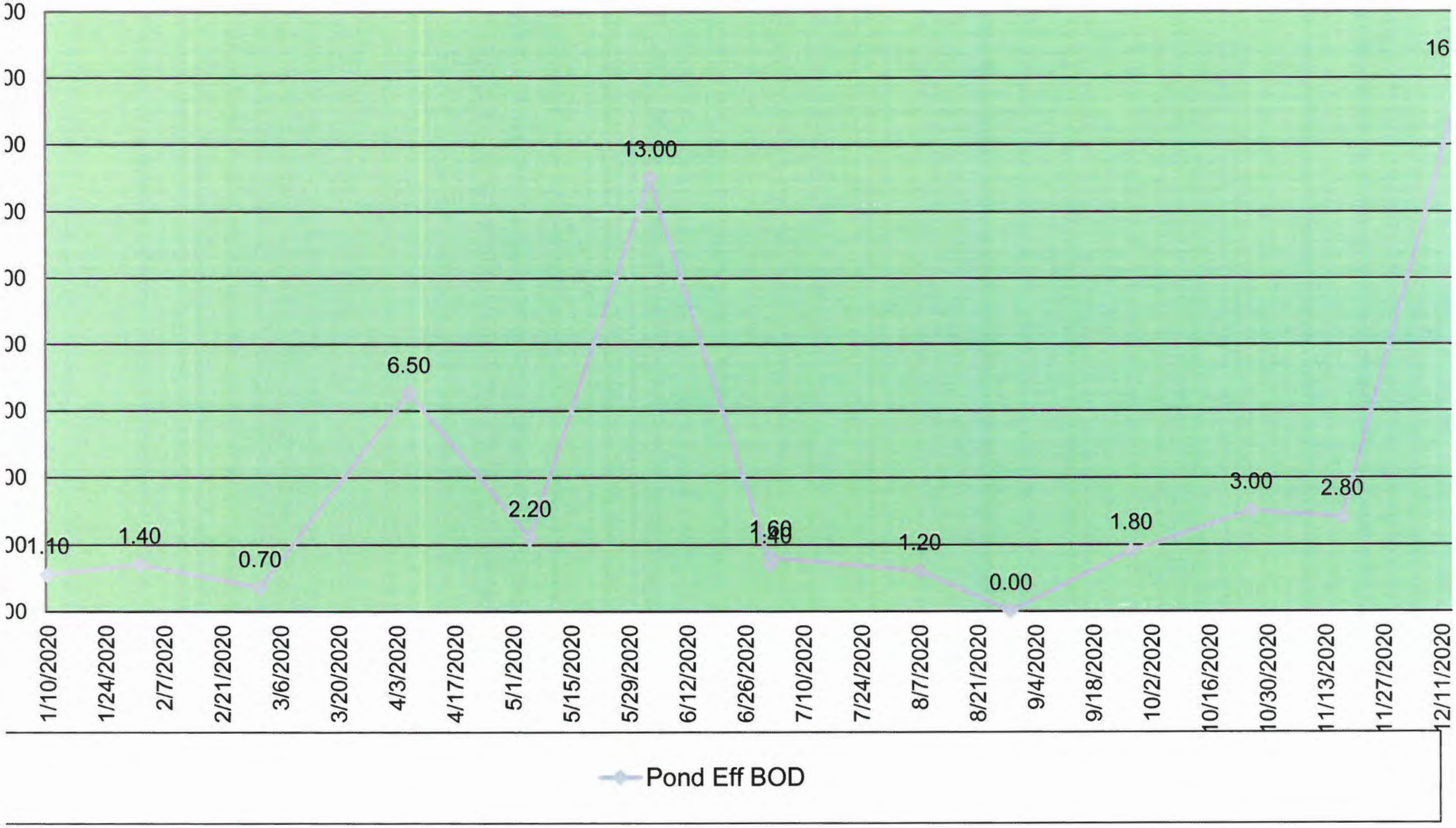
Ridgemark Estates Subdivision

RM - I Wastewater Treatment Plant

Pond Final Effluent Monitoring Results - Grab Sample - mg/l

Date	Pond Eff Chloride	Pond Eff Total Dissolved Solids	Pond Eff Nitrite Nitrogen (NO2-N)	Pond Eff Nitrate Nitrogen (NO3-N)	Pond Eff BOD	Pond Eff Soluble BOD	Pond Eff Carbonate Alkalinity	Pond Eff Total Suspended Solids	Pond Eff Sulfate	Pond Eff Boron	Pond Eff Sodium (Na)	Pond Eff Total Nitrogen (as N)	Pond Eff pH	Pond Eff Ammonia as Nitrogen	Pond Eff Total Kjeldahl Nitrogen (TKN)
1/10/2020	260	770	ND	0.44	1.10			0.00			180	1.50	7.60	1.10	1.10
2/1/2020	240	750	ND	0.43	1.40			0.00			190		7.44	0.51	1.90
3/1/2020	250	710	ND	0.48	0.70			0.00	68	0.50	170	3.20		0.70	2.30
4/6/2020	260	790		0.52	6.50			0.00			190	3.30	7.50	1.50	2.70
5/5/2020	260	820	0.18	0.67	2.20			0.00			200	2.90	7.58	1.50	2.00
6/3/2020	270	880	ND	0.27	13.00			9.40			240	2.00	7.76	0.52	1.70
7/2/2020	280	900	0.10	0.50	1.40			7.60			200	2.30	7.58	0.00	1.70
7/2/2020	310	950	0.05	0.00	1.60			0.00			220	1.90	8.21	0.13	1.80
8/7/2020	270	960	0.11	0.91	1.20			0.00			210	2.30	7.66	0.30	1.30
8/29/2020	260	840	0.06	0.61	0.00			0.00			170	0.00	7.90	0.00	0.00
9/27/2020	270	950	0.10	0.92	1.80			ND	140	0.74	190	2.40	7.56	0.12	1.40
10/26/2020	310	1100	ND	0.82	3.00			0.00			230	3.90		0.49	3.00
11/17/2020	280	940	ND	0.72	2.80			ND			200	3.60	7.60	1.70	2.90
12/16/2020	290	970	ND	0.37	16.00			29.00			210	3.40	8.24	ND	3.00
Average	**272**	**881**	**0.10**	**0.55**	**3.76**			**3.83**	**104**	**0.62**	**200**	**2.52**	**7.72**	**0.66**	**1.91**

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment
RM I Sequencing Batch Reactor (SBR)
Lab Results 30 Day Average
Chart



MRP # R3-2004-0065
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Sunnyslope County Water District
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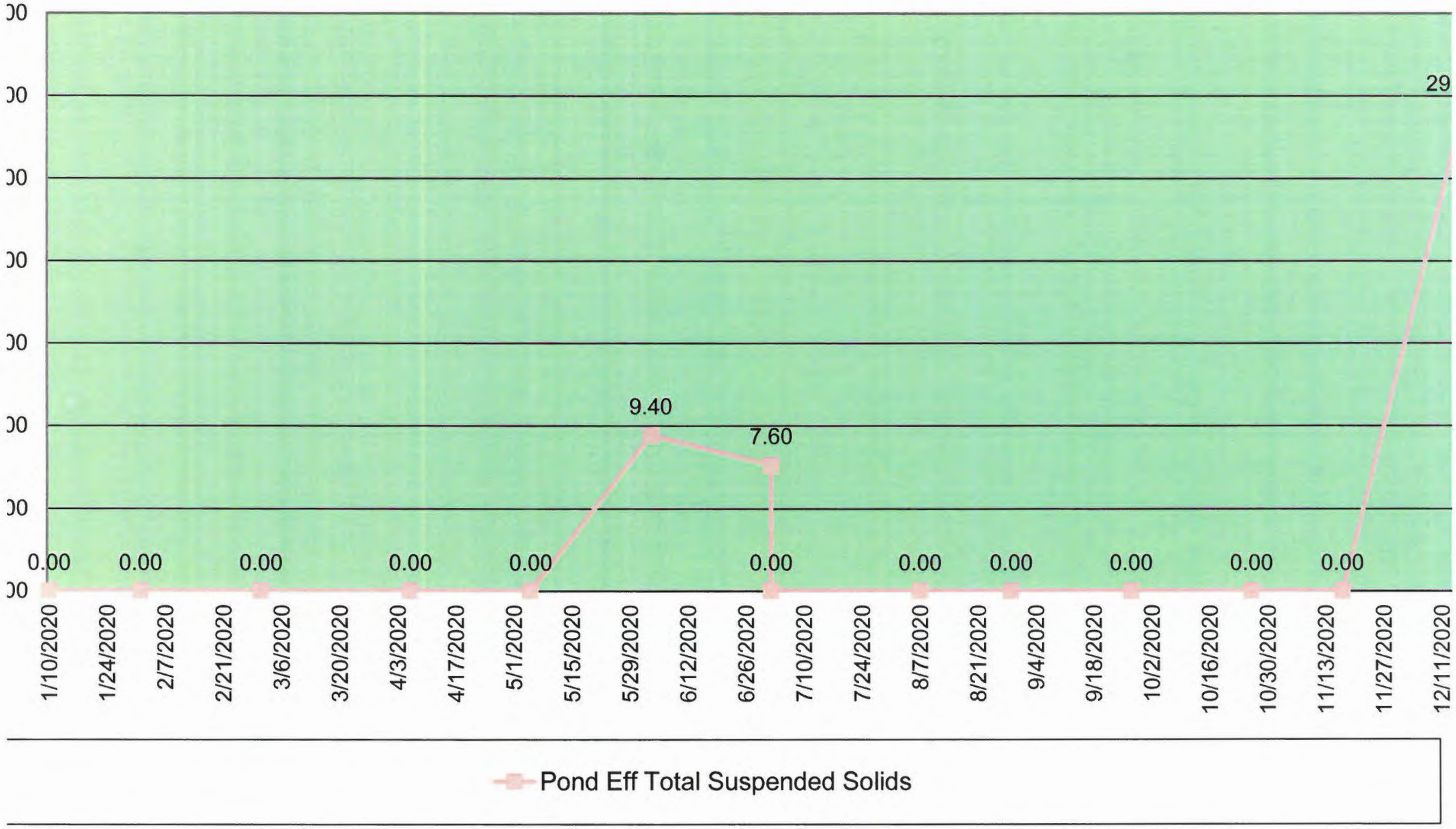

MRP # R3-2004-0065
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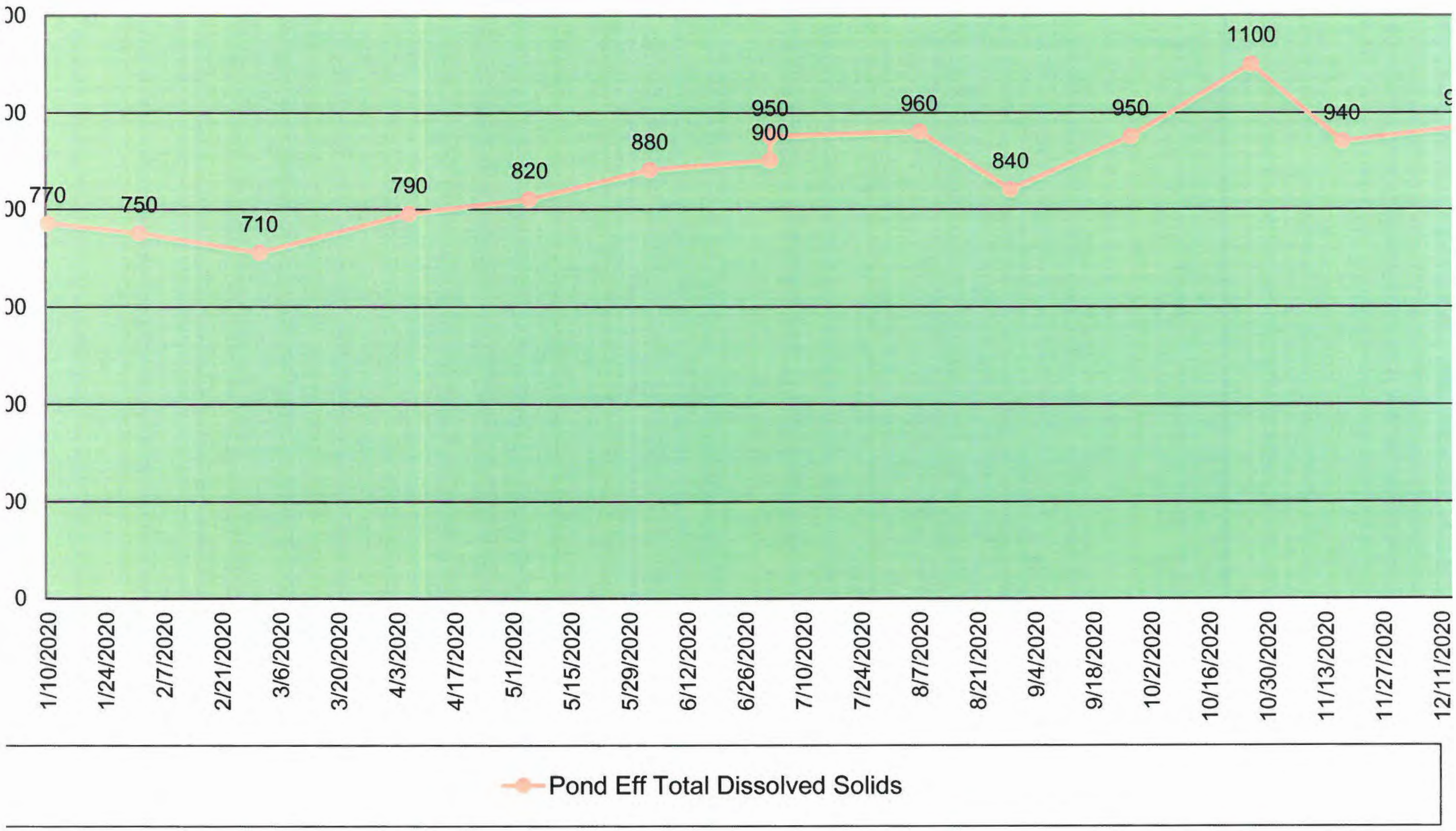

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Sunnyslope County Water District
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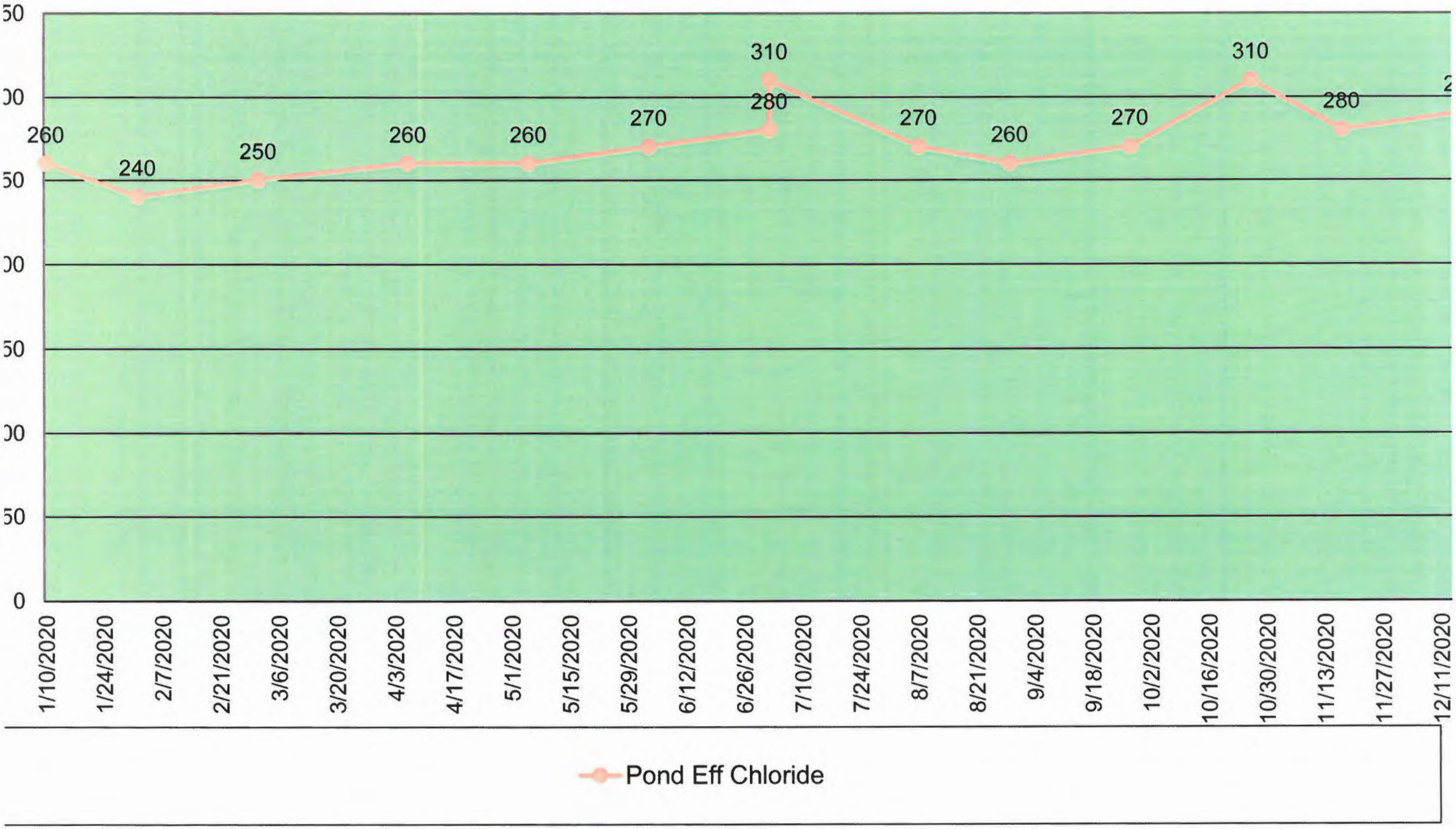

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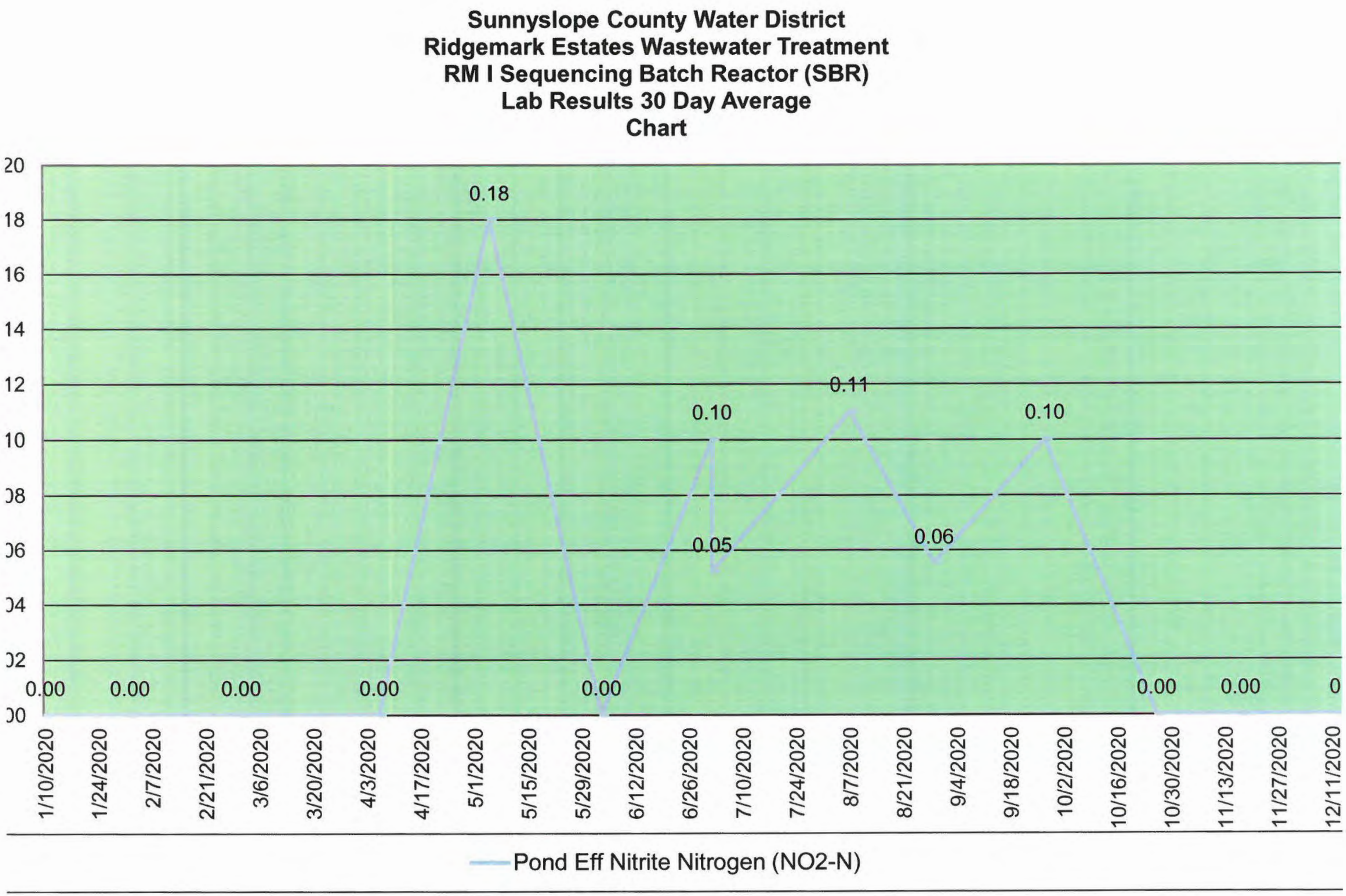

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Ridgemark Estates Wastewater Treatment
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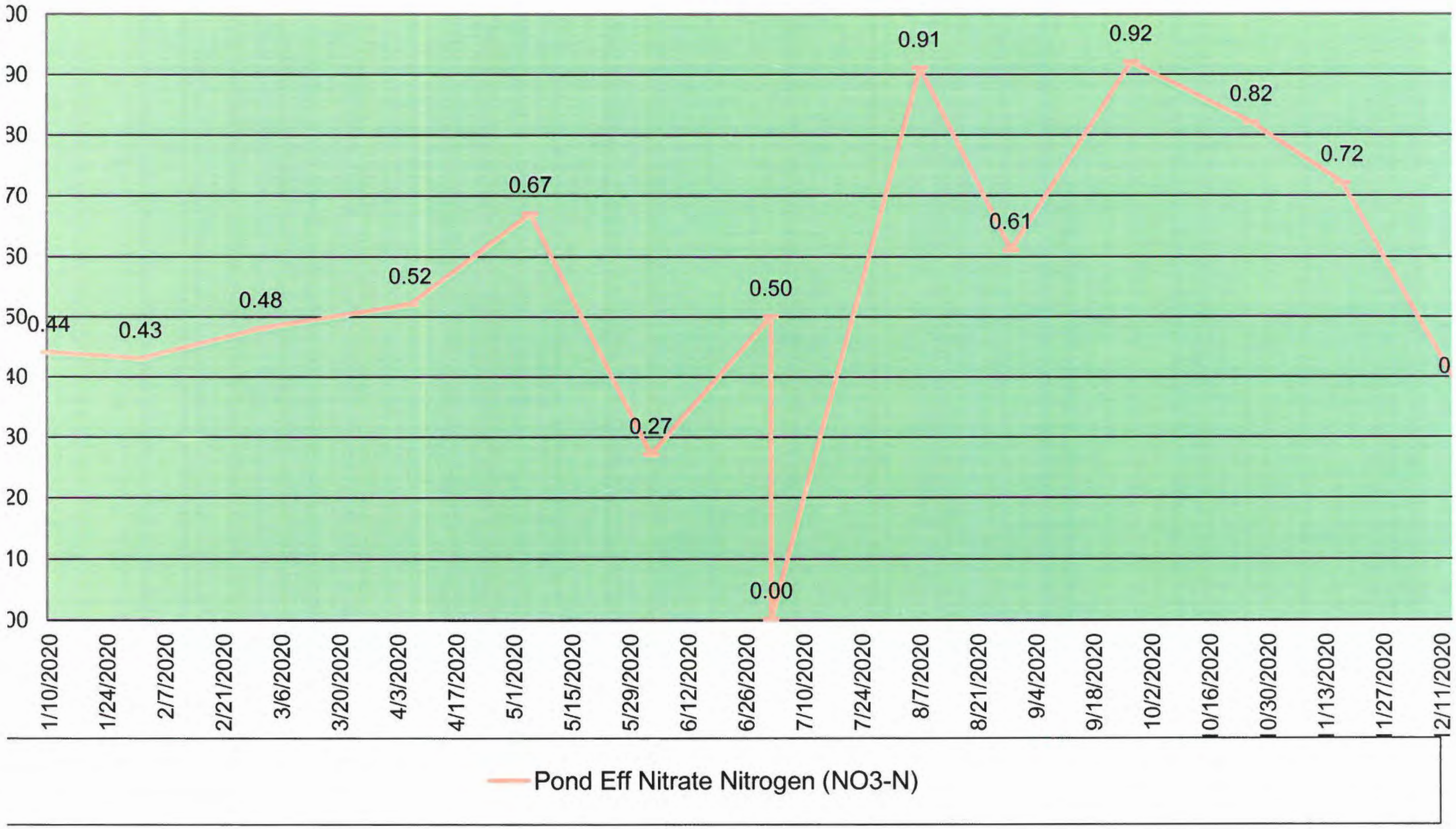

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Sunnyslope County Water District
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Lab Results 30 Day Average
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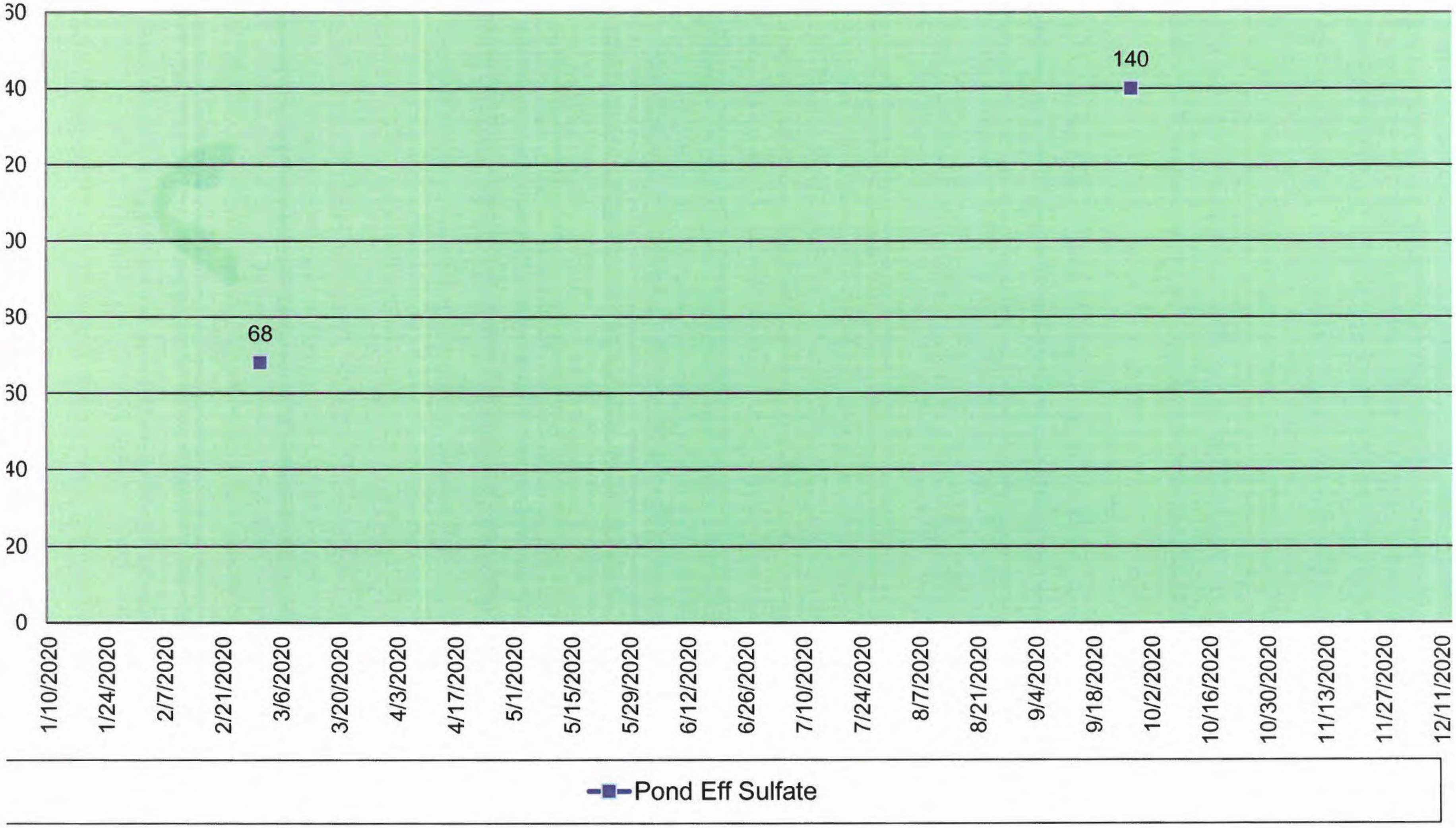

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Sunnyslope County Water District
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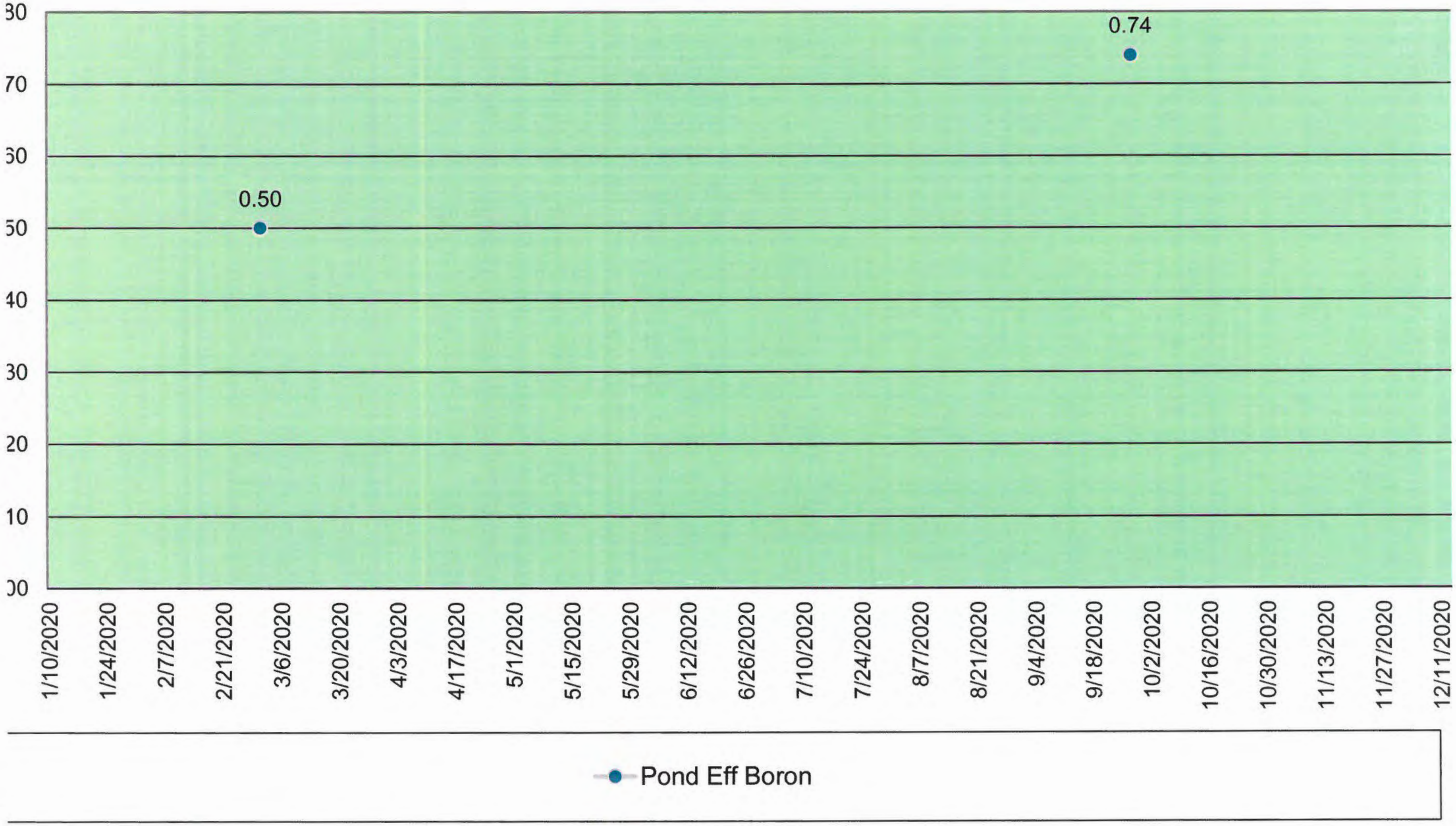
Chart



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Sunnyslope County Water District
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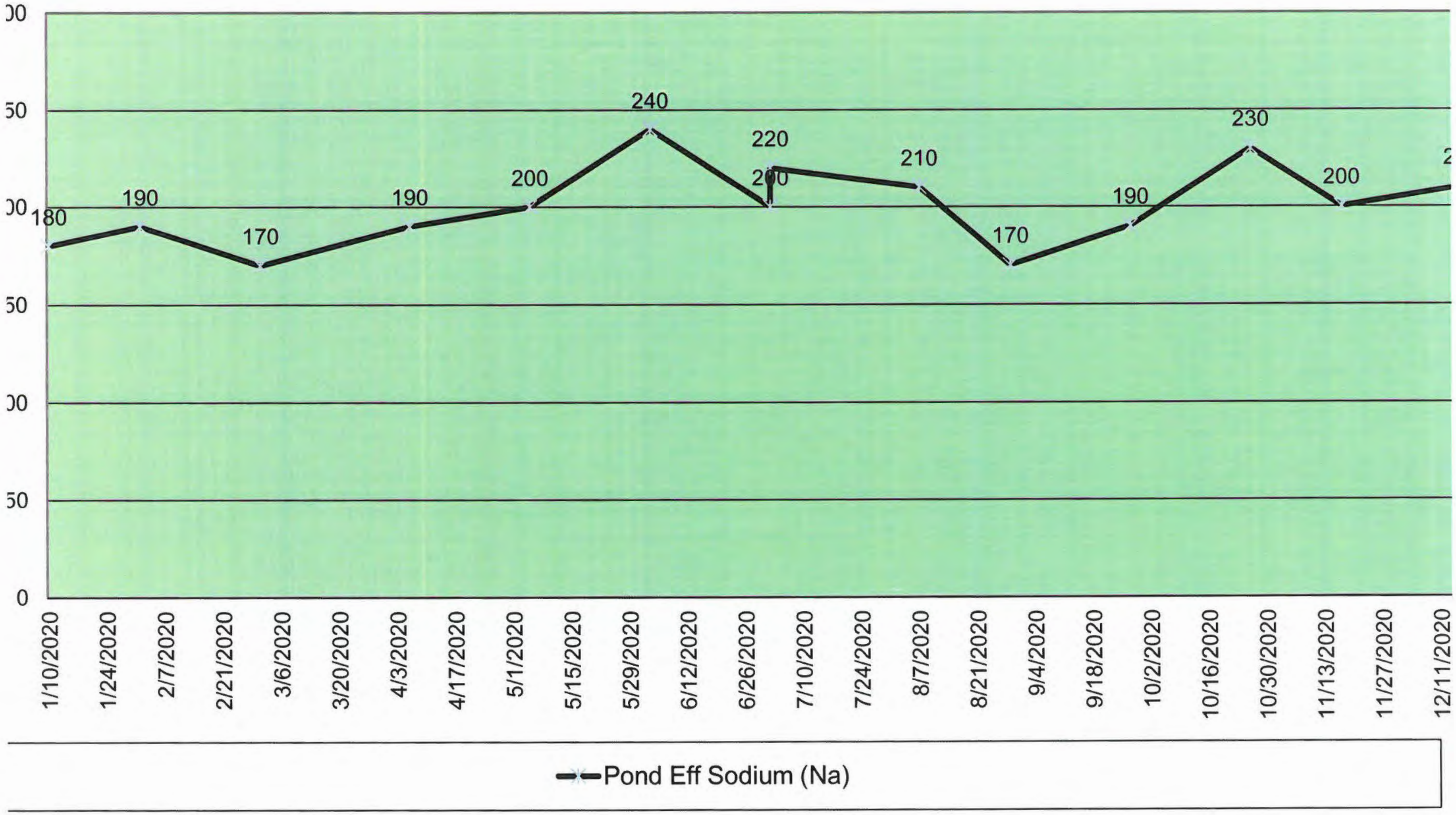

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Sunnyslope County Water District
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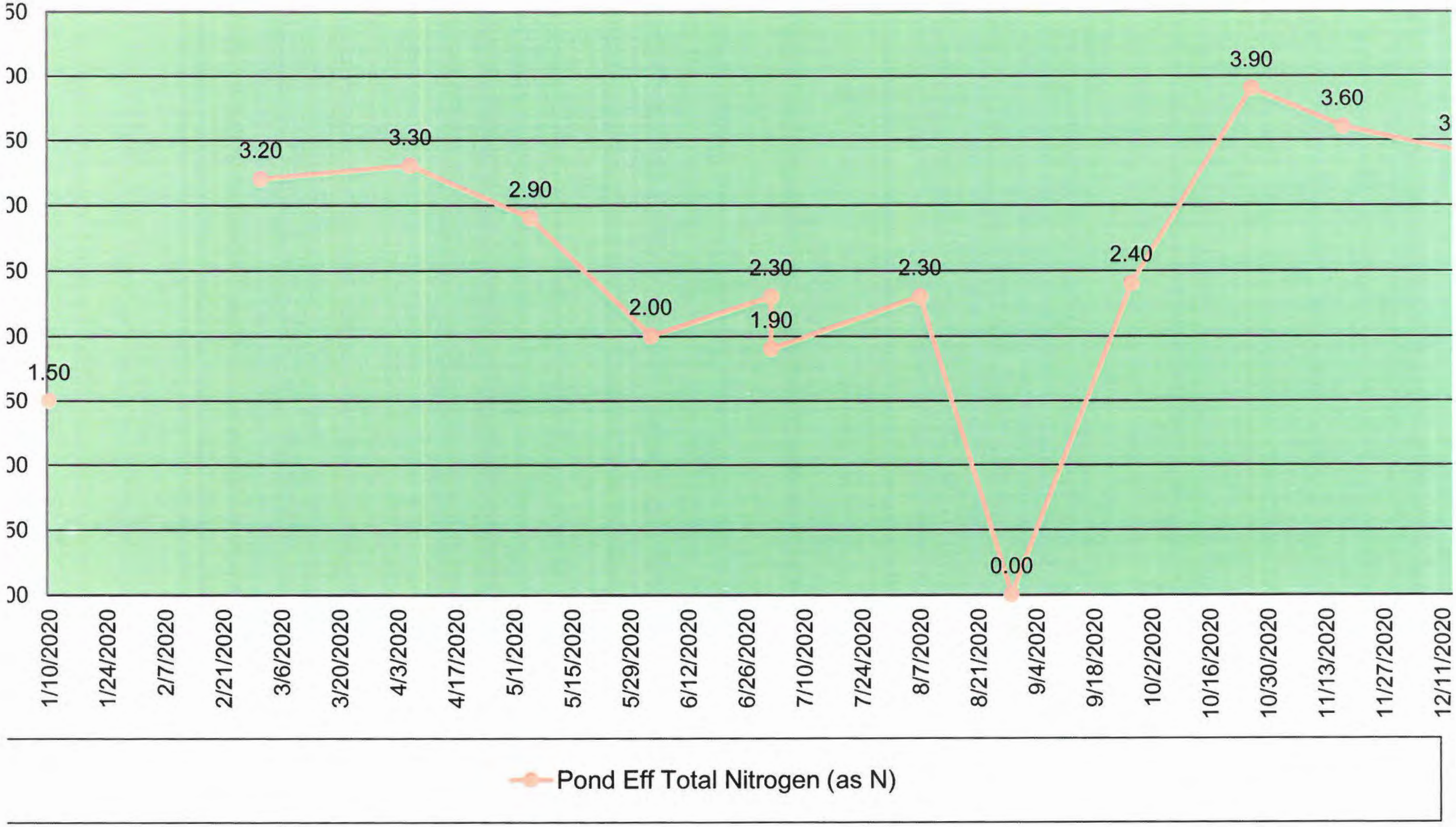

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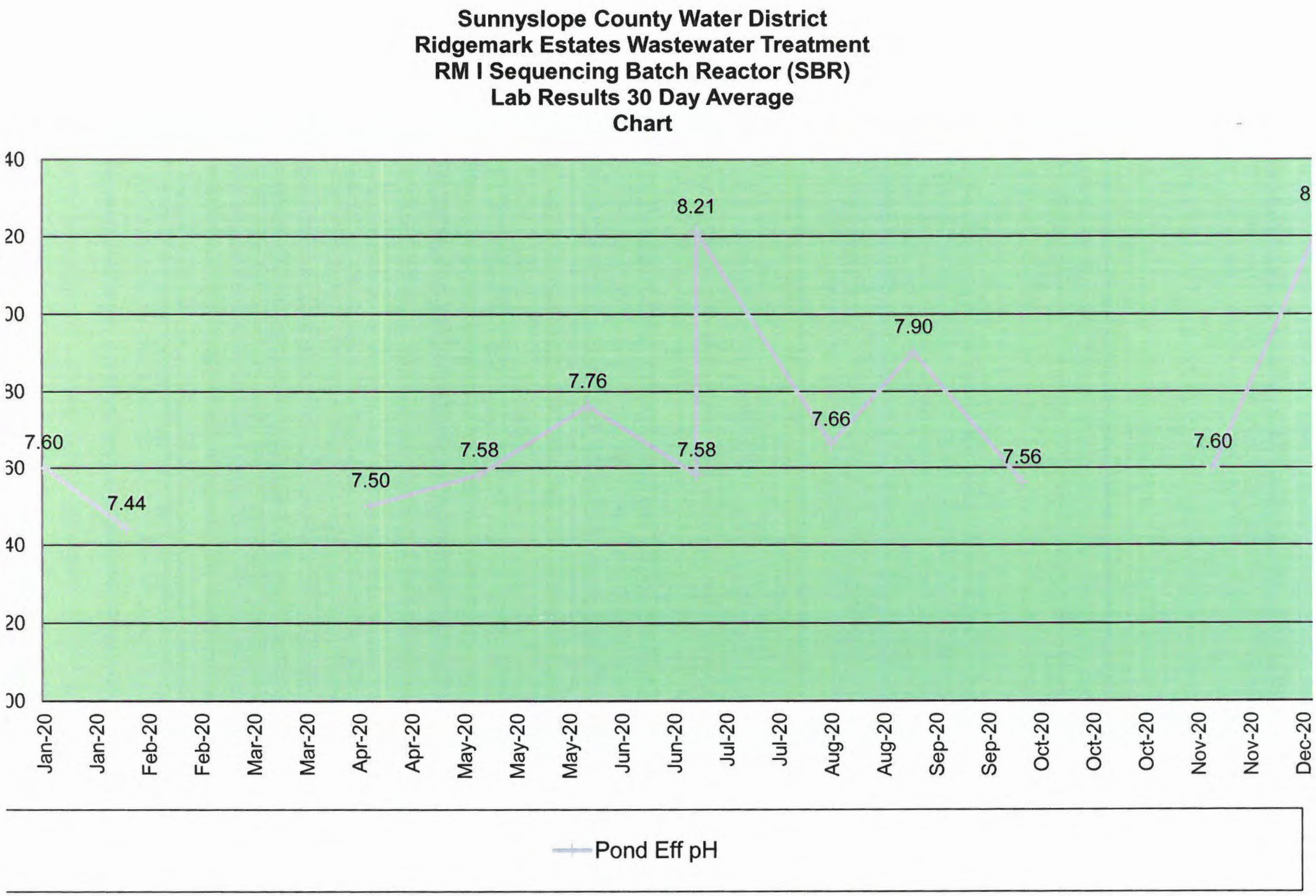

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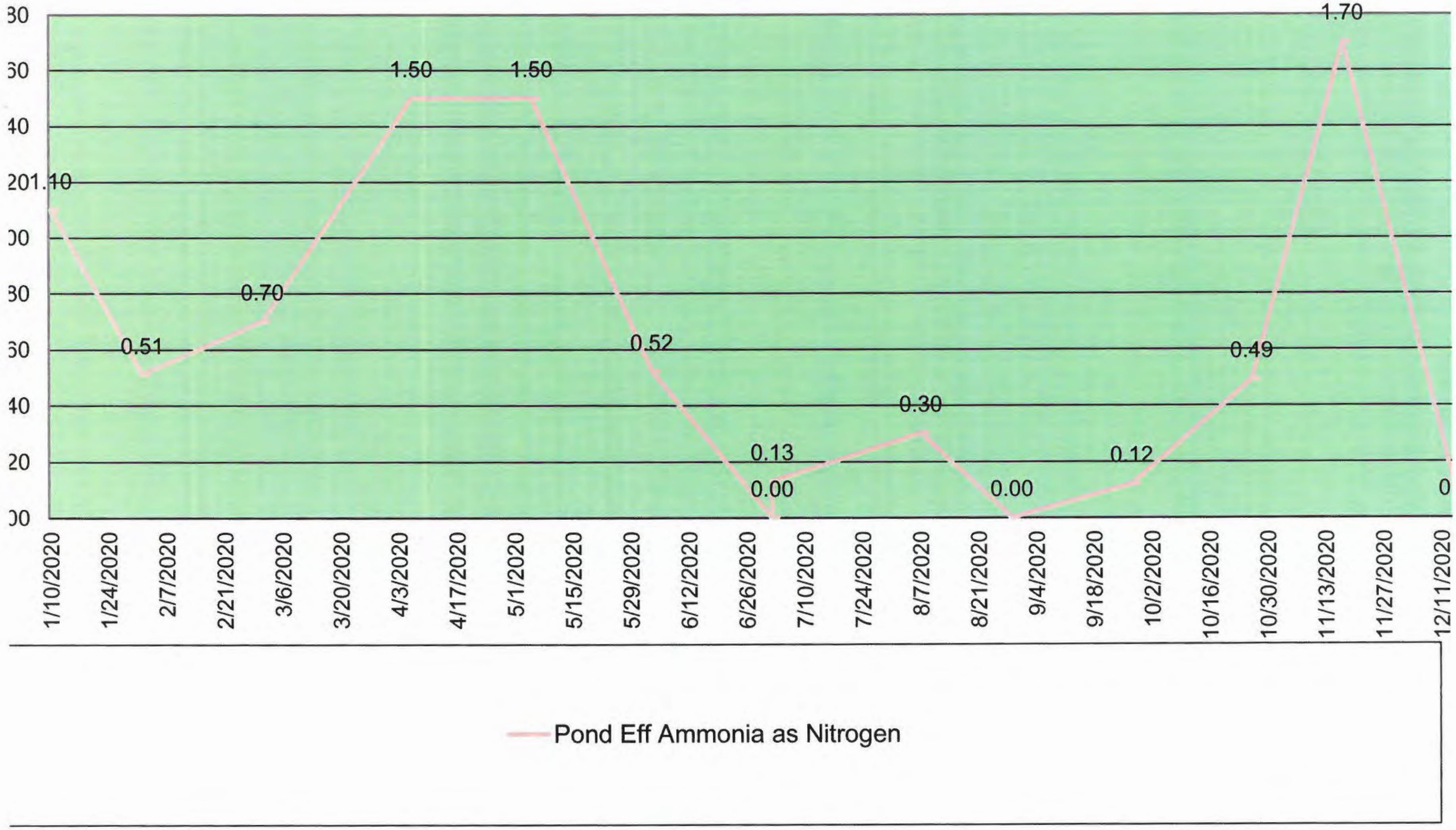
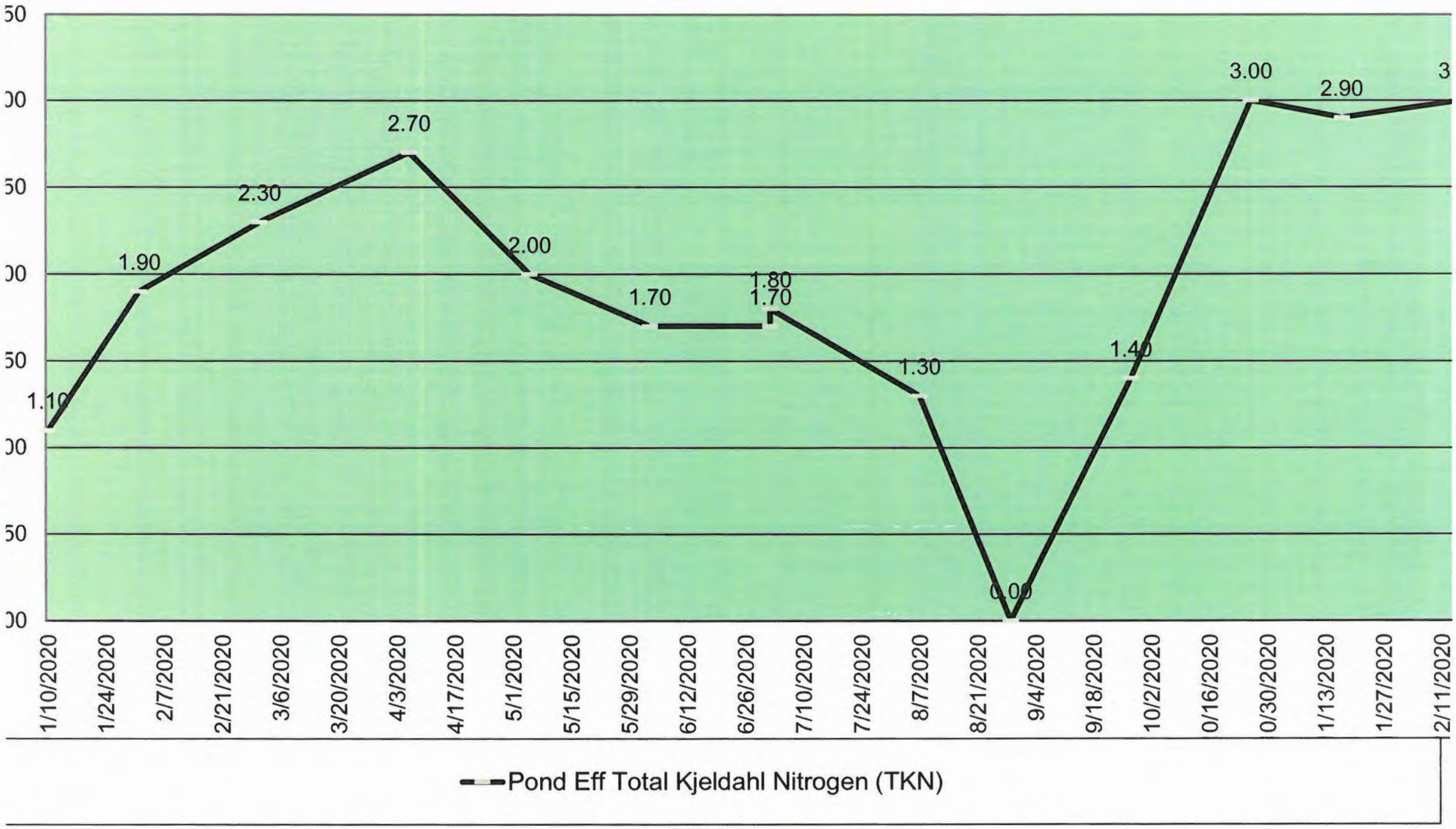


MRP # R3-2004-0065
1/23/2021

Sunnyslope County Water District
Ridgemark Estates Wastewater Treatment
RM I Sequencing Batch Reactor (SBR)
Lab Results 30 Day Average
Chart



MRP # R3-2004-0065
1/23/2021

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Water Supply

	Flow Well 5 GPD	Flow Well 8 GPD	LESSALT GPD	Total GPD
1/1/2020	130,964	59,500	576,000	766,464
1/2/2020	182,388	40,000	557,000	779,388
1/3/2020	147,922	25,000	559,000	731,922
1/4/2020	147,922	25,000	564,000	736,922
1/5/2020	147,922	25,000	557,000	729,922
1/6/2020	236,003	42,000	507,000	785,003
1/7/2020	158,673	32,000	591,000	781,673
1/8/2020	168,320	27,000	463,000	658,320
1/9/2020	135,651	48,000	567,000	750,651
1/10/2020	337,645	36,333	552,000	925,978
1/11/2020	337,645	36,333	578,000	951,978
1/12/2020	337,645	36,333	180,000	553,978
1/13/2020	474,713	18,000	203,000	695,713
1/14/2020	365,721	19,000	260,000	644,721
1/15/2020	529,419	28,000	210,000	767,419
1/16/2020	44,643	68,000	482,000	594,643
1/17/2020	81,464	50,000	553,000	684,464
1/18/2020	81,464	50,000	552,000	683,464
1/19/2020	81,464	50,000	644,000	775,464
1/20/2020	179,807	91,000	519,000	789,807
1/21/2020	146,377	57,000	567,000	770,377
1/22/2020	146,700	89,000	569,000	804,700
1/23/2020	202,155	112,000	570,000	884,155
1/24/2020	44,537	39,333	647,000	730,870
1/25/2020	44,537	39,333	687,000	770,870
1/26/2020	44,537	39,333	709,000	792,870
1/27/2020	24,797	18,000	635,000	677,797
1/28/2020	21,084	18,000	578,000	617,084
1/29/2020	22,369	11,000	655,000	688,369
1/30/2020	27,768	28,000	689,000	744,768
1/31/2020	36,864	18,667	662,000	717,530
2/1/2020	36,864	18,667	745,000	800,530
2/2/2020	36,864	18,667	805,000	860,530
2/3/2020	16,120	18,000	781,000	815,120
2/4/2020	16,575	18,000	804,000	838,575
2/5/2020	15,438	18,000	765,000	798,438
2/6/2020	34,262	36,000	827,000	897,262
2/7/2020	51,073	33,000	828,000	912,073
2/8/2020	51,073	33,000	811,000	895,073
2/9/2020	51,073	33,000	716,000	800,073
2/10/2020	54,891	30,000	915,000	999,891
2/11/2020	14,629	31,000	853,000	898,629
2/12/2020	15,301	23,000	804,000	842,301
2/13/2020	16,097	19,000	945,000	980,097
2/14/2020	23,156	17,750	921,000	961,906
2/15/2020	23,156	17,750	804,000	844,906
2/16/2020	23,156	17,750	940,000	980,906
2/17/2020	23,156	17,750	1,005,000	1,045,906
2/18/2020	39,945	32,000	939,000	1,010,945
2/19/2020	15,314	18,000	862,000	895,314
2/20/2020	9,040	31,000	935,000	975,040
2/21/2020	15,962	31,667	930,000	977,629
2/22/2020	15,962	31,667	958,000	1,005,629
2/23/2020	15,962	31,667	998,000	1,045,629
2/24/2020	16,137	32,000	900,000	948,137
2/25/2020	15,906	26,000	916,000	957,906
2/26/2020	16,156	32,000	912,000	960,156
2/27/2020	24,911	33,000	950,000	1,007,911
2/28/2020	41,373	32,000	878,000	951,373
3/1/2020	41,373	32,000	1,097,000	1,170,373
3/2/2020	14,407	32,000	1,008,000	1,054,407
3/3/2020	13,055	32,000	850,000	895,055
3/4/2020	15,385	47,000	936,000	998,385
3/5/2020	16,317	34,000	889,000	939,317
3/6/2020	16,282	35,333	924,000	975,615
3/7/2020	16,282	35,333	958,000	1,009,615
3/8/2020	16,282	35,333	946,000	997,615
3/9/2020	15,223	33,000	934,000	982,223
3/10/2020	9,536	32,000	882,000	923,536
3/11/2020	14,143	36,000	958,000	1,008,143
3/12/2020	16,459	32,000	951,000	999,459
3/13/2020	48,146	32,667	888,000	968,812
3/14/2020	48,146	32,667	943,000	1,023,812
3/15/2020	48,146	32,667	948,000	1,028,812
3/16/2020	6	32,000	933,000	965,006
3/17/2020	-	18,000	801,000	819,000
3/18/2020	-	32,000	983,000	1,015,000
3/19/2020	7,370	33,000	1,061,000	1,101,370
3/20/2020	10,558	18,667	736,000	765,225
3/21/2020	10,558	18,667	892,000	921,225
3/22/2020	10,558	18,667	596,000	625,225
3/23/2020	485,190	103,000	180,000	768,190
3/24/2020	550,066	34,000	326,000	910,066
3/25/2020	157,715	271,000	308,000	736,715
3/26/2020	112,633	379,000	337,000	828,633
3/27/2020	38,283	676,333	284,000	998,616
3/28/2020	38,283	676,333	-	714,616
3/29/2020	38,283	676,333	33,000	747,616
3/30/2020	19,665	81,000	888,000	988,665
3/31/2020	24,358	31,000	792,000	847,358

January 2020

28%	% Ground
72%	% Surface

Total Flow Gallons

5,069,116	Well 5	
1,276,167	Well 8	
16,642,000	LESSALT	
22,987,283	Total	
22%	Well 5	% of Flow
6%	Well 8	% of Flow
72%	LESSALT	% of Flow

February 2020

6%	% Ground
94%	% Surface

Total Flow Gallons

729,549	Well 5	
731,333	Well 8	
24,447,000	LESSALT	
25,907,883	Total	
3%	Well 5	% of Flow
3%	Well 8	% of Flow
94%	LESSALT	% of Flow

March 2020

19%	% Ground
81%	% Surface

Total Flow Gallons

1,869,722	Well 5	
3,614,000	Well 8	
23,422,000	LESSALT	
28,905,722	Total	
6%	Well 5	% of Flow
13%	Well 8	% of Flow
81%	LESSALT	% of Flow

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Water Supply

	Flow Well 5 GPD	Flow Well 8 GPD	LESSALT GPD	Total GPD
4/1/2020	7,971	43,000	814,000	864,971
4/2/2020	6	32,000	936,000	968,006
4/3/2020	10,848	34,667	919,000	964,515
4/4/2020	10,848	34,667	788,000	833,515
4/5/2020	10,848	34,667	824,000	869,515
4/6/2020	0	43,000	796,000	839,000
4/7/2020	15,633	32,000	803,000	850,633
4/8/2020	15,133	49,000	805,000	869,133
4/9/2020	22,445	32,000	794,000	848,445
4/10/2020	16,720	59,667	833,000	909,386
4/11/2020	16,720	59,667	887,000	963,386
4/12/2020	16,720	59,667	929,000	1,005,386
4/13/2020	25,643	33,000	803,000	861,643
4/14/2020	58,346	60,000	881,000	999,346
4/15/2020	45,118	108,000	961,000	1,114,118
4/16/2020	25,321	51,000	942,000	1,018,321
4/17/2020	24,721	58,333	977,000	1,060,055
4/18/2020	24,721	58,333	936,000	1,019,055
4/19/2020	24,721	58,333	900,000	983,055
4/20/2020	47,392	107,000	875,000	1,029,392
4/21/2020	52,125	122,000	898,000	1,072,125
4/22/2020	73,545	151,000	836,000	1,060,545
4/23/2020	90,584	161,000	889,000	1,140,584
4/24/2020	52,369	152,667	922,000	1,127,036
4/25/2020	52,369	152,667	945,000	1,150,036
4/26/2020	52,369	152,667	958,000	1,163,036
4/27/2020	67,530	139,000	945,000	1,151,530
4/28/2020	49,834	218,000	963,000	1,230,834
4/29/2020	53,789	219,000	927,000	1,199,789
4/30/2020	53,176	209,000	901,000	1,163,176
5/1/2020	42,523	239,333	885,000	1,166,856
5/2/2020	42,523	239,333	939,000	1,220,856
5/3/2020	42,523	239,333	944,000	1,225,856
5/4/2020	77,036	98,000	914,000	1,089,036
5/5/2020	77,667	344,000	959,000	1,380,667
5/6/2020	59,302	174,000	894,000	1,127,302
5/7/2020	74,878	241,000	980,000	1,295,878
5/8/2020	59,563	184,000	1,044,000	1,287,563
5/9/2020	59,563	184,000	981,000	1,224,563
5/10/2020	59,563	184,000	999,000	1,242,563
5/11/2020	51,685	158,000	1,002,000	1,211,685
5/12/2020	23,993	90,000	956,000	1,069,993
5/13/2020	23,520	58,000	1,017,000	1,098,520
5/14/2020	38,807	90,000	948,000	1,076,807
5/15/2020	60,699	173,667	974,000	1,208,366
5/16/2020	60,699	173,667	935,000	1,169,366
5/17/2020	60,699	173,667	936,000	1,170,366
5/18/2020	24,681	38,000	895,000	957,681
5/19/2020	7,741	33,000	774,000	814,741
5/20/2020	69,873	266,000	845,000	1,180,873
5/21/2020	72,447	343,000	940,000	1,355,447
5/22/2020	57,573	295,500	910,000	1,263,073
5/23/2020	57,573	295,500	933,000	1,286,073
5/24/2020	57,573	295,500	944,000	1,297,073
5/25/2020	57,573	295,500	981,000	1,334,073
5/26/2020	90,434	401,000	922,000	1,413,434
5/27/2020	94,457	309,000	980,000	1,383,457
5/28/2020	55,009	338,000	1,089,000	1,482,009
5/29/2020	15,297	134,667	1,124,000	1,273,964
5/30/2020	15,297	134,667	980,000	1,129,964
5/31/2020	15,297	134,667	847,000	996,964
6/1/2020	45,097	380,000	844,000	1,269,097
6/2/2020	65,249	337,000	1,165,000	1,567,249
6/3/2020	58,816	229,000	1,112,000	1,399,816
6/4/2020	120,538	386,000	1,037,000	1,543,538
6/5/2020	40,875	225,000	1,037,000	1,302,875
6/6/2020	40,875	225,000	1,041,000	1,306,875
6/7/2020	40,875	225,000	1,036,000	1,301,875
6/8/2020	45,295	393,000	974,000	1,412,295
6/9/2020	57,317	245,000	1,003,000	1,305,317
6/10/2020	55,681	403,000	1,075,000	1,533,681
6/11/2020	66,610	79,000	1,125,000	1,270,610
6/12/2020	23,945	137,333	1,254,000	1,415,279
6/13/2020	23,945	137,333	1,118,000	1,279,279
6/14/2020	23,945	137,333	1,024,000	1,185,279
6/15/2020	41,152	341,000	1,014,000	1,396,152
6/16/2020	32,871	220,000	1,162,000	1,414,871
6/17/2020	40,570	289,000	911,000	1,240,570
6/18/2020	50,391	112,000	1,145,000	1,307,391
6/19/2020	24,858	188,333	1,180,000	1,393,192
6/20/2020	24,858	188,333	1,155,000	1,368,192
6/21/2020	24,858	188,333	1,183,000	1,396,192
6/22/2020	24,954	330,000	1,133,000	1,487,954
6/23/2020	29,609	288,000	1,123,000	1,440,609
6/24/2020	23,103	326,000	1,119,000	1,468,103
6/25/2020	31,430	289,000	1,137,000	1,457,430
6/26/2020	150,396	422,000	1,128,000	1,700,396
6/27/2020	150,396	422,000	1,049,000	1,621,396
6/28/2020	150,396	422,000	-	572,396
6/29/2020	159,756	348,000	801,000	1,308,756
6/30/2020	70,793	300,000	1,020,000	1,390,793

12%	% Ground
88%	% Surface

Total Flow Gallons

988,749	Well 5
2,547,000	Well 8
26,478,000	LESSALT
30,013,749	Total

3%	Well 5	% of Flow
8%	Well 8	% of Flow
88%	LESSALT	% of Flow

21%	% Ground
79%	% Surface

Total Flow Gallons

1,643,947	Well 5
6,432,333	Well 8
29,525,000	LESSALT
37,601,281	Total

4%	Well 5	% of Flow
17%	Well 8	% of Flow
79%	LESSALT	% of Flow

24%	% Ground
76%	% Surface

Total Flow Gallons

1,683,959	Well 5
8,047,667	Well 8
30,932,000	LESSALT
40,663,626	Total

4%	Well 5	% of Flow
20%	Well 8	% of Flow
76%	LESSALT	% of Flow

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Water Supply

	Flow Well 5 GPD	Flow Well 8 GPD	LESSALT GPD	Total GPD
7/1/2020	39,336	247,000	945,000	1,231,336
7/2/2020	56,886	239,750	1,067,000	1,363,636
7/3/2020	56,886	239,750	1,014,000	1,310,636
7/4/2020	56,886	239,750	1,154,000	1,450,636
7/5/2020	56,886	239,750	1,143,000	1,439,636
7/6/2020	67,637	275,000	1,107,000	1,449,637
7/7/2020	38,486	290,000	1,126,000	1,454,486
7/8/2020	83,191	253,000	1,165,000	1,501,191
7/9/2020	82,356	331,000	1,076,000	1,489,356
7/10/2020	67,202	235,000	1,113,000	1,415,202
7/11/2020	67,202	235,000	983,000	1,285,202
7/12/2020	67,202	235,000	937,000	1,239,202
7/13/2020	8,211	208,000	1,144,000	1,360,211
7/14/2020	57,530	367,000	1,045,000	1,469,530
7/15/2020	39,833	225,000	1,049,000	1,313,833
7/16/2020	16,472	326,000	1,075,000	1,417,472
7/17/2020	16,002	273,333	1,049,000	1,338,336
7/18/2020	16,002	273,333	905,000	1,194,336
7/19/2020	16,002	273,333	1,202,000	1,491,336
7/20/2020	86,713	273,000	1,046,000	1,405,713
7/21/2020	232,270	600,000	525,000	1,357,270
7/22/2020	482,463	763,000	-	1,245,463
7/23/2020	476,924	747,000	-	1,223,924
7/24/2020	299,466	865,000	-	1,164,466
7/25/2020	299,466	865,000	-	1,164,466
7/26/2020	299,466	865,000	-	1,164,466
7/27/2020	338,632	769,000	243,000	1,350,632
7/28/2020	466,838	760,000	-	1,226,838
7/29/2020	475,955	770,000	-	1,245,955
7/30/2020	432,023	759,000	108,000	1,299,023
7/31/2020	40,826	152,000	731,000	923,826
8/1/2020	40,826	152,000	993,000	1,185,826
8/2/2020	40,826	152,000	1,108,000	1,300,826
8/3/2020	32,074	278,000	1,136,000	1,446,074
8/4/2020	38,877	83,000	1,168,000	1,289,877
8/5/2020	32,611	56,000	1,141,000	1,229,611
8/6/2020	14,744	64,000	1,175,000	1,253,744
8/7/2020	206,099	903,333	-	1,109,432
8/8/2020	206,099	903,333	-	1,109,432
8/9/2020	206,099	903,333	-	1,109,432
8/10/2020	52,282	338,000	887,000	1,277,282
8/11/2020	20,245	159,000	959,000	1,138,245
8/12/2020	15,395	85,000	1,050,000	1,150,395
8/13/2020	25,436	205,000	1,036,000	1,266,436
8/14/2020	20,678	210,000	1,172,000	1,402,678
8/15/2020	20,678	210,000	1,040,000	1,270,678
8/16/2020	20,678	210,000	1,211,000	1,441,678
8/17/2020	25,818	412,000	1,098,000	1,535,818
8/18/2020	16,768	286,000	1,191,000	1,493,768
8/19/2020	16,370	250,000	1,124,000	1,390,370
8/20/2020	15,998	237,000	1,160,000	1,412,998
8/21/2020	16,620	210,000	1,185,000	1,411,620
8/22/2020	16,620	210,000	1,168,000	1,394,620
8/23/2020	16,620	210,000	1,163,000	1,389,620
8/24/2020	15,881	244,000	1,196,000	1,455,881
8/25/2020	11,206	227,000	1,139,000	1,377,206
8/26/2020	19,911	167,000	1,130,000	1,316,911
8/27/2020	33,034	100,000	1,167,000	1,300,034
8/28/2020	16,039	50,333	1,256,000	1,322,373
8/29/2020	16,039	50,333	1,152,000	1,218,373
8/30/2020	16,039	50,333	1,157,000	1,223,373
8/31/2020	15,984	221,000	1,072,000	1,308,984
9/1/2020	224,007	774,000	403,000	1,401,007
9/2/2020	448,285	835,000	-	1,283,285
9/3/2020	494,625	865,000	-	1,359,625
9/4/2020	193,967	931,750	-	1,125,717
9/5/2020	193,967	931,750	-	1,125,717
9/6/2020	193,967	931,750	-	1,125,717
9/7/2020	193,967	931,750	-	1,125,717
9/8/2020	579,904	911,000	-	1,490,904
9/9/2020	350,778	736,000	-	1,086,778
9/10/2020	41,180	217,000	706,000	964,180
9/11/2020	30,683	100,333	987,000	1,118,016
9/12/2020	30,683	100,333	846,000	977,016
9/13/2020	30,683	100,333	952,000	1,083,016
9/14/2020	32,622	187,000	1,007,000	1,226,622
9/15/2020	31,743	268,000	856,000	1,155,743
9/16/2020	34,272	119,000	933,000	1,086,272
9/17/2020	33,346	324,000	802,000	1,159,346
9/18/2020	33,180	281,667	847,000	1,161,846
9/19/2020	33,180	281,667	770,000	1,084,846
9/20/2020	33,180	281,667	806,000	1,120,846
9/21/2020	41,950	375,000	850,000	1,266,950
9/22/2020	34,825	333,000	798,000	1,165,825
9/23/2020	114,648	357,000	792,000	1,263,648
9/24/2020	345,177	675,000	268,000	1,288,177
9/25/2020	266,343	886,667	-	1,153,010
9/26/2020	266,343	886,667	-	1,153,010
9/27/2020	266,343	886,667	-	1,153,010
9/28/2020	487,369	845,000	-	1,332,369
9/29/2020	470,941	723,000	-	1,193,941
9/30/2020	378,930	874,000	-	1,252,930

44%	% Ground
56%	% Surface

Total Flow Gallons

4,871,215	Well 5	
13,342,000	Well 8	
23,241,000	LESSALT	
41,454,215	Total	
12%	Well 5	% of Flow
32%	Well 8	% of Flow
56%	LESSALT	% of Flow

23%	% Ground
77%	% Surface

Total Flow Gallons

1,287,439	Well 5	
7,768,000	Well 8	
31,093,000	LESSALT	
40,148,439	Total	
3%	Well 5	% of Flow
19%	Well 8	% of Flow
77%	LESSALT	% of Flow

61%	% Ground
39%	% Surface

Total Flow Gallons

5,548,142	Well 5	
16,298,000	Well 8	
13,695,000	LESSALT	
35,541,142	Total	
16%	Well 5	% of Flow
46%	Well 8	% of Flow
39%	LESSALT	% of Flow

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Water Supply

	Flow Well 5 GPD	Flow Well 8 GPD	LESSALT GPD	Total GPD
10/1/2020	538,934	784,000	-	1,322,934
10/2/2020	337,400	834,667	-	1,172,066
10/3/2020	337,400	834,667	-	1,172,066
10/4/2020	337,400	834,667	-	1,172,066
10/5/2020	389,547	964,000	-	1,353,547
10/6/2020	490,862	772,000	-	1,262,862
10/7/2020	395,372	855,000	172,000	1,422,372
10/8/2020	310,821	736,000	-	1,046,821
10/9/2020	342,863	857,000	-	1,199,863
10/10/2020	342,863	857,000	-	1,199,863
10/11/2020	342,863	857,000	-	1,199,863
10/12/2020	484,425	698,000	-	1,182,425
10/13/2020	415,887	661,000	-	1,076,887
10/14/2020	532,200	790,000	-	1,322,200
10/15/2020	404,183	866,000	-	1,270,183
10/16/2020	327,963	828,667	-	1,156,629
10/17/2020	327,963	828,667	-	1,156,629
10/18/2020	327,963	828,667	-	1,156,629
10/19/2020	355,283	950,000	-	1,305,283
10/20/2020	456,697	763,000	-	1,219,697
10/21/2020	232,911	914,000	683,000	1,829,911
10/22/2020	119,511	155,000	469,000	743,511
10/23/2020	52,914	511,333	496,000	1,060,247
10/24/2020	52,914	511,333	489,000	1,053,247
10/25/2020	52,914	511,333	462,000	1,026,247
10/26/2020	108,772	585,000	501,000	1,194,772
10/27/2020	74,793	364,000	718,000	1,156,793
10/28/2020	91,105	506,000	748,000	1,345,105
10/29/2020	66,183	305,000	756,000	1,127,183
10/30/2020	48,054	371,000	718,000	1,137,054
10/31/2020	48,054	371,000	778,000	1,197,054
11/1/2020	48,054	371,000	796,000	1,215,054
11/2/2020	102,149	426,000	729,000	1,257,149
11/3/2020	72,270	360,000	771,000	1,203,270
11/4/2020	82,340	459,000	778,000	1,319,340
11/5/2020	62,077	337,000	766,000	1,165,077
11/6/2020	63,962	287,667	749,000	1,100,628
11/7/2020	63,962	287,667	774,000	1,125,628
11/8/2020	63,962	287,667	657,000	1,008,628
11/9/2020	68,165	408,000	791,000	1,267,165
11/10/2020	76,592	246,000	756,000	1,078,592
11/11/2020	76,592	246,000	791,000	1,113,592
11/12/2020	65,491	88,000	770,000	923,491
11/13/2020	55,398	184,667	783,000	1,023,065
11/14/2020	55,398	184,667	774,000	1,014,065
11/15/2020	55,398	184,667	744,000	984,065
11/16/2020	47,614	322,000	778,000	1,147,614
11/17/2020	32,239	70,000	790,000	892,239
11/18/2020	40,628	198,000	724,000	962,628
11/19/2020	37,256	43,000	800,000	880,256
11/20/2020	32,326	222,333	779,000	1,033,659
11/21/2020	32,326	222,333	782,000	1,036,659
11/22/2020	32,326	222,333	754,000	1,008,659
11/23/2020	62,819	279,000	763,000	1,104,819
11/24/2020	46,748	180,000	775,000	1,001,748
11/25/2020	63,023	230,200	816,000	1,109,223
11/26/2020	63,023	230,200	735,000	1,028,223
11/27/2020	63,023	230,200	769,000	1,062,223
11/28/2020	63,023	230,200	768,000	1,061,223
11/29/2020	63,023	230,200	766,000	1,059,223
11/30/2020	87,742	290,000	750,000	1,127,742
12/1/2020	53,073	184,000	770,000	1,007,073
12/2/2020	74,901	334,000	790,000	1,198,901
12/3/2020	76,086	386,000	770,000	1,232,086
12/4/2020	57,184	311,000	773,000	1,141,184
12/5/2020	57,184	311,000	758,000	1,126,184
12/6/2020	57,184	311,000	784,000	1,152,184
12/7/2020	81,340	363,000	767,000	1,211,340
12/8/2020	70,315	252,000	738,000	1,060,315
12/9/2020	63,515	322,000	763,000	1,148,515
12/10/2020	114,568	301,000	744,000	1,159,568
12/11/2020	42,012	114,333	801,000	957,345
12/12/2020	42,012	114,333	764,000	920,345
12/13/2020	42,012	114,333	757,000	913,345
12/14/2020	41,838	54,000	734,000	829,838
12/15/2020	0	12,000	714,000	726,000
12/16/2020	-	-	732,000	732,000
12/17/2020	8,781	86,000	754,000	848,781
12/18/2020	13,741	128,000	815,000	956,741
12/19/2020	13,741	128,000	736,000	877,741
12/20/2020	13,741	128,000	770,000	911,741
12/21/2020	-	218,000	769,000	987,000
12/22/2020	33,788	203,000	764,000	1,000,788
12/23/2020	29,758	159,000	773,000	961,758
12/24/2020	42,011	152,750	714,000	908,761
12/25/2020	42,011	152,750	822,000	1,016,761
12/26/2020	42,011	152,750	767,000	961,761
12/27/2020	42,011	152,750	812,000	1,006,761
12/28/2020	67,254	160,000	764,000	991,254
12/29/2020	67,042	139,000	784,000	990,042
12/30/2020	70,286	168,000	770,000	1,008,286
12/31/2020	47,965	98,000	761,000	906,965

83%	% Ground
17%	% Surface

Total Flow Gallons

9,077,887	Well 5	
22,008,000	Well 8	
6,212,000	LESSALT	
37,297,887	Total	
24%	Well 5	% of Flow
59%	Well 8	% of Flow
17%	LESSALT	% of Flow

29%	% Ground
71%	% Surface

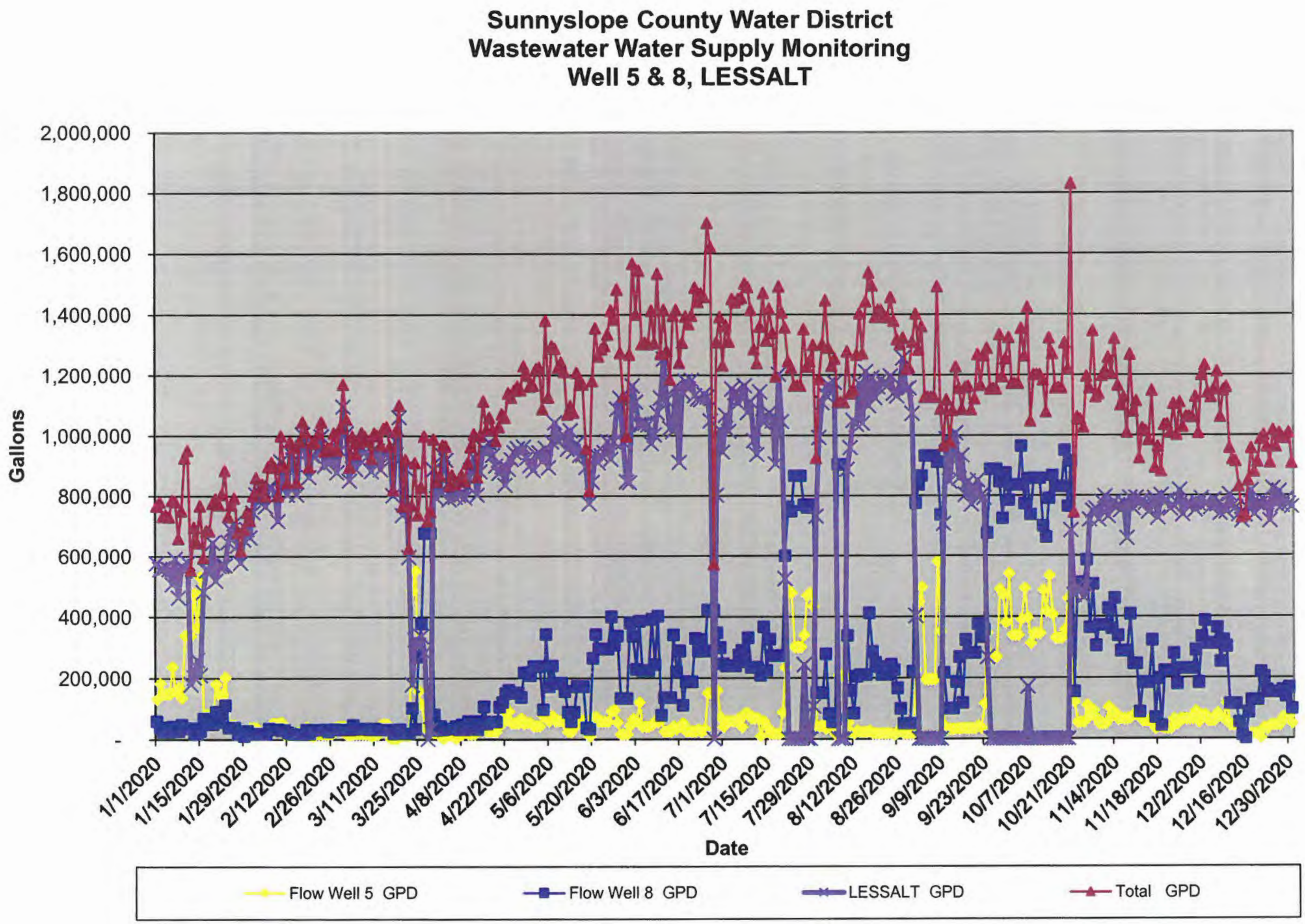
Total Flow Gallons

1,739,257	Well 5	
7,639,000	Well 8	
23,006,000	LESSALT	
32,384,257	Total	
5%	Well 5	% of Flow
24%	Well 8	% of Flow
71%	LESSALT	% of Flow

24%	% Ground
76%	% Surface

Total Flow Gallons

1,447,140	Well 5	
5,902,000	Well 8	
23,723,000	LESSALT	
31,072,140	Total	
5%	Well 5	% of Flow
19%	Well 8	% of Flow
76%	LESSALT	% of Flow


Sunnyslope County Water District
Wastewater Water Supply Monitoring
Well 5 & 8, LESSALT
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
Gallons
1/1/2020
1/15/2020
1/29/2020
2/12/2020
2/26/2020
3/11/2020
3/25/2020
4/8/2020
4/22/2020
5/6/2020
5/20/2020
6/3/2020
6/17/2020
7/1/2020
7/15/2020
7/29/2020
8/12/2020
8/26/2020
9/9/2020
9/23/2020
10/7/2020
10/21/2020
11/4/2020
11/18/2020
12/2/2020
12/16/2020
12/30/2020
Date
Flow Well 5 GPD
Flow Well 8 GPD
LESSALT GPD
Total GPD

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I SBR Wastewater Treatment Plant
Wastewater Monitoring Water Supply

Well # 5

Grab Sample mg/l

Date	Nitrate as (N)	Sulfate	Boron	Total Hardness	Chloride	Residual Filterable TDS @ 180 c	Sodium	Total Gallons Supplied	% Supplied
January 31, 2020								5,032,253	22
February 28, 2020								688,194	3
March 31, 2020								729,566	3
Total Flow Sampled 3-4-2020	2.6	180	0.97		130	790	130	6,450,013	8
April 30, 2020								988,749	3
May 31, 2020								1,643,947	4
June 30, 2020								1,683,959	4
Total Flow Apr May June								4,316,656	4
July 31, 2020								4,871,215	12
August 31, 2020								1,287,439	3
September 30, 2020								5,548,142	16
Total Flow Sampled 9-2-2020	2.3	190	1		120	790	130	11,706,796	10
October 31, 2020								9,077,887	24
November 30, 2020								1,739,257	5
December 31, 2020								1,447,140	5
Total Flow Oct Nov Dec								12,264,284	12
Average	**4**	**197**	**1**		**125**	**789**	**130**	**6,246,977**	**18**

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I SBR Wastewater Treatment Plant
Wastewater Monitoring Water Supply

Well # 8

Grab Sample mg/l

Date	Nitrate as (N)	Sulfate	Boron	Total Hardness	Chloride	Residual Filterable TDS @ 180 c	Sodium	Total Gallons Supplied	% Supplied
January 31, 2020								1,276,167	6
February 28, 2020								731,333	3
March 31, 2020								3,645,000	13
Total Flow Sampled 3-4-2020	1.4	210	1.00		95	770	120	5,652,500	7
April 30, 2020								2,547,000	8
May 31, 2020								6,432,333	17
June 30, 2020								8,047,667	20
Total Flow Apr May June								17,027,000	16
July 31, 2020								13,342,000	32
August 31, 2020								7,768,000	19
September 30, 2020								16,298,000	46
Total Flow Sampled 9-2-2020	2.7	190	0.92		130	820	120	37,408,000	32
October 31, 2020								22,008,000	59
November 30, 2020								7,639,000	24
December 31, 2020								5,902,000	19
Total Flow Oct Nov Dec								35,549,000	35
Average	**4**	**191**	**1**		**122**	**787**	**113**	**16,589,023**	**49**

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I SBR Wastewater Treatment Plant
Wastewater Monitoring Water Supply

LESSALT WTP

Grab Sample mg/l

Date	Nitrate as (N)	Sulfate	Boron	Total Hardness	Chloride	Residual Filterable TDS @ 180 c	Sodium	Total Gallons Supplied	% Supplied
January 31, 2020								16,642,000	73
February 28, 2020								24,447,000	95
March 31, 2020								23,422,000	84
Total Flow Sampled 3-4-2020	0.25	35	0.18		82	280	57	64,511,000	84
April 30, 2020								26,478,000	88
May 31, 2020								29,525,000	79
June 30, 2020								30,932,000	76
Total Flow Apr May June								86,935,000	80
July 31, 2020								23,241,000	56
August 31, 2020								31,093,000	77
September 30, 2020								13,695,000	39
Total Flow Sampled 9-2-2020	0	32	0.2		69	250	52	68,029,000	58
October 31, 2020								6,212,000	17
November 30, 2020								23,006,000	71
December 31, 2020								23,723,000	76
Total Flow Oct Nov Dec								52,941,000	53
Average	**0**	**38**	**0**		**91**	**288**	**63**	**29,532,250**	**77**

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001
Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

RM - I SBR Wastewater Treatment Plant
Wastewater Monitoring Water Supply
Flow Proportional Results mg/l

Grab Sample mg/l

Date	Nitrate as (N)	Sulfate	Boron	Total Hardness	Chloride	Residual Filterable TDS @ 180 c	Sodium
January 31, 2020							
February 28, 2020							
March 31, 2020							
Total Flow Sampled 3-4-2020	0.53	60	0.31		87	359	68
April 30, 2020							
May 31, 2020							
June 30, 2020							
Total Flow Apr May June							
July 31, 2020							
August 31, 2020							
September 30, 2020							
Total Flow Sampled 9-2-2020	1.09	98	0.51		94	486	82
October 31, 2020							
November 30, 2020							
December 31, 2020							
Total Flow Oct Nov Dec							
Average	**3.18**	**142**	**0.64**		**108**	**639**	**99**

Sunnyslope Water District

Section B

Compliance and Performance

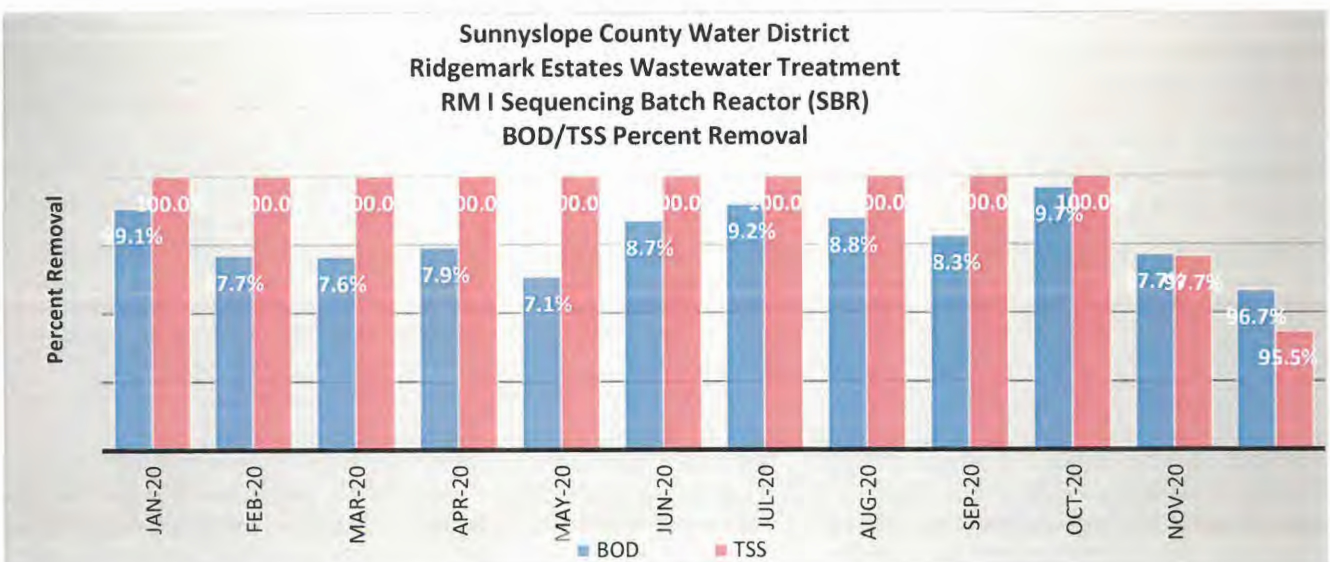
Sunnyslope County Water District

3570 Airline Highway
Hollister, California 95023-9702
Phone (831) 637-4670
Fax (831) 637-1399

Compliance and Performance

The Ridgemark WWTP has consistently treated wastewater effluent for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Ammonia, Nitrites and Nitrates as specified by the WDR permit from the RWQCB. The secondary treatment process is a biochemical oxidation process that uses microorganism to stabilize organic matter, measured by a reduction in BOD. The secondary treatment process was also designed to remove nitrogen by converting ammonia to nitrate (nitrification) and then to nitrogen gas (denitrification) which is released to the atmosphere. TSS (including biomass) will settle out of the wastewater and are removed as a waste solids product. Overloading a wastewater pond with BOD constituents can result in nuisance odor generation. Source control of BOD constituents, additional pretreatment prior to discharge to the pond was practiced in preventing a pond from generating nuisance odors. The Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) percent removal efficiency throughout the year were proficient on average of 98.4% and 99.6% removal efficiency respectively for the calendar year of 2020.

Ridgemark WWTP treatment process and effluent water quality are meeting all permit requirements including the above mentioned along with TDS and Sodium with the exception of Chlorides. The treatment process is not designed to remove Total Dissolved Solids (TDS), Sodium, or Chlorides so the main strategy for salinity control is by reducing influent salinity through reducing water softener use.



Sunnyslope County Water District

3570 Airline Highway
Hollister, California 95023-9702
Phone (831) 637-4670
Fax (831) 637-1399

Noncompliance

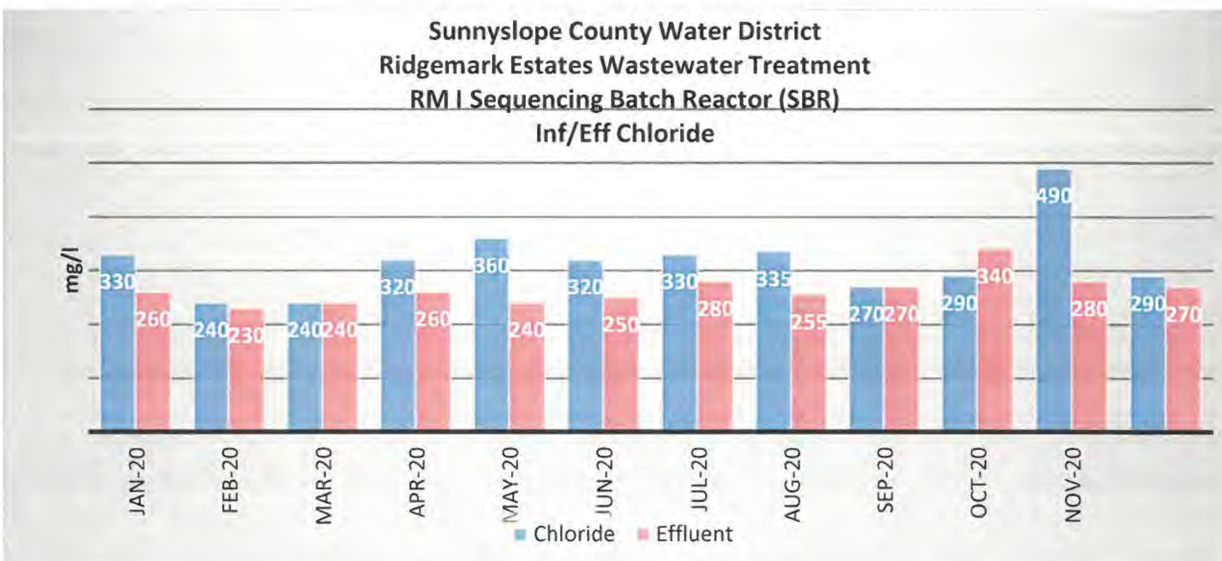
Chlorides

SSCWD has not been able to meet the discharge requirements for chlorides due to delays encountered in the building of a potable water supply which has lower hardness and eliminates and/or reduces the need for customers to use brine discharging water softeners. After considering groundwater treatment and receiving opposition from other agencies, SSCWD joined San Benito County Water District, the City of Hollister, and San Benito County in the development of the Hollister Urban Area Water Plan (HUAWP). The HUAWP was completed and included the upgrade of the existing Lessalt Water Treatment Plant and the construction of a new surface water treatment plant called the West Hills Water Treatment Plant. These two facilities, associated pipelines, and pump stations will allow high quality drinking water to be delivered throughout the Hollister Urban Area.

Corrective Actions(s):

Chlorides

Sunnyslope continues to make progress with meeting the salinity requirements of the WDRs. The addition of higher quality surface water deliveries to customers, providing rebates for the removal of salt discharging water softeners, and adopting an ordinance banning the installation of new salt discharging water softeners is bringing the District closer to compliance. The District is now in compliance with TDS, Sodium and we are continuing our efforts to reduce chloride levels in the system. The District will continue its outreach and education of customers in partnership with the City of Hollister and San Benito County Water District to promote the improvement of drinking water quality and the removal of salt discharging water softeners.



Sunnyslope County
Water District

BOD

Date	RM I Average Monthly Flow MGD	RM I Influent BOD	mg/l Effluent BOD	Removal Efficiency Percent
January 1, 2020	0.149452	290	3	99.1%
February 1, 2020	0.146759	160	4	97.7%
March 1, 2020	0.158065	170	4	97.6%
April 1, 2020	0.164700	360	8	97.9%
May 1, 2020	0.167871	160	5	97.1%
June 1, 2020	0.161767	260	3	98.7%
July 1, 2020	0.162806	410	3	99.2%
August 1, 2020	0.162097	200	2	98.8%
September 1, 2020	0.157967	160	3	98.3%
October 1, 2020	0.161065	300	1	99.7%
November 1, 2020	0.164167	240	6	97.7%
December 1, 2020	0.167226	200	7	96.7%
	1.923939	2910	48	98.4%

TSS

Date	RM I Average Monthly Flow MGD	RM I Influent Total Suspended Solids (TSS)	mg/l Effluent Total Suspended Solids	Removal Efficiency Percent
January 1, 2020	0.149452	390	0	100.0%
February 1, 2020	0.146759	340	0	100.0%
March 1, 2020	0.158065	140	0	100.0%
April 1, 2020	0.164700	270	0	100.0%
May 1, 2020	0.167871	100	0	100.0%
June 1, 2020	0.161767	280	0	100.0%
July 1, 2020	0.162806	410	0	100.0%
August 1, 2020	0.162097	123	0	100.0%
September 1, 2020	0.157967	110	0	100.0%
October 1, 2020	0.161065	310	0	100.0%
November 1, 2020	0.164167	290	7	97.7%
December 1, 2020	0.167226	110	5	95.5%
	1.923939	2873	12	99.6%

Ammonia

Nitrite as N	RM I Average Monthly Flow MGD	RM I Influent Start Time	mg/l Effluent Ammonia (NH3-N)	Removal Efficiency Percent
January 1, 2020	0.149452	72.40	0.53	99%
February 1, 2020	0.146759	62.80	0.60	99%
March 1, 2020	0.158065	44.50	1.20	97%
April 1, 2020	0.164700	55.90	2.40	96%
May 1, 2020	0.167871	48.40	1.50	97%
June 1, 2020	0.161767	69.00	0.53	99%
July 1, 2020	0.162806	73.50	0.34	100%
August 1, 2020	0.162097	69.90	0.44	99%
September 1, 2020	0.157967	69.80	0.24	100%
October 1, 2020	0.161065		0.40	
November 1, 2020	0.164167		2.30	
December 1, 2020	0.167226		0.80	
	1.923939	566	11	98.0%

Sunnyslope County Water District

Chloride

Date	RM I Average Monthly Flow MGD	RM II Average Monthly Flow	RM I Influent Chloride (Cl)	mg/l Effluent Chloride	Removal Efficiency Percent
January 1, 2020	0.149452	0	330	260	21%
February 1, 2020	0.146759	0	240	230	4%
March 1, 2020	0.158065	0	240	240	0%
April 1, 2020	0.1647	0	320	260	19%
May 1, 2020	0.167871	0	360	240	33%
June 1, 2020	0.161767	0	320	250	22%
July 1, 2020	0.162806	0	330	280	15%
August 1, 2020	0.162097		335	255	24%
September 1, 2020	0.157967		270	270	0%
October 1, 2020	0.161065		290	340	-17%
November 1, 2020	0.164167		490	280	43%
December 1, 2020	0.167226		290	270	7%
	1.923939		3815	3175	16.8%

TDS

Date	RM I Average Monthly Flow MGD	RM I Influent Total Dissolved Solids (TDS)	mg/l Effluent Total Dissolved Solids (TDS)	Removal Efficiency Percent
January 1, 2020	0.149452	1400	730	47.9%
February 1, 2020	0.146759	730	670	8.2%
March 1, 2020	0.158065	750	690	8.0%
April 1, 2020	0.164700	840	780	7.1%
May 1, 2020	0.167871	890	850	4.5%
June 1, 2020	0.161767	1000	820	18.0%
July 1, 2020	0.162806	960	640	33.3%
August 1, 2020	0.162097	960	845	12.0%
September 1, 2020	0.157967	1100	970	11.8%
October 1, 2020	0.161065	1100	1100	0.0%
November 1, 2020	0.164167	1200	910	24.2%
December 1, 2020	0.167226	880	880	0.0%
	1.923939	11810	9885	16.3%

Nitrate

Date	RM I Average Monthly Flow MGD	RM I Influent Nitrate (NO3-N + NO2-N)	mg/l Effluent Nitrate Nitrogen (NO3-N)	Removal Efficiency Percent
January 1, 2020	0.149452	0.00	0.29	
February 1, 2020	0.146759	0.00	0.26	
March 1, 2020	0.158065	0.00	0.36	
April 1, 2020	0.164700	0.00	0.25	
May 1, 2020	0.167871	0.00	0.32	
June 1, 2020	0.161767	0.00	0.60	
July 1, 2020	0.162806	0.62	0.60	3%
August 1, 2020	0.162097	0.00	0.81	
September 1, 2020	0.157967	0.00	0.67	
October 1, 2020	0.161065	0.00	0.82	
November 1, 2020	0.164167	0.00	0.73	
December 1, 2020	0.167226	0.00	0.54	
	1.923939	1	6	-906.4%

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Well # 1

MG/L - Location: next to Pond # 6 (WWMW Pond 6N) Units mg/l

Date	Nitrate as Nitrogen (NO3-N + NO2-N)	Chloride (CL)	Residual Filterable TDS @ 180 c	Sodium (NA)	pH	Boron	Sulfate (SO4)	Nitrite (NO2-N)	Total Nitrogen (as N)	Total Kjeldahl Nitrogen (TKN)	Depth to Water (Feet) 500 Above Sea Level
3/3/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	250
6/3/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	250
9/1/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	237
12/1/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	235
Average	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**243**

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Well # 2

MG/L - Location: Southside Road Units mg/l

Date	Nitrate as Nitrogen (NO3-N + NO2-N)	Chloride (CL)	Residual Filterable TDS @ 180 c	Sodium (NA)	pH	Boron	Sulfate (SO4)	Nitrite (NO2-N)	Total Nitrogen (as N)	Total Kjeldahl Nitrogen (TKN)	Depth to Water (Feet) 380 Above Sea Level
3/3/2020	6	220	840	96	7.66	0.48	60	ND	6	ND	44
6/3/2020	5.5	230	780		7.58			ND	5.5	ND	45
9/2/2020	6.4	210	700	92	7.49	0.48	49	ND	6.4	ND	45
12/8/2020	6.6	220	710	96	7.41			ND	6.6	ND	46
Average	**6.13**	**220**	**757.5**	**95**	**7.54**	**0.48**	**54.5**	**ND**	**6.13**	**ND**	**45**

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Well # 3

Location: RM - II - next to Pond 4-3 Units mg/l

Date	Nitrate as Nitrogen (NO3-N + NO2-N)	Chloride (CL)	Residual Filterable TDS @ 180 c	Sodium (NA)	pH	Boron	Sulfate (SO4)	Nitrite (NO2-N)	Total Nitrogen (as N)	Total Kjeldahl Nitrogen (TKN)	Depth to Water (Feet) 548 Above Sea Level
3/3/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	115
6/3/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	115
9/1/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	115
12/1/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	116
Average	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**115**

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Well # 4

Location: Pond 6 South by Gate Units mg/l

Date	Nitrate as Nitrogen (NO3-N + NO2-N)	Chloride (CL)	Residual Filterable TDS @ 180 c	Sodium (NA)	pH	Boron	Sulfate (SO4)	Nitrite (NO2-N)	Total Nitrogen (as N)	Total Kjeldahl Nitrogen (TKN)	Depth to Water (Feet) 507 Above Sea Level
3/3/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	119
6/3/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	119
9/2/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	119
12/1/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	119
Average	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**119**

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Well # 5

Location: RM - I - next to Pond 4 & 5 Units mg/l

Date	Nitrate as Nitrogen (NO3-N + NO2-N)	Chloride (CL)	Residual Filterable TDS @ 180 c	Sodium (NA)	pH	Boron	Sulfate (SO4)	Nitrite (NO2-N)	Total Nitrogen (as N)	Total Kjeldahl Nitrogen (TKN)	Depth to Water (Feet) 526 Above Sea Level
3/3/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	192
6/3/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	192
9/2/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	192
12/1/2020	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	192
Average	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**Dry**	**192**

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Well # 6

Location: RM - II - next to Pond 2 Units mg/l

Date	Nitrate as Nitrogen (NO3-N + NO2-N)	Chloride (CL)	Residual Filterable TDS @ 180 c	Sodium (NA)	pH	Boron	Sulfate (SO4)	Nitrite (NO2-N)	Total Nitrogen (as N)	Total Kjeldahl Nitrogen (TKN)	Depth to Water (Feet) 528 Above Sea Level
3/3/2020	3.3	560	1300	190	7.67	0.47	31	ND	3.3	ND	86
6/3/2020	3.2	560	1300		7.48			ND	3.2	ND	86
9/2/2020	3.9	590	1200	220	7.5	0.54	36	ND	3.9	ND	86
12/8/2020	3.5	550	1200		7.48			ND	3.5	ND	86
Average	**3.48**	**565**	**1250**	**205**	**7.53**	**0.51**	**33.5**	**ND**	**3.5**	**ND**	**86**

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Wells

Depth to Water in Feet

	Monitoring Well # 1 (500 feet Above Sea Level)	Monitoring Well # 2 (380 feet Above Sea Level)	Monitoring Well # 3 (548 feet Above Sea Level)	Monitoring Well # 4 (507 feet Above Sea Level)	Monitoring Well # 5 (526 feet Above Sea Level)	Monitoring Well # 6 (528 feet Above Sea Level)
3/3/2020	250	44	115	119	192	86
6/3/2020	250	45	115	119	192	86
9/1/2020	237	45	115	119	192	86
12/1/2020	235	46	115	119	192	86

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Wells

pH Monitoring Results mg/l

Grab Sample

	Monitoring Well # 1	Monitoring Well # 2	Monitoring Well # 3	Monitoring Well # 4	Monitoring Well # 5	Monitoring Well # 6
3/3/2020	Dry	7.66	Dry	Dry	Dry	8
6/3/2020	Dry	7.58	Dry	Dry	Dry	7
9/1/2020	Dry	7.49	Dry	Dry	Dry	8
12/1/2020	Dry	7.41	Dry	Dry	Dry	7

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Wells

TDS Monitoring Results mg/l

Grab Sample

	Monitoring Well # 1	Monitoring Well # 2	Monitoring Well # 3	Monitoring Well # 4	Monitoring Well # 5	Monitoring Well # 6	Water Supply
3/3/2020	Dry	840	Dry	Dry	Dry	1300	
6/3/2020	Dry	780	Dry	Dry	Dry	1300	
9/1/2020	Dry	700	Dry	Dry	Dry	1200	
12/1/2020	Dry	710	Dry	Dry	Dry	1200	

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Wells

Sodium Monitoring Results mg/l

Grab Sample

	Monitoring Well # 1	Monitoring Well # 2	Monitoring Well # 3	Monitoring Well # 4	Monitoring Well # 5	Monitoring Well # 6	Water Supply
3/3/2020	Dry	96	Dry	Dry	Dry	190	
6/3/2020	Dry		Dry	Dry	Dry		
9/1/2020	Dry	92	Dry	Dry	Dry	220	
12/1/2020	Dry	96	Dry	Dry	Dry		

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Wells

Chloride Monitoring Results mg/l

Grab Sample

	Monitoring Well # 1	Monitoring Well # 2	Monitoring Well # 3	Monitoring Well # 4	Monitoring Well # 5	Monitoring Well # 6	Water Supply
3/3/2020	Dry	220	Dry	Dry	Dry	560	
6/3/2020	Dry	230	Dry	Dry	Dry	560	
9/1/2020	Dry	210	Dry	Dry	Dry	590	
12/1/2020	Dry	220	Dry	Dry	Dry	550	

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

Wastewater Monitoring Wells

Boron Monitoring Results mg/l

Grab Sample

	Monitoring Well # 1	Monitoring Well # 2	Monitoring Well # 3	Monitoring Well # 4	Monitoring Well # 5	Monitoring Well # 6	Water Supply
3/3/2020	Dry	0	Dry	Dry	Dry	0	
6/3/2020	Dry		Dry	Dry	Dry		
9/1/2020	Dry	0	Dry	Dry	Dry	1	
12/1/2020	Dry		Dry	Dry	Dry		

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision
Wastewater Treatment Plant

Wastewater Monitoring Wells

Sulfate Monitoring Results mg/l

Grab Sample

	Monitoring Well # 1	Monitoring Well # 2	Monitoring Well # 3	Monitoring Well # 4	Monitoring Well # 5	Monitoring Well # 6	Water Supply
3/3/2020	Dry	60.0	Dry	Dry	Dry	31	38.8
6/3/2020	Dry		Dry	Dry	Dry		
9/1/2020	Dry	49.0	Dry	Dry	Dry	36	67.1
12/1/2020	Dry		Dry	Dry	Dry		

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision
Wastewater Treatment Plant

Wastewater Monitoring Wells

Nitrite (as N) Monitoring Results mg/l

Grab Sample

	Monitoring Well # 1	Monitoring Well # 2	Monitoring Well # 3	Monitoring Well # 4	Monitoring Well # 5	Monitoring Well # 6
3/3/2020	Dry	ND	Dry	Dry	Dry	ND
6/3/2020	Dry	ND	Dry	Dry	Dry	ND
9/1/2020	Dry	ND	Dry	Dry	Dry	ND
12/1/2020	Dry	ND	Dry	Dry	Dry	ND

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision
Wastewater Treatment Plant
Wastewater Monitoring Wells
Nitrate (as N) Monitoring Results mg/l

Grab Sample

	Monitoring Well # 1	Monitoring Well # 2	Monitoring Well # 3	Monitoring Well # 4	Monitoring Well # 5	Monitoring Well # 6	Water Supply
3/3/2020	Dry	6.00	Dry	Dry	Dry	3	
6/3/2020	Dry	5.50	Dry	Dry	Dry	3	
9/1/2020	Dry	6.40	Dry	Dry	Dry	4	
12/1/2020	Dry	6.60	Dry	Dry	Dry	4	

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision
Wastewater Treatment Plant
Wastewater Monitoring Wells

Total Kjeldahl Nitrogen (TKN) (as N) Monitoring Results mg/l

Grab Sample

	Monitoring Well # 1	Monitoring Well # 2	Monitoring Well # 3	Monitoring Well # 4	Monitoring Well # 5	Monitoring Well # 6
3/3/2020	Dry	ND	Dry	Dry	Dry	ND
6/3/2020	Dry	ND	Dry	Dry	Dry	ND
9/1/2020	Dry	ND	Dry	Dry	Dry	ND
12/1/2020	Dry	ND	Dry	Dry	Dry	ND

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report
Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision
Wastewater Treatment Plant
Wastewater Monitoring Wells

Total Nitrogen (as N) Monitoring Results mg/l

Grab Sample

	Monitoring Well # 1	Monitoring Well # 2	Monitoring Well # 3	Monitoring Well # 4	Monitoring Well # 5	Monitoring Well # 6
3/3/2020	Dry	6	Dry	Dry	Dry	3
6/3/2020	Dry	6	Dry	Dry	Dry	3
9/1/2020	Dry	6	Dry	Dry	Dry	4
12/1/2020	Dry	7	Dry	Dry	Dry	4

Sunnyslope Water District

Section C

Flow Evaluation

Engineering Technical Report

Sunnyslope County Water District

Subject:	**2020 Annual Engineering Technical Report**
Prepared For:	Regional Water Quality Control Board
Certified by:	Drew Lander, P.E. 79561 (Expires 9/30/2022), General Manager
Prepared by:	Rob Hillebrecht, P.E. 88972 (Expires 9/30/2022), Associate Engineer
Reviewed by:	Jose Rodriguez, Water & Wastewater Superintendent
Date:	January 21, 2021

The purpose of this Technical Memorandum (TM) is to meet the Annual Engineering Report requirements of the Regional Water Quality Control Board (RWQCB) Waste Discharge Requirement (WDR) Order No. R3-2004-0065 (December 3, 2004).

Annual Engineering Reports must be submitted by January 30th every year commencing in 2006. The report will evaluate the performance and capacity of the wastewater treatment and disposal system. The report shall contain a hydraulic balance analysis of facility inputs and outputs including influent flow, precipitation, infiltration/percolation, and evaporation for the facility and shall quantify disposal capacity of the facility based on actual operating data. The reports shall be prepared and certified by, or under the supervision/review of a registered professional engineer registered in California and possessing applicable experience in wastewater engineering and planning.

1 Introduction

As identified in Section E, paragraph 7, of WDR R3-2004-0065 for the Sunnyslope County Water District (SSCWD), an annual engineering technical report shall be submitted to the Regional Water Quality Control Board (RWQCB) to evaluate the performance and capacity of the wastewater treatment and disposal system for the Ridgemark Wastewater Treatment Plant (Ridgemark WWTP) facility. The main aspect of this annual report is a water balance analysis. The following sections of this document summarize the information required by the RWQCB for the annual reports.

2 Capital Project Activities

In 2011 Percolation Pond 3 at Ridgemark I (RM I) was retired in order to prepare for the construction of the Ridgemark WWTP sequential batch reactors where a portion of Percolation Pond 3 had been located.

Construction of these sequential batch reactors were completed and began wastewater treatment at the end of 2012. Treatment Pond 2 at RM I was then retired from service and construction began on the sludge treatment and drying beds where Treatment Pond 2 had been. At the end of 2012, Treatment Pond 1 was also retired from wastewater treatment service and placed into service as a sludge storage and treatment pond until the new wastewater sludge treatment and drying facilities at RM I were completed. In 2013 the sludge treatment tank and drying beds were completed and Treatment Pond 1 was retired from sludge treatment. Treatment Pond 1 remains as an emergency overflow sludge disposal site.

In 2013, Ridgemark II (RM II) Treatment Ponds 1 & 2 and Percolation Ponds 3 & 4 were decommissioned as part of the consolidation of the two wastewater treatment sites at the Ridgemark Wastewater Treatment Plant (Ridgemark WWTP) on the RM I site.

Rehabilitation activities on percolation ponds from 2005 through 2020 are summarized in Table 2-1. These activities ensure that adequate percolation rates are maintained to effectively dispose of treated wastewater.

Table 2-1: Ridgemark I Maintenance Activities

Date	Item
2005	RM I, Ponds 3 & 4 drained, dried and solids removed
1/4/06 – 1/12/06	Pumping from Pond 4 at RM II to Pond 4 at RM I
July-Aug 2006	Bypass pumping from Pond 2 at RM I to Pond 4
10/30/06 – 12/3/06	Pumping from Pond 4 at RM II to Pond 4 at RM I
November 2006	Sludge removed from bottom of Pond 5 at RM I. Pond bottom ripped
November 2007	Ponds 3 & 4 at Ridgemark I. Pond bottoms ripped.
Jan-Dec 2007	Pumping effluent from Pond 4 at RM II to Pond 4 at RM I
August 2008	Ponds 3 & 4 at Ridgemark I. Pond bottoms ripped.
August 2009	Percolation Pond 4 was ripped to improve its percolation rates.
August 2010	Percolation Ponds 4 & 5 were ripped to improve their percolation rates.
September 2013	Percolation Ponds 4 & 6 were ripped to improve their percolation rates.
June 2014	Percolation Pond 5 was ripped to improve its percolation rates.
July 2015	Percolations Pond 3 & 4 were ripped to improve their percolation rates.
October 2015	Percolation Pond 5 was ripped to improve its percolation rates.
October 2016	Percolation Ponds 3 & 4 were ripped to improve their percolation rates.
August 2017	Percolation Pond 5 was ripped to improve its percolation rates.
December 2017	Percolation Pond 4 was ripped to improve its percolation rates.
November 2018	Percolation Pond 3 was ripped to improve its percolation rates.
December 2020	Percolation Pond 4 was ripped to improve its percolation rates.

3 Hydraulic Balance Analysis

The hydraulic balance analysis is performed for the period spanning January 2020 through December 2020. The following sections describe the data used in the water balance and summarize the results.

3.1 Influent Flows

Influent flows are based on the magnetic flow meter data at the headworks of the Ridgemark WWTP. The total annual influent flow to the Ridgemark WWTP in 2020 was 180.14 acre-feet per year (AFY). This represents a 6.8% increase in annual influent flow as a direct result of the Covid-19 pandemic and the large number of individuals working from home. It is expected that after the pandemic passes, influent flows will subside and return closer to their historic average of about 170 AFY.

Table 3-1: Facility Influent Flows (Monthly Average) to Influent SBR

Month	Ridgemark WWTP Influent (gpd)	Ridgemark WWTP Influent (gallons)
Jan-20	149,452	4,633,000
Feb-20	146,759	4,256,000
Mar-20	158,065	4,900,000
Apr-20	164,700	4,941,000
May-20	167,871	5,204,000
Jun-20	161,767	4,853,000
Jul-20	162,806	5,047,000
Aug-20	162,097	5,025,000
Sep-20	157,967	4,739,000
Oct-20	161,065	4,993,000
Nov-20	164,167	4,925,000
Dec-20	167,226	5,184,000
Annual Total (Gallons)		**58,700,000**
Annual Total (Acre Feet)		**180.14**
Annual Average(gpd)	**160,328**	

Note: Influent flow rate is the average daily value over each month.

3.2 Precipitation and Evaporation

Precipitation data for the water balance is based on the California Irrigation Management Information System (CIMIS) station #126 located at the San Benito County Water District (SBCWD) offices (approximately 3-miles from the Ridgemark WWTP). The monthly precipitation for 2020 is shown in Table 3-2.

Table 3-2: 2020 Precipitation Data

Month	Precipitation (in)
January 2020	1.39
February 2020	0
March 2020	2.79
April 2020	1.18
May 2020	0.41
June 2020	0.24
July 2020	0.14
August 2020	0.02
September 2020	0.00
October 2020	0.00
November 2020	0.42
December 2020	0.75
Annual Total	**7.34**

Evaporation data from CIMIS Station 126 Table 3-4 presents pan evaporation data for 2020. Pond evaporation rates are assumed to be 75% of pan evaporation rates to compensate for the extra heat transmitted to water through a pan's metal sides. Pond evaporation is thus calculated at 39.00 inches per year. With precipitation during 2020 being 7.34 inches as shown in Table 3-2, the annual net pond evaporation was 31.66 inches.

Table 3-4: Pan and Pond Evaporation Data

Month	Pan Evaporation (in)*	Pond Evaporation (in)
January 2020	1.60	1.20
February 2020	2.80	2.10
March 2020	3.15	2.36
April 2020	4.54	3.41
May 2020	6.52	4.89
June 2020	7.16	5.37
July 2020	6.97	5.23
August 2020	6.24	4.68
September 2020	4.80	3.60
October 2020	4.14	3.11
November 2020	2.26	1.70
December 2020	1.82	1.37
Annual Total	**52.00**	**39.00**

*Source: CIMIS Station 126 for 2020

Pond 4 was in operation from Jan.-May during which period it experienced 5.77 inches of rain and 13.96 inches of evaporation. The pond was partially full with an average surface area of 0.6 acres. The equation below demonstrates the volume of evaporated water during this period.

$$(13.96\ in - 5.77\ in) X \frac{1\ ft}{12\ in}\ X\ 0.6\ ac = 0.41\ ac\ ft$$

Pond 3 filled from June-Oct. 2020 and was full from Oct.-Dec. During this time it experienced 1.75 inches of rain and 25.06 inches of evaporation. Being as Pond 3 is rather small and the surface area does not significantly change with its fullness, the minor changes in surface area as the pond filled can be neglected. Therefore, Pond 3 is assumed to have a water surface area of 0.3 acres through this whole period. The equation below demonstrates the volume of evaporated water during this period.

$$(25.06\ in - 1.75\ in)\ X \frac{1\ ft}{12\ in}\ X\ 0.3\ ac = 0.58\ ac\ ft$$

Pond 6 received some water from Oct.-Dec. but did not fill and had at most 0.1 acres of water surface. During this time it experienced 1.17 inches of rain and 6.18 inches of evaporation. The equation below demonstrates the volume of evaporated water during this period.

$$(6.18\ in - 1.75\ in)\ X \frac{1\ ft}{12\ in}\ X\ 0.1\ ac = 0.04\ ac\ ft$$

Therefore, the water balance regarding precipitation and evaporation is a net removal of approximately **1.76** acre feet of treated effluent in 2020.

3.3 Percolation

Operation in 2020

The primary means of wastewater disposal for the Ridgemark facilities is through percolation of the treated wastewater via disposal ponds. The Ridgemark WWTP facility has 4 disposal ponds and the decommissioned RM II facility has 2 disposal ponds. The Ridgemark WWTP disposal ponds are operated on a rotation schedule rather than all being simultaneously active. This allows for regular ripping and other maintenance to be done on ponds not in service.

From January 1st, 2020 – May 28th, 2020 treated effluent was directed to Pond 4 for percolation while the other ponds remained dry. Then starting on May 29th, 2020 effluent from the Ridgemark WWTP was direct to Pond 3 to allow Pond 4 to dry and be ripped. By October 6th, 2020 Pond 3 had filled and the excess water beyond the percolation capacity of Pond 3 was pumped to Pond 6. Effluent was redirected to Pond 4 on December 15, 2020 after it had been ripped to maintain its high percolation rate.

Historical Background

From the commissioning of the RM I ponds in 1974 until 2005 the percolation ponds at RM I were never drained or ripped to maintain high percolation rates. As the percolation rates slowly decreased due to plugging of the pores in the soil, the District developed additional percolation ponds to dispose of the effluent. Percolation Pond 5 was constructed in 1984 directly south of Ponds 3 and 4. Percolation Pond 6 was later constructed in 1992 for additional percolation capacity. In 2006, Sunnyslope hired RMC to conduct a Long-term Wastewater Management Plan as there were continuing percolation capacity issues. A key determination of this study was the need to improve the percolation rates in Sunnyslope's existing ponds through regular ripping and regular maintenance. Prior to maintenance that was performed on RM I Ponds 3 and 4 in 2005, the percolation rate for Ponds 3, 4, and 5 at RM I was estimated to be only 0.34 inches/day (SSCWD *Long-Term Wastewater Management Plan*, RMC 2006). This was mainly due to decades of accumulated solids which largely sealed the bottom of the ponds and hindering the natural percolation rates of the soil.

However, after Ponds 3 and 4 were drained, dried, and had the solids removed Pond 4 was observed to have a percolation rate of 5.97 in/day in August 2006. Ponds 3 and 5 were estimated to have percolation rate of 3 in/day. While the Pond 6 percolation rate was originally estimated to be the maximum observed percolation rate of 3.82 in/day based on the Water Balance in the *Long-Term Wastewater Management Plan*, subsequent percolation monitoring in Pond 6 was performed that indicated a percolation rate range between 1.0 in/day and 3.0 in/day depending on level in the pond. An average Pond 6 percolation rate of 1.75 in/day (SSCWD *Long-term Wastewater Management Plan*) was assumed for the capacity analysis. RM II Ponds 3 and 4 have an estimated percolation capacity of 1.37 in/day (SSCWD *Long-Term Wastewater Management Plan*) but have been decommissioned since 2013.

Updated Percolation Analysis

The improved quality of the treated wastewater with the operation of the Ridgemark WWTP and the continued ripping of Percolation Ponds 3, 4, and 5 have significantly improved the percolation rates of these ponds.

Pond 4 operated as the single percolation pond for a 148-day period from January through May of 2020 when it disposed of approximately 23.4 million gallons or 71.8 acre-feet. Over this time period approximately 0.4 acre-feet was lost to evaporation as shown in Section 3.2. The water level in the pond had minimal variation indicating that flow into the pond roughly equaled the volume of water leaving via percolation and evaporation. Therefore, approximately 71.4 acre-feet percolated. Pond 4 was partially full for an effective surface area of about 0.6 acres. The equation below calculates the daily percolation rate.

$$\frac{71.4\,AF}{148\,day}\,X\,\frac{1}{0.6\,ac}\,X\,\frac{12\,in}{1\,ft}=9.7\frac{in}{day}$$

In 2018 immediately following ripping of Pond 4, a percolation rate of 22.3 in/day was calculated by this method. The significant decrease in percolation rate indicates the sealing of soil pores. This highlights the importance of regular maintenance ripping in the ponds. Thus an average percolation rate of 16 in/day is used for capacity analysis in Table 3-3.

Pond 3 was operated from late May through mid-December. During this 201 day period, approximately 26.3 million gallons or 80.7 acre-feet was disposed of with 0.6 acre-feet attributable to evaporation. Thus it is assumed that 80.1 acre-feet percolated in Pond 3. The effective surface area of Pond 3 is 0.3 acres, neglecting the minor surface area variations as the pond filled. The equation below calculates the daily percolation rate for Pond 3.

$$\frac{80.1\,AF}{201\,day}\,X\,\frac{1}{0.3\,ac}\,X\,\frac{12\,in}{1\,ft}=15.9\frac{in}{day}$$

Pond 3 had been ripped before being placed in operation so this percolation rate is assumed to be its maximum. A slightly more conservative percolation rate of 12 in/day is used for the capacity analysis in Table 3-3.

Though approximately 9.0 million gallons or 27.6 acre-feet were directed to Pond 6 over a 168 day period, a sufficient water level equilibrium was never achieved to conduct this form of percolation rate calculation. Therefore, the percolation rate of 1.75 inches/day from the 2006 Long-Term Wastewater Management Plan will be assumed for Table 3-3. Pond 5 was not operated in 2020 but the a similar percolation rate calculation conducted in 2018 revealed a percolation rate of 8.5 in/day.

Disposal Capacity

Table 3-3 summarizes the maximum surface areas, percolation rates, and annual maximum percolation capacities for each disposal pond.

Table 3-3: Ridgemark Disposal Pond Maximum Surface Area

Pond	Max Surface Area (acres)	Percolation Rate (in/day)	Annual Max Capacity (AFY)
Pond 3	0.3	12	110
Pond 4	0.7	16.0	340
Pond 5	1.2	8.5	310
Pond 6	2.1	1.75 *	110
RM II Pond 3 (not used)	1.1	1.37	45
RM II Pond 4 (not used)	1.1	1.37	45

* Percolation Rate for Percolation Pond 6 has not been recalculated since the Ridgemark WWTP sequential batch reactor plant upgrade and continued pond ripping. Thus the percolation rates may be significantly higher than shown.

The Annual Maximum Capacity for each percolation pond was determined using the equation below.

$$\text{Max Surface Area } acres\ X\ \text{Percolation Rate} \frac{in}{day}\ X\ 365 \frac{days}{year}\ X\ \frac{foot}{12\ in} = \text{Annual Max Capacity } AFY$$

By adding the annual maximum capacity of Ridgemark WWTP Ponds 3, 4, 5, and 6, the cumulative maximum percolation capacity is approximately **870 AFY**. RM II Ponds 3 and 4 are no longer in active operation and therefore are not considered in the cumulative annual maximum percolation capacity but could be utilized with minor infrastructural changes.

3.4 Water Balance Summary

The purpose of the water balance analysis was to identify the 2020 disposal balance and assess the disposal capacity of the facilities. Table 3-5 summarizes the actual influent and disposal quantities for Ridgemark WWTP in 2020.

Table 3-5: 2020 Water Balance Summary

Site	Total Influent Raw WW Flow (AF)	Net Evaporation (AF)	Treated WW Effluent Pond Percolation (AF)
Ridgemark WWTP	180.14	1.76	178.38
RM II (Decommissioned)	N/A	N/A	N/A

Using the percolation information from Table 3-3, the total disposal capacity at Ridgemark WWTP is 870 AF per year. In 2020, only 20% of overall percolation capacity was utilized. The District will continue to monitor and observe percolation rates in 2021 to further refine the estimated percolation rates. Substantially higher percolation rates have been observed in Ponds 3, 4, and 5 since the completion of the Sequential Batch Reactor Treatment Plant and with regular ripping of the ponds. This has likely also significantly increased percolation rate in 6 as well, but this pond has not yet been utilized to the point of percolation equilibrium which is necessary for the analysis.

In the third quarter 2013, the RM II facility was decommissioned, and all wastewater flows were redirected to the Ridgemark WWTP. The total disposal capacity for the RM II facility is calculated at 90 AFY based on the RM II Pond 3 and 4 percolation rate of 1.37 in/day. Some infrastructure improvements would be required to utilize these ponds for percolation. Treatment Pond 1 at the Ridgemark II facility was converted to a Ridgemark II lift station emergency overflow holding pond while Treatment Pond 2 was abandoned.

4 Treatment Process Performance

Table 4-1 summarizes the average influent and effluent water quality at the Ridgemark WWTP facility and summarizes WDR water quality regulations that are in effect since 2010. Ridgemark WWTP treatment process and effluent water quality are meeting all permit requirements with the exception of Chlorides.

Table 4-1: 2020 Average Influent and Effluent Water Quality

Existing Water Quality Parameter	RM I SBR Influent	RM I SBR Effluent	RM I % Removal	2010 Permit Requirement
TDS (mg/L)	984	824	N/A	1,200
Sodium (mg/L)	213	193	N/A	200
Chloride (mg/L)	310	262	N/A	200
Nitrate as N (mg/L)	NA	0.52	N/A	5
Ammonia as Nitrogen (mg/L)	NA	0.94	N/A	5
Total Nitrogen (mg/L)	59.23	3.25	94.5%	
BOD_5 (mg/L)	242.5	3.99	98.4%	30
TSS (mg/L)	239.38	0.98	99.6%	30
pH	7.70	7.60	N/A	6.5-8.4

Data is average of 12 monthly sampling events from Jan – Dec 2020.

The Ridgemark Wastewater Treatment Plant's SBR treatment process has consistently treated the wastewater effluent to within regulation standards for Nitrate, Ammonia, BOD_5, TSS, and pH since it began operation at the end of 2012. The treatment process is not designed to remove TDS, Sodium, or Chlorides so the main strategy for salinity control is by reducing influent salinity through reducing water softener use.

The District achieved compliance with TDS regulations in 2015 and has continued to remain under the limit through 2020. The effluent TDS has been drastically reduced from previous concentrations that were consistently above 1,600mg/L in 2014, to a current annual average concentration of 824 mg/L. This is a decrease of 48.5% in six years.

In 2018, treated wastewater effluent met the regulatory limit for Sodium of 200mg/l and has continued to meet it through 2020. This is a significant accomplishment as Sodium concentrations were as much as 400mg/l in 2014 and have decreased by over 50% to meet the regulation. Sodium concentrations in the effluent have been on a consistent downward trend correlating to the District's salinity management efforts.

Along with the Sodium and TDS levels, the effluent Chloride concentration has been steadily declining from 580mg/L in 2014 to 262mg/L in 2020. This represents a decrease of 55% and shows significant progress toward achieving compliance. However, this decrease in Chlorides is beginning to slow as many salinity management measures are already being practiced. Thus, Sunnyslope will redouble its efforts to reduce residential water softener use. Water softeners remain the largest contributor to Chlorides in the wastewater influent and effluent. Based on the current trend from 2014 through 2020, it is projected that the effluent quality may be in full compliance with the Chloride regulation as early as 2023.

5 Past and Future Steps

In order to reduce the Ammonia, BOD_5, and TSS levels in the treated wastewater at the RM I and II wastewater treatment plants, a new SBR treatment plant designed and built as Ridgemark WWTP. The construction contract was awarded in May 2011 and the Sequential Batch Reactors were operational by the end of 2012. Construction of the sludge treatment and drying beds was completed in 2013. RM II influent flow was rerouted to Ridgemark WWTP for treatment in the third quarter of 2013 to consolidate all wastewater treatment at that site. Since its construction, the Ridgemark WWTP has always met all Ammonia, BOD_5, and TSS regulations.

In order to address the salinity regulations, the District has worked with the City of Hollister, San Benito County Water District, San Benito County, and other stakeholders to develop agreement on the preferred regional projects and strategies. In 2008, SSCWD joined the Governance Committee of the Hollister Area Urban Water and Wastewater Management Plan in order to become an integral part of this regional effort to improve potable water and wastewater quality. The strategy laid out through this plan was to increase treatment and distribution of softer high quality surface water, thus reducing the regions reliance on the hard groundwater. Therefore, domestic customers in Sunnyslope and Hollister could remove or reduce the use of their water softeners. These water softeners are a significant source of salt for the wastewater stream and a primary reason for the salinity issues with wastewater effluent.

In June 2013, Sunnyslope County Water District, the City of Hollister, and San Benito County Water District entered into a Water Supply and Treatment Agreement to implement the entire Hollister Urban Area Water and Wastewater Master Plan and Coordinated Water Supply and Treatment Plan. The three major water supply and treatment components for the Coordinated Water Supply and Treatment Plan were to upgrade the Lessalt Surface Water Treatment Plant, to construct a new West Hills Surface Water Treatment Plant along with the Crosstown Pipeline, and to build a North (San Benito) County Groundwater Bank to supply these two surface water treatment plants in time of drought.

The Upgrade to the Lessalt Water Treatment Plant, pump station, and a potable water pipeline connecting the Lessalt surface water treatment plant to the Ridgemark Pressure Zone was completed in December 2014. These facilities now allow the Ridgemark Pressure Zone (which includes most Ridgemark WWTP customers) to receive softer surface water from Lessalt.

The West Hills Water Treatment Plant was constructed and began operation in 2017. This plant can supply up to 4.5 MGD of soft surface water to customers in Hollister. This will significantly improve the salinity parameters at the Hollister Regional Domestic Water Reclamation Facility. The Crosstown Pipeline was completed in September 2019 and began moving treated water from West Hills to

Sunnyslope's Middle Pressure Zone. This can provide softer water to the remaining Ridgemark WWTP customers who were not receiving water from Lessalt. Additionally, most Middle Zone customers add to the Hollister Water Reclamation Facility sewer stream. Improved water quality for them can thus further improve salinity at that facility.

The North County Groundwater Bank project is intended to ensure sufficient high quality surface water is available to the Lessalt and West Hills water treatment plants. The Phase 1 Feasibility study began in late 2019 to evaluate the potential water quality and quantity from this project. Additionally, it considers various engineering, financing, environmental, and political issues and opportunities that could be solved with this regional project.

Because of the benefits provided by these projects, Sunnyslope has been in cooperation with the Water Resources Association of San Benito County (WRA) has been conducting a significant educational campaign through door hanger distribution, website posts, direct outreach at community events, and in the annual Drinking Water Quality Report. The main goal of this outreach is to reduce the use of self-regenerating water softeners. These water softeners are a significant source of TDS, Sodium, and Chloride in the wastewater stream. Rebates of $250-$300 for customers who remove their brine discharging water softeners have been applied to 21 sewer customers in 2020. At least 237 customers, (representing approximately 20% of total sewer customers) have removed their water softeners through the program since the Lessalt WTP Upgrade in 2014. Additionally, in February 2015 the District adopted new codes prohibiting the replacement and/or installation of brine discharging water softeners.

Section D

Operator Certification

Sunnyslope County
Water District

Sunnyslope County Water District

Certification Renewal Dates

Sunnyslope County Water District

Name	Certificate	Renewal Date	Expiration Date	Grade	Cert. #	Operator #	From This Date
Jose J. Rodriguez	W/W Treatment	12/14/2023	12/14/2023	5	V-9646		
Dee J. Burbank, Jr	W/W Treatment	1/2/2022	1/2/2022	3	III-43830		
Adan Cervantes	W/W Treatment	12/15/2023	12/15/2023	3	III-28756		
Luis Vasquez-Herrera	W/W Treatment	7/1/2019	7/1/2022	3	41555		
Abel Alvarez	W/W Treatment	2/8/2023	2/8/2023	2	I-39670		
Kevin Castro	W/W Treatment	7/26/2021	7/27/2021	2	II-39672		
Bazilio Hernandez	W/W Treatment	3/11/2019	3/11/2022	1	44153		
David Padilla	W/W Treatment	6/30/2021	6/30/2021	1	I-10194		
Manuel T. Chavez	W/W Treatment	6/30/2023	6/30/2023	2	II-10633		
Ernie Eclarin	W/W Treatment	2/3/2023	2/3/2023	2	I-10632		
Scott Watson	W/W Treatment	3/9/2021	3/9/2021	2	I-39671		
Troy E. Quick	W/W Treatment	1/17/2022	1/17/2022	1			
Diego Perez-Bribiesca	W/W Treatment	4/23/2023	4/23/2023	OIT			
Michael Vargas-Garcia	W/W Treatment	6/7/2022	6/7/2022	OIT			
Dee J. Burbank, Jr	CWEA - Collection	10/31/2021	10/31/2021	2	1308219739		5/1/2017
Jose J. Rodriguez	CWEA - Collection	8/31/2021	8/31/2021	1	1308220684		
Michael Vargas-Garcia	CWEA - Collection	9/30/2021	9/30/2021	1	1308221190		
Abel Alvarez	CWEA - Collection	10/31/2021	10/31/2021	1	1308231303		
Diego Perez-Bribiesca	CWEA - Collection	10/31/2021	10/31/2021	1	1308231511		
Dee J. Burbank, Jr	CWEA - Mechanical Technologist	6/30/2021	6/30/2021	1	1308220413		
Jose J. Rodriguez	CWEA - Industrial Waste Treatment Plant	8/31/2021	8/31/2021	1	1308214672		
Adan Cervantes	CWEA - Laboratory 1	5/31/2021	5/31/2021	1	80731013		
Luis Vasquez-Herrera	CWEA - Laboratory 1	4/30/2021	5/1/2021	1	120431002		

Sunnyslope Water District

Section E

Operation and Maintenance

Operational Description

Dual Mode SBR (Sequencing Batch Reactor) / ICEAS®
(Intermittent Cycle Extended Aeration System)
NDN Process

Ridegemark I WWTP
Sunnyslope, California USA

Project No. 09-7087A

ITT Water & Wastewater
Sanitaire Products
Brown Deer, Wisconsin, USA

July 2011

ITT

Issue, Revision, and Approval Record

Issue	Date	Sections Changed	Description of Changes	Changes Made By	Approved By
A	07/12/2011	na	na	SOS	FBM; 7/25/11
B	09/13/2011	5.1, 5.3	Plant Design Parameters, WAS Set Point	SOS	FBM; 9/15/11

Table of Contents

1.0 Introduction

ITT Water & Wastewater – Sanitaire Products is the provider of the Sanitaire process and associated equipment. This Operational Description describes the basic operation of the process and is specific to the following plant:

Project Name:	Ridgemark I WWTP
Project Location:	Sunnyslope, CA USA
Sanitaire Number:	09-7087A
Process, Basins:	NDN, 2-Basin

This document will be used in conjunction with the Functional Design Specification (FDS) for the system. This document is a process overview, whereas, the FDS will describe in detail the control of each system component, interlocks between components, operating ranges and how to change control set points.

2.0 Abbreviations

The following abbreviations apply to this Operational Description and the FDS for the control logic for the plant.

ADWF	Average Dry Weather Flow
Auto	Automatic Control
BOD	Biochemical Oxygen Demand
BOD_5	Biochemical Oxygen Demand - 5 day test
BWL	Bottom Water Level
CBOD	Carbonaceous Oxygen Demand
COD	Chemical Oxygen Demand
DO	Dissolved Oxygen
EQ	Equalization
ETM	Elapsed Time Meter
FDS	Functional Design Specification
F/M	Food to Microorganism Ratio
FS	Float Switch
ft	feet
gpd	gallons per day
HMI	Human-Machine Interface
HOA	Hand-Off-Auto
HOR	Hand-Off-Remote
HRT	Hydraulic Retention Time
I/O	Inputs/Outputs
ICEAS	Intermittent Cycle Extended Aeration System
kg	kilogram
lb	pound
Lps	Liters per second
LT	Level Transducer
m	meter
m^3/day	cubic meters per day
MCC	Motor Control Center
mg/L	milligrams per Liter (parts per million, ppm)
MLSS	Mixed Liquor Suspended Solids
MLVSS	Mixed Liquor Volatile Suspended Solids
NDN	Nitrification/Denitrification Process
NDNP	Nitrification/Denitrification/Phosphorus Process
NH_3-N	Ammonia - Nitrogen
NIT	Nitrification Process
NO_2-N	Nitrite - Nitrogen
NO_3-N	Nitrate - Nitrogen
COAO	Close-Off-Auto-Open
ORP	Oxidation-Reduction Potential
PID	Proportional Integral Derivative
P&ID	Piping and Instrumentation Diagram
PC	Personal Computer
PD	Positive Displacement
PDWF	Peak Dry Weather Flow
PLC	Programmable Logic Controller
PWWF	Peak Wet Weather Flow
RAS	Return Activated Sludge
SBR	Sequencing Batch Reactor
SCADA	Supervisory Control and Data Acquisition
SOR	Standard Oxygen Requirements
SOTE	Standard Oxygen Transfer Efficiency
SRT	Sludge Retention Time
SSV	Settled Sludge Volume
SVI	Sludge Volume Index
SWD	Side Water Depth
TKN	Total Kjeldahl Nitrogen
TN	Total Nitrogen
TP	Total Phosphorus
TWL	Top Water Level
VFD	Variable Frequency Drive
WAS	Waste Activated Sludge
WWTP	Wastewater Treatment Plant
°C	degrees Celcius

3.0 SBR and ICEAS Process

The sequencing batch reactor (SBR) process is a modification of a conventional activated sludge plant. The SBR process allows the unit processes of react, settle, and discharge to occur sequentially in one basin. As a result, the "footprint" of a SBR is typically much smaller than that of a conventional activated sludge plant. The Intermittent Cycle Extended Aeration System (ICEAS) process is a modification of a conventional SBR.

The ICEAS process allows continuous inflow of wastewater into the treatment basins during all phases of the cycle. The continuous inflow is an advantage over conventional SBRs in that it optimizes biological treatment by supplying a constant food source for the process and equalizes the flow loadings in multiple-basin systems. A cycle consists of different phases (react, settle, and decant) during which treatment takes place. The cycles operate continuously in each basin to meet the treatment goals of the plant.

The Ridgemark I WWTP has the capability to operate as either an SBR process or ICEAS process. If the SBR mode is selected, the influent valves will alternate positions to allow inflow of wastewater into one (1) basin at a time. If the ICEAS mode is selected, the influent valves will remain open to allow continuous inflow at all times in the cycle.

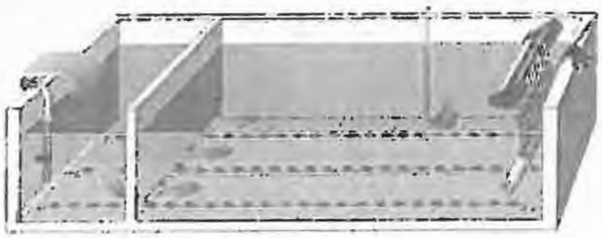
3.1 Basin Design

An ICEAS basin has two compartments: a pre-react zone and a main-react zone. The pre-react zone acts as a biological selector and receives the continuous influent flow. The two compartments are separated by a baffle wall that spans the tank width and has openings at the basin floor. The baffle wall prevents short circuiting and allows the two zones to be hydraulically connected as it directs the flow to enter the main-react zone at the bottom of the basin.

3.2 Process Overview

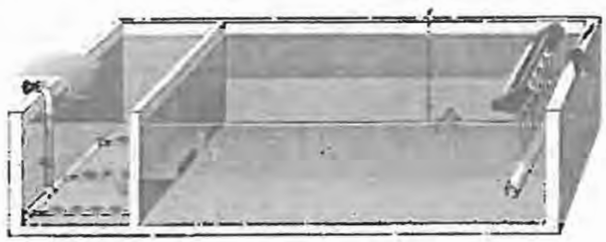
The following is a brief process overview of the three phases common to all Sanitaire cycles: 1.) React, 2.) Settle, and 3.) Decant.

React Phase



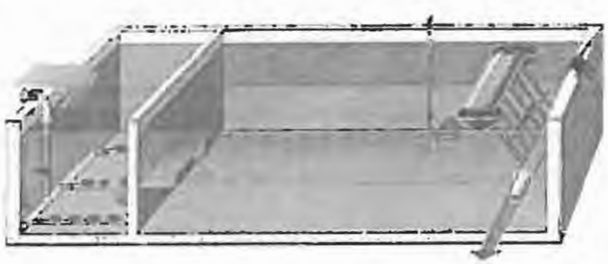
During the react phase, raw wastewater flows into the pre-react zone continuously to react with the mixed liquor suspended solids. Depending on the process scheme, the basin contents are aerated, anoxically mixed, allowed to react anaerobically, or a combination thereof. As the basin continues to fill, biological oxidation/reduction reactions take place simultaneously to treat the wastewater.

Settle Phase



During the settle phase, basin agitation from the react phase (i.e. aeration or mixing) is stopped to allow the solids to settle to the bottom of the basin. Raw wastewater continues to flow into the pre-react zone as the main-react zone settles. As the solids settle, a clear layer of water will remain on top of the basin.

Decant Phase



During the decant phase, the decanter rotates downward to draw off the clarified supernatant and discharge it to the effluent line. Raw wastewater continues to flow into the pre-react zone as the main-react zone is decanted. Sludge is typically wasted from the basin during this phase in the cycle.

3.3 Basin Layers

The picture illustrates the three stratified layers that are formed in each basin at the end of the settle phase and beginning of the decant phase. The sludge blanket forms on the bottom of the basin as the mixed liquor suspended solids (MLSS) settle. A buffer zone of three feet acts to buffer the sludge blanket from the volume that will be removed during the decant phase. The drawdown is the top layer of clear liquid that remains after the MLSS settle and is the maximum volume that will be drawn off during the decant phase.

3.4 Basin Hydraulics and Loading

In the SBR cycle, raw influent (usually screened and degritted) flows into one basin at a time with the use of motorized influent valves. During all phases of the ICEAS cycle, raw influent (usually screened and degritted) flows into the basins. To allow equal loading, flow is split equally to all basins by a splitter box. Since influent flow is continuous, the ICEAS process can be operated in a single basin allowing for basins to be taken out of service for maintenance or during low flow/loading conditions.

The SBR/ICEAS basins are designed to handle the average dry weather flow (ADWF), the peak dry weather flow (PDWF), and the peak wet weather flow (PWWF) as specified in the design parameters. Flow enters the basin either in batches or continuously and the treated effluent leaves the basin intermittently (only during the decant phase). Two time-based cycles are used to hydraulically process the flow. The normal cycle will process the ADWF and the PDWF. The storm cycle has time periods that are 25 percent shorter than the normal cycle to process flows above the PDWF up to the PWWF.

3.5 Nitrification-Denitrification Process Operation

The nitrification-denitrification (NDN) process operates to remove BOD, TSS, ammonia-nitrogen (NH_3-N) through nitrification, and nitrite-nitrogen (NO_2-N)/nitrate-nitrogen (NO_3-N) through denitrification. In the NDN process, the react phase consists of all alternating periods of aeration and anoxic mixing. The aeration periods supply oxygen to the biomass for BOD oxidation and nitrification. The anoxic mixing periods provide minimal oxygen and mixing of the biomass for denitrification.

3.6 Cycle Time – NDN Process, 2 Basins

The SBR/ICEAS process will complete one normal cycle every 288 minutes or 4.8 hours. Each cycle is divided into 168 minutes of react phase, 60 minutes of settle phase, and 60 minutes of decant phase. The react phase is divided into seven 24-minute periods that alternate anoxic mix and aeration. There are five periods of aeration or "air on", which have adjustable blower run times. The second and sixth periods are anoxic or "air off" periods, which have adjustable mixer

3.7 Storm Cycle Transitions

The system switches from normal cycle operation to storm cycle operation when the level sensing equipment in a basin detects a water level that corresponds to a flow that is above PDWF. After the storm cycle is initiated, the system will stay in the storm cycle until the basin that indicated a storm event has completed its cycle (end of decant phase) and completed another full storm cycle.

At the completion of the full storm cycle for that basin, the system will switch back to normal cycle operation if no basins are indicating water levels that correspond to a flow above PDWF. If a basin detects high water levels that indicate a flow above PDWF, the system will stay in the storm cycle until normal cycle water levels return. The system can switch into the storm cycle at any time during the normal cycle. The system cannot, however, switch from storm back to normal cycle until the completion of the storm cycle for the initiating basin.

4.0 Equipment Operation

The following sections contain brief descriptions of the equipment operation for the ICEAS process. More detailed descriptions are found in the FDS.

4.1 Control System

The control system for the ICEAS NDN process has a control panel, which contains the programmable logic controller (PLC), a human-machine interface (HMI), control switches, indicator lights, power connection, etc. The motor starters and variable frequency drives (VFDs) for the equipment are housed in a separate motor control center (MCC). The PLC contains the logic to operate the process equipment when the equipment is in automatic control. Local and/or remote control switches are provided for equipment operation when taken out of automatic control. The HMI is an operator interface that communicates with the PLC to display system status, allow set point adjustments, and perform alarm handling.

4.2 Decanters

Each basin has a decanter installed on the wall opposite the pre-react zone. The decanter operates to remove clarified effluent from the top layer of the basin (drawdown) during the decant phase of the cycle. The drawdown is defined by the top water level (TWL) and the bottom water level (BWL). When the decanter is not operating, it remains in a parked position above the TWL, which eliminates the possibility of solids carryover during other phases in the cycle. In the park position, the decanter can act as a clarifier weir in the event of a power outage.

The decanter is mechanically operated by the use of an electro-mechanical actuator that is mounted on the basin walkway for easy access. The actuator moves the decanter between the top and bottom limit switches whenever the decanter is in operation. The decanter speed is controlled through the use of a variable frequency drive (VFD). As a result, the decanter discharge rate will be relatively constant from the time the decanter enters the water to the time it reaches the BWL.

During the end of the settle phase, the decanter will travel from the park position to the TWL. When decant phase is started, the decanter will travel from the TWL to the BWL in the allotted time to remove the drawdown volume from the basin. Since influent flow to the plant varies, the water level in the basin at the start of each decant phase will be at differing levels above BWL. Consequently, during the decant phase, the decanter will travel downward for a period of time before reaching the water surface. Also mounted on the decanter in front of the weir is a floatable scum guard that operates to exclude floating material during the decant phase.

4.3 Blowers

Three turbo blowers can operate to supply air to the aeration systems in the basins. Each blower is capable of delivering between 50 percent and 100 percent of the air requirements to the process in one basin at a time. One blower operates as the "Duty" blower and the other two operate as the "Standby" blowers, in the event that the "Duty" blower is not available. The "Duty" blower can alternate duty on a weekly basis.

4.4 Air Valves

Each basin has a motorized air valve, which will operate to allow air to enter one basin at a time. The two air valves will operate in an alternating sequence during blower operation; when one valve is open, the other one is closed, etc. The air valves divert air between the two basins when blower operation is required in the cycle. At certain times in the cycle, both basins will have the air valves closed. This will occur when one basin is in the settle or decant phase and the other basin is in an "air off" period of the react phase.

4.5 Aeration Systems

Each basin has two fine bubble aeration systems (one in the pre-react zone and one in the main react zone), which operates to deliver diffused air to the process. The aeration system only receives air when the air valve for the basin is open. A solenoid valve connected to the aeration system periodically opens and closes to allow the aeration system to purge and depressurize. The duration that the solenoid valve is open for purging and depressurizing is operator adjustable through the HMI. In addition to the automatic purge, the aeration system has a manual purge valve that the operator can use as needed.

4.6 Influent Valves

Each basin will have a motorized influent valve which, when open, will operate to allow influent wastewater to enter one basin at a time when "SBR mode" is selected. The two influent valves will operate in an alternating sequence; when one valve is open, the other is closed, etc. This allows continuous inflow of wastewater to one of the two basins during the cycle. Refer to the cycle charts, which show when the basin's influent valve is open. In the "ICEAS mode", all of the influent valves will be open all the time to allow for equal loading to all the basins.

4.7 Mixers

Each basin has two mixers installed in the main-react zone, which operate during the "air off" periods of the react phase. The operator can enable or disable the mixer during each "air off" period through the HMI. If a reduced "air on" time is selected for an air period or if the air shuts off due to the DO control system, the operator can select to run the mixers for these time periods as well. The aeration and mixers cannot be operating at the same time.

4.8 Waste Activated Sludge (WAS) Pumps

Each basin has a submersible pump, which operates to waste sludge from the basin during the decant phase of the cycle. The waste activated sludge (WAS) pump start and run times are adjustable through the HMI located on the ICEAS control panel to adjust the amount of sludge wasted.

4.9 Level Sensing Equipment

A level transducer and float switch are installed in each basin. The level transducer continuously indicates the basin water level at the HMI. The PLC uses the water level reading to calculate the corresponding flow rate into the basin. If the basin water level indicates that a flow above the PDWF is entering the basin, the system will transition into the storm cycle.

There are two float switches in each basin, a lower and upper float switch. The lower float switch has two functions. One function is to signal a high level in the basin and force the system into a settle phase to allow a minimum of 30 minutes of settle time prior to the water level overtopping the decanter. The second function is to signal that the system must transition into the storm cycle if the level transducer has not already signaled this to take place. The upper float switch is used in SBR mode to confirm water level in the basin after the fill cycle is completed. If the basin water level is below TWL after the fill cycle is complete, the system will be allowed to continue normal cycle operation, if the water level is at or above TWL, the cycle will remain in the forced settle mode of operation. The upper float switch is not used in ICEAS mode of operation.

4.10 Dissolved Oxygen (DO) Control System

The dissolved oxygen (DO) control system regulates the DO in the basin by controlling the blower operation. Each basin has a DO probe and analyzer. The analyzer sends the signal received from the probe in the basin to the PLC indicating the DO concentration in parts per million (ppm), which is the same as milligrams per liter (mg/L). High, low, and target DO set points in ppm are selected and entered at the HMI. Blower operation is regulated by the PLC based on the DO set points. When the high DO set point has been reached, there is a time delay before the blower will respond that is operator adjustable through the HMI. The goal of the system is to achieve a constant DO concentration without over- or under-aerating the process during the aeration periods in the react phase.

4.11 SBR Scum Valves

Each basin will have a motorized scum valve which, when open, will operate to allow floating scum to be removed from a basin by gravity. The two scum valves will operate independently, and will be controlled by the PLC, via inputs on the HMI. The valves will be controlled based on basin water level, cycle time, and duration of opening.

4.12 Utility Water Spray Control Valves

Each basin will have a motorized utility water spray valve which, when open, will operate to allow water through the spray header. Nozzles on the spray header will spray water towards the adjustable weir scum trough. The spray control valve can operate in manual or automatic mode. In automatic mode, the duration of the valve being open is operator selectable. The utility water spray valve will not open unless the scum valve is also open.

5.0 Plant Specifics

The specifics for the Ridgemark I WWTP are briefly described in this section. Refer to the Contract Documents for more details regarding the overall process at the plant.

5.1 Plant Design Parameters

The Ridgemark I WWTP has been designed based on the following influent wastewater characteristics and site conditions. These parameters have been used for basin design and the process criteria.

ADWF (Average Day Flow)	350,000	gpd
Maximum Day Flow	430,000	gpd
PDWF	725,156	gpd
PWWF (Peak 3 Hour Flow*)	967,000	gpd
Design BOD_5 Conc. (at 20°C)	338	mg/L
Design BOD Loading	987	lb/day
Design TSS Conc.	338	mg/L
Design TSS Loading	987	lb/day
Design TKN Conc.	54	mg/L
Design TKN Loading	158	lb/day
Alkalinity required (minimum)	159	mg/L
Wastewater Temperature, Min	16	°C
Wastewater Temperature, Max	20	°C
Ambient Air Temperature	0 to 32	°C
pH Range	6.5 to 8.5	SU
Site Elevation - above sea level	520	ft

*Includes plant recycle flow of 150,000 gpd

The ICEAS NDN process has been designed to meet the following effluent requirements on a 30-day arithmetic average.

BOD_5 Conc. (at 20°C)	30	mg/L
TSS Conc.	30	mg/L
NH_3-N Conc.	5	mg/L
Nitrate Conc.	5	mg/L

To meet the effluent requirements, the ICEAS NDN process has the following basin design.

Number of Basins	2	basins
Basin Length	77.0	ft
Basin Width	30.0	ft
TWL	18.5	ft
BWL	14.3	ft
Basin Volume at BWL	246,758	gallons
Basin Volume at TWL	319,680	gallons

To meet the effluent requirements, the ICEAS NDN process has been designed with the following parameters for each basin.

F/M Ratio	0.048	lb BOD/lb MLSS-day
SVI (after 30 min settle)	150	mL/gm (max)
MLSS (at BWL, design loading)	4,922	mg/L
MLSS (at TWL, design loading)	3,978	mg/L
HRT	1.56	days
SRT	28	days
Normal Decant Rate (ICEAS Mode)	1,293	gpm
Normal Decant Rate (SBR Mode)	1,209	gpm
Peak Decant Rate	2,418	gpm
WAS Produced (mass)	349	lb/day
WAS Produced @ 0.85% solids	4,928	gpd

5.2 Dissolved Oxygen Control Set Points

For nitrification to occur, it is important to maintain DO concentrations in the basin around 2 ppm during the aeration periods in the react phase. The following DO Set Points are recommended for design conditions and can be adjusted by the operator through the HMI.

Parameter	Set Point Value
Enable/Disable DO Control	On
High DO Set Point	3.0 ppm
Target DO Set Point	2.0 ppm
Low DO Set Point	1.0 ppm
High DO Off Delay	2 minutes

More information on changing set points is located in the controls FDS.

Unit Process	Comments
Effluent Wet Well	Controlled by others.
Storage Ponds	Controlled by others.

During the decant phase, the treated flow will leave the basins through the decanter and discharge into the effluent wet well. The flow will then be pumped through the effluent pipe into the disposal/storage ponds.

Sunnyslope Water District

Section F

Laboratory Information

Sunnyslope County
Water District

Name	Address	Certification
CM Analytical Inc.	6700 Brem Ln. Suite #10 Gilroy, CA 95020	1423 Exp. 7/31/2021
BSK Associates	1414 Stanislaus St Fresno CA 93706	1180 Exp. 4/30/2021

Sunnyslope Water District

Section G

Sludge Management

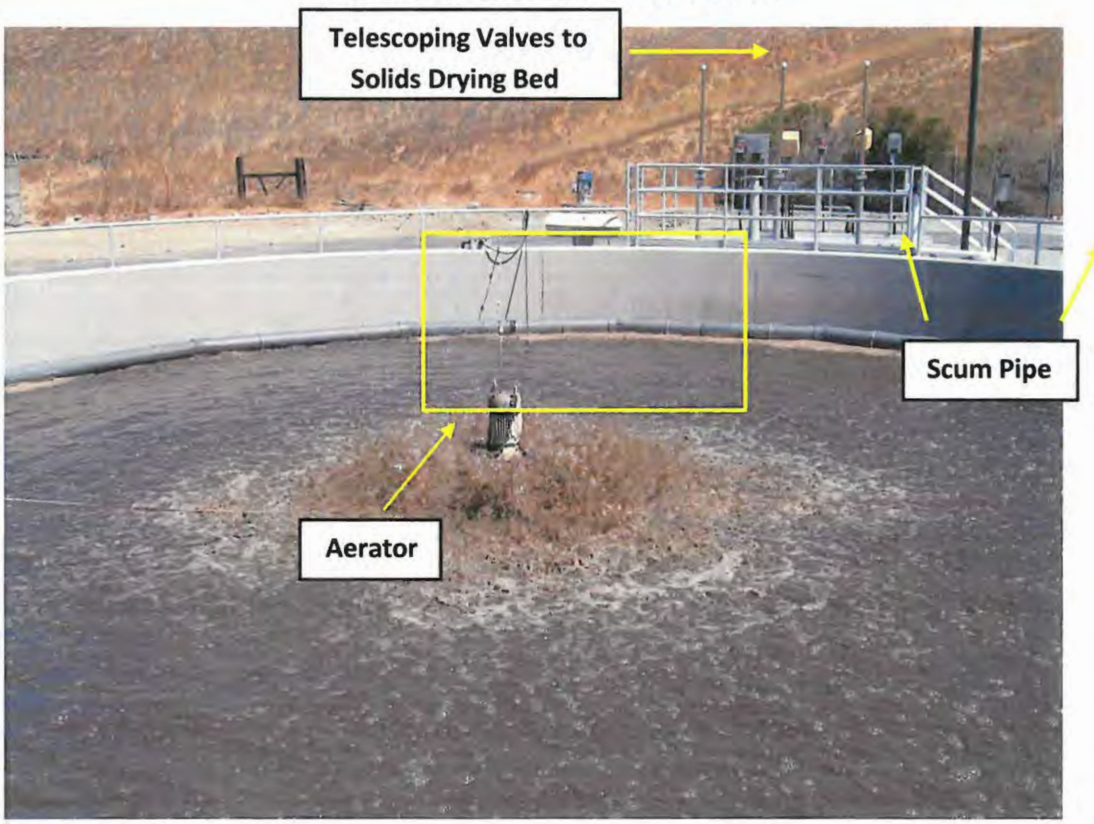
3570 Airline Highway
Hollister, California 95023-9702
Phone (831) 637-4670
Fax (831) 637-1399

Process Description

The solids storage tank holds biosolids wasted from the sequencing batch reactor process. A waste activated sludge (WAS) pump discharges the biosolids into the solids storage tank. This concrete tank provides approximately 60 days of solids retention time at buildout flows and loads. Storing the solids allows the WAS pumping to be de-coupled from the solids drying bed and provides flexibility in the operation of the solids handling systems. The storage tank is designed to mimic a facultative system with a surface aerator maintaining an aerobic zone on the top of the tank to minimize odors and a lower zone of anaerobic conditions.

As WAS is conveyed to tank, the water level will rise and the tank water level will need to be periodically decanted. During a decant step, the surface aerator should be turned off and solids will be allowed to settle. Supernatant can then be removed from the top of the tank with the telescoping valve and conveyed to the Plant Drain Pump Station (PDPS). Solids will periodically be removed from the bottom of the tank and conveyed to the solids drying beds for drying. Figure 8-1 shows a photo of the tank and the aerator in use.

Figure 8-1: Solids Storage Tank Photo



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Purpose and Intent

The principal objective of the solids storage tank is to support wasting of solids from the SBR. WAS from the SBR is pumped into the solids storage tank to maintain an optimal biomass in the SBR process. The solids storage tank then stores, continues to breakdown, and to provides separation of the supernatant from the solids. Periodically (primarily during dry weather periods), solids are removed from the bottom of the tank to the solids drying beds for drying and disposal.

Wastewater Characteristics

Solids concentration and volume in the solids storage tank will vary depending on discharge of solids to the drying bed, breakdown of solids in the tank, and WAS wasting rates (dependent on influent load).

Design Criteria

Table 8-1 summarizes the solids storage tank design criteria.

Table 8-1: Solids Storage Tank Design Criteria

Parameter	Value	Units
Tank Diameter	52	ft
Side Water Depth	20	ft
Total Liquid Volume	337,000	gals
Solids Storage Capacity	55,800	lbs
Solids Retention Time	60	days
Aeration Type	Surface Aerators	
Number	1	(existing)
Aerator Motor Size	7.5[a]	hp
Impeller Motor Size	5	hp

Footnotes:

a. District has several different sized aerators that can be used.

Process Overview

The solids drying beds receives solids from the storage tank for drying. The solids from the tank will be pumped to the drying beds and will primarily be water (~0.5% to 2% solids). Once in the drying bed, solids will be allowed to settle and the telescoping valve will be used to decant supernatant off the top. Supernatant from the top layer of the solid drying beds will be diverted to the plant drain pump station and pumped back to headworks. The solids are then allowed to dry in the drying beds for an extended amount of time before it is hauled away.

Figure 9-1 shows a solids drying bed when it is empty and Figure 9-2 provides a plan view of the three beds.

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Hollister, California 95023-9702
Phone (831) 637-4670
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Figure 9-1: Solids Drying Bed #1 (Empty)

Purpose and Intent

The principal objective of the solid drying beds is to air dry solids from the solids storage tank. Four solids drying beds are available to receive batches of solids from the storage tank. The solids content will be increased to approximately 15% solids and can be removed from the drying beds twice per year and hauled off site.

Solids Characteristics

Solids drying beds will receive solids drawn off the bottom of the solids storage tank and is expected to include a mix of anaerobic and facultative solids.

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Anticipated Performance

Please refer to Table 9-1 for the solids drying beds design criteria.

Table 9-1: Solids Drying Beds Design

Parameter	Value	Units
No. of Beds	4	
Area per Bed	5,775	square feet (sf)
Total Area	23,100	sf
Surface Type	Concrete	
Months of Operation	March to October	
Net Evaporation	29.2	inches
Number of Removals	4	Per year
Cake Depth	Up to 2	ft
Average Solids from Storage Tank	2%	
Average Final Solids Concentration	15%	

General Operations

Under initial Phase 1 flows, solids from the storage tank are envisioned to be pumped to the drying bed from March through October for drying. Table 9-4 summarizes net evaporation rates (approximately 29.2 inches per year) used in the dry bed design. Prior to filling solids drying beds, check that mud valves are closed and telescoping valves are in the full upright positions. Confirm that influent plugs valves are open and/or closed as desired for the drying beds that will be filled. The bed(s) are now ready to be filled.
The solids drying beds will receive batches of solids pumped from the solids storage tank over several days (Note: pumping over several days will allow the solids from the bottom of the solids tank to be removed more effectively from the 3 draw off locations).
As solids/flow is conveyed to the beds, it spreads out over the bed area to facilitate evaporation. The beds are designed for up to two feet of solids but can be operating initial at lower levels to enhance drying. Once flow has been batched into the basin solids should be allowed to settle before decanting the supernatant off using the telescoping valves. This would minimize the solids return to the plant drain pump station.

Sunnyslope County Water District

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Table 9-4: Historic Net Evaporation for Drying Bed Operation

Month	Rainfall (in)	Evaporation (in)	Net Evaporation (in)
Jan	1.31	1.54	
Feb	4.21	1.62	
Mar	0.57	2.39	1.82
Apr	0.26	3.63	3.37
May	0.08	4.43	4.35
Jun	0	4.69	4.69
Jul	0	5.49	5.49
Aug	0	4.52	4.52
Sep	0.1	3.75	3.65
Oct	1.95	3.28	1.33
Nov	0.54	2.07	
Dec	3.45	1.42	
Total			**29.2**

It may be advantageous to maintain a water cap on the solids depending on the characteristics of the solids from the basin. The water cap would help to minimize odors and provide a period for aerobic conditions to establish. Once aerobic conditions have established, the water can be decanted from the top of the solids.

The solids will then be allowed to air dry over a couple months and should be disked or turned over periodically to enhance drying and minimize odors. The basins were designed for a small loader to be used to turn solids over. Once the solids percent has been achieved, solids would be off hauled to a landfill or other approved site.

At build out flows, it was envisioned that dewatering equipment would be implemented to dewater solid before sending solids to the drying beds. This would allow for a 50% solids cake to be achieved for disposal therefore minimizing the weight and frequency of hauling.

Sunnyslope County Water District

Sunnyslope County Water District

Waste Discharge Identification # 3 351000001

Discharge Self-Monitoring Report

Monitoring and Reporting Program # R3-2004-0065

Ridgemark Estates Subdivision

Wastewater Treatment Plant

RM I SBR Wastewater Sludge Disposal

Sludge Disposal from Drying Beds, Tons										
2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
70.71	62.76	33.62	55.61	36.42	47.32	31.35				

Disposal at the John Smith Land Fill Hollister California

Certificate of Analysis

Sample ID: ADG2205-05
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 1 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

BSK Associates Laboratory Fresno

General Chemistry

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Nitrate as N, DI Extract	EPA 300.0	**17**	2.3	mg/kg	1	ADG1594	07/28/20	07/29/20	
Percent Solids	SM 2540B	**82**	0.10	% by Weight	1	ADG1356	07/23/20	07/24/20	
Total Kjeldahl Nitrogen	EPA 351.2	**50000**	9700	mg/kg	387	ADG1753	07/30/20	08/05/20	MS1.3

Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Antimony	EPA 6020	ND	10	mg/kg	1	ADG1629	07/28/20	07/29/20	
Arsenic	EPA 6020	**3.1**	2.5	mg/kg	1	ADG1629	07/28/20	07/29/20	
Barium	EPA 6020	**230**	6.3	mg/kg	1	ADG1629	07/28/20	07/29/20	
Beryllium	EPA 6020	ND	1.3	mg/kg	1	ADG1629	07/28/20	07/29/20	
Cadmium	EPA 6020	ND	1.3	mg/kg	1	ADG1629	07/28/20	07/29/20	
Chromium	EPA 6020	**19**	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Cobalt	EPA 6020	ND	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Copper	EPA 6020	**310**	5.0	mg/kg	1	ADG1629	07/28/20	07/29/20	
Lead	EPA 6020	ND	6.3	mg/kg	1	ADG1629	07/28/20	07/29/20	
Mercury	EPA 6020A	ND	0.50	mg/kg	1	ADG1629	07/28/20	07/29/20	
Molybdenum	EPA 6020	ND	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Nickel	EPA 6020	ND	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Selenium	EPA 6020	**6.6**	2.5	mg/kg	1	ADG1629	07/28/20	07/29/20	SD1.1
Silver	EPA 6020	ND	13	mg/kg	1	ADG1629	07/28/20	07/29/20	MS1.2
Thallium	EPA 6020	ND	2.0	mg/kg	1	ADG1629	07/28/20	07/29/20	
Vanadium	EPA 6020	**14**	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Zinc	EPA 6020	**620**	63	mg/kg	1	ADG1629	07/28/20	07/29/20	

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Organochlorine Pesticides by GC-ECD									
4,4'-DDD	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	CV0.0
4,4'-DDE	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
4,4'-DDT	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	CV2.0
Aldrin	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
alpha-BHC	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
beta-BHC	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Chlordane (Technical)	EPA 8081A	ND	50	ug/kg	50	ADG1229	07/22/20	07/27/20	CV0.0
delta-BHC	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Dieldrin	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Endosulfan I	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Endosulfan II	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Endosulfan Sulfate	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Endrin	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-05
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 1 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Organochlorine Pesticides by GC-ECD									
Endrin Aldehyde	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Heptachlor	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Heptachlor Epoxide	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Lindane	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Methoxychlor	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	CV2.0
Toxaphene	EPA 8081A	ND	50	ug/kg	50	ADG1229	07/22/20	07/27/20	CV0.0
Surrogate: TCMX	EPA 8081A	57 %	*Acceptable range: 10-138 %*						
Polychlorinated Biphenyls (PCBs) by GC-ECD									
Aroclor-1016	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1221	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1232	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1242	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1248	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1254	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1260	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Surrogate: Decachlorobiphenyl	EPA 8082	92 %	*Acceptable range: 50-150 %*						
Volatile Organics (Standard List) by GC-MS									
Total Xylenes	EPA 8260B	ND	25	ug/kg					
Volatile Organics (Standard List) by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1,1-Trichloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1,2-Trichloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1-Dichloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1-Dichloroethene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1-Dichloropropene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2,3-Trichlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2,3-Trichloropropane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2,4-Trichlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2,4-Trimethylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2-Dibromoethane (EDB)	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2-Dichlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2-Dichloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2-Dichloropropane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,3,5-Trimethylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,3-Dichlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,3-Dichloropropane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,4-Dichlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
2,2-Dichloropropane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
2-Chlorotoluene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
2-Hexanone	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-05
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 1 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics (Standard List) by GC-MS									
4-Chlorotoluene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
4-Methyl-2-pentanone	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Benzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Bromobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Bromochloromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Bromodichloromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Bromoform	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Bromomethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Carbon disulfide	EPA 8260B	34	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Carbon Tetrachloride	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Chlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Chloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Chloroform	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Chloromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
cis-1,2-Dichloroethene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
cis-1,3-Dichloropropene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Dibromochloromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Dibromochloropropane (DBCP)	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Dibromomethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Dichlorodifluoromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Dichloromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Ethylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Hexachlorobutadiene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Hexachloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Iodomethane	EPA 8260B	ND	50	ug/kg	5	ADG1034	07/21/20	07/21/20	
Isopropylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
m,p-Xylenes	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Methyl-t-butyl ether	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Naphthalene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
n-Butylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
n-Propylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
o-Xylene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
p-Isopropyltoluene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
sec-Butylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Styrene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
tert-Butylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Tetrachloroethene (PCE)	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Toluene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
trans-1,2-Dichloroethene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
trans-1,3-Dichloropropene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Trichloroethene (TCE)	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Trichlorofluoromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Vinyl Chloride	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-05
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 1 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Surrogate: 1,2-Dichloroethane-d4	EPA 8260B	112 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 8260B	112 %	*Acceptable range: 70-130 %*						
Surrogate: Toluene-d8	EPA 8260B	108 %	*Acceptable range: 70-130 %*						
Semi-Volatile Organics (Standard List) by GC-MS								**Analysis Qualifier(s): DL1.0**	
1,2,4-Trichlorobenzene	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,2'-oxybis(1-chloropropane) (2)	EPA 8270C	ND	2000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4,5-Trichlorophenol	EPA 8270C	ND	4000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4,6-Trichlorophenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4-Dichlorophenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4-Dimethylphenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4-Dinitrophenol	EPA 8270C	ND	2000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4-Dinitrotoluene	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,6-Dinitrotoluene	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2-Chloronaphthalene	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2-Chlorophenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2-Methylphenol (o-cresol)	EPA 8270C	ND	2000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2-Nitrophenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
3,3-Dichlorobenzidine	EPA 8270C	ND	10000	ug/kg	20	ADG1227	07/22/20	07/24/20	
3-MPhenol/4-MPhenol	EPA 8270C	ND	4000	ug/kg	20	ADG1227	07/22/20	07/24/20	
4,6-Dinitro-2-methylphenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
4-Bromophenyl phenyl ether	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
4-Chloro-3-methylphenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
4-Chlorophenyl phenyl ether	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
4-Nitrophenol	EPA 8270C	ND	2000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Acenaphthene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Acenaphthylene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Anthracene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Benzo(a)anthracene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Benzo(a)pyrene	EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Benzo(b)fluoranthene	EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Benzo(g,h,i)perylene	EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Benzo(k)fluoranthene	EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Bis(2-chloroethoxy)methane	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Bis(2-chloroethyl) ether	EPA 8270C	ND	2000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Bis(2-ethylhexyl) phthalate	EPA 8270C	**5200**	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Butyl benzyl phthalate	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Chrysene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Dibenzo(a,h)anthracene	EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Diethyl phthalate	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Dimethyl phthalate	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Di-n-butyl phthalate	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Di-n-octyl phthalate	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Fluoranthene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-05
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 1 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics (Standard List) by GC-MS							**Analysis Qualifier(s): DL1.0**		
Fluorene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Hexachlorobenzene	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Hexachlorobutadiene	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Indeno(1,2,3-cd)pyrene	EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Isophorone	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Naphthalene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Nitrobenzene	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
N-Nitrosodi-n-propylamine (NDPA)	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
N-Nitrosodiphenylamine (as DPA)	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Pentachlorophenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Phenanthrene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Phenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Pyrene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Surrogate: 2,4,6-Tribromophenol	EPA 8270C	%	*Acceptable range: 41-200 %*						
Surrogate: 2-Fluorobiphenyl	EPA 8270C	118 %	*Acceptable range: 46-144 %*						
Surrogate: 2-Fluorophenol	EPA 8270C	155 %	*Acceptable range: 30-155 %*						
Surrogate: Nitrobenzene-d5	EPA 8270C	119 %	*Acceptable range: 30-149 %*						
Surrogate: Phenol-d6	EPA 8270C	84 %	*Acceptable range: 40-162 %*						
Surrogate: p-Terphenyl-d14	EPA 8270C	154 %	*Acceptable range: 45-161 %*						

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-05RE1
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 1 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

BSK Associates Laboratory Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics (Standard List) by GC-MS									
2-Butanone	EPA 8260B	**380**	50	ug/kg	10	ADG1284	07/22/20	07/22/20	
Surrogate: 1,2-Dichloroethane-d4	EPA 8260B	112 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 8260B	109 %	*Acceptable range: 70-130 %*						
Surrogate: Toluene-d8	EPA 8260B	102 %	*Acceptable range: 70-130 %*						

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-05RE2
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 1 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

BSK Associates Laboratory Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics (Standard List) by GC-MS									
Acetone	EPA 8260B	ND	500	ug/kg	50	ADG1292	07/30/20	07/30/20	
Surrogate: 1,2-Dichloroethane-d4	EPA 8260B	96 %	*Acceptable range:*	*70-130 %*					
Surrogate: Bromofluorobenzene	EPA 8260B	112 %	*Acceptable range:*	*70-130 %*					
Surrogate: Toluene-d8	EPA 8260B	98 %	*Acceptable range:*	*70-130 %*					

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-06
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 4 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

BSK Associates Laboratory Fresno

General Chemistry

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Nitrate as N, DI Extract	EPA 300.0	**12**	2.3	mg/kg	1	ADG1594	07/28/20	07/29/20	MS1.2
Percent Solids	SM 2540B	**91**	0.10	% by Weight	1	ADG1356	07/23/20	07/24/20	
Total Kjeldahl Nitrogen	EPA 351.2	**53000**	9800	mg/kg	391	ADG1753	07/30/20	08/05/20	

Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Antimony	EPA 6020	ND	10	mg/kg	1	ADG1629	07/28/20	07/29/20	
Arsenic	EPA 6020	**3.4**	2.5	mg/kg	1	ADG1629	07/28/20	07/29/20	
Barium	EPA 6020	**270**	6.3	mg/kg	1	ADG1629	07/28/20	07/29/20	
Beryllium	EPA 6020	ND	1.3	mg/kg	1	ADG1629	07/28/20	07/29/20	
Cadmium	EPA 6020	ND	1.3	mg/kg	1	ADG1629	07/28/20	07/29/20	
Chromium	EPA 6020	**19**	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Cobalt	EPA 6020	ND	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Copper	EPA 6020	**320**	5.0	mg/kg	1	ADG1629	07/28/20	07/29/20	
Lead	EPA 6020	**6.3**	6.3	mg/kg	1	ADG1629	07/28/20	07/29/20	
Mercury	EPA 6020A	ND	0.50	mg/kg	1	ADG1629	07/28/20	07/29/20	
Molybdenum	EPA 6020	ND	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Nickel	EPA 6020	**15**	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Selenium	EPA 6020	**6.8**	2.5	mg/kg	1	ADG1629	07/28/20	07/29/20	
Silver	EPA 6020	ND	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Thallium	EPA 6020	ND	2.0	mg/kg	1	ADG1629	07/28/20	07/29/20	
Vanadium	EPA 6020	**14**	13	mg/kg	1	ADG1629	07/28/20	07/29/20	
Zinc	EPA 6020	**680**	63	mg/kg	1	ADG1629	07/28/20	07/29/20	

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Organochlorine Pesticides by GC-ECD									
4,4'-DDD	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	CV0.0
4,4'-DDE	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
4,4'-DDT	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	CV2.0
Aldrin	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
alpha-BHC	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
beta-BHC	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Chlordane (Technical)	EPA 8081A	ND	50	ug/kg	50	ADG1229	07/22/20	07/27/20	CV0.0
delta-BHC	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Dieldrin	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Endosulfan I	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Endosulfan II	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Endosulfan Sulfate	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Endrin	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-06
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 4 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Organochlorine Pesticides by GC-ECD									
Endrin Aldehyde	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Heptachlor	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Heptachlor Epoxide	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Lindane	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	
Methoxychlor	EPA 8081A	ND	5.0	ug/kg	50	ADG1229	07/22/20	07/27/20	CV2.0
Toxaphene	EPA 8081A	ND	50	ug/kg	50	ADG1229	07/22/20	07/27/20	CV0.0
Surrogate: TCMX	EPA 8081A	67 %	*Acceptable range: 10-138 %*						
Polychlorinated Biphenyls (PCBs) by GC-ECD									
Aroclor-1016	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1221	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1232	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1242	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1248	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1254	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Aroclor-1260	EPA 8082	ND	0.25	mg/kg	50	ADG1229	07/22/20	07/27/20	
Surrogate: Decachlorobiphenyl	EPA 8082	89 %	*Acceptable range: 50-150 %*						
Volatile Organics (Standard List) by GC-MS									
Total Xylenes	EPA 8260B	ND	25	ug/kg					
Volatile Organics (Standard List) by GC-MS									
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1,1-Trichloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1,2-Trichloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1-Dichloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1-Dichloroethene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,1-Dichloropropene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2,3-Trichlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2,3-Trichloropropane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2,4-Trichlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2,4-Trimethylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2-Dibromoethane (EDB)	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2-Dichlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2-Dichloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,2-Dichloropropane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,3,5-Trimethylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,3-Dichlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,3-Dichloropropane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
1,4-Dichlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
2,2-Dichloropropane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
2-Chlorotoluene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
2-Hexanone	EPA 8260B	**30**	25	ug/kg	5	ADG1034	07/21/20	07/21/20	

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-06
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 4 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics (Standard List) by GC-MS									
4-Chlorotoluene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
4-Methyl-2-pentanone	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Benzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Bromobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Bromochloromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Bromodichloromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Bromoform	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Bromomethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Carbon disulfide	EPA 8260B	**30**	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Carbon Tetrachloride	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Chlorobenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Chloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Chloroform	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Chloromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
cis-1,2-Dichloroethene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
cis-1,3-Dichloropropene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Dibromochloromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Dibromochloropropane (DBCP)	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Dibromomethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Dichlorodifluoromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Dichloromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Ethylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Hexachlorobutadiene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Hexachloroethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Iodomethane	EPA 8260B	ND	50	ug/kg	5	ADG1034	07/21/20	07/21/20	
Isopropylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
m,p-Xylenes	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Methyl-t-butyl ether	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Naphthalene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
n-Butylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
n-Propylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
o-Xylene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
p-Isopropyltoluene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
sec-Butylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Styrene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
tert-Butylbenzene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Tetrachloroethene (PCE)	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Toluene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
trans-1,2-Dichloroethene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
trans-1,3-Dichloropropene	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Trichloroethene (TCE)	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Trichlorofluoromethane	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	
Vinyl Chloride	EPA 8260B	ND	25	ug/kg	5	ADG1034	07/21/20	07/21/20	

ASSOCIATES

ADG2205
Master

Certificate of Analysis

Sample ID: ADG2205-06
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 4 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

Organics

Analyte		Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Surrogate: 1,2-Dichloroethane-d4		EPA 8260B	108 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene		EPA 8260B	114 %	*Acceptable range: 70-130 %*						
Surrogate: Toluene-d8		EPA 8260B	110 %	*Acceptable range: 70-130 %*						
Semi-Volatile Organics (Standard List) by GC-MS									**Analysis Qualifier(s): DL1.0**	
1,2,4-Trichlorobenzene		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,2'-oxybis(1-chloropropane)	(2)	EPA 8270C	ND	2000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4,5-Trichlorophenol		EPA 8270C	ND	4000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4,6-Trichlorophenol		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4-Dichlorophenol		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4-Dimethylphenol		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4-Dinitrophenol		EPA 8270C	ND	2000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,4-Dinitrotoluene		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2,6-Dinitrotoluene		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2-Chloronaphthalene		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2-Chlorophenol		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2-Methylphenol (o-cresol)		EPA 8270C	ND	2000	ug/kg	20	ADG1227	07/22/20	07/24/20	
2-Nitrophenol		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
3,3-Dichlorobenzidine		EPA 8270C	ND	10000	ug/kg	20	ADG1227	07/22/20	07/24/20	
3-MPhenol/4-MPhenol		EPA 8270C	ND	4000	ug/kg	20	ADG1227	07/22/20	07/24/20	
4,6-Dinitro-2-methylphenol		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
4-Bromophenyl phenyl ether		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
4-Chloro-3-methylphenol		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
4-Chlorophenyl phenyl ether		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
4-Nitrophenol		EPA 8270C	ND	2000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Acenaphthene		EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Acenaphthylene		EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Anthracene		EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Benzo(a)anthracene		EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Benzo(a)pyrene		EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Benzo(b)fluoranthene		EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Benzo(g,h,i)perylene		EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Benzo(k)fluoranthene		EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Bis(2-chloroethoxy)methane		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Bis(2-chloroethyl) ether		EPA 8270C	ND	2000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Bis(2-ethylhexyl) phthalate		EPA 8270C	**4300**	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Butyl benzyl phthalate		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Chrysene		EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Dibenzo(a,h)anthracene		EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Diethyl phthalate		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Dimethyl phthalate		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Di-n-butyl phthalate		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Di-n-octyl phthalate		EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Fluoranthene		EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-06
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 4 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics (Standard List) by GC-MS								**Analysis Qualifier(s): DL1.0**	
Fluorene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Hexachlorobenzene	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Hexachlorobutadiene	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Indeno(1,2,3-cd)pyrene	EPA 8270C	ND	400	ug/kg	400	ADG1227	07/22/20	07/30/20	
Isophorone	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Naphthalene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Nitrobenzene	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
N-Nitrosodi-n-propylamine (NDPA)	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
N-Nitrosodiphenylamine (as DPA)	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Pentachlorophenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Phenanthrene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Phenol	EPA 8270C	ND	1000	ug/kg	20	ADG1227	07/22/20	07/24/20	
Pyrene	EPA 8270C	ND	100	ug/kg	20	ADG1227	07/22/20	07/24/20	
Surrogate: 2,4,6-Tribromophenol	EPA 8270C	%	*Acceptable range: 41-200 %*			*Qualifiers -*	*SR4.1*		
Surrogate: 2-Fluorobiphenyl	EPA 8270C	114 %	*Acceptable range: 46-144 %*						
Surrogate: 2-Fluorophenol	EPA 8270C	135 %	*Acceptable range: 30-155 %*						
Surrogate: Nitrobenzene-d5	EPA 8270C	111 %	*Acceptable range: 30-149 %*						
Surrogate: Phenol-d6	EPA 8270C	80 %	*Acceptable range: 40-162 %*						
Surrogate: p-Terphenyl-d14	EPA 8270C	153 %	*Acceptable range: 45-161 %*						

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-06RE1
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 4 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

BSK Associates Laboratory Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics (Standard List) by GC-MS									
2-Butanone	EPA 8260B	**330**	50	ug/kg	10	ADG1284	07/22/20	07/22/20	
Surrogate: 1,2-Dichloroethane-d4	EPA 8260B	112 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 8260B	107 %	*Acceptable range: 70-130 %*						
Surrogate: Toluene-d8	EPA 8260B	102 %	*Acceptable range: 70-130 %*						

ASSOCIATES

Certificate of Analysis

Sample ID: ADG2205-06RE2
Sampled By: Abel Alvarez
Sample Description: Composite of Drying Bed 4 (Front and Back)

Sample Date - Time: 07/20/2020 - 10:28
Matrix: Solid
Sample Type: Composite

Composite Start: 07/20/2020 - 10:28

BSK Associates Laboratory Fresno

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics (Standard List) by GC-MS									
Acetone	EPA 8260B	ND	500	ug/kg	50	ADG1292	07/30/20	07/30/20	
Surrogate: 1,2-Dichloroethane-d4	EPA 8260B	96 %	*Acceptable range: 70-130 %*						
Surrogate: Bromofluorobenzene	EPA 8260B	112 %	*Acceptable range: 70-130 %*						
Surrogate: Toluene-d8	EPA 8260B	97 %	*Acceptable range: 70-130 %*						

Sunnyslope Water District

Section H

Pretreatment

Not Applicable

Sunnyslope Water District

Section I

Salt and Nutrient Management Plan

Technical Memorandum

Sunnyslope County Water District

Subject:	**2020 Annual Salt Management Report**
Prepared For:	Regional Water Quality Control Board
Certified by:	Drew Lander, P.E. 79561 (Expires 9/30/2022), General Manager
Prepared by:	Rob Hillebrecht, P.E. 88972 (Expires 9/30/2022), Associate Engineer
Reviewed by:	Jose Rodriguez, Water & Wastewater Superintendent
Date:	January 25, 2021

The purpose of this Technical Memorandum (TM) is to meet the Annual Salt Management Report requirements of the Regional Water Quality Control Board (RWQCB) Waste Discharge Requirement (WDR) Order No. R3-2004-0065 (December 3, 2004). Annual Salt Management Reports must be submitted by January 30th every year commencing in 2006. The report shall include, at a minimum:

a. Calculations of annual salt mass discharged to the wastewater treatment system and disposal ponds with an accompanying analysis of contributing sources;

b. Analysis of wastewater evaporation/salt concentration effects;

c. Analysis of groundwater monitoring results related to salt constituents;

d. Analysis of potential impacts of salt loading on the groundwater basin;

e. A summary of existing salt reduction measures; and,

f. Recommendations and time schedules for implementation of any additional salt reduction measures.

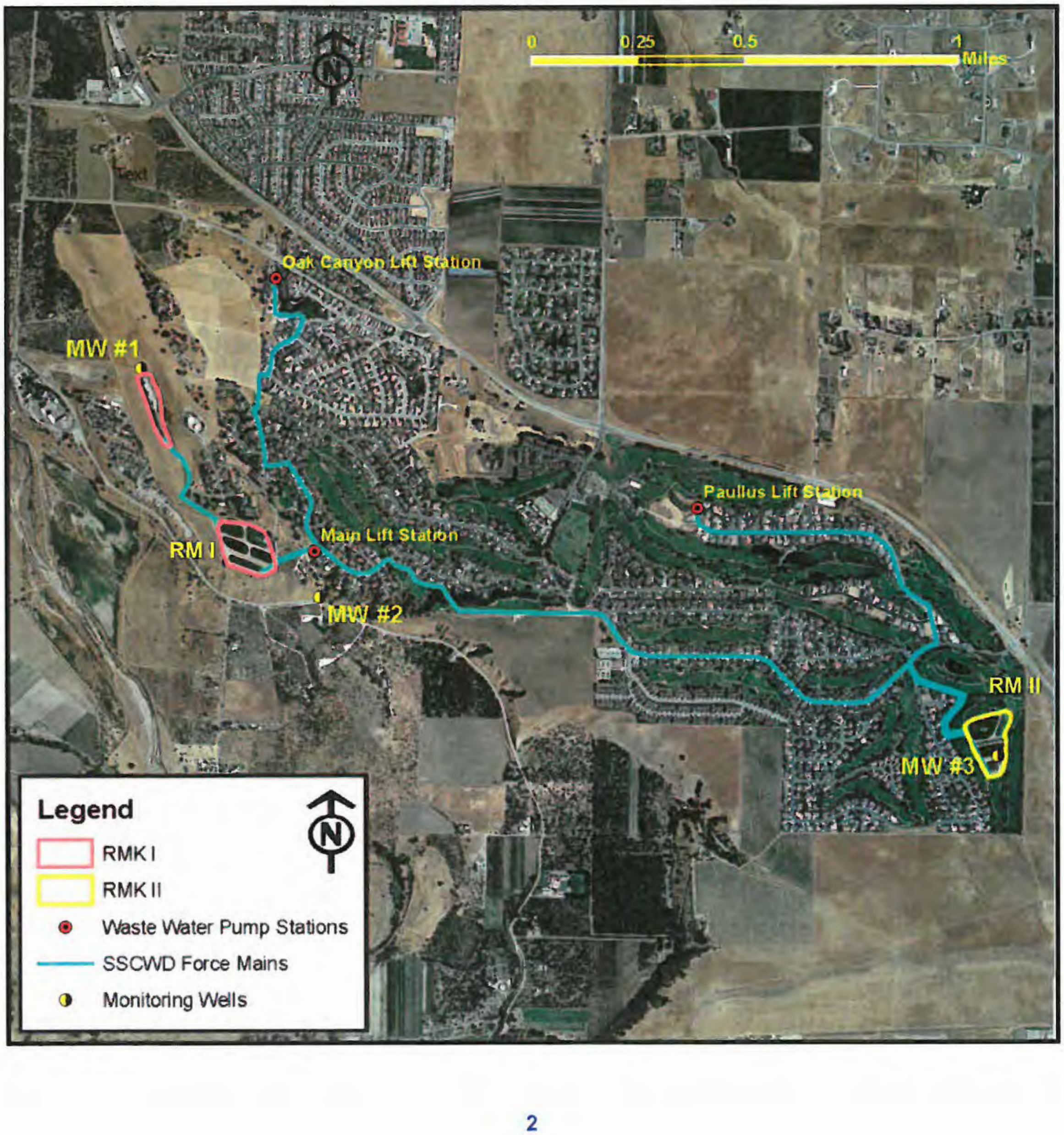
The TM is organized as follows:

1 Background

The Sunnyslope County Water District (SSCWD) in Hollister, California, operates one wastewater treatment plant (WWTP) shown in Figure 1-1 that serve the residences and a few commercial businesses near the Ridgemark Golf Course. The facility is known as Ridgemark WWTP. In prior years SSCWD operated a second facility known as Ridgemark II (RM II). The RM II facility was decommissioned in the third quarter of 2013 after completion of the new wastewater treatment facilities at Ridgemark WWTP and has not been in use since.

Prior to 2014, wastewater effluent from Ridgemark WWTP contained salinity levels exceeding State effluent limits. Salinity concentrations in surrounding area groundwater used to supply water service are already relatively high but a noted increase occurred through normal municipal use. Salinity was further increased by the widespread use of residential water softeners in the service area to soften the hard groundwater. Salt buildup in the groundwater basin is a significant long-term concern. Thus, salinity management measures are being implemented to preserve the long-term quality and beneficial use of groundwater resources in the region.

Figure 1-1: Ridgemark WWTP and Facilities



The WDR permit adopted in December 2004 includes a phased regulatory schedule to meet salinity water quality regulations. Beginning in January 2008, TDS, sodium, and chloride concentrations in the WWTP effluent were subject to WDR limits shown in Table 1-1. Stricter limits were phased in two years later to require the final concentration limits by January 30, 2010.

Table 1-1: Salinity Waste Discharge Requirements in 2008 and 2010

	30-Day Average Limitations (mg/L)		
Effective Date	Interim	January 30, 2008	January 30, 2010
TDS	No Limit	1,500	1,200
Sodium	No Limit	300	200
Chloride	No Limit	300	200

The 2020 average influent and effluent wastewater quality shown in Table 1-2 meets the limits for TDS and sodium but still exceeds the January 2010 limit for chloride. Efforts taken to reduce salinity are working and salinity management measures must continue to be implemented to meet WDR limits. This report will summarize the salt sources contributing to salinity in the wastewater effluent and will present salt management and reduction measures to address high salinity concentrations.

Table 1-2: Existing 2020 Average Wastewater Quality

Parameter	RM I SBR Influent *	RM I SBR Effluent
TDS (mg/L)	984	824
Sodium (mg/L)	212	193
Chloride (mg/L)	310	262

Data consists of averages from 12 monthly sampling events from January 2020 through December 2020.
* Discrepancies between Influent salinity and Effluent salinity values are a result of sample timing and not specifically a result of the treatment process. .

The average TDS for 2020 is about 100 mg/L higher than in 2019 mainly due to increased use of potable groundwater to the Ridgemark WWTP customers. This is further discussed in Section 2.1.1.

2 Salinity

The effluent from Ridgemark WWTP has higher concentrations of TDS, sodium, and chloride than would normally be expected relative to the salinity of the local potable water supply. This section highlights the sources of these salt constituents and summarizes the results of a mass balance analysis that was performed on the system.

2.1 Sources of Salt

High effluent salinity concentrations stem from three primary factors. The first is the base salinity in the potable supply. The second is normal municipal and industrial (M&I) contributions as water is used. And the third is operation of residential self-regenerating water softeners. The salinity concentration in the Ridgemark WWTP percolation ponds may increase negligibly due to evaporation during warm weather periods, but this does not increase salt loading in the wastewater effluent. The contributions of each of these sources to concentrations observed in the effluent are noted in the following documentation.

2.1.1 Water Supply

Groundwater from wells and surface water from the Lessalt surface water treatment plant are the source of potable water supply for the sanitary sewer service area served by Ridgemark WWTP. Groundwater contains relatively high concentrations of salts and minerals contributing to hardness, while treated surface water has lower concentrations of salts and hardness. Table 2.1 shows the average TDS, sodium, chloride, and hardness concentrations for groundwater, surface water, and the proportional blend between these two sources. Since treated wastewater ultimately percolates back into the groundwater basin, the groundwater salinity mass load passes through the water and wastewater systems and returns to the basin. Therefore, groundwater salinity does not contribute additional salt load to the basin, but simply cycles it. Surface water from the Lessalt WTP however does contribute to the salt loading as the water and salinity dissolved in it are imported from outside the basin.

Table 2-1: Existing 2020 Potable Water Quality

Constituent	Groundwater Concentration (mg/L)	Lessalt Surface Water Concentration (mg/L)	Proportional Mix Concentration (mg/L)
TDS	792	265	436
Total Hardness, $CaCO_3$	395	102	197
Sodium	125	55	78
Chloride	119	76	90

Source: 2020 SSCWD Biannual Water Quality Report Wells 5 & 8 & LESSALT WTP

Due to higher than usual water demand in the pressure zone serving most of Sunnyslope's wastewater customers, more groundwater was used than in previous years. This increase in water demand can be partially attributed to the COVID-19 pandemic as residents were required to stay at home as much as possible. Sunnyslope experienced about a 6-7% increase in potable water use due to the pandemic. Another factor for the higher water demand was significant construction water use as two large developments purchased and drew water from the same pressure zone as most Ridgemark WWTP customers. As Lessalt has limited capacity, the extra water demand was supplied by wells. Additionally, the Lessalt treatment plant was down due to repairs in August and then again for most of October due to very poor source water quality which the plant was unable to adequately treat. During these periods, all water was supplied by our groundwater wells.

Due to these two factors, about 32.4% of water to that pressure zone was supplied by wells compared to only 7.3% in 2019. However, it is understood that the Ridgemark WWTP likely received more than 32.4% groundwater. This is because the wells are located within that area while Lessalt is on the other side of the pressure zone. Water produced by the wells will first be used by Ridgemark WWTP customers and water produced by Lessalt will first be used by non-Ridgemark WWTP customers. However, we have no means to calculate the proportional mix beyond production data.

Overall, the increased use of groundwater accounts for at least 100 mg/L high average TDS simply from the water supply.

2.1.2 Municipal Use and Water Softeners

A significant amount of salt is added through customer use. Normal municipal use can add from 150-300 mg/l of TDS. Prior to 2014, very hard groundwater had been the only source for potable water. Due to this, most customers used residential water softeners. Though much of the water supply is now softer surface water from Lessalt, there is still widespread utilization of water softeners. These add a significant source of salt to the wastewater stream during self-regeneration cycles.

In 2020, the total TDS contribution from municipal use was approximately 388 mg/l based on the difference between source water quality data (436 mg/l from calculated Proportional Flow) and the effluent water quality leaving the Ridgemark WWTP (824 mg/l). This is well above the normal salt contribution for standard domestic use and reflects the significant impact of water softeners have on wastewater salinity in the Ridgemark WWTP service area.

Water softeners remove the calcium and magnesium ions that are responsible for hardness. The water softener resin must be regenerated periodically through washing with a concentrated brine solution of sodium chloride or potassium chloride. This brine water is then discharged into the sewer system during regeneration cycles and adds a substantial amount of salinity to the wastewater stream. Estimates of the amount of salinity added by water softener use can vary based on the hardness of the water, amount of water used, and the extent of water softener use in the area. The type of softener, its efficiency, and operational settings can also impact the regeneration frequency and result in elevated salt loads to the Ridgemark WWTP influent.

Older water softeners generally have their regeneration cycles based on a timer, in which the user sets a number of days between cycles regardless of the volume of water softened. This can impact the efficiency of the softener as it may regenerate early during periods of low water use. For this reason, timer-based softeners can have efficiencies as low as 1,500 grains of hardness removed per pound of salt (1 grain = 17.1 mg/l hardness). Demand Initiated Regeneration (DIR) softeners regenerate based on actual water use and have efficiencies ranging from 2,000-3,350 grains of hardness removed per pound of salt.

For both versions to operate efficiently, the source water hardness must remain the same as when the softener operational settings were programmed. The source water hardness for customers within the Ridgemark WWTP service area has dropped substantially due to the Lessalt Upgrade and pipeline constructed in 2014 to provide primarily higher quality surface water to these customers. Because many customer water softeners were set based off the groundwater hardness rather than the hardness of the surface water currently being provided, they are now operating at lowered efficiencies and regenerating more often than is necessary. An average water softener efficiency of 1,900 grains removed per pound of salt was estimated for Water Softener Analysis as it brought the final salinity calculation within reasonable range of observed testing. Simply reprogramming all water softener settings to account for the improved source water quality could considerably increase the softener efficiencies and reduce wastewater salt loading.

To determine an estimate for the water softener component of added salinity, an analysis was performed using assumed values for the parameters listed in Table 2-2.

Table 2-2: Assumptions in the Water Softener Analysis

Parameter	Value
Potable Water Hardness [a]	197 mg/l as $CaCO_3$
Total % of households using water softeners [b]	47%
% of households using NaCl water softeners [b]	37%
% of household using KCl water softeners [b]	5%
% of households using off site regeneration [b]	5%
Household Indoor Use [c]	136 gpd
Average Water Softener Efficiency [d]	1,900 grains removed / lb. salt

a) Potable water hardness based on Proportional Mix from Table 2-1

b) Based on previous Annual Salt Management Reports and water softener removal rebates.

c) 160,328 gpd (average daily wastewater flows plus 5% for indoor water use not discharged to the sewer) divided by 1240 accounts = 136 gpd indoor use per day per account

d) Average water softener efficiency was adjusted so that calculated total TDS would equal the actual effluent TDS recorded.

According to the analysis, the estimated contribution to TDS from water softeners for the Ridgemark WWTP service area is approximately 182 mg/l for 2020.

2.1.3 Evaporation

Evaporation and precipitation do not play a significant role regarding salinity. When treatment ponds were used to treat the wastewater prior to the operation of the Ridgemark WWTP, it was mistakenly thought that evaporation had a notable concentrating effect on treatment pond salinity. This attempted to explain differences between influent and effluent salinity. However, these differences were due to grab samples not being representative of salinity variability in the influent sewer stream rather than evaporative effects.

Now with the operation of the Ridgemark WWTP, evaporation is even less significant. The small open surface area of the treatment basins and the short retention times within those basins eliminate any potential for salinity concentration due to evaporation.

2.1.4 Summary of Salinity Contributions to Ridgemark WWTP Final Effluent

TDS concentrations are high in the potable groundwater supply for the service area at approximately 792 mg/l. Lessalt Surface water TDS concentration is approximately 265 mg/l. The 2020 influent flow was 32.4% groundwater and 67.6% surface water. As this water is utilized in the service area the salinity concentrations increase through normal M&I use and through the regeneration of water softeners. After use, the water is discharged to the sewer collection system. Influent wastewater to Ridgemark WWTP has TDS concentrations of 730-1400 mg/l. Evaporation represents a miniscule element of the salinity concentration and has no effect on salt mass load percolated into the basin.

Table 2-3 reflects the relative contributions of various sources to TDS, Sodium, and Chloride.

Table 2-3: Estimated Municipal Use Contributions for Salt Constituents and Comparison to Actual WWTP Influent When Using Groundwater as the Potable Water Supply

Parameter	Potable Water Concentrations (1) Footnote (a)	Est. Water Softener Contribution (2) Footnote (b)	Est. Normal M&I Use Contribution (3) Footnote (c)	Est. Wastewater Concentrations (1)+(2)+(3)	Actual 2020 Average Effluent Footnote (d)
TDS (mg/L)	436	182	200	818	824
Sodium (mg/L)	78	96	50	195	193
Chloride (mg/L)	90	106	65	261	262

a) Potable water quality data based on SSCWD biannual monitoring in 2020 of Wells 5 & 8 and Lessalt WTP.

b) Water softener contribution based upon assumptions in Table 2-2.

c) TDS, sodium, and chloride additions from normal M&I use was estimated to be 200mg/l, 50mg/l and 65mg/l respectively for Ridgemark WWTP distribution area. Generally accepted TDS additions for normal M&I use range from 150 to 300mg/l so these estimates are reasonable.

d) Actual 2020 WWTP average effluent quality based upon Ridgemark WWTP effluent testing.

By providing a primarily surface water supply combined with customers' significant reductions in the use of brine discharging water softeners, the District has drastically improved wastewater effluent salinity since 2014. Concentrations of all salinity parameters have been reduced by over 50% since 2014 and continue trending downward. Wastewater effluent is now below the regulatory limit for both TDS and Sodium. However, to come into compliance with the 200 mg/l effluent limit for chloride the contributions from water softeners must still be reduced by nearly an additional 50%. It is likely that it will take time for the District's exerted education campaign to influence enough customers to adjust or discontinue using their self-regenerating water softeners. Nevertheless, if the current trend persists through the continued educational and outreach efforts, chlorides may come into compliance with the RWQCB requirements as early as 2025.

2.2 Salt Mass Balance

Salt concentrations from Table 1-2 in conjunction with 2020 proportional source water blend of 32.4% groundwater and 67.6% surface water were used to estimate the salinity mass loads shown in Table 2-5. The existing groundwater salinity contributes to a baseline salt load in the wastewater effluent of about 62.7 tons per year. This represents salt that passes through from groundwater extraction, use and percolation back into the groundwater basin. It therefore does not add salinity to the groundwater basin as this salinity was already present. Approximately 43.8 tons of salt were added to the basin as a result of the imported surface water salinity.

In 2020, typical M&I use is assumed to have contributed approximately 200 mg/L of TDS to the wastewater stream. This accounts for an added 48.9 tons of salt. Residential water softeners added an additional 182 mg/L TDS resulting in 44.4 tons of salt discharged into the basin.

The total salt added to the basin from imported surface water salinity, municipal and industrial use, and water softeners is 137.1 tons in 2020.

Table 2-5: 2018 Annual Salt Mass Loads

	Ridgemark WWTP
Annual Average Influent Flow Total (gpd)	**160,328**
Average Effluent TDS Concentration (mg/L)	**824**
Total Annual Salt to Disposal Ponds (tons)	**201.4**
Annual Salt from Potable Groundwater (tons) [a]	**62.7**
Annual Salt Load from Surface Water (tons)	**43.8**
Annual Salt Load from Normal M&I Use (tons)	**48.9**
Annual Salt Load from Water Softeners (tons)	**44.4**
Total Salt Added to Basin in 2020 (tons) [b]	**137.1**

Footnotes:

a) Salt associated with the groundwater supply is a pass through. Salt in groundwater is returned to groundwater basin.
b) Salt Added to Basin excludes Annual Salt from Potable Groundwater as it is a pass through of previously existing salt rather than new salt in the basin.

Notes:

1) Mass Load = Daily Flow * TDS Concentration * (days/year) * (L/gal) * (ton/mg)
2) 365 days/year, 3.79 L/gal, 1.102 x 10^{-9} ton/mg
3) Groundwater Daily Flow = 160,328gpd * 0.324 as groundwater was only 32.4% of total supply water. Groundwater TDS Concentration = 792mg/L based on biannual testing at Well #5 & #8
4) Surface Water Daily Flow = 160,328gpd * 0.676 as surface water was 67.6% of total supply water. Surface water TDS Concentration = 265mg/L based on biannual testing at Lessalt WTP.
5) Normal M&I Use TDS Concentration = 200mg/L based on Water Softener Analysis assumptions and salt balance.
6) Water Softener TDS Concentration = 182mg/L based on Water Softener Analysis.

2.3 Groundwater Impacts

SSCWD has six monitoring wells located around the disposal ponds to monitor groundwater conditions. Details on groundwater monitoring well installation and evaluation of groundwater conditions are described in the *Groundwater Monitoring Well Installation Report* by Todd Engineers. A summary of the data collected from these wells in 2020 is included in Table 2-6. Groundwater wells 1, 3, 4, and 5 were dry and were not able to be sampled. Monitoring well 2 appears to be monitoring mostly background groundwater. Monitoring Well 6 may be detecting legacy salinity from the operation of RM II.

Table 2-6: 2020 Wastewater Monitoring Well Average Water Quality

	MW 1 (Pond 6)	MW 2 (RM WWTP)	MW 3 (RM II)	MW 4 (Pond 6)	MW 5 (RM WWTP)	MW 6 (RM II)
TDS (mg/L)	Dry	758	Dry	Dry	Dry	1250
Chloride (mg/L)	Dry	220	Dry	Dry	Dry	565
Sodium (mg/L)	Dry	95	Dry	Dry	Dry	205
pH	Dry	7.54	Dry	Dry	Dry	7.53
Total Nitrogen (mg/L)	Dry	6.13	Dry	Dry	Dry	3.5
Notes	Dry for all 4 sampling rounds	-	Dry for all 4 sampling rounds	Dry for all 4 sampling rounds	Dry for all 4 sampling rounds	-

Notes: Average for 2020 quarterly data.

3 Salinity Reduction Measures

SSCWD is involved in a variety of programs and efforts to reduce salt loading to the groundwater basin. These programs include water softener education activities, a water softener removal rebate program, and water supply alternatives such as increased Central Valley Project (CVP) surface water treatment or potential future groundwater desalination. Additionally, there are many regional efforts being conducted by SSCWD, San Benito County Water District (SBCWD), City of Hollister, and San Benito County with the goal of reducing salinity throughout the entire groundwater basin. These cooperative efforts are critical towards developing efficient salt management solutions for all water purveyors and users in the region.

3.1 Water Softeners

A major goal of SSCWD's program is to reduce the amount of salts added by water softeners in its service area. SSCWD, SBCWD, and the City of Hollister all cooperate through the San Benito Water Resources Association (WRA) to develop programs to enhance customer knowledge and change customer behavior regarding water issues. One of the programs focuses on water softener removal through a rebate program, an educational campaign, and enforcing local ordinances banning the installation or replacement of all salt discharging water softeners.

Water Softener Rebate Program

Residential customers of SSCWD can participate in a water softener rebate program that is administered by the WRA. The program offers a $250 rebate for replacement of a self-regenerating water softener with a cartridge style water softener and requires a minimum one-year contract with an offsite regeneration service. Customers who fully remove or demolished their water softeners are eligible for a $300 rebate.

There were 38 SSCWD sewer customers who participated in the water softener rebate program in 2020. Since the Lessalt Upgrade in December 2014, 275 Ridgemark WWTP customers have received rebates through this program, representing approximately 22% of all sewer customers. It is unknown exactly how many SSCWD customers have removed or quit using their water softeners without applying for the rebates although the Water Softener Analysis suggests that more softeners have been removed than rebates have been given.

Water Softener Education Programs

SSCWD is conducting an educational campaign to inform its customers on the impact of water softeners on wastewater quality through website posts, distributing door hanger, and in the annual Drinking Water Quality Report. Educational literature also provides information on how to properly operate and adjust water softeners according to water quality. This is important as many softeners are no longer operating efficiently due to the improved source water quality. The WRA also promotes public education, distributes informational literature, and take surveys on water softener use at local events such as the San Benito County Fair and Farmers' Market.

Water Softener Ordinance

The Regional Water Quality Control Board took action to allow Sunnyslope County Water District and other local agencies to restrict the salinity discharge to the wastewater system from brine discharging water softeners. In February 2015, SSCWD adopted a new District Code prohibiting the replacement of salt discharging water softeners and prohibiting the installation of new salt discharging water softeners. The District also participates in a coordinated program with the City of Hollister and San Benito County Water District to limit the salinity discharge from water softeners by providing softer surface water to customers so that they no longer need a water softener.

3.2 LESSALT Water & West Hills Water Treatment Plants

As a joint effort with the City of Hollister, and SBCWD, Sunnyslope treats Central Valley Project (CVP) surface water from the San Felipe Project and delivers this softer potable water to customers. CVP water has lower salinity levels than local groundwater and has considerably lower hardness as shown in Table 3-1. The higher quality supply reduces the need for water softening, which results in a reduction of salt added to the groundwater basin.

Table 3-1: LESSALT WTP vs. Groundwater Water Quality

	Average TDS (mg/l)	Sodium (mg/L)	Chloride (mg/L)	Average Hardness, $CaCO_3$ (mg/l)
Surface Water Quality	265	55	76	102
Groundwater Quality	793	125	119	395

Prior to 2014, less than one third of SSCWD's customers received an intermittent supply of CVP water. None of the customers in the area served by Ridgemark WWTP receive this treated surface water.

As part of the Hollister Urban Area Coordinated Water Supply and Treatment Plan, the Lessalt Water Treatment Plant was upgraded and went into operation in December, 2014. This upgrade included a pump station and associated pipeline from the Lessalt WTP to the Ridgemark area. SSCWD's wastewater customers are now largely supplied with surface water. As part of this Plan, a second surface water treatment plant called the West Hills Water Treatment Plant was constructed and began operation in 2017. The combination of these two surface water treatment plants has increased the delivery of high quality drinking water to SSCWD and City of Hollister water customers. This results in reduced TDS, chlorides, and sodium being discharged from the two agencies' wastewater treatment plants.

In the spring of 2015 Sunnyslope began an extensive education and outreach program to inform all the residents of Ridgemark area of the improved water quality. SSCWD has continued these efforts through 2020 and observed major results. The reduction and/or elimination of the water softeners significantly reduced salinity in the wastewater discharge levels such that SSCWD is now in compliance with TDS and sodium discharge regulations. Chloride levels remain over the limit but have decreased by over 50% since the Lessalt WTP Upgrade in December 2014. This shows noteworthy progress toward achieving compliance for the final wastewater salinity parameter. The District will continue its salinity management campaign to make further reductions in sodium, chloride and TDS concentrations.

3.3 Groundwater Desalination

Groundwater desalination is a potential salt management solution but due to cost it is not anticipated until after other strategies have been significantly developed. Groundwater treatment is appealing from a long-term point of view as salt can be removed permanently from the San Benito County groundwater basin. However, the cost for disposal of the concentrated brine and the high electrical use are major drawbacks to this solution.

3.4 Hollister Urban Area Water and Wastewater Master Plan

In 2004, the City of Hollister, SBCWD, and San Benito County signed a Memorandum of Understanding (MOU) to develop the Hollister Urban Area Water and Wastewater Master Plan (HUAWWMP). In December 2007 the Board of SSCWD adopted the MOU Amendment, and formally joined the Governance Committee in 2009. The HUAWWMP ensures that stringent standards for wastewater management will be maintained to protect groundwater resources in the basin. The HUAWWMP study encompasses the SSCWD service area and developed a comprehensive plan for water supply and wastewater treatment and disposal within the Hollister urban area. Updates on HUAWWMP were completed in 2010 and 2017 with the publication of the implementation plan. The HUAWWMP identifies programs and projects to achieve the stated objectives of having drinking water with less than 500 mg/l TDS and between 120 to 150 mg/l hardness. Targeted recycled water objectives would provide a reclaimed water supply with less than 500 mg/l TDS or a maximum of 700 TDS if such water quality objectives can be achieved at a reasonable cost. In January 2010, the Hollister Urban Area Coordinated Water Supply and Treatment Plan were completed.

Sunnyslope County Water District, the City of Hollister, and San Benito County Water District have executed a Water Supply and Treatment Agreement to implement the Hollister Urban Area Water and Wastewater Master Plan and Coordinated Water Supply and Treatment Plan. The three major water supply and treatment components for the Coordinated Water Supply and Treatment Plan were to upgrade the Lessalt Surface Water Treatment Plant to 2.5 MGD, to construct the new 4.5 MGD West Hills Surface Water Treatment Plant, and to build a North (San Benito) County Groundwater Bank to supply water to these two treatment plants in time of drought. The Lessalt Upgrade was completed in 2014 and West Hills was completed in 2017. A feasibility study for the North County Groundwater project is ongoing.

3.5 Water Resources Association Groundwater Management Plan

WRA has developed a comprehensive Groundwater Management Plan (GMP) Update that addresses a number of groundwater quality and quantity issues. The GMP Update integrates salinity management into the broader basin plan and identifies a number of recommended programs for addressing salinity on a region wide basis. These programs are summarized in Table 3-2.

Table 3-2: Salinity Management Programs in the Groundwater Management Plan

Program	Description
Salinity Education Program	Salinity education of both agricultural and M&I users.
Water Softener Ordinance	Public education on the impact of water softeners, retrofit ordinance and water softener conversion rebate programs.
Industrial Salt Control	Cooperative reduction efforts with food processors and other industrial dischargers whose operations contribute elevated salt levels
Surface Water Importation and Treatment	Construction of surface water treatment delivery and storage facilities to supply a total of 6 to 9 MGD in a phased program.
Groundwater Treatment and Concentrate Disposal	Construction of demineralization facilities could reduce salt loads up to 2,270 tons per year for the basin. Concentrate disposal options are considered

SSCWD, SBCWD, City of Hollister, and San Benito County are continuing to work toward implementation of these programs and projects. Section 3.4 of the HUAWWMP further evaluated reclaimed wastewater and locations for utilizing reclaimed wastewater from the City of Hollister's expanded wastewater treatment plant. SBCWD has constructed a recycled water pipeline that delivers treated wastewater from the City of Hollister's wastewater treatment plant to farmers north of the City of Hollister. Additional recycled water projects are being contemplated and planned for future years.

The WRA also initiated development of a water softener ordinance that has been adopted by the City of Hollister and SSCWD. In 2012 the Regional Water Quality Control Board granted SSCWD and other local agencies the authority to regulate salinity discharge into its sewerage system. Continued implementation of these salinity control efforts is envisioned in future years.

3.6 Summary of Salt Reduction Options

The salt reduction options available to SSCWD include education programs, water softener ordinances and rebates, increased treatment and distribution of potable surface water, and ultimately groundwater desalination.

Currently, the most immediate method to reduce wastewater salinity is to promote the removal or reprogramming of water softeners in the Ridgemark WWTP service area. Elimination of all water softener use (or replacement of all brine discharging water softeners with cartridge type softeners, which use off-site softener regeneration services) has the potential to remove up to 182 mg/L TDS from wastewater effluent and achieve compliance with chloride limits.

The treatment and distribution of surface water has significantly impact improved regional salinity issues. These efforts continue to bring Sunnyslope closer to compliance as the overall water supply quality improves. Ultimately some form of groundwater desalination or softening may be required long term. However it is currently cost prohibitive while there are other potentially cheaper alternatives.

Finally, SSCWD is continuing an education program to convince Ridgemark customers to remove salt discharging water softeners, or at minimum reprogram their softener settings to operate efficiently for the improved water quality.

4 Next Steps

Based on current projections, Sunnyslope County Water District may begin meeting the requirements for chloride as early as 2025. This will be achieved by continuing to educate its wastewater customers about the improved water quality and reprogramming or eliminating the customers' brine discharging water softeners. Beginning in early 2015 and continuing throughout 2020, SSCWD has strived to inform its wastewater customers of the improved water quality that they began receiving in December, 2014. Additional efforts include offering rebates for the permanent removal of softeners or replacement with cartridge type softeners that are regenerated off site also continued. These have been successful at reducing wastewater TDS, sodium, and chloride concentrations by over 50% since 2014.

SSCWD intends to continue efforts in partnership with the WRA, SBCWD, and City of to increase potable surface water delivered to its customers. It will continue public outreach efforts to educate customers and reduce and/or eliminate the use of water softeners in the Hollister Urban Area.

Sunnyslope Water District

Section J

Collection System Management Plan

Sunnyslope County Water District

Sewer System Management Plan (SSMP)

2020

S:\A D M I N & E N G\SSMP\SSMP Documents\Draft 2020 SSMP.doc

Legally Responsible Official Certification

I certify under penalty of law that this Sewer System Management Plan and all referenced attachments herein incorporated were prepared under Sunnyslope County Water District direction or supervision. Qualified personnel have properly gathered and evaluated the all information submitted. Based on inquiries of the persons who manage the sewer system and are directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. This document was presented to the Sunnyslope County Water District Board of Directors and approved on **April 21st, 2020**.

Drew A. Lander, General Manager
Legally Responsible Official

4/22/20
Date

Jose Rodriguez, Water/Wastewater Superintendent
Legally Responsible Official

4/22/2020
Date

Table of Contents

Definitions and Abbreviations

BMP – Best Management Practices

CCTV – Closed Circuit Television

CIP – Capital Improvement Plan

CMMS – Computerized Maintenance Management System

FOG – Fats, Oils, and Greases

GIS – Geographic Information System

I&I – Infiltration and Inflow

NPDES – National Pollutant Discharge Elimination System

OERP – Overflow Emergency Response Plan

OES – Office of Emergency Services

PVC – Polyvinyl Chloride Plastic

PPE – Personal Protection Equipment

RWQCB – Regional Water Quality Control Board

SCADA – Supervisory Control and Data Acquisition

SOP – Standard Operating Procedures

SSCWD – Sunnyslope County Water District

SSMP – Sanitary Sewer Management Plan

SSO – Sanitary Sewer Overflow

SWRCB – California State Water Resources Control Board

VCP – Vitrified Clay Pipe

WDR – Waste Discharge Requirement

WWTP – Wastewater Treatment Plant

Introduction

The California State Water Resources control Board (SWRCB) approved order No. 2006-003, Statewide General Waste Discharge Requirements (WDR) for Wastewater Collection Agencies, in May 2006. This regulation requires that Sunnyslope County Water District (SSCWD) along with all other wastewater agencies develop, maintain, and implement a Sewer System Management Plan (SSMP) and submit specified monitoring and reporting of these measures to the SWRCB. The SSCWD Board of Directors approved the first SSMP on September 13, 2007. There have been regular reviews and updates of the plan to ensure that it remains up to date so as to incorporate and reflect any changes to the 11 key elements addressed in the SSMP.

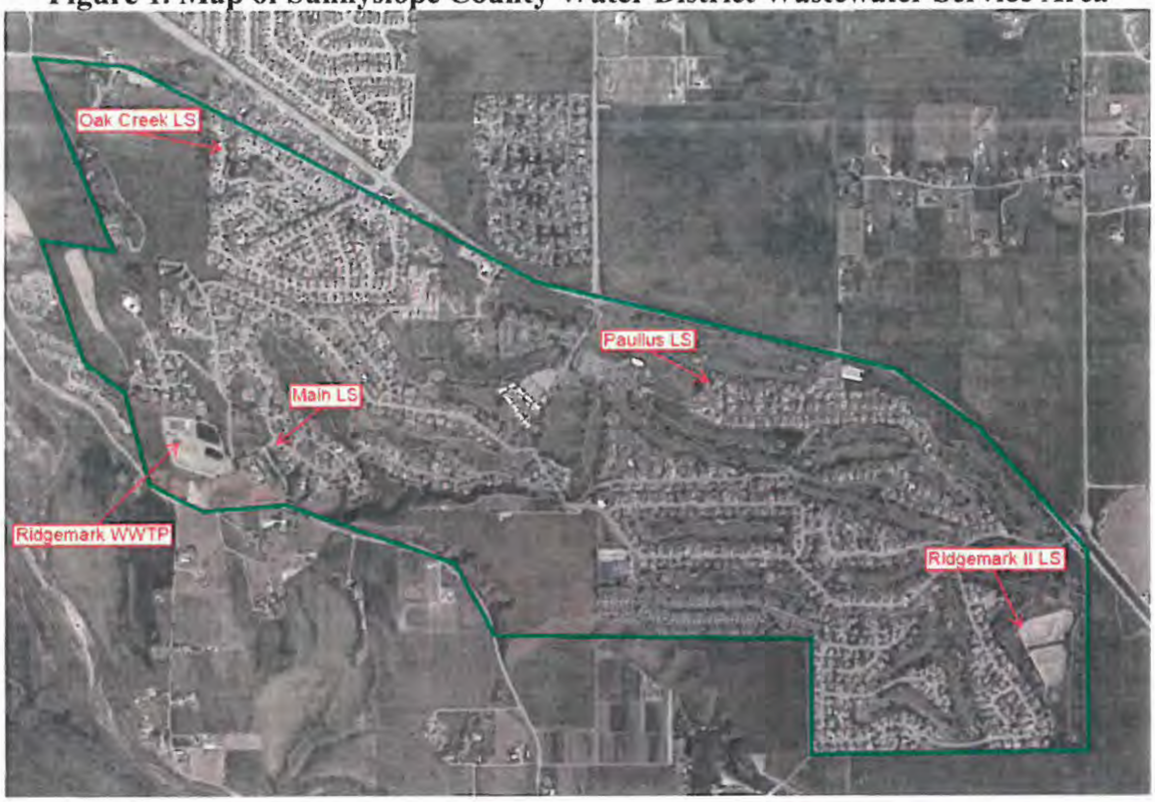
The District has successfully operated its sewer collection system and continually strives to improve the reliability, affordability, and safety of sewer service for its customers. This document provides a summary of the core policies, processes, and practices which have enabled SSCWD accomplish this. For more detailed information regarding specific items, bracketed and italicized references to other specific District documents are provided at the end of various sections which further address those subjects.

[State Water Resources Control Board – Waste Discharge Requirements]

System Overview & Description

Sunnyslope County Water District was incorporated on December 14th, 1954 to provide drinking water and fire protection water services to then unincorporated portions of San Benito County east of Hollister. With the construction of the Ridgemark country club in the 1970's, SSCWD agreed to provide sanitary sewer service for the development and some neighboring properties as shown in the map below.

Figure 1. Map of Sunnyslope County Water District Wastewater Service Area



This sewer service area has developed such that SSCWD currently provides sewer serve to approximately 4,000 people through about 1,240 residential homes in a 1.4 square mile area. This entire area is in the unincorporated portion of San Benito County, just southeast of Hollister. SSCWD also provides drinking water and fire protection water to all is wastewater customers along with about 5,000 other homes which receive sewer service from the City of Hollister.

The Sunnyslope sewer system is composed of approximately 20 miles of sewer mains, 315 manholes, 4 sewer lift stations, and the sequential batch reactor Ridgemark Wastewater Treatment Plant (WWTP). Approximately 10% of the gravity sewer mains are made of 6" or 8" vitrified clay pipe (VCP) installed in the early to mid-1970s. The remaining 90% is predominantly 8" polyvinyl chloride (PVC) plastic pipe from the 1980s through 1990s. Average wastewater flow to the Ridgemark WWTP is about 150,000 gallons per day (GPD) with maximum daily flows of up to 195,000 GPD. However this is well within the Ridgemark WWTP a treatment capacity of 350,000 GPD.

Due to the relatively young age of the sewer system and the high quality materials it was constructed from along with SSCWD's proactive maintenance and cleaning practices, there have been very few Sanitary Sewer Overflows (SSO), sewer main breaks, or other issues. Additionally infiltration and inflow (I&I) during storm events does not cause a noticeable increase in flow, attesting to the good condition of the sewer collection system.

All four SSCWD sewer lift stations are equipped with the District's Supervisory Control and Data Acquisition (SCADA) system allowing for operators to remotely monitor and control the status of these stations. Alarms programmed into the SCADA are active 24/7 and will alert operators of issues at key set points. Each station also has primary and backup submersible pumps in the wet wells to ensure that they can continue operation even if one pump is damaged. Two lift stations have permanent onsite backup power generators. The other two lift stations have adequate wet well storage to give staff sufficient time to respond and connect the District's portable generators to the lift stations.

Section I. Goals

The primary goal of the SSMP is primarily to protect the health and safety of the public by preventing SSO occurrences and properly mitigating any SSO to a safe level. To realize this, SSCWD intends to meet the following goals:

A. Regulations

In order to comply with all state and federal regulations and requirements including NPDES and WDR, SSCWD will continue to maintain zero occurrences of SSOs over the next five year period.

B. Best Management Practices (BMP)

Always employ BMPs in the planning, management, operation, and maintenance activities for the sewer collection system as shown through detailed SOPs, well documented decision-making, and accurate record keeping in the CMMS.

C. Employee Training

Provide effective and continuing employee training to ensure that all operations staff are competent and knowledgeable in the collection system maintenance and operation. This could include employee cross-training, obtaining of AWWA and CWEA certifications, attendance at industry conferences and events, or other opportunities.

D. CCTV Investigation

Initiate a Closed Circuit Television (CCTV) investigation program by 2021 which will have videoed the full collections system by 2024 to better evaluate the internal condition of the sewer main. The information from this investigation will be used to inform future CIPs.

E. CIP Projects

Create a detailed Capital Improvement Plan (CIP) by 2022 to identify and address collection system deficiencies or opportunities to better maintain and improve system performance. SSCWD shall coordinate with potential developments to implement various CIP projects jointly to minimize cost and disruption to the sewer collection system.

F. Capacity

Continue to maintain sufficient capacity in the collection system to convey maximum anticipated peak wastewater flows effectively to the Ridgemark WWTP and assure that additional development within the sewer collection system does not exceed that capacity. Also SSCWD intends to continue monitoring I&I to insure that it does not exceed 20% of normal daily flows.

G. Safety

Maintain a record of zero work related injuries for the next 5 years through regular safety training, enforcement of safety protocols, identifying potential hazards, and addressing safety concerns in a timely manner to minimize risk of injury.

Section II. Organization

Sunnyslope County Water District has been organized to provide clear management direction and to minimize confusion or miscommunication, especially during emergencies. Management structure includes a chain of authority to effectively delegate responsibilities and assures a chain of accountability for work performance.

A. Board of Directors

SSCWD is governed by a five member Board of Directors directly elected by the constituents living within the District boundary in general elections. The Board provides general policy direction to the District and serves as the final governing authority.

B. General Manager

The General Manager (GM) has ultimate responsibility for all SSCWD operations and activities. The GM answers to the Board of Directors for administrative, managerial, and operational compliance and reporting in regards to external and internal regulations and policies. When appropriately licensed the GM also serves as the District Engineer.

C. Associate Engineer

The Associate Engineer is responsible for the planning, design, and inspection of new and existing facilities within the sewer collection system as well as managing the CIP to improve the system functionality and prevent SSOs or other emergencies. The Associate Engineer may act as the District Engineer when appropriately licensed and the responsibility has been delegated by the GM.

D. Water/Wastewater Superintendent

The Water/Wastewater Superintendent is responsible for managing all field staff for all daily and emergency operation of the sewer collection system including recordkeeping and reporting as regulations require.

E. Operations/Maintenance Crew Chief

The Crew Chief is responsible for the daily management of the computerized maintenance management system (CMMS), assignment of work orders, and the employee safety and training programs.

F. Water/Wastewater Utility Maintenance

The Water/Wastewater Utility Maintenance staff are responsible for the daily maintenance and operational activities as assigned. They are generally the first responders to any sewer system issues and conduct the onsite work to resolve such issues. They also provide on-call service for 24/7 emergency response and monitor the sewer system via the District's SCADA.

[Organization Chart]
[Emergency Response Plan District Personnel]
[Job Descriptions of Pertinent Positions]

G. Communication Chain and Duties

The following list identifies the proper order of who is to be notified of an SSO.

1. **SSCWD District Office .... (831) 637-4670**
   - Receives initial notification from the public and begins internal notifications
2. **On-Call Maintenance Staff .... (831) 801-5817**
   - Receives initial notification outside business hours
   - Immediately responds to the SSO site to evaluate situation
   - Communicates to supervisor the situation & assistance or equipment needed
   - Starts addressing the SSO to resolve it and mitigate as directed
3. **General Manager .... (831) 917-6696**
   - Responsible for properly reporting to other agencies the occurrence of an SSO
   - Requests assistance from other agencies via mutual aid agreements if needed
   - Spokesperson to local news media and decides on extent of public notification
   - Ensures that proper written reporting is submitted to RWQCB on time
4. **Water/Wastewater Superintendent .... (831) 524-0382**
   - Responsible for calling upon and coordinating emergency response crew
   - Determines method to resolve SSO and mitigate all effects of it
   - Gathers needed information and field reports for written reporting to RWQCB
5. **Crew Chief .... (408) 396-2320**
   - Manages the on-site response activities to an SSO event
   - Determines what safety precautions & measures are necessary for staff
   - Considers public safety such as traffic control & minimizing public exposure
6. **San Benito County Communications .... (831) 636-1400**
   - Disseminates information to key County Departments like Sherriff and OES
   - Provides aid in notifying public and mass emergency communication
7. **San Benito County Health Department .... (831) 637-5367**
   - Advises on methods to minimize public exposure
   - Inspects all mitigation measures to ensure everything is sanitary
8. **California Fish & Game .... (408) 649-2870**
   - Must be contacted immediately if spill reaches a State Water Body
   - Evaluates the environmental damage and advises on mitigation
   - Inspects mitigation measures to ensure protection of environment
9. **Office of Emergency Services .... (800) 852-7550**
   - Must be notified within 2 hours if spill reaches surface water or drainage
   - Determines extent of damage to water body and containment options
   - Institutes temporary public safety measures such as closing access to water
10. **Regional Water Quality Control Board .... (805) 549-3147**
    - Must be notified within 24 hours of SSO
    - Regulatory authority over District
    - Advises on response strategy and implementation
    - Receives, reviews, and files the final written report
    - Determines whether fines or other enforcement measures are issued
11. **Board President .... (831) 261-4451**
    - Evaluates response actions taken and performance by General Manager
    - Considers expenditures and may call Special Board Meetings to address them

Section III. Legal Authority

District Code Title 4, provides SSCWD the legal authority to enforce the following rights and requirements to ensure public health and safety concerning the sewer collection system.

A. Prevent Illicit Discharges

Any discharge into the SSCWD sewer collection system that does not comply with all requirements of the District Code Title 4 is considered an illicit discharge and is subject to all legal enforcement measures as described in Code 4.40.

B. Public and Private Sewage Disposal

District Code 4.10 dictates that any property requiring sewer disposal within the District connect to the public sewer system unless specific exemptions detailed in Code 4.15 apply to permit a private sewage disposal system. This is intended to prevent unsanitary disposal of sewage which could be harmful to human and environmental health.

C. Proper Design and Construction

District Code 4.20 requires that all sewer facilities and connections be properly designed, constructed, tested, and inspected according to District standards. Additionally it ensures SSCWD has full access to all facilities for maintenance, repair, and replacement.

D. Limit Types of Discharges

District Code 4.25 prohibits various types of discharge to the sewer system including storm water drainage, garbage, debris, fat oil and grease (FOG), hazardous chemicals, new self-regenerating water softener brine, and other illicit discharges. This is to prevent blockages within the sewer collection system and disruption to the sewer treatment process at the Ridgemark WWTP.

E. Enforcement

District Code 4.40 provides the means and methods through which SSCWD may enforce these regulations. Avenues available for such enforcement include inspection, notice of violation, sewer disconnection, water discontinuance, fines, and assessment of civil and criminal proceedings.

[Sunnyslope County Water District Code]

Section IV. SSSMP Implementation and Maintenance Program

Sunnyslope County Water District staff engage in daily operation and maintenance of the sewer collection system in order to ensure the good performance and condition of the facilities. By incorporating these maintenance strategies into the regular operational procedures, staff effectively minimize the likelihood of SSOs and other emergencies by resolving issues before they cause larger problems.

A. Standard Operating Procedures (SOPs)

Staff shall develop and follow comprehensive and clear SOPs to describe all details of each operational procedure. This guarantees consistent methods are used between various maintenance personnel and is especially key when training new staff. Consistency is vital so that all equipment and facilities are evaluated according to the same standard and receive the same level of care.

B. Sewer System Maps

The Associate Engineer maintains accurate and updated mapping of the sewer collection system including all gravity and force main sewer lines, manholes, lift stations, and other facilities. This map data is stored in the geographic information system (GIS) along with the age, material, elevation, slope, and other pertinent information for each asset. Annual updates to these maps shall be distributed to replace any outdated sheets and ensure that all maps are current.

[Sewer System Maps]

C. Record & Evaluate Information

The District records and evaluates relevant information to identify trends and evaluate the collection system performance. This information is then used to give insight on potential issues and the measures taken to prevent them. Implementation of the CMMS program will significantly aid in the collection and filing of this data so that it is easily accessible and utilized.

D. Preventative Maintenance

Staff are proactive in conducting routine preventative maintenance of the collection system facilities and equipment to ensure their reliability and consistent performance. This includes daily monitoring of lift stations, regular clearing lift stations of debris, and scheduled sewer pipe cleaning and flushing. Specific cleaning is done in target areas of historic concern and issues. The Crew Chief assigns the various maintenance activities from an Excel-based CMMS program which schedules and creates work orders. Once these work orders are completed, the Crew Chief updates the program and assesses if further maintenance work is required. SSCWD intends to transition from the Excel-based CMMS to using the NexGen Asset Management program in the coming years. This is a much more robust CMMS system which will more easily analyze maintenance activities. Such analysis will enable SSCWD it become even more proactive in preventative maintenance by studying various trends, costs, and lifecycles of the system assets.

E. Capital Improvement Plan

The District is developing a CIP for the sewer collection system which identifies the structural deficiencies within the system and proposes long term solutions to resolve those problems. Often, these solutions involve the rehabilitation or replacement of existing facilities at risk of failure. However it may also include new projects which may resolve longstanding maintenance matters that cause recurring problems. The CIP is informed by historical information and condition assessments of the facilities.

[Sewer System CIP]

F. Training

The District is committed to providing regular training and continuing education to all of its staff. This may include on-the-job cross-training between various employees, group training sessions, or more formalized training classes. Staff are encouraged to pursue specialized training and SSCWD has adopted personnel policies to accommodate and reimburse many training and certificate opportunities. Certain compensation step advancements are conditioned on obtaining specific certificates or licenses to further motivate employees. To demonstrate this emphasis on employee training, SSCWD budgets appropriately for professional development.

G. Equipment Inventory

SSCWD maintains a robust inventory of parts and equipment necessary for emergencies and repairs. This includes identification of critical specialty parts which must always have a spare replacement in the District's possession for immediate repair. Such inventory provides assurance that the sewer collection system remains operational even in the event of unexpected equipment failure. Staff routinely evaluate and update the inventory to ensure the system's resiliency.

Section V. Design and Performance Provisions

Sunnyslope County Water District requires all new, rehabilitated, and replacement sewer facilities to conform to the District's adopted design details and specifications. These design requirements provide assurance that the collections system is properly constructed and is consistent in the application and installation of facilities. District design details are regularly reviewed and updated.

A. Sewer Standard Details and Specifications

SSCWD keeps sewer standard details and specifications which must be adhered to in the design and construction of all additions or alterations to the sewer collection system. These standards are regularly reviewed to ensure that they remain updated and utilize reliable and state of the art technology. Maintenance staff are also encouraged to provide feedback and recommendations for improvements upon the standard designs.

[Sewer Standard Construction Details and Specifications]

B. Development Plan Review, Approval, Inspection, & Acceptance

All proposals for new developments that are to obtain sewer service from SSCWD must submit Improvement Plans for the District's review and comments. In reviewing these plans, SSCWD staff consider conformance to District standards, long term system maintenance, capacity, future growth, access, and several other factors. Once all District comments have been satisfactorily addressed, the General Manager signs approval of the Improvement Plans. A standard agreement for facilities and service between the developer and the District with Board approval. During construction, SSCWD staff inspect and test the installation of the sewer system to ensure that the standards are properly followed. Upon completion of the sewer system construction, the District accepts ownership of it from the developer and assumes responsibility at that point for all operation and maintenance activities for that addition to the sewer system.

C. Sewer Lateral Repair Permits

Sewer laterals extending from the sewer main in the street to the private home are owned and maintained by the property owner, and they are responsible for any repairs or replacements needed. However, SSCWD requires that a permit be obtained from the District for any repairs or replacements of the lateral prior to any work. District staff shall inspect the sewer lateral and its repairs prior to burial to insure proper installation and workmanship. SSCWD will work closely with the San Benito County Building Department to coordinate the sewer lateral permits alongside any other county permits the homeowner is required to obtain.

Section VI. Overflow Emergency Response Plan (OERP)

The OERP is intended to protect public and environmental health and safety in the event of a sanitary sewer overflow (SSO) and to mitigate any danger posed by a SSO as quickly and safely as possible.

A. Initial Notification

SSCWD personnel are generally first notified of a SSO by phone. During business hours (8am-5pm Mon-Fri) office staff answering the phone will take down all pertinent information from the caller including the address and location, time, SSO severity, and other key information. They will immediately dispatch maintenance staff to respond. Outside of business hours, the public can indicate there is an emergency (SSO) happening through the District's answering machine, which then transfers them to the 24/7 on-call maintenance staff cell phone. The on-call employee will take the relevant information and immediately respond to the situation. All the sewer lift stations also have high level alarms which through SCADA will automatically call out to the maintenance staff cell phone when triggered. This provides some advanced notice before a lift station overflows.

B. Primary Response

A copy of the OERP is in the Emergency Response Plan and Operations & Maintenance Procedures Binders which are located in each service vehicle and various District facilities. The OERP lays out the procedures for notification and response to a SSO though step by step instructions. The 24/7 on-site response time is always to be one hour or less from the time of the first notification call. All anticipated equipment necessary to address the SSO is to be retrieved so SSO containment, mitigation, and clean-up can start immediately. The OERP also indicates the regulatory agencies that must be contacted and timelines for that contact. Once on site, staff follow the OERP guidelines for effectively and safely containing the spill, resolving the blockage or other issue causing the SSO, and mitigating the site. Maintenance staff annually review the OERP so that they are prepared to effectively respond and follow its guidelines.

[Overflow Emergency Response Plan]

C. Written Reporting

The on-site staff responsible for the SSO containment, cleanup, and mitigation must prepare a written field report using the Field Spill Report Form within 24 hours of the spill. This report should include all pertinent information including the time, location, estimated volume of the spill, names of responders, measures taken to contain and resolve the spill, and mitigation measures enacted. Additional reporting shall be conducted and submitted to the proper regulatory agencies as required.

[Field Spill Report Form]

D. Investigation

All SSO incidents shall be thoroughly investigated to determine the cause for the spill. Corrective action based upon the results of this investigation shall be taken to prevent future spills. Such actions may include increased sewer cleaning in the location, FOG enforcement action, CIP projects to rehabilitate sewer mains, or other actions.

E. Evaluate Overall Response

After all aspects of a SSO have been completed from initial response through the final investigation and reporting, staff conduct thorough evaluation of the overall response and all actions taken. Every step and decision of the event is critiqued to determine what was or was not effective. The goal is to learn from the real-world experiences and situations to improve future responses to similar emergencies by determining what strategies were or were not helpful and effective. Using this information, appropriate changes or revisions to the OERP shall be proposed and implemented to improve the response.

General categories for the critique include:

1. Initial notification and communication
2. Response time and preparedness
3. Initial determination of SSO scope and damage potential
4. Coordination and dispatching of emergency crew
5. Determination and gathering of parts & equipment
6. Containment and bypassing of SSO wastewater
7. Safety of public and employees (traffic, PPE, lights, unsanitary exposure, etc.)
8. Clearing of the plug or issue to restore normal flow
9. Site cleanup and restoration/mitigation
10. Notification of other agencies and following of Chain of Communication
11. Investigation of SSO cause and actions taken to address the determined cause
12. Writing and submitting of the required reports

Section VII. Fats, Oils, and Greases (FOG) Control Program

Fats, oils, and greases from cooking and food preparation that enter the sewer system can congeal and fall out of solution. As FOG is not water soluble, they can continue to build up on the inside of the sewer pipes and eventually cause blockages that contribute to SSOs. In an attempt to eliminate this issue from its sewer collection system, SSCWD has implemented the FOG Control Plan here summarized.

A. FOG Elimination at the Source

The most effective means of combatting FOG is preventing it from ever entering the sewer collection system. To accomplish this, the FOG Control Program includes the following key elements.

1. Identification of FOG Sources
2. Legal Enforcement Authority
3. FOG Removal Device Requirements/Specifications
4. Inspection & Monitoring
5. Record Keeping of Best Management Practices (BMPs)
6. Public Education & Outreach

[FOG Control Program]

B. FOG Hotspot Cleaning & Maintenance

While the main contribution of FOG to SSCWD's sewer system is from food service establishments, the accumulation of FOG from individual residences can also contribute to SSOs and must be addressed. Historical maintenance data has been used to identify various hotspot areas that need to be addressed more regularly. Below is the maintenance schedule for these areas.

Weekly Flushing

1) Joes Lane south to Donald Drive
2) Club House to Donna Lane
3) Cheri Court to Ridgemark Estates Wastewater Treatment Ponds II

Semi-monthly Flushing

1) Helen Court (every second week)

Monthly Hydro Cleaning

1) Club House to Donna Lane

Semi-annual Hydro Cleaning

1) Joes Lane south to Donald Drive
2) Helen Court
3) Club House to Donna Lane
4) Paullus Drive to Ridgemark Estates Wastewater Treatment Ponds II

Section VIII. System Evaluation and Capacity Assurance Plan

Sufficient sewer collection system capacity is key to preventing SSOs from occurring due to peak instantaneous flow conditions.

A. Data Collection

In 2012 SSCWD hired Wallace Group to compile GPS data on all the collection system facilities and compile the data into a GIS format. The data collected included the coordinate location, elevation, depth, and invert of all manholes along with the gravity sewer pipe material, size, and slope. All this information was made easily accessible for analysis of the sewer system capacity. New developments are required to provide AutoCAD files to the District to update GIS format.

B. Maximum Capacity Analysis

In 2020 SSCWD staff created an Excel spreadsheet with the information obtained from the Wallace Group study to calculate the design free flow maximum capacity for each section of sewer pipe in the collections system. The design capacity is determined as 75% full pipe flow using the Manning equation for open-channel flow. By establishing the design capacity as 75% full pipe flow, factor of safety is incorporated as a buffer for I&I and other factors such as FOG accumulation, root intrusion, and for preventing potential system damage caused by syphoning. This analysis has revealed areas within the existing sewer collection system of inadequate design capacity, although still within the full pipe flow capacity. These areas receive prioritized attention for cleaning and maintenance as well as consideration for upsizing through CIP or new development projects.

[Sewer Capacity Analysis]

C. New Developments

Whenever a new development is proposed to receive sewer service from SSCWD, an analysis is conducted to determine the downstream effects of the additional sewer flow. If that additional flow from the new development causes a section of gravity sewer main to be over design capacity for peak hour flow, that development must upsize that section prior to receiving sewer service.

D. Capital Improvement Plan

In areas where the flows main are over the gravity sewer design capacity at peak hour flow, SSCWD shall consider upsizing of those pipes as part of the CIP. These lines shall be evaluated to consider risk of failure, cost of replacement or upsizing, constructability, and other factors to prioritize the projects. SSCWD will also look for opportunities to incorporate such pipe upsizing projects into proposed development projects.

E. Flow Monitoring

SSCWD staff shall perform routine evaluation of sewer system flow conditions by analyzing pumping trends at the four lift stations. In this way, comparisons can be made between estimated peak hour flows and real observed flow rates experienced in the sewer mains. This information shall then be used to revise the sewer capacity evaluation.

Section IX. Monitoring, Measurement, and Program Modifications

The success of SSCWD's SSMP is continually monitored and evaluated through several methods and measurements. These serve to inform staff of the effectiveness of the various implementation strategies and provide valuable feedback for improvement.

A. Information Collection

SSCWD staff collect and record key data which is maintained in the Excel CMMS for easy access and analysis. This data includes regular maintenance activities like cleaning lines, unclogging lift station pumps, servicing motors, chemical dosages, power usage, lift station levels, and other relevant routine information. It also includes all non-routine data such as SSO events, system repairs, emergency call-outs, mitigation measures taken, overtime hours, and any other key data. SSCWD intends to transition from the Excel CMMS to the NexGen Asset Management CMMS program. NexGen is a much more robust CMMS system that will enhance the District's ability to better analyze trends, costs, equipment lifecycles, and other key aspects. Moreover, it can enable predictive planning of equipment repair and replacement for budgetary purposes.

B. Data Analysis

Reports summarizing all the collections system data are regularly created for the Water/Wastewater Superintendent, Associate Engineer, and General Manager to review. Noteworthy information is reported to the Board of Directors at monthly general board meetings. Staff use these reports to inform decisions regarding the effectiveness of current preventative maintenance and corrective measures taken as well as opportunities to improve upon them.

C. Adapt and Modify Practices

After evaluation of the data collected and analyzed, SSCWD staff consider whether any changes or modifications to the SSMP are necessary or useful to further the goal of eliminating SSO occurrences and improving the overall sewer collection system performance. Maintenance staff are always encouraged to suggest ideas for new and better practices and these ideas are seriously considered. Such new concepts or methods can be tested in pilot projects or trial periods and closely monitored to determine whether they should be implemented system wide and incorporated into the SSMP.

Section X. Sanitary Sewer Management Plan Audits

This SSMP is meant to be a living document which is regularly reviewed and updated as circumstances and situations around it change. As such, it is regularly reviewed and audited.

A. Annual Review

The SSMP undergoes yearly review by the General Manager, Water/Wastewater Superintendent, Associate Engineer, Crew Chief, and all Maintenance staff during the Operations and Emergency Response Training. This training generally takes place in January and is required for all relevant management and field staff.

B. Biennial Audit

A full internal audit of the SSMP is conducted by management staff at least once every two years evaluating the effectiveness of SSMP implementation measures. This audit shall focus on the previous two years, but also consider the long-term progress in achieving the SSMP goals.

C. Five Year Update and Approval

At least once every five years, a full update of the SSMP shall be conducted to incorporate all changes and modifications. This update shall then be taken before the Board of Directors for their approval.

Section XI. Communication Program

It is critical to the success of this SSMP that the information contained within it be clearly and effectively communicated to SSCWD employees, sewer customers, and the public.

A. Informing Employees

All management and field staff are required to review the SSMP during the annual Operations and Emergency Response Training. This training is also to be provided to new employees within 2 weeks of their start date. Through this review, SSCWD ensures that field staff understand the requirements, procedures, and practices of the SSMP so that they can be successfully implemented in the daily operation of the collection system. Additionally, the SSMP shall be periodically reviewed with office staff so that they too understand the SSMP goals and purpose. This is key as they are often the first contact with customers and must be prepared to provide them clear and accurate information.

B. Public Outreach

SSCWD is dedicated to providing its sewer customer and the general public with clear, accurate, and easily accessible information regarding the SSMP and the sewer collection system in general. Several public outreach strategies outlined below have been implemented to disseminate this information and to advise customers on how they can participate in safeguarding the sewer collection system.

1. <u>Board Meetings</u>

SSCWD Board Meetings are fully open to the public and agendas of each meeting are posted on the District's website. At these meetings, regular reports are given on the status and operations of the sewer collection system.

2. <u>Website Links</u>

The approved SSMP is posted through a link on the SSCWD website (sscwd.org) and can easily be located and read through. The website also houses board meeting minutes and other general information.

3. <u>Bill Inserts</u>

Monthly bills are delivered to all SSCWD customers which often include bill insert fliers informing customers of District news and programs.

4. <u>Direct Customer Communication</u>

The most effective means for informing customers of the elements of the SSMP is through direct face to face or phone conversation. Concerned customers often call the SSCWD office and the office staff can take advantage of this opportunity to answer their questions and give them accurate information. They can also make certain that the customer truly understands and appreciates the importance of controlling what they dispose of into the sewer system. Equally effective is the face to face interaction that customers may have with field staff as they conduct routine and emergency maintenance. Employees can take advantage of the customer's curiosity to educate them about the sewer system and ways the customer can help prevent SSOs.

SSMP Update Log

Original Approval	September 13th, 2007
Audit Review & Update	September 10th, 2009
Audit Review & Update	March 2nd, 2012

Current Audit Review & Update	April 21st, 2020

Sunnyslope County Water District Board Approved this Sewer System Management Plan at the Regular Board Meeting on April 21st, 2020.

Sunnyslope Water District

Section K

Mercury Seals

Not Applicable

Sunnyslope Water District

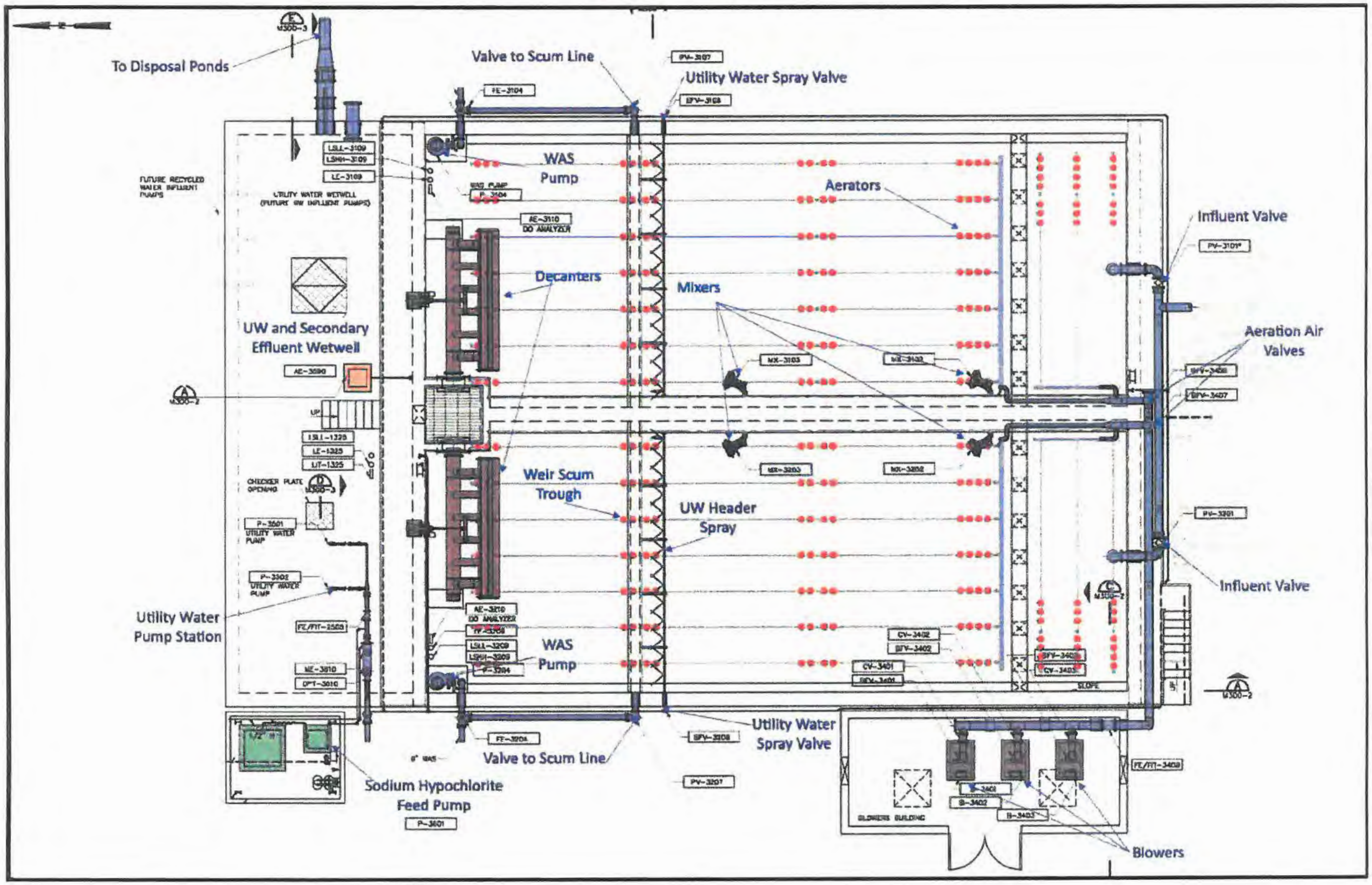
Section L

Figures

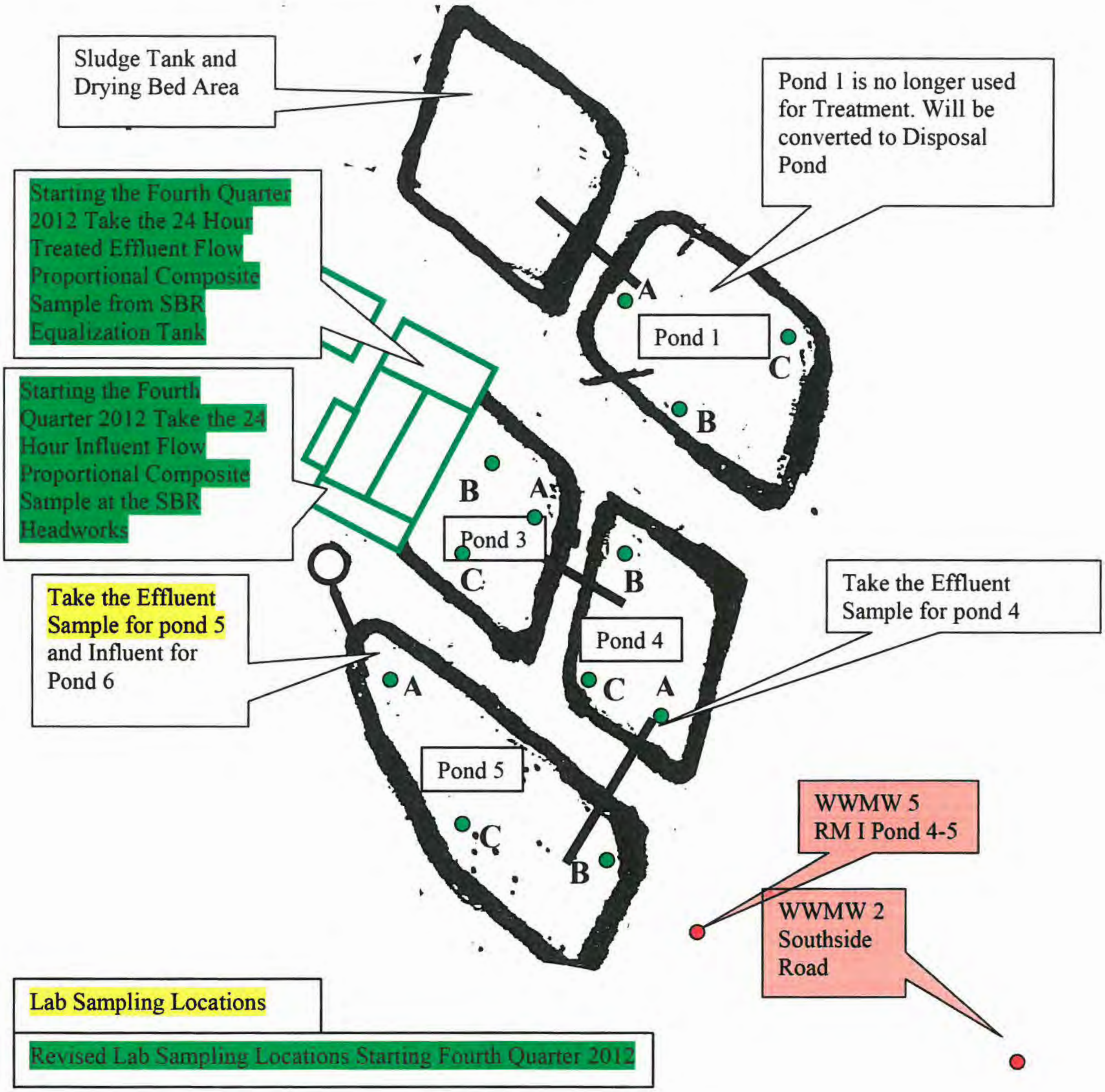
Figure 2-1: Ridgemark I Facilities (Photo taken during construction March 2013)

MONITORING WELL LOCATIONS

Figure 6-2: SBR Plan



RM – I Ridgemark Estates Wastewater Treatment Ponds
Sequencing Batch Reactor (SBR) Lab Sample Site Sheet



Revised 12-2013

- All Disposal Pond Monitoring Sites for Weekly Lab pH, Dissolved Oxygen (DO) Monitoring 1 foot depth at 3 locations in each of the 4 ponds.
- Starting the Fourth Quarter 2012 Sampling the Influent and Treated Effluent will be from the SBR Head Works and Decant Equalization Tank .

Figure 2-2: Ridgemark I Site Plan