

## **Appendix A – Overview of Groundwater Observation Well Data**



**Table A1: Groundwater Observation Well Data for the Regional District of Nanaimo Water Regions**

Water Regions	Observation Wells		Mapped Aquifer Number and Type	Historical Groundwater Level Trend (2013-2021)	Seasonal Groundwater Level Trend 2021	Associated Groundwater Level Charts (Figure #)	Water Service Wells (Provided by the RDN) Correlated to Each Mapped Aquifer	Total Number of Registered Wells Correlated to Each Mapped Aquifer
	Active Provincial Groundwater Observation Wells used in 2021 Analysis	Active RDN Volunteer Observation Wells (Site Name and Number) used in 2021 Analysis						
Little Qualicum	OW 389	-	664-Surficial (UNC)	Increasing	Below	<ul style="list-style-type: none"> <li>Figure B1</li> <li>Figure C1</li> </ul>	<ul style="list-style-type: none"> <li>Town of Qualicum Beach – 9 Wells</li> <li>Regional District of Nanaimo – 2 Wells</li> <li>Small Water Systems - 1 Well</li> </ul>	43
French Creek	-	Rinvold (VOW 16)	217-Surficial (CON)	Large Decline	Below	<ul style="list-style-type: none"> <li>Figure B2</li> <li>Figure C2</li> </ul>	<ul style="list-style-type: none"> <li>Town of Qualicum Beach – 6 Wells</li> <li>Regional District of Nanaimo – 7 Wells</li> <li>EPCOR Utilities – 1 Well</li> <li>Small Water Systems - 12 Wells</li> </ul>	33
	-	Lowrys (VOW 15)	212 – Bedrock	Increasing	Average	<ul style="list-style-type: none"> <li>Figure B3</li> <li>Figure C3</li> </ul>	<ul style="list-style-type: none"> <li>Small Water Systems - 1 Well</li> </ul>	19
Englishman River	OW 314 and OW 424	Hodges (VOW 14) and Fourneau (VOW 01)	216-Surficial (CON)	Increasing	Average	<ul style="list-style-type: none"> <li>Figure B4-B7</li> <li>Figure C4-C7</li> </ul>	<ul style="list-style-type: none"> <li>City of Parksville – 20 Wells</li> <li>EPCOR Utilities – 5 Wells</li> <li>Small Water Systems - 6 Wells</li> </ul>	22
	OW 287	Middlegate (VOW 18)	220 – Bedrock	Large Decline	Below	<ul style="list-style-type: none"> <li>Figure B8-B9</li> <li>Figure B8-B9</li> </ul>	<ul style="list-style-type: none"> <li>BC Parks - Vancouver Island Region – 1 Well</li> <li>Small Water Systems - 7 Wells</li> </ul>	279
NanOOSE and South Wellington	-	Biggs (VOW 12)	167-Surficial (CON)	Increasing	Average	<ul style="list-style-type: none"> <li>Figure B10</li> <li>Figure C10</li> </ul>	<ul style="list-style-type: none"> <li>Small Water Systems - 2 Wells</li> </ul>	18
	OW 388	-	211 – Bedrock	Large Decline	Below	<ul style="list-style-type: none"> <li>Figure B11</li> <li>Figure C11</li> </ul>	<ul style="list-style-type: none"> <li>Small Water Systems - 2 Wells</li> </ul>	214
	-	Sea Blush (VOW 13), Northwind (VOW 02) and Elm (VOW 03)	213 – Bedrock	Increasing	Below	<ul style="list-style-type: none"> <li>Figure B12-B14</li> <li>Figure C12-C14</li> </ul>	<ul style="list-style-type: none"> <li>Small Water Systems - 14 Wells</li> </ul>	132
	-	B2 (VOW 30), B3 (VOW 31), B4 (VOW 32), B7 (VOW 33) and B9 (VOW 34)	214 – Bedrock	Large Decline to Increasing	Average	<ul style="list-style-type: none"> <li>Figure B15-B19</li> <li>Figure C15-C19</li> </ul>	<ul style="list-style-type: none"> <li>Regional District of Nanaimo – 1 Well</li> <li>Small Water Systems - 3 Wells</li> </ul>	40
	-	NWB (VOW 27) and Florence (VOW 26)	218 – Bedrock	Moderate Decline to Increasing	Average	<ul style="list-style-type: none"> <li>Figure B20-B21</li> <li>Figure C20-C21</li> </ul>	<ul style="list-style-type: none"> <li>Regional District of Nanaimo – 2 Wells</li> <li>Small Water Systems - 5 Wells</li> </ul>	41
	-	Southwind (VOW 28)	215-Surficial (CON)	Moderate Decline	Below	<ul style="list-style-type: none"> <li>Figure B22</li> <li>Figure C22</li> </ul>	<ul style="list-style-type: none"> <li>District of Lantzville – 7 Wells</li> <li>NanOOSE First Nation – 3 Wells</li> <li>Small Water Systems - 5 Wells</li> </ul>	142
	OW 393 and OW 396	Sanders (VOW 25)	219-Surficial (CON)	Stable to Increasing	Above	<ul style="list-style-type: none"> <li>Figure B23-B25</li> <li>Figure C23-C25</li> </ul>	<ul style="list-style-type: none"> <li>Regional District of Nanaimo – 9 Wells</li> <li>EPCOR Utilities – 1 Well</li> <li>Small Water Systems - 9 Wells</li> </ul>	53
	-	O3 (VOW 29) and O7 (VOW 17)	1098-Surficial (CON)	Stable to Increasing	Average	<ul style="list-style-type: none"> <li>Figure B26-B27</li> <li>Figure C26-C27</li> </ul>	<ul style="list-style-type: none"> <li>Qualicum School District – 2 Wells</li> <li>Regional District of Nanaimo – 14 Wells</li> <li>Small Water Systems - 1 Well</li> </ul>	89
Gabriola	OW 316	Mander (VOW 08) and Descansco (VOW 07)	709 – Bedrock	Large Decline to Stable	Below	<ul style="list-style-type: none"> <li>Figure B28-B30</li> <li>Figure C28-C30</li> </ul>	<ul style="list-style-type: none"> <li>Small Water Systems - 9 Wells</li> </ul>	1042
Nanaimo River	-	Hallberg (VOW 04)	160-Surficial (CON)	Increasing	Below	<ul style="list-style-type: none"> <li>Figure B31</li> <li>Figure C31</li> </ul>	<ul style="list-style-type: none"> <li>Small Water Systems - 1 Well</li> </ul>	36
	-	Brightman (VOW 24)	163-Surficial (CON)	Large Decline	Below	<ul style="list-style-type: none"> <li>Figure B32</li> <li>Figure C32</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	17
	OW 432	Pylades (VOW 06), DeCourcy (VOW 19), Ritten (VOW 20), Rosalie (VOW 21), Gould (VOW 22) and Haro (VOW 23)	162 – Bedrock	Moderate Decline	Below	<ul style="list-style-type: none"> <li>Figure B33-B39</li> <li>Figure C33-C39</li> </ul>	<ul style="list-style-type: none"> <li>Regional District of Nanaimo – 1 Wells</li> <li>Chemainus First Nation – 6 Wells</li> <li>Shell Beach Water Utility – 4 Wells</li> <li>Small Water Systems - 21 Wells</li> </ul>	1237
	OW 435	Grandom (VOW 05)	165 – Bedrock	Moderate Decline to Stable	Average	<ul style="list-style-type: none"> <li>Figure B40-B41</li> <li>Figure C40-C41</li> </ul>	<ul style="list-style-type: none"> <li>Small Water Systems - 5 Wells</li> </ul>	327

Notes: - indicates no data available; CON indicates surficial aquifer is confined; UNC indicates surficial aquifer is unconfined; The total number of registered wells, including private domestic wells, correlated to an aquifer were obtained from the Provincial wells database (BC MoE, 2021)

## 1.0 COMMENTS FROM THE GROUNDWATER LEVEL ANALYSIS

It was determined after reviewing the Provincial Groundwater Observation Well Network (PGOWN) database, that 13 Observation Wells (OW) did not have new or updated groundwater level data, that was useful for the groundwater level trend analysis at the time of reporting in 2021. The OW locations excluded from the 2021 groundwater level analysis resulted in no trends being reported for the following aquifers:

### **Big Qualicum Water Region:**

- Aquifer 416-Surficial (CON); and
- Aquifer 665-Surficial (UNC).

### **Little Qualicum Water Region:**

- Aquifer 662-Surficial (CON).

### **Nanaimo River Water Region:**

- Aquifer 161-Surficial (UNC).

With fewer OW's included in the 2021 groundwater level analysis, as compared to the 2020 analysis (Waterline, 2020), some historical groundwater level trends changed because of sparser temporal (period of record) and or sparser spatial (less wells to review) data. Aquifers where this was observed included:

### **French Creek Water Region:**

1. Aquifer 217-Surficial (UNC). In 2020 the historical trend was "moderate decline" whereas in 2021 the trend is "large decline". No new OW data was available in 2021, with the one Regional District of Nanaimo (RDN) Volunteer Observation Well (VOW) only having 3-years of data.

### **Nanoose and South Wellington Water Region:**

1. Aquifer 218-Bedrock. In 2020 the historical trend was "stable to increasing" whereas in 2021 the trend is "moderate decline to increasing". No new OW data was available in 2021, with the two VOWs only having 3-years of data.
2. Aquifer 215-Surficial (CON). In 2020 the historical trend was "stable" whereas in 2021 the trend is "moderate decline". No new OW data was available in 2021, with the one VOW only having 3-years of data.
3. Aquifer 1098-Surficial (CON). In 2020 the historical trend was "moderate decline to stable" whereas in 2021 the trend is "stable to increasing". No new OW data was available in 2021, with the two VOWs only having 5-years of data. It should be noted that one of the VOW (O7) was added to the analysis in 2021.

### **Nanaimo River Water Region:**

1. Aquifer 163-Surficial (CON). In 2020 the historical trend was "increasing" whereas in 2021 the trend is "large decline". No new OW data was available in 2021, with the one VOW only having 3-years of data.

The reported groundwater conditions are still seen as locally representative for the above-mentioned aquifers. However, the reliability of 2021 trends in comparison to the 2020 analysis should be flagged as less “comprehensive” considering the shortfall in available data from the PGOWN at the time of the analysis. As was previously reported, multiple wells in one mapped aquifer can display different long-term trends based on the nature of the aquifer properties (heterogeneity, recharge variability, etc.) and/or local effects from pumping.

## **Appendix B – Long-Term Groundwater Level Trend Results**



Table B1: Long-Term Groundwater Level Trend Results for the VOWN and PGOWN in 2021

CHART NUMBER	WATER REGION	OBS WELL NUMBER	AQUIFER	AQUIFER TYPE	TRENDLINE EQUATION* (y = mx + b)					
					m	b	Date Range (whole years)	X-Start	X- End	RESULT
1	Little Qualicum	OW389	664	Surficial	1.0E-04	2.6	2013-2020	6.69	6.98	DIFFERENCE = 3.7 cm/year
2	French Creek	VOW 16	217	Surficial	-4.0E-04	126.6	2018-2020	109.31	108.87	DIFFERENCE = -14.6 cm/year
3		VOW 15	212	Bedrock	5.5E-03	-215.0	2018-2020	22.07	28.47	DIFFERENCE = 213.4 cm/year
4	Englishman River	OW 314	216	Surficial	3.0E-04	50.1	2013-2020	62.52	63.40	DIFFERENCE = 11 cm/year
5		OW 424	216	Surficial	3.0E-04	74.8	2013-2020	87.23	88.11	DIFFERENCE = 11 cm/year
6		VOW 14	216	Surficial	3.0E-04	19.1	2018-2020	32.06	32.39	DIFFERENCE = 11 cm/year
7		VOW 01	216	Surficial	2.0E-04	34.9	2014-2020	43.27	43.78	DIFFERENCE = 7.3 cm/year
8		OW 287	220	Bedrock	-7.0E-04	136.3	2013-2020	107.40	105.35	DIFFERENCE = -25.6 cm/year
9		VOW 18	220	Bedrock	3.0E-04	145.8	2018-2020	158.69	159.02	DIFFERENCE = 11 cm/year
10		VOW 12	167	Surficial	2.0E-04	77.8	2017-2020	86.36	86.65	DIFFERENCE = 7.3 cm/year
11	Nanoose and South Wellington	OW 388	211	Bedrock	-1.8E-03	211.5	2013-2020	137.18	131.92	DIFFERENCE = -65.7 cm/year
12		VOW 02	213	Bedrock	1.0E-03	7.0	2014-2020	48.62	51.18	DIFFERENCE = 36.5 cm/year
13		VOW 03	213	Bedrock	6.0E-04	53.0	2013-2020	77.77	79.53	DIFFERENCE = 21.9 cm/year
14		VOW 13	213	Bedrock	-7.0E-04	156.2	2017-2020	126.31	125.29	DIFFERENCE = -25.6 cm/year
15		VOW 30	214	Bedrock	1.9E-03	-80.7	2016-2020	-0.23	3.24	DIFFERENCE = 69.4 cm/year
16		VOW 31	214	Bedrock	3.4E-03	-141.4	2016-2020	2.67	8.88	DIFFERENCE = 124.2 cm/year
17		VOW 32	214	Bedrock	1.8E-03	-74.5	2016-2020	1.74	5.03	DIFFERENCE = 65.8 cm/year
18		VOW 33	214	Bedrock	-1.5E-03	69.0	2016-2020	5.49	2.75	DIFFERENCE = -64.8 cm/year
19		VOW 34	214	Bedrock	7.0E-04	-31.4	2016-2020	-1.72	-0.44	DIFFERENCE = 25.6 cm/year
20		VOW 27	218	Bedrock	-1.0E-04	72.6	2018-2020	68.33	68.22	DIFFERENCE = -3.7 cm/year
21		VOW 26	218	Bedrock	1.1E-03	36.5	2018-2020	83.87	85.07	DIFFERENCE = 40.2 cm/year
22		VOW 28	215	Surficial	-9.0E-05	17.2	2018-2020	13.36	13.26	DIFFERENCE = -3.3 cm/year
23		OW 393	219	Surficial	9.0E-05	83.0	2013-2020	86.72	86.99	DIFFERENCE = 3.3 cm/year
24		OW 396	219	Surficial	4.0E-05	22.7	2013-2020	24.31	24.43	DIFFERENCE = 1.5 cm/year
25		VOW 25	219	Surficial	5.0E-04	3.8	2018-2020	25.31	25.85	DIFFERENCE = 18.3 cm/year
26		VOW 29	1098	Surficial	8.0E-05	-4.5	2016-2020	-1.07	-0.93	DIFFERENCE = 2.9 cm/year
27		VOW 17	1098	Surficial	1.1E-03	-32.5	2016-2020	14.13	16.14	DIFFERENCE = 40.2 cm/year
28	Gabriola	OW 316	709	Bedrock	-1.0E-05	64.8	2013-2020	64.43	64.41	DIFFERENCE = -0.4 cm/year
29		VOW 08	709	Bedrock	-4.0E-04	26.3	2014-2020	9.68	8.65	DIFFERENCE = -14.6 cm/year
30		VOW 07	709	Bedrock	-2.0E-04	14.5	2014-2020	6.20	5.69	DIFFERENCE = -7.3 cm/year
31	Nanaimo River	VOW 04	160	Surficial	1.0E-04	30.6	2014-2020	34.73	34.99	DIFFERENCE = 3.7 cm/year
32		VOW 24	163	Surficial	-7.0E-04	75.3	2018-2020	45.18	44.41	DIFFERENCE = -25.6 cm/year
33		OW 432	162	Bedrock	-2.0E-04	53.0	2014-2020	44.66	44.15	DIFFERENCE = -7.3 cm/year
34		VOW 06	162	Bedrock	-1.0E-04	8.1	2014-2020	3.91	3.65	DIFFERENCE = -3.7 cm/year
35		VOW 19	162	Bedrock	1.4E-03	-22.0	2018-2020	38.35	39.89	DIFFERENCE = 51.1 cm/year
36		VOW 20	162	Bedrock	-4.0E-05	33.4	2018-2020	31.68	31.64	DIFFERENCE = -1.5 cm/year
37		VOW 21	162	Bedrock	1.4E-03	-34.4	2018-2020	25.99	27.53	DIFFERENCE = 51.1 cm/year
38		VOW 22	162	Bedrock	2.0E-04	21.8	2018-2020	30.40	30.62	DIFFERENCE = 7.3 cm/year
39		VOW 23	162	Bedrock	-3.0E-06	6.1	2018-2020	6.02	6.02	DIFFERENCE = -0.1 cm/year
40		OW 435	165	Bedrock	-2.0E-04	34.4	2014-2020	26.07	25.55	DIFFERENCE = -7.3 cm/year
41		VOW 05	165	Bedrock	4.0E-05	23.7	2014-2020	25.33	25.43	DIFFERENCE = 1.5 cm/year

Notes:

OW - Wells associated with the PGOWN

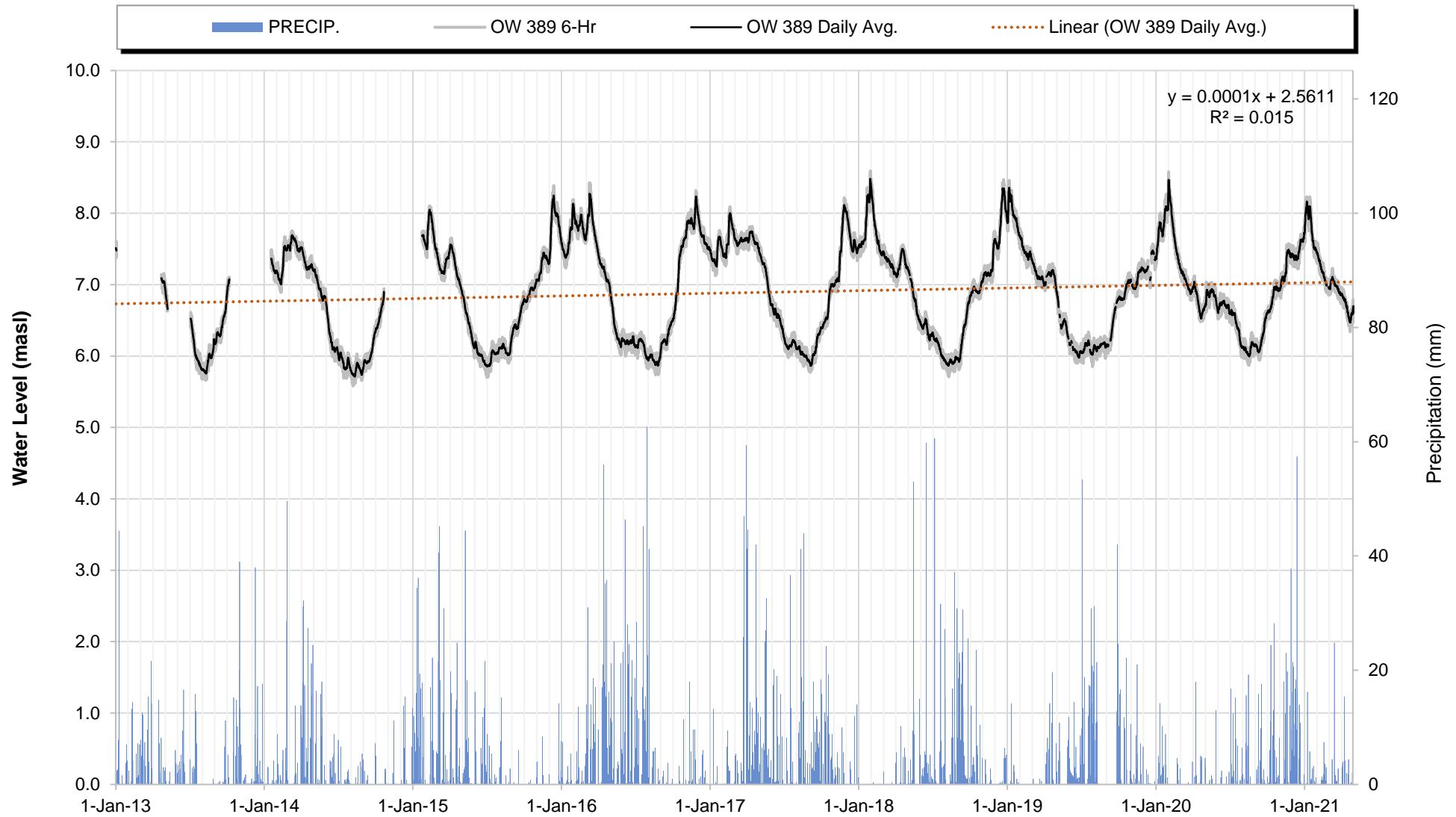
VOW - Wells associated with the VOWN

m - Slope of the linear regression trend line

b - Y-intercept

\* The trend line is calculated from the daily average, which is an 18-hour moving average for the barometrically compensated data. The daily average excludes any data gaps or erroneous data, returning a "no value". The daily average is subsequently reported every 6-hours to provided a smoothed data series. Conversely, the 6-hour data is just the barometrically compensate data at 6-hour intervals, displaying the daily fluctuations for a given day.




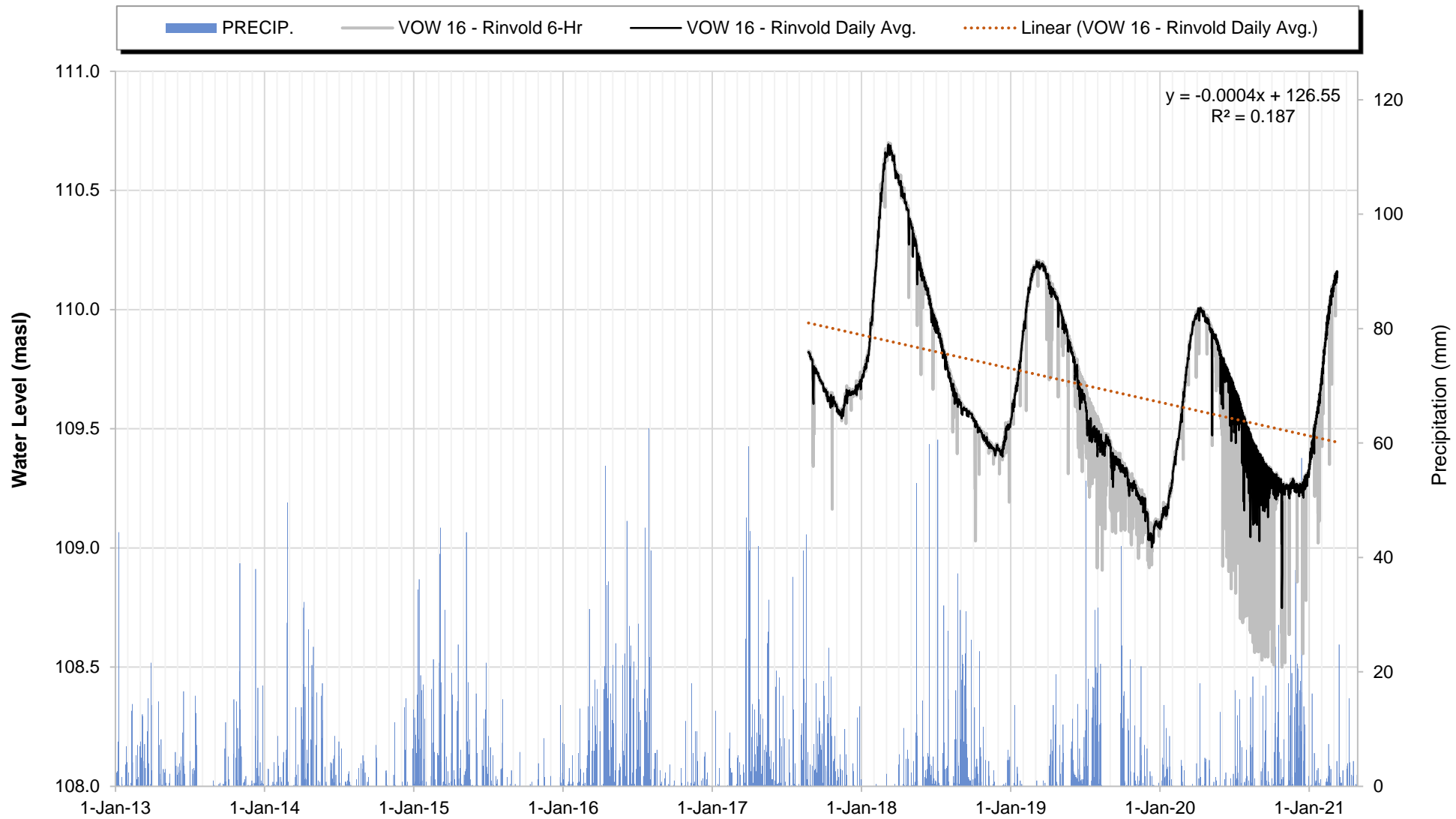


**NOTES:**

Observation Well is Associated with Aquifer 664


Aquifer 664 is Unconfined Surficial Sediments

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART OW 389 (WR2 - Little Qualicum)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-1</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

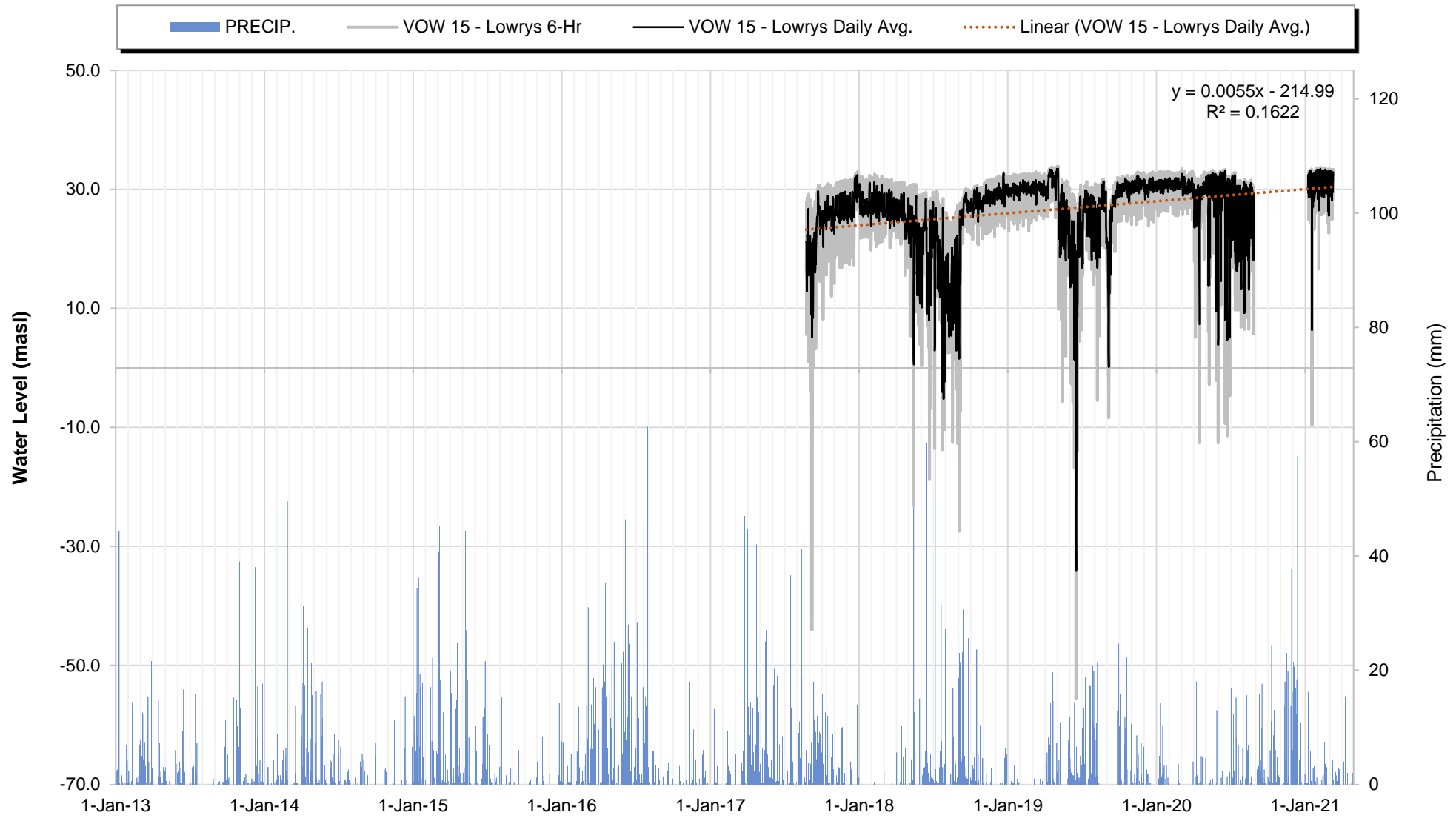


**NOTES:**

Observation Well is Associated with Aquifer 217  
 Aquifer 217 is Confined Surficial Sediments


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 16 - Rinvold (WR3 - French Creek)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-2</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

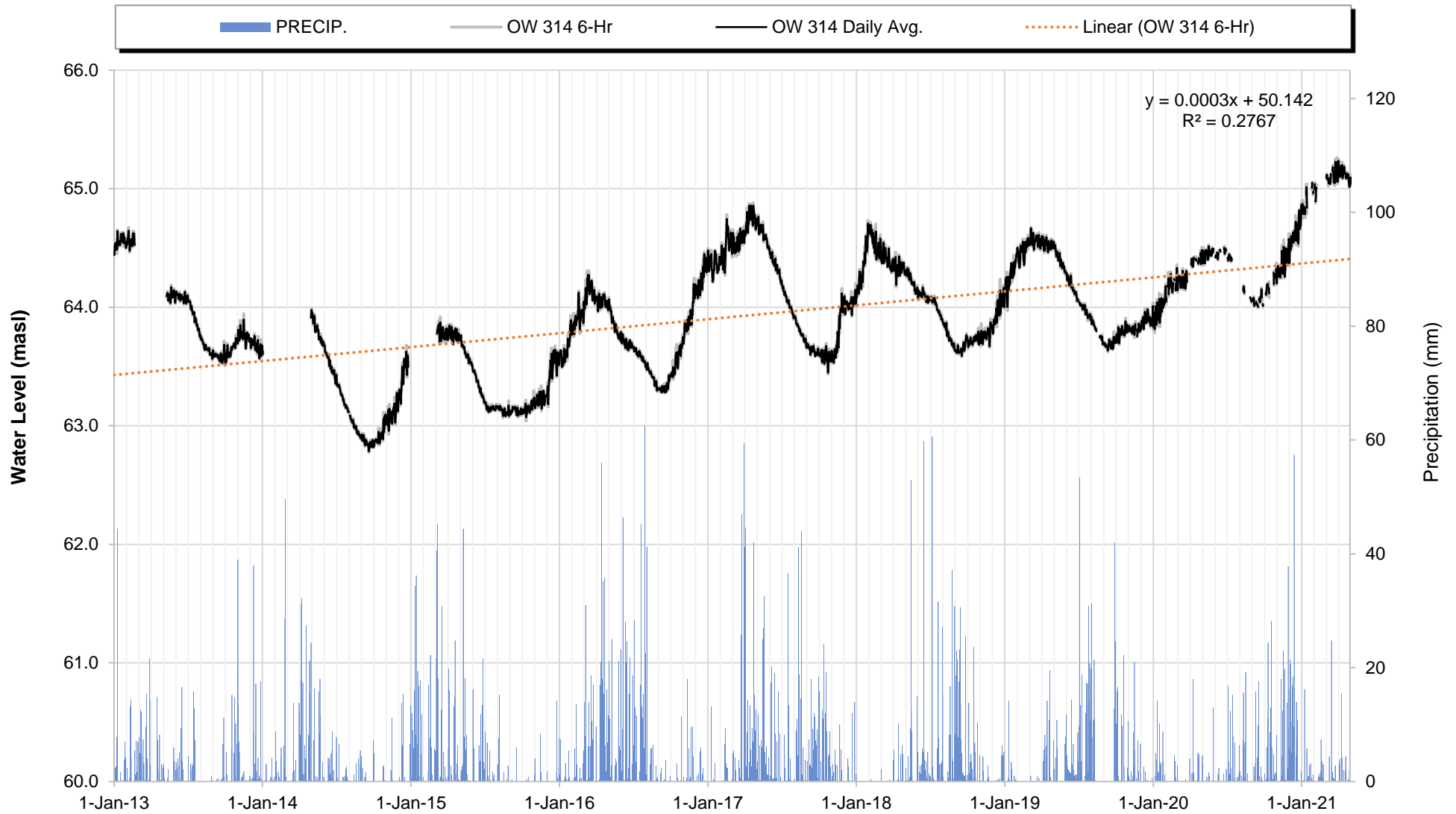




**NOTES:**


Observation Well is Associated with Aquifer 212  
 Aquifer 212 is Fractured Bedrock

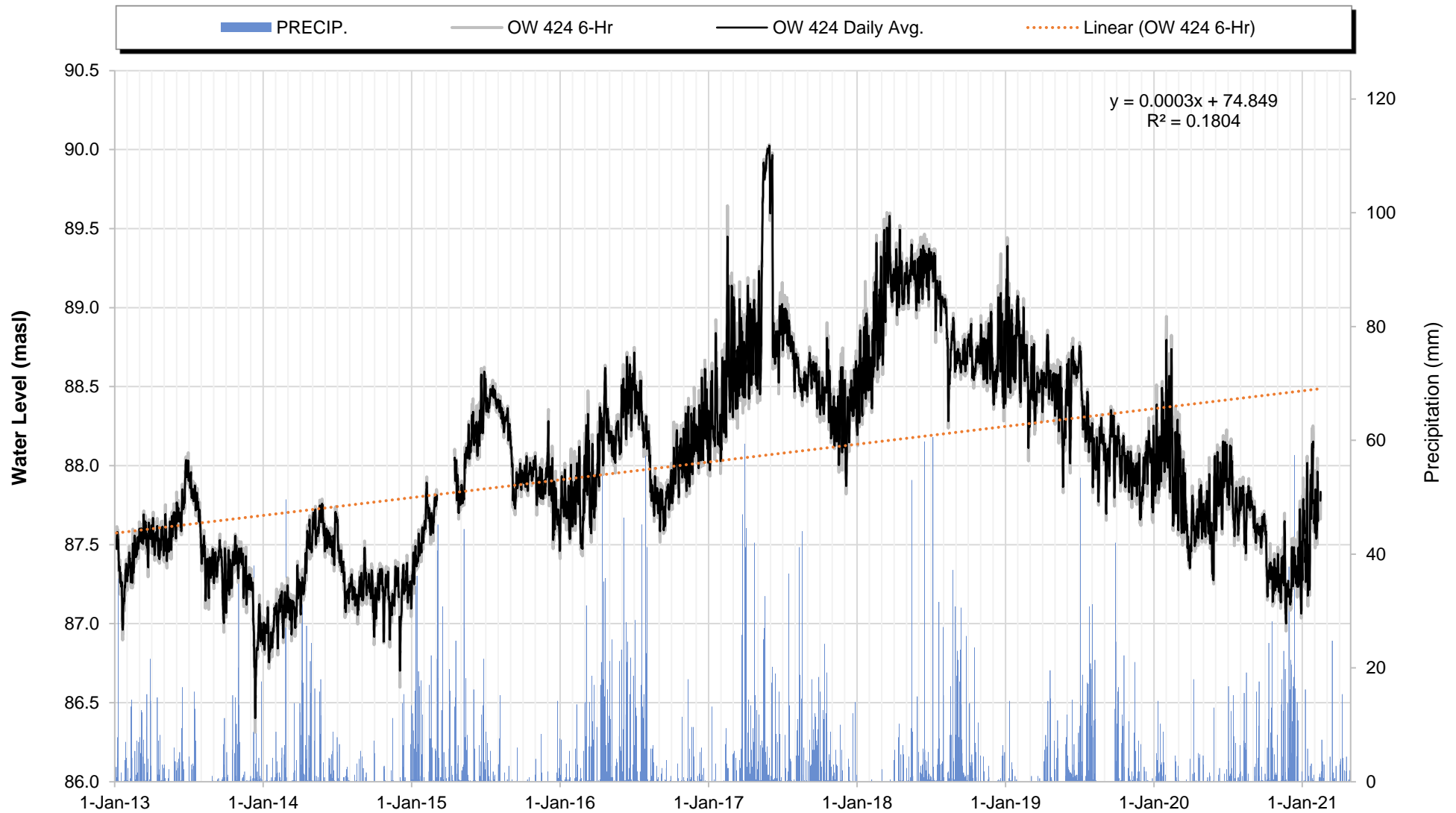
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TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 15 - Lowrys (WR3 - French Creek)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-3</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**


Observation Well is Associated with Aquifer 216  
 Aquifer 216 is Confined Surficial Sediments

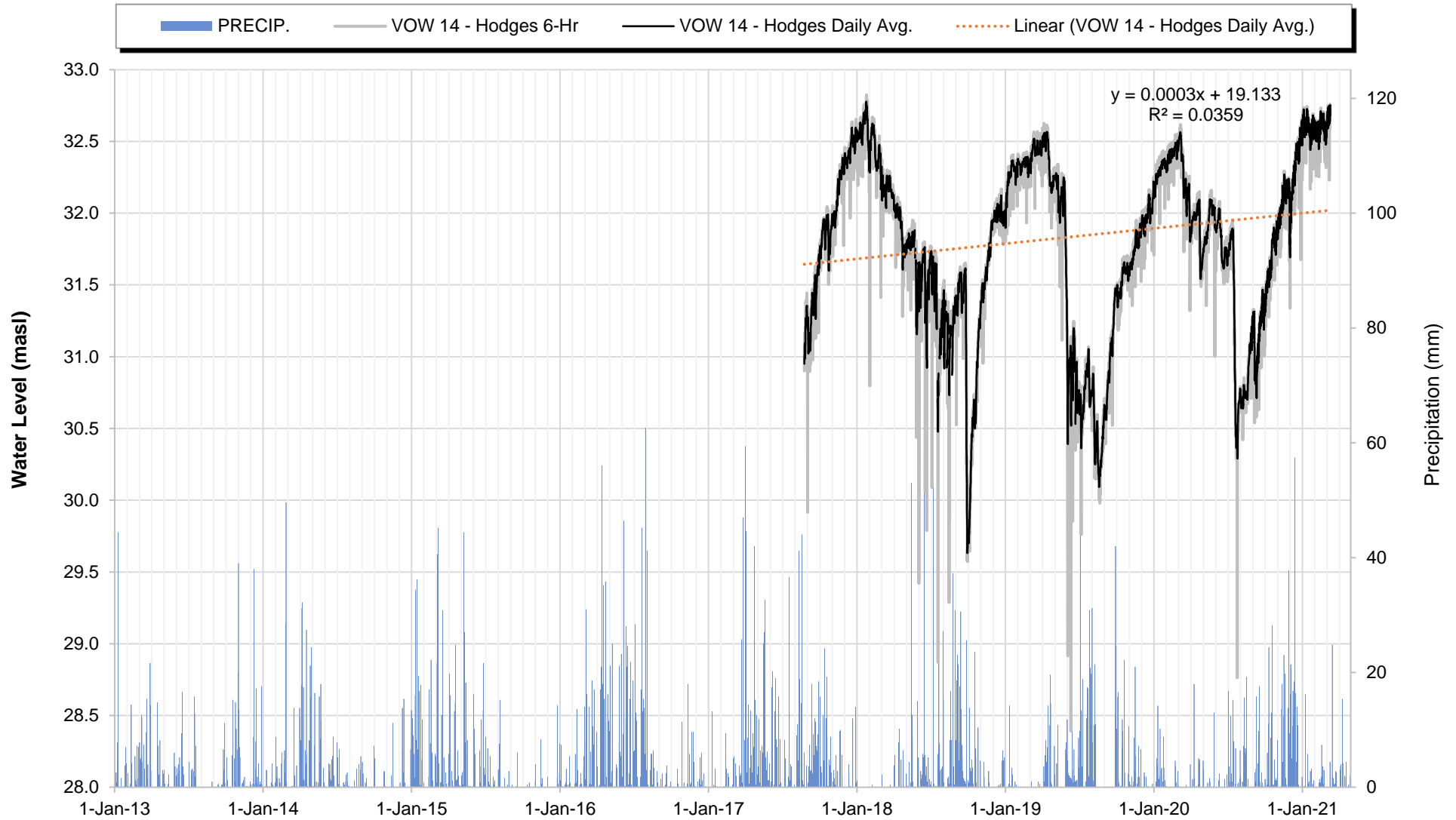
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART OW 314 (WR4 - Englishman River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-4</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**

Observation Well is Associated with Aquifer 216  
 Aquifer 216 is Confined Surficial Sediments


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART OW 424 (WR4 - Englishman River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-5</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

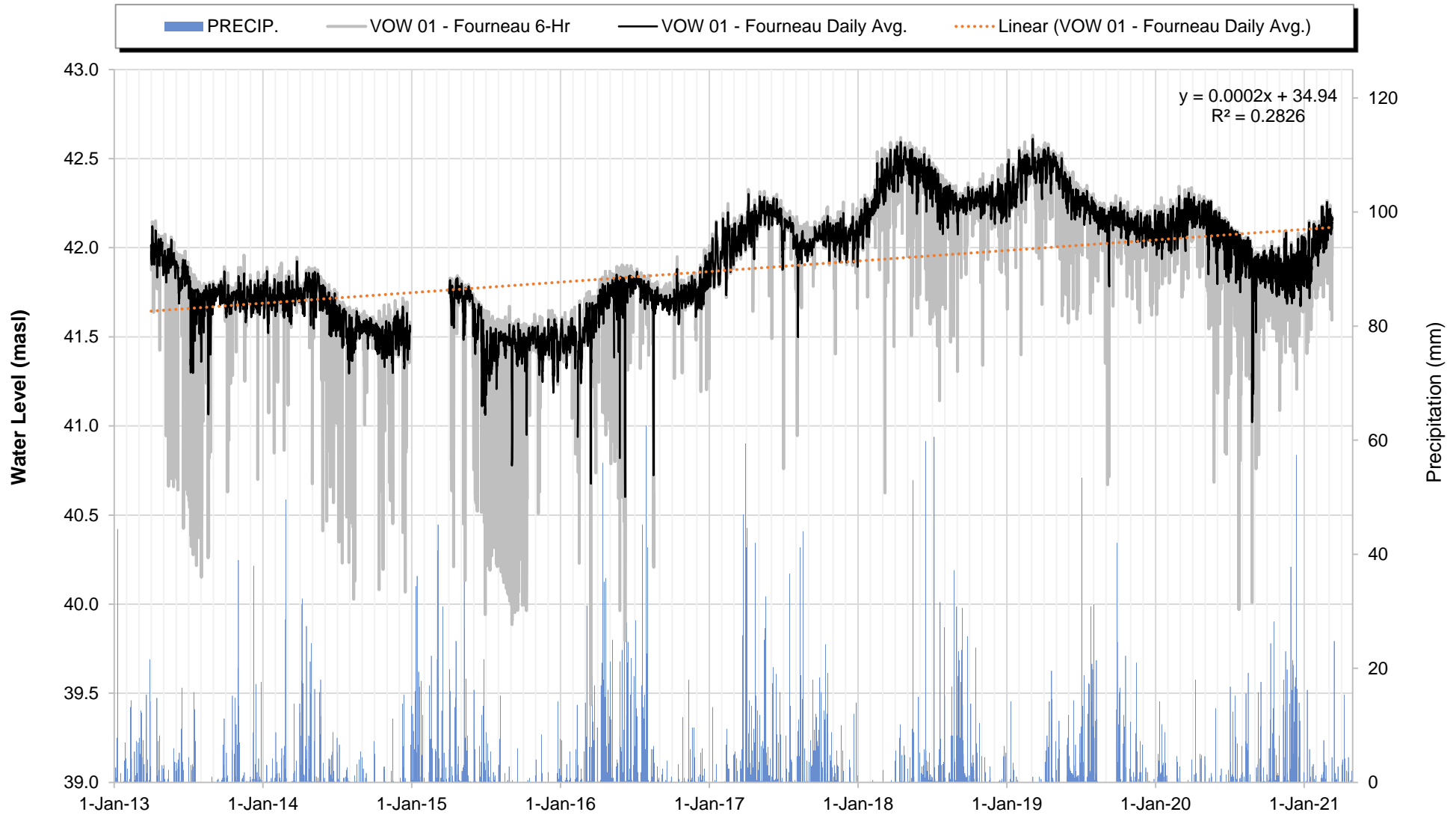


**NOTES:**

Observation Well is Associated with Aquifer 216


Aquifer 216 is Confined Surficial Sediments

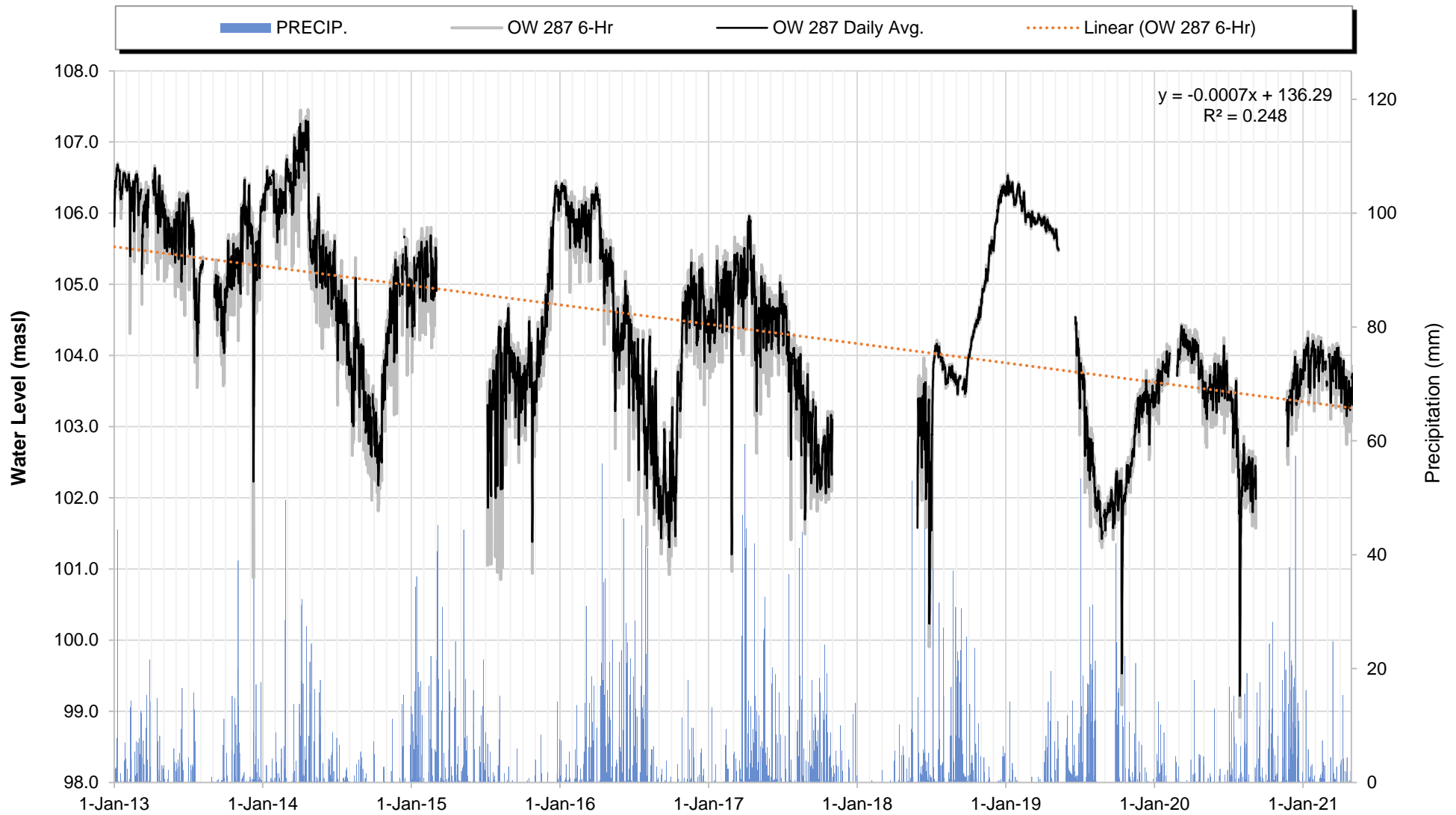
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 14 - Hodges (WR4 - Englishman River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-6</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
REVISED: FINAL			



**NOTES:**


Observation Well is Associated with Aquifer 216  
 Aquifer 216 is Confined Surficial Sediments

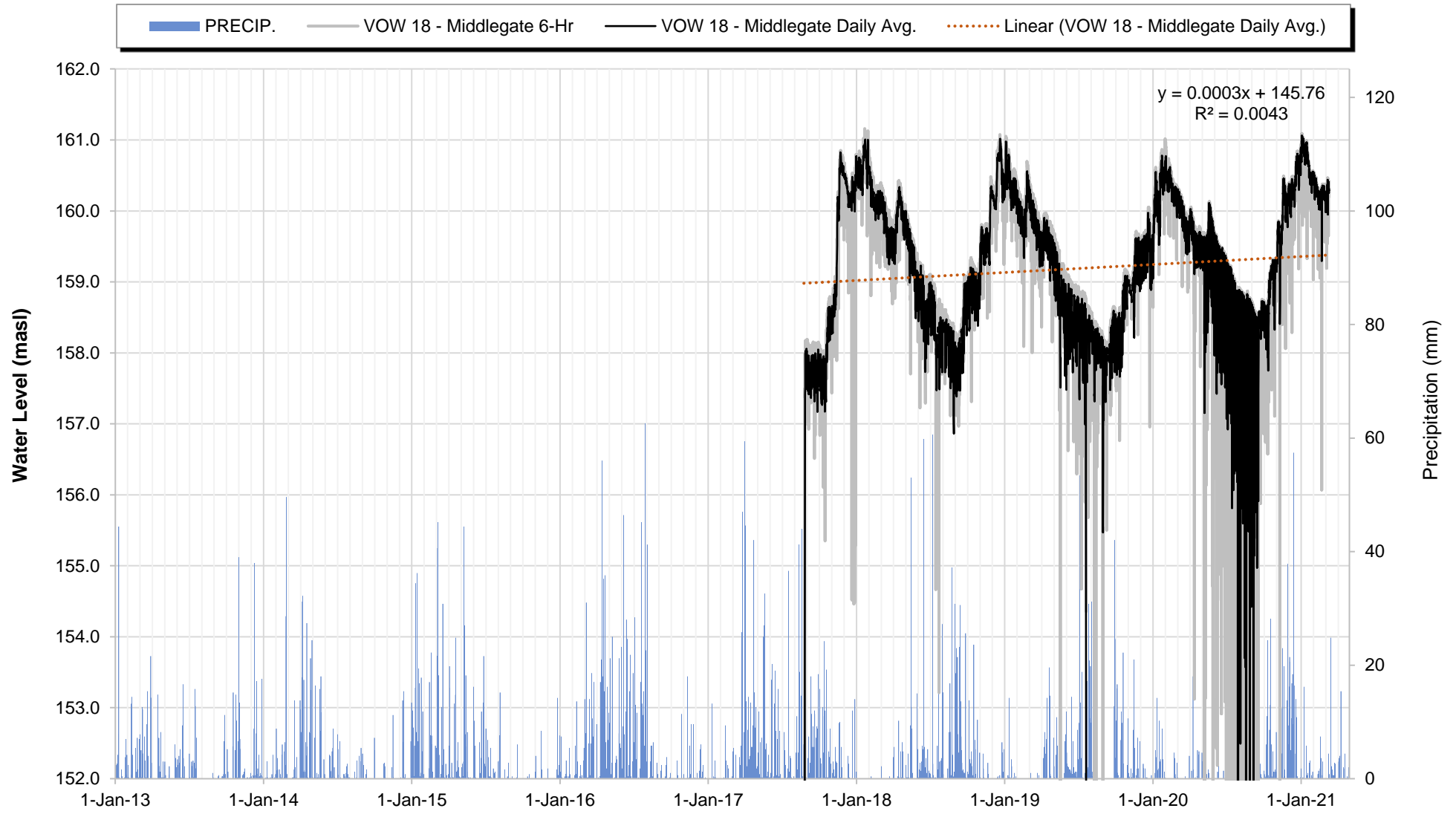
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 01 - Fourneau (WR4 - Englishman River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-7</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**

Observation Well is Associated with Aquifer 220  
 Aquifer 220 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART OW 287 (WR4 - Englishman River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-8</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

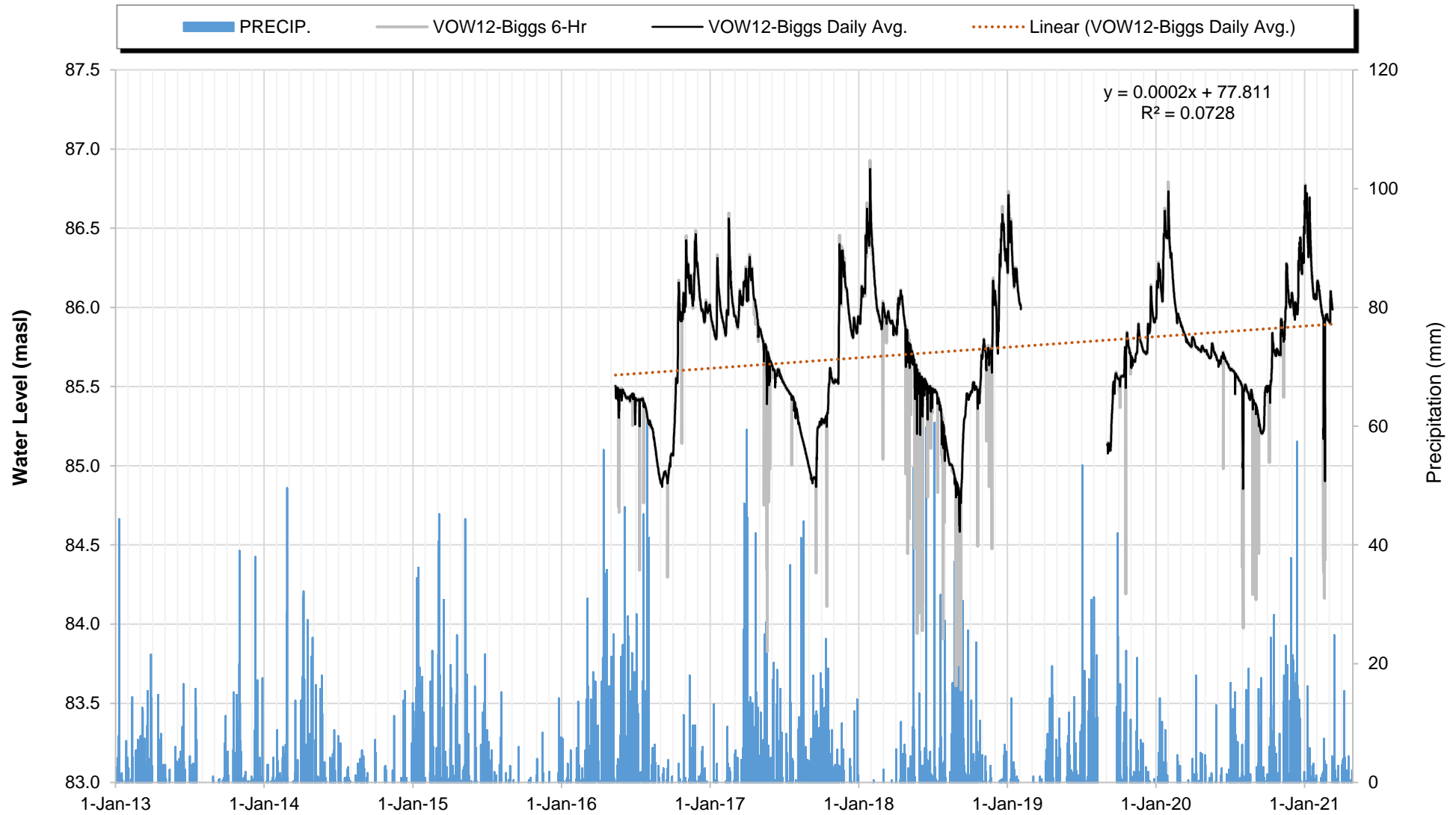


**NOTES:**

Observation Well is Associated with Aquifer 220


Aquifer 220 is Fractured Bedrock

PROJECT		<p><b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b></p>
TITLE		
<p><b>HISTORICAL GROUNDWATER LEVEL CHART VOW 18 - Middlegate (WR4 - Englishman River)</b></p>		<p><b>FIGURE B-9</b></p>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

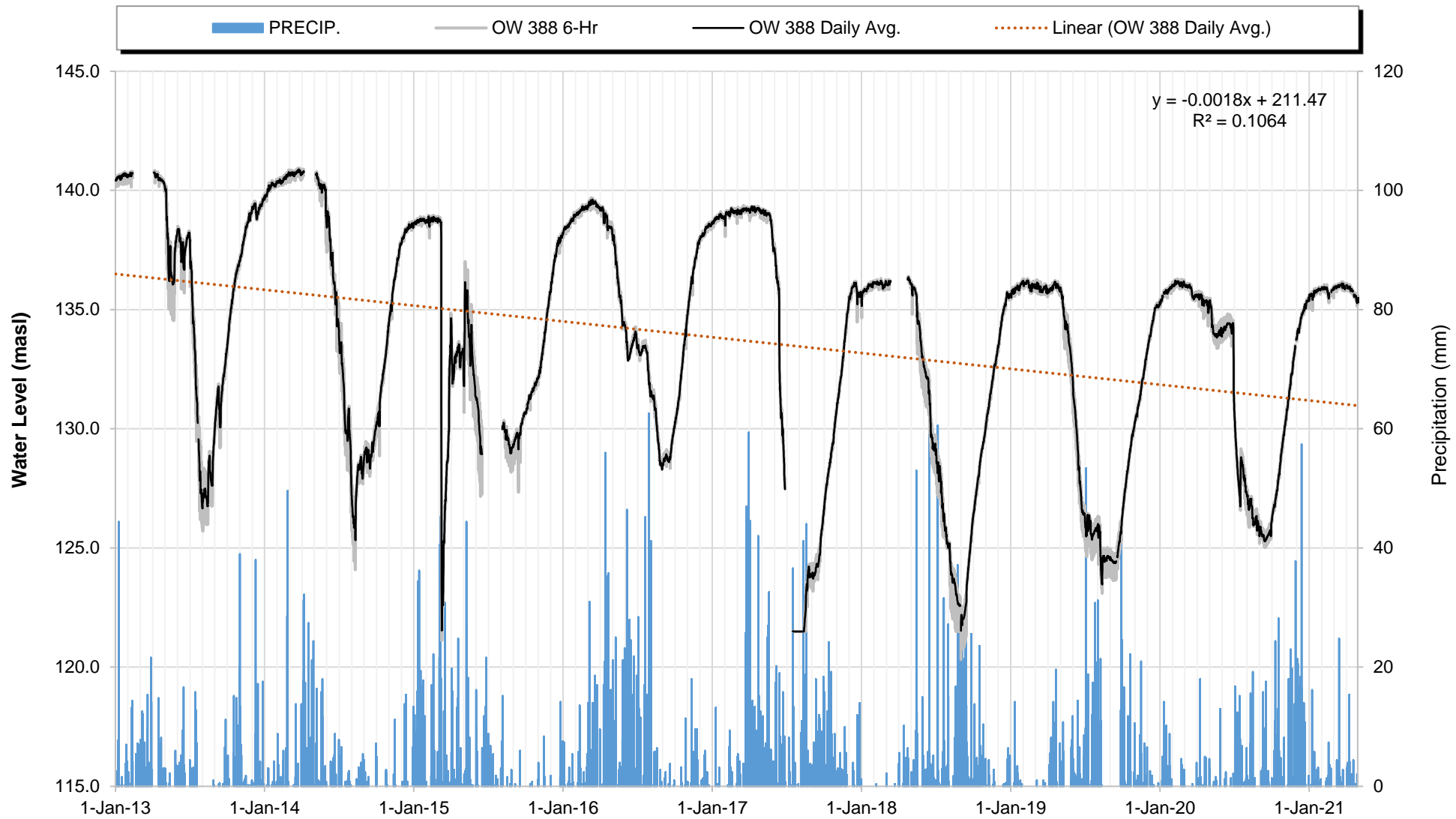


**NOTES:**

Observation Well is Associated with Aquifer 167  
 Aquifer 167 is Confined Surficial Sediments


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 12 - Biggs (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-10</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

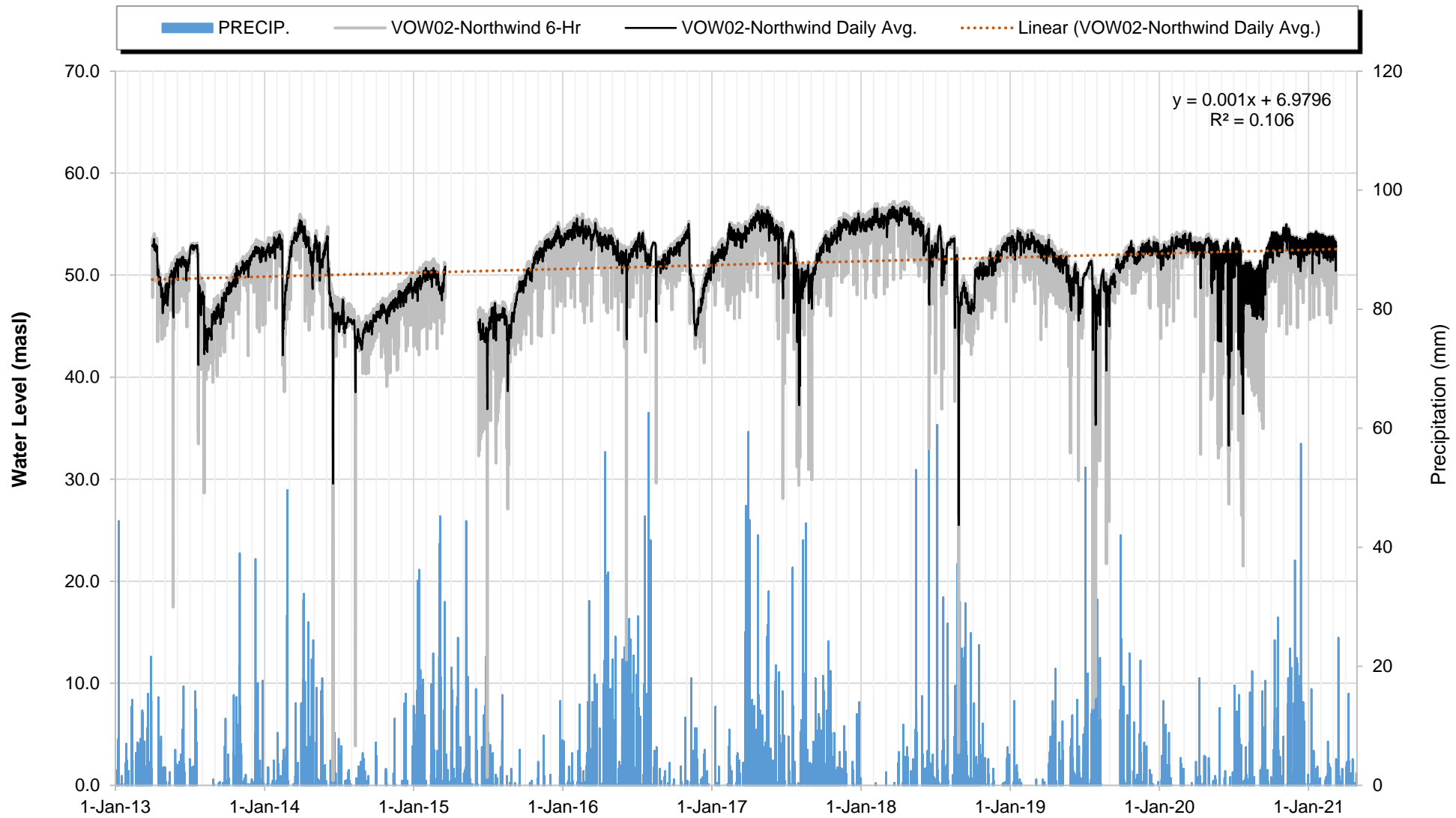




**NOTES:**


Observation Well is Associated with Aquifer 211  
 Aquifer 211 is Fractured Bedrock

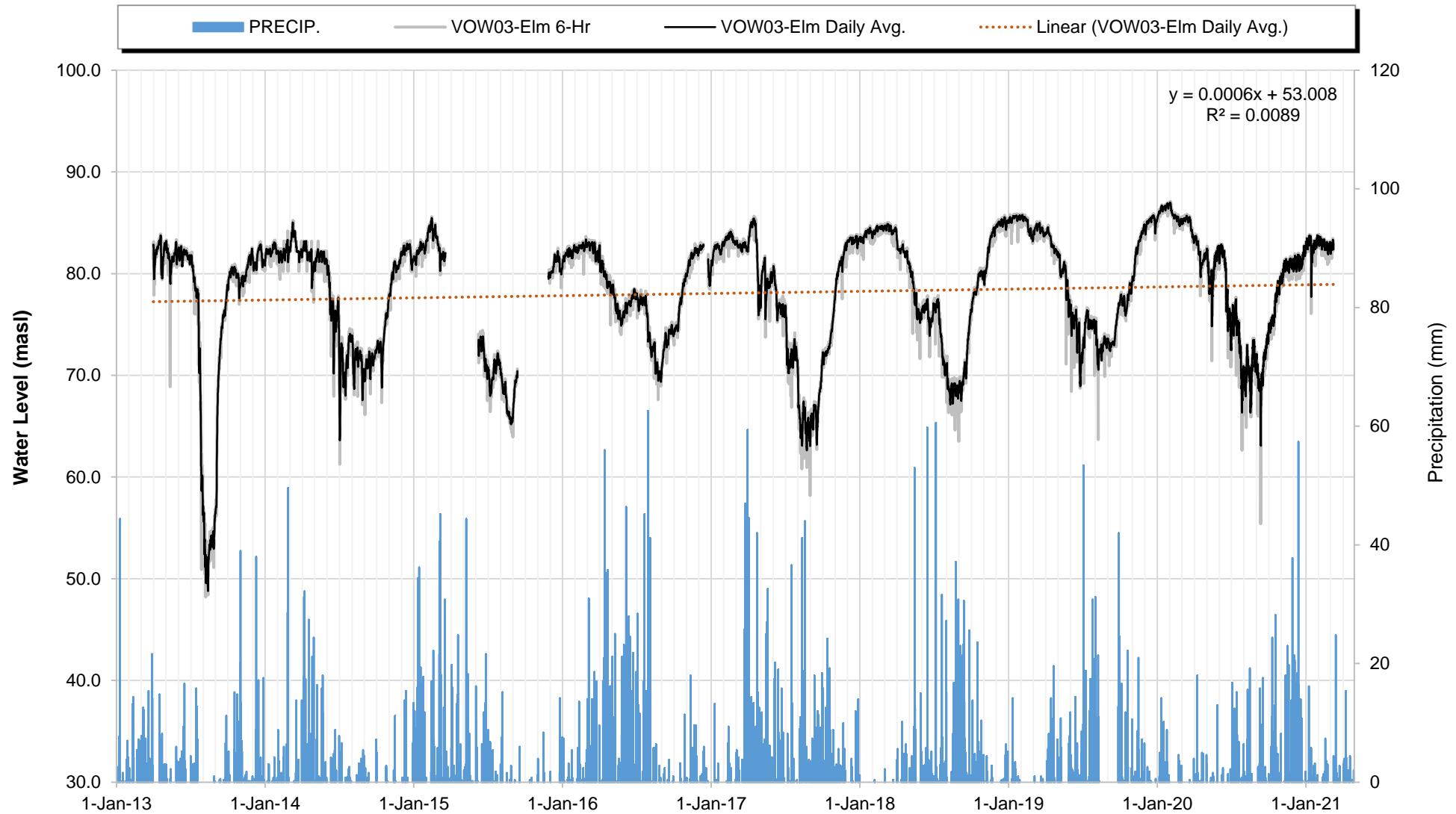
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART OW 388 (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-11</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**


Observation Wellis Associated with Aquifer 213  
 Aquifer 213 is Fractured Bedrock

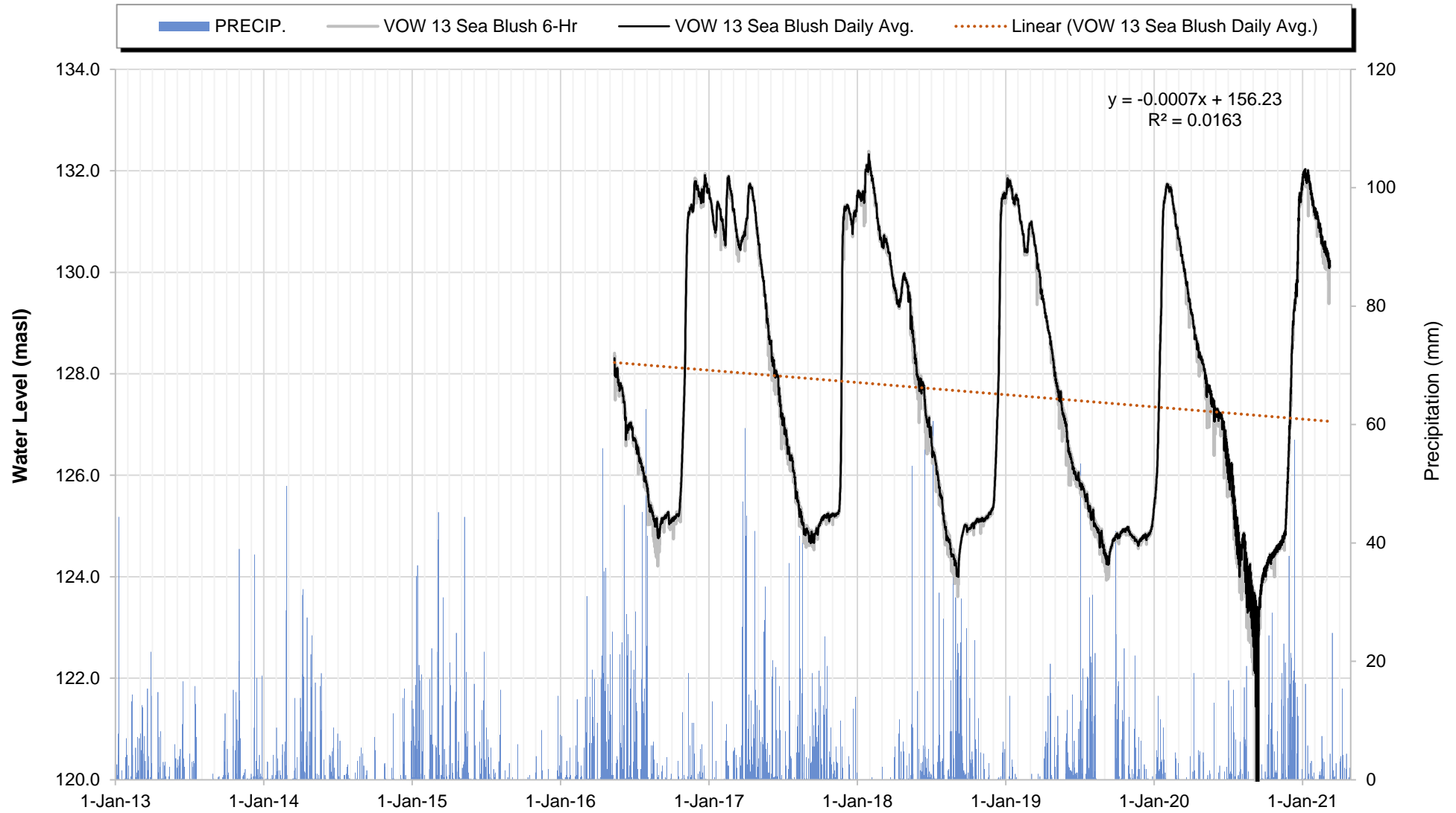
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 02 - Northwind (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-12</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**

Observation Well is Associated with Aquifer 213  
 Aquifer 213 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION -          REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
<b>HISTORICAL GROUNDWATER LEVEL CHART          VOW 03 - Elm (WR5 - Nanoose)</b>		<b>FIGURE B-13</b>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

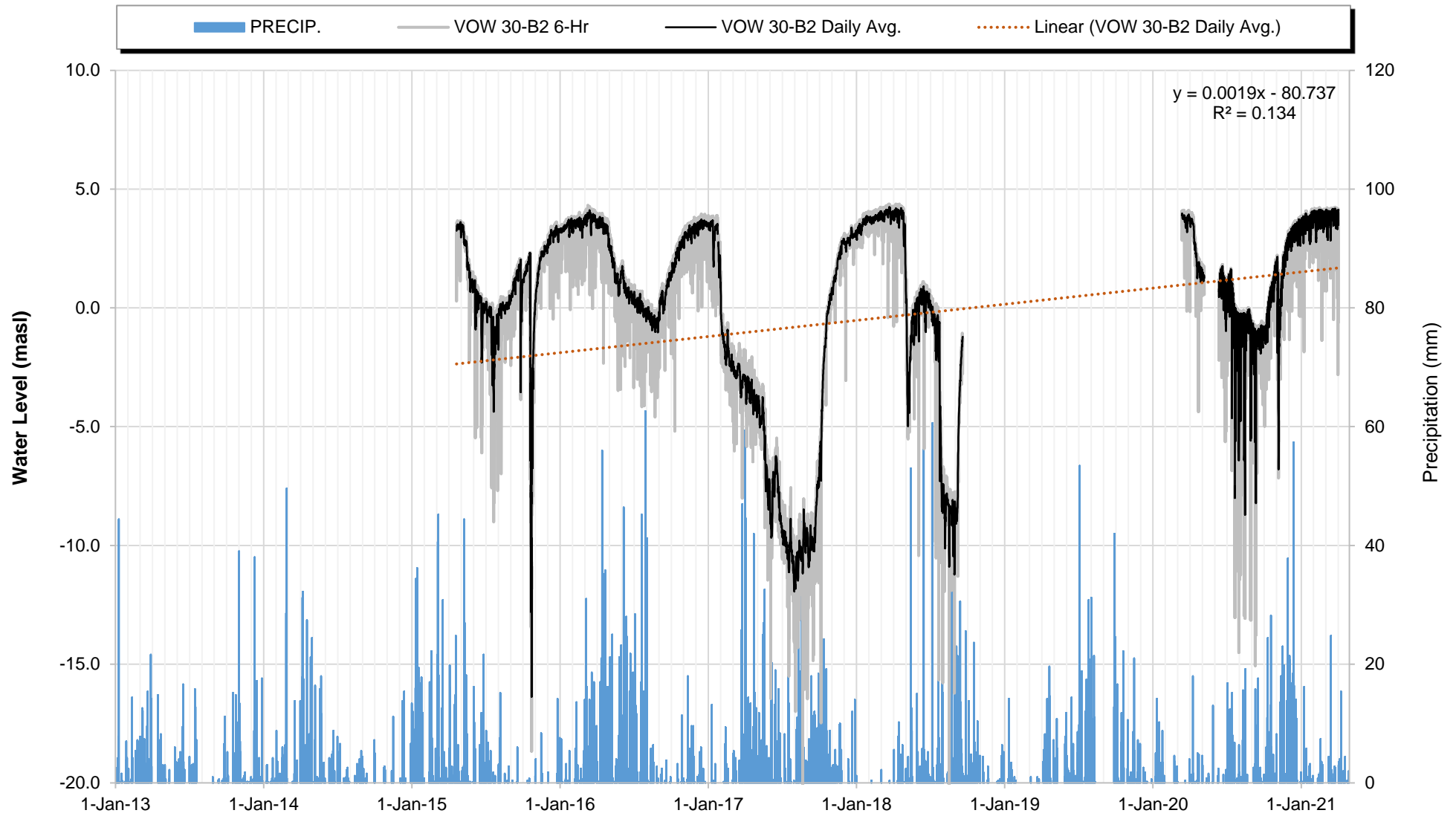


**NOTES:**

Observation Well is Associated with Aquifer 213

Aquifer 213 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 13 - Sea Blush (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-14</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

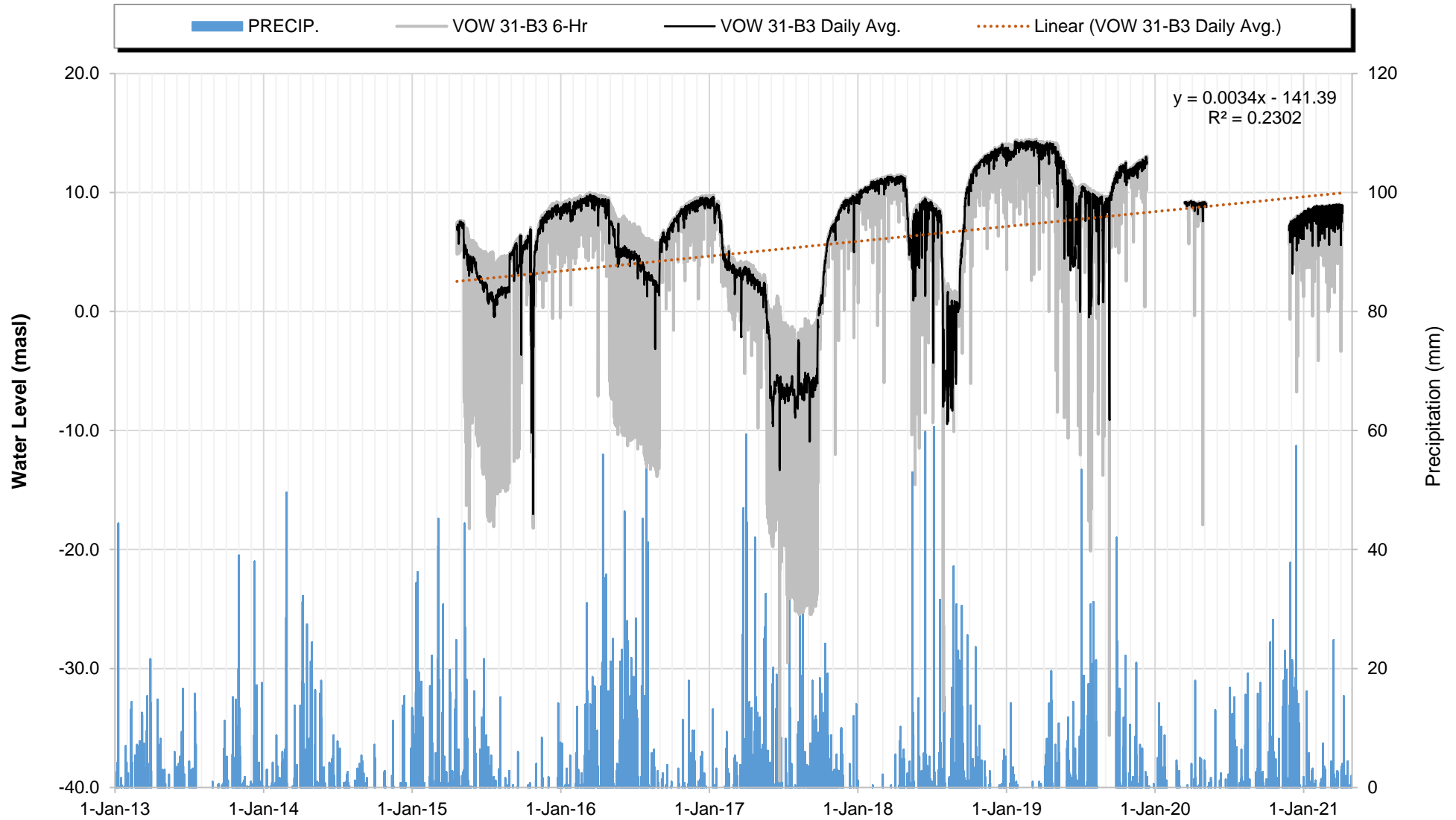


**NOTES:**

Observation Well is Associated with Aquifer 214

Aquifer 214 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 30 - B2 (WR5 - Nanoose)</b>		<b>FIGURE B-15</b>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

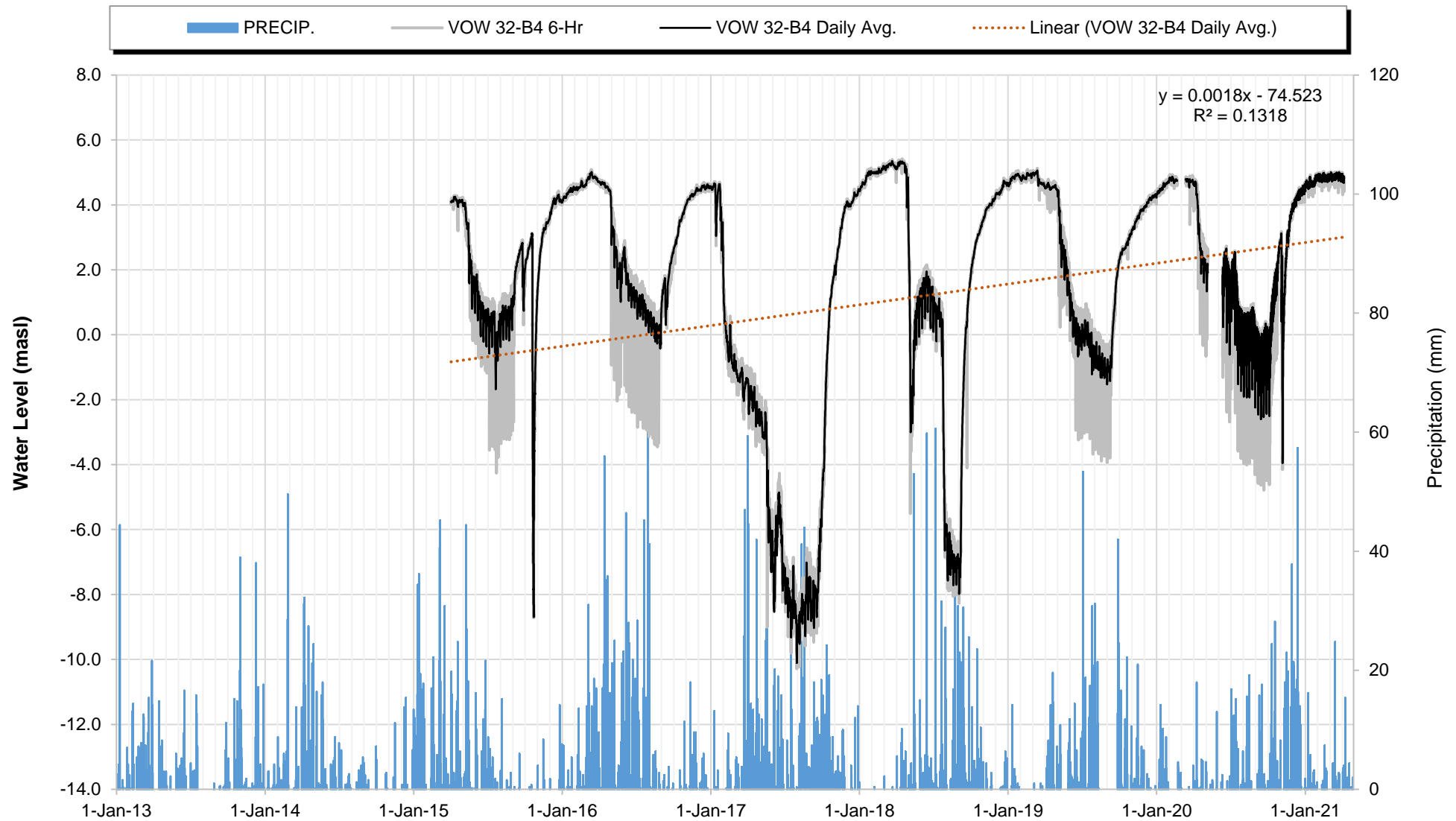


**NOTES:**

Observation Well is Associated with Aquifer 214

Aquifer 214 is Fractured Bedrock


PROJECT		<p><b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b></p>
TITLE		
<p><b>HISTORICAL GROUNDWATER LEVEL CHART VOW 31 - B3 (WR5 - Nanoose)</b></p>		<p><b>FIGURE B-16</b></p>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

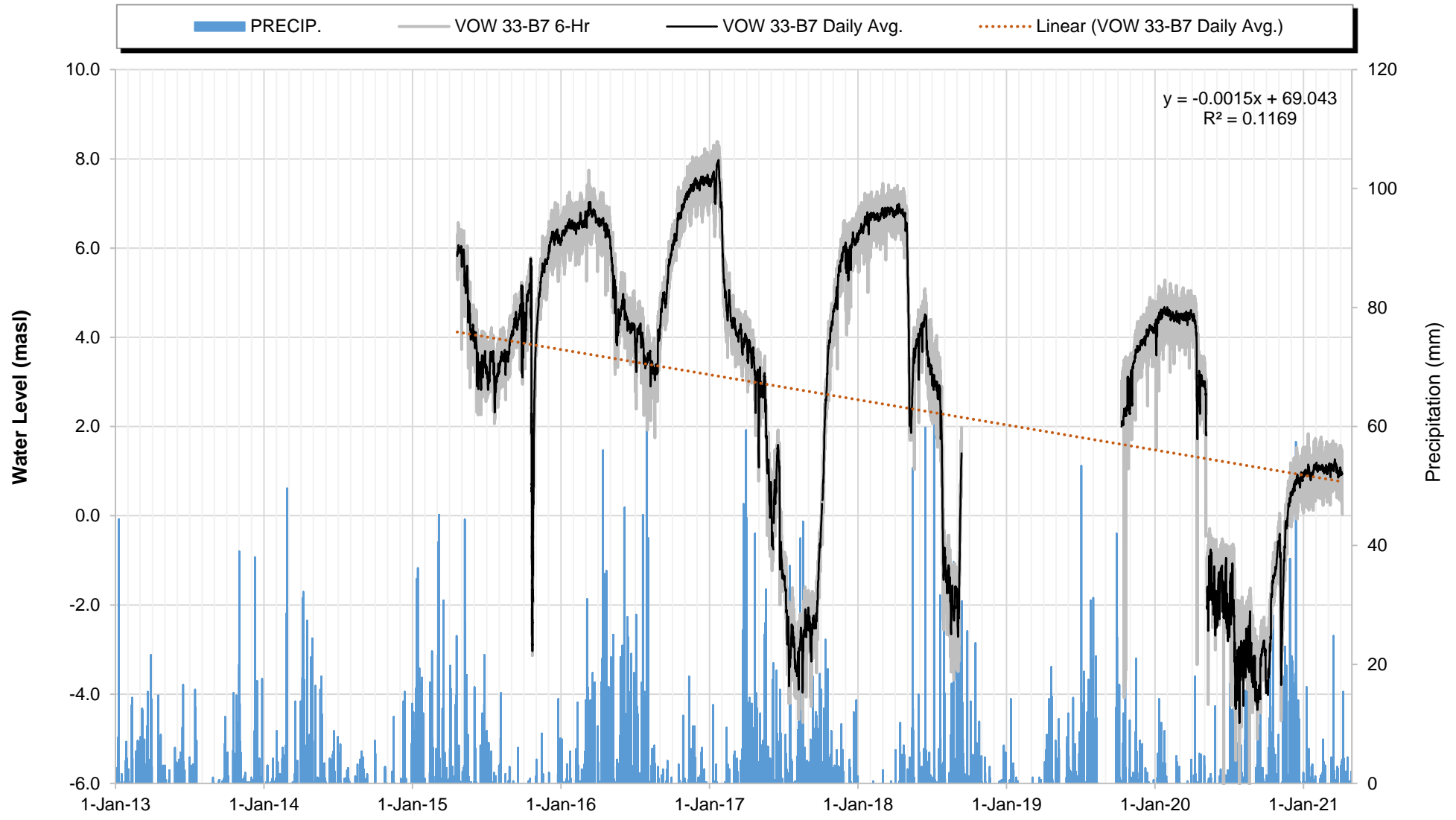


**NOTES:**

Observation Well is Associated with Aquifer 214

Aquifer 214 is Fractured Bedrock

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 32 - B4 (WR5 - Nanoose)</b>	
	PREPARED BY:	WATERLINE RESOURCES INC.	
	PROJECT:	2590-21-001	
	COMPILED BY:	SR	
	DATE ISSUED:	May 2021	
	REVISED:	FINAL	
			<b>FIGURE B-17</b>

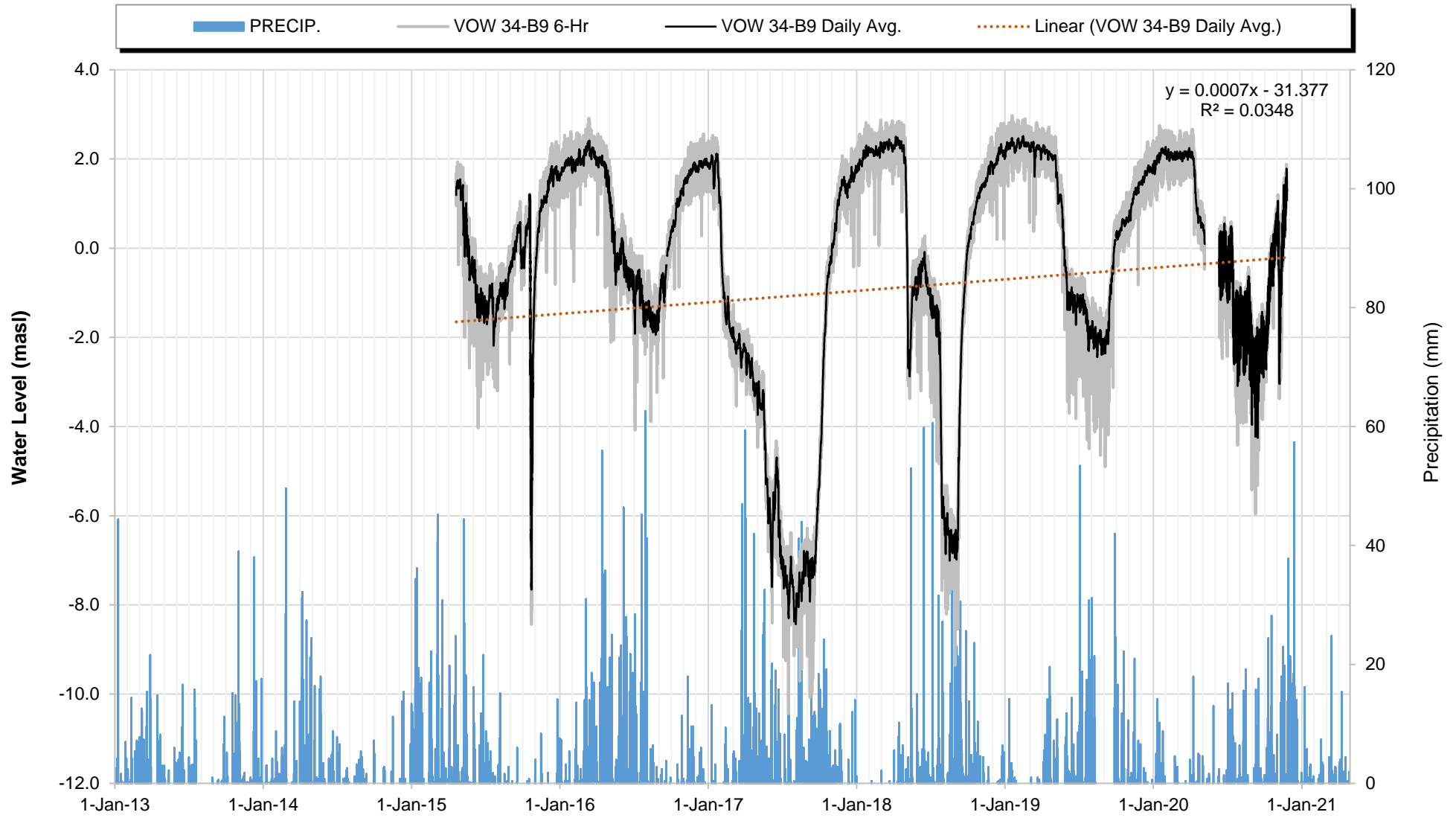


**NOTES:**

Observation Well is Associated with Aquifer 214  
 Aquifer 214 is Fractured Bedrock

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 33 - B7 (WR5 - Nanoose)</b>		<b>FIGURE B-18</b>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
REVISED: FINAL		




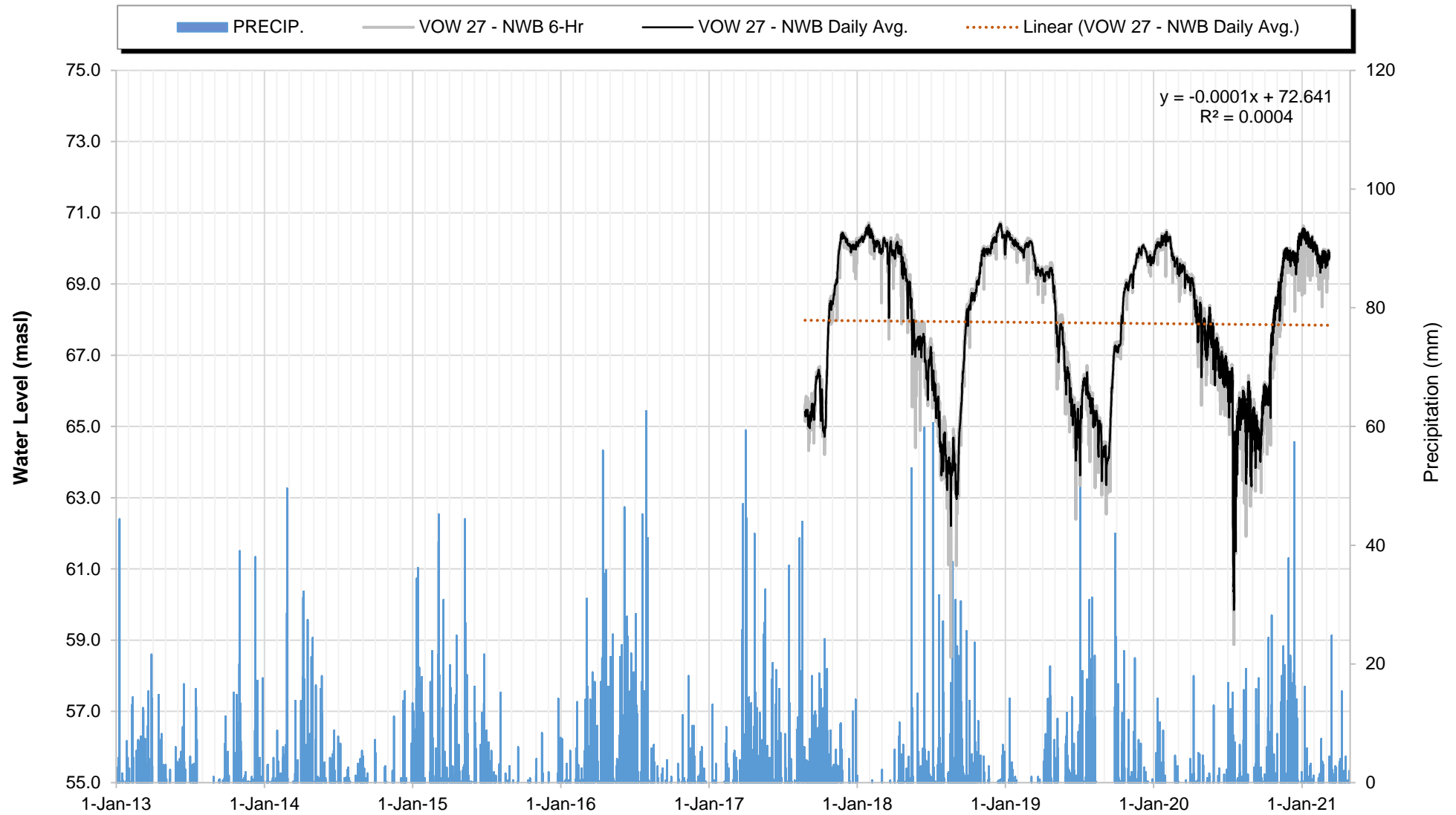


**NOTES:**

Observation Well is Associated with Aquifer 214

Aquifer 214 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 34 - B9 (WR5 - Nanoose)</b>	
	PREPARED BY:	WATERLINE RESOURCES INC.	
	PROJECT:	2590-21-001	
	COMPILED BY:	SR	
	DATE ISSUED:	May 2021	
	REVISED:	FINAL	
			<b>FIGURE B-19</b>

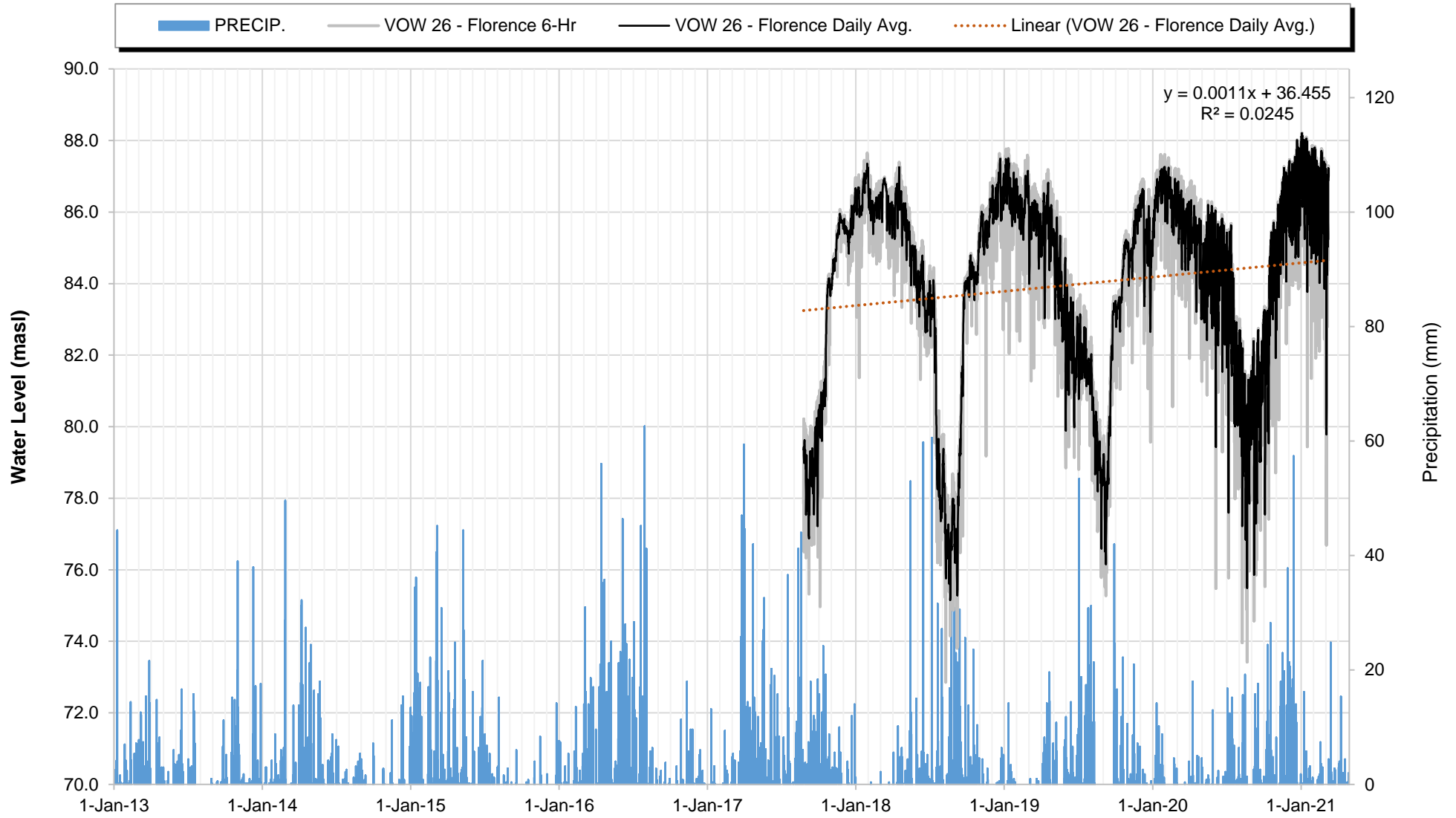


**NOTES:**

Observation Well is Associated with Aquifer 218


Aquifer 218 is Fractured Bedrock

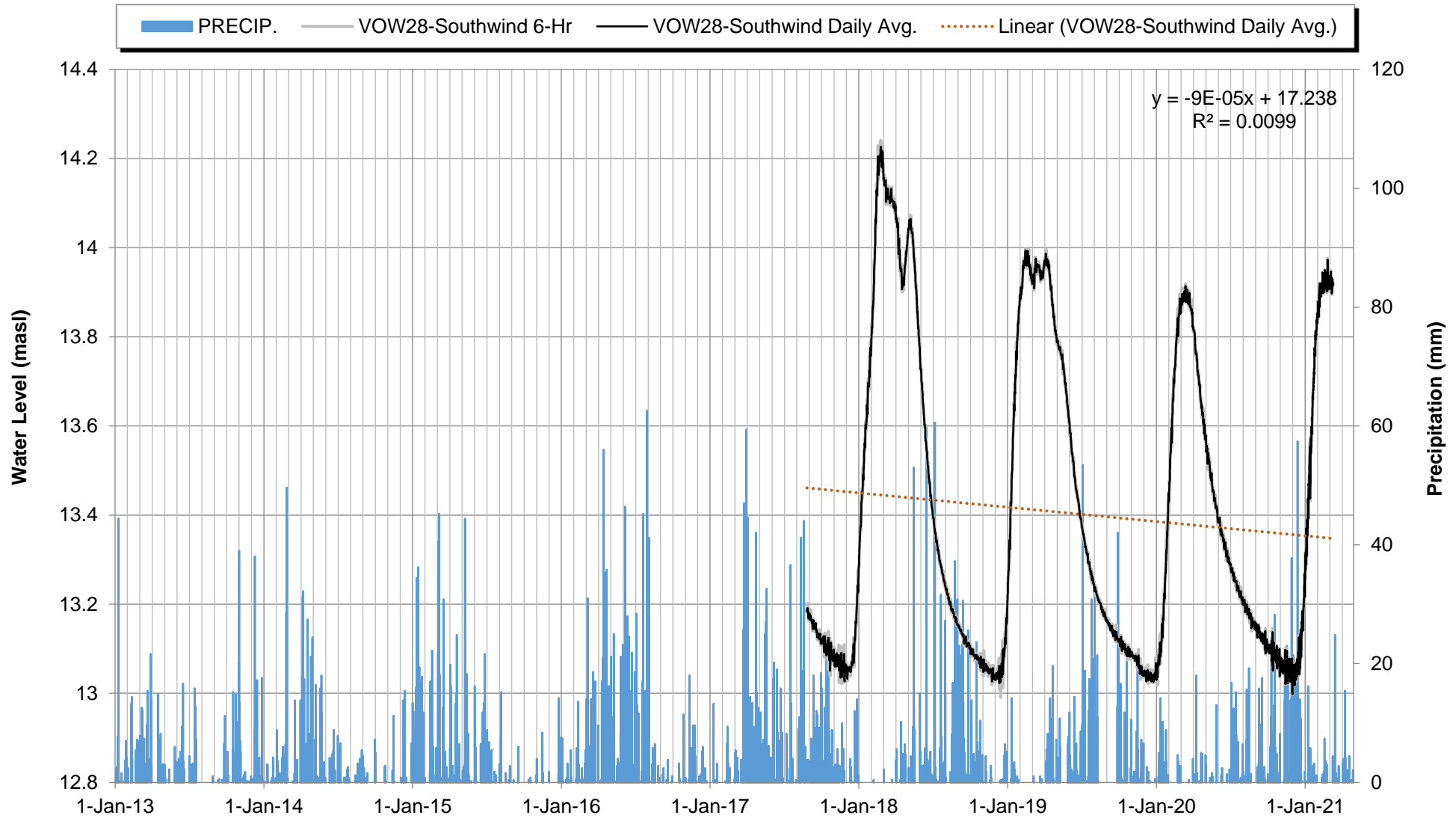
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 27 - NWB (WR5 - Nanoose)</b>	
	PREPARED BY:	WATERLINE RESOURCES INC.	
	PROJECT:	2590-21-001	
	COMPILED BY:	SR	
	DATE ISSUED:	May 2021	
	REVISED:	FINAL	
		<b>FIGURE B-20</b>	



**NOTES:**

Observation Well is Associated with Aquifer 218  
 Aquifer 218 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 26 - Florence (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-21</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

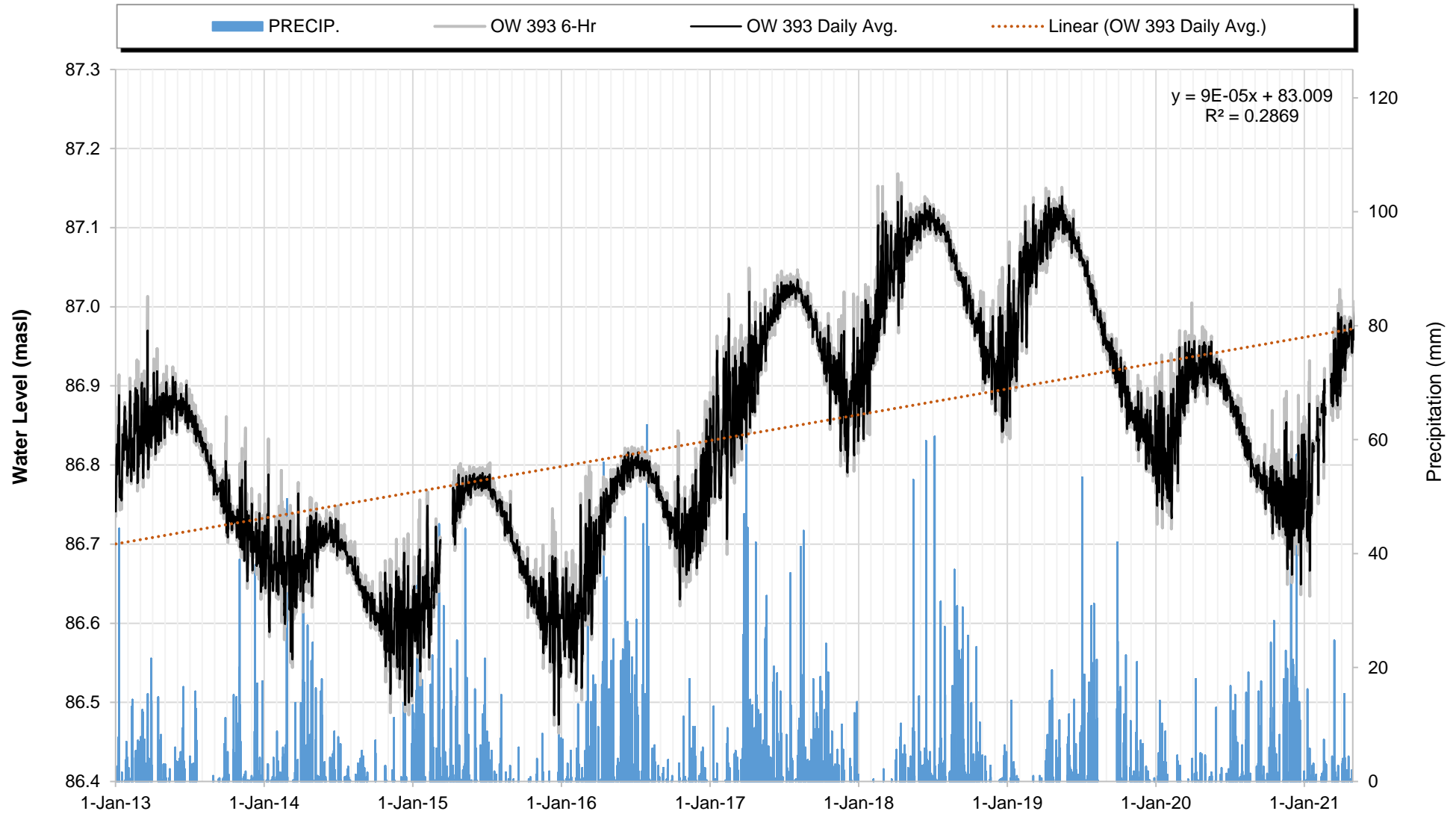


**NOTES:**

Observation Well is Associated with Aquifer 215

Aquifer 215 is Confined Surficial Sediments


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 28 - Southwind (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-22</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

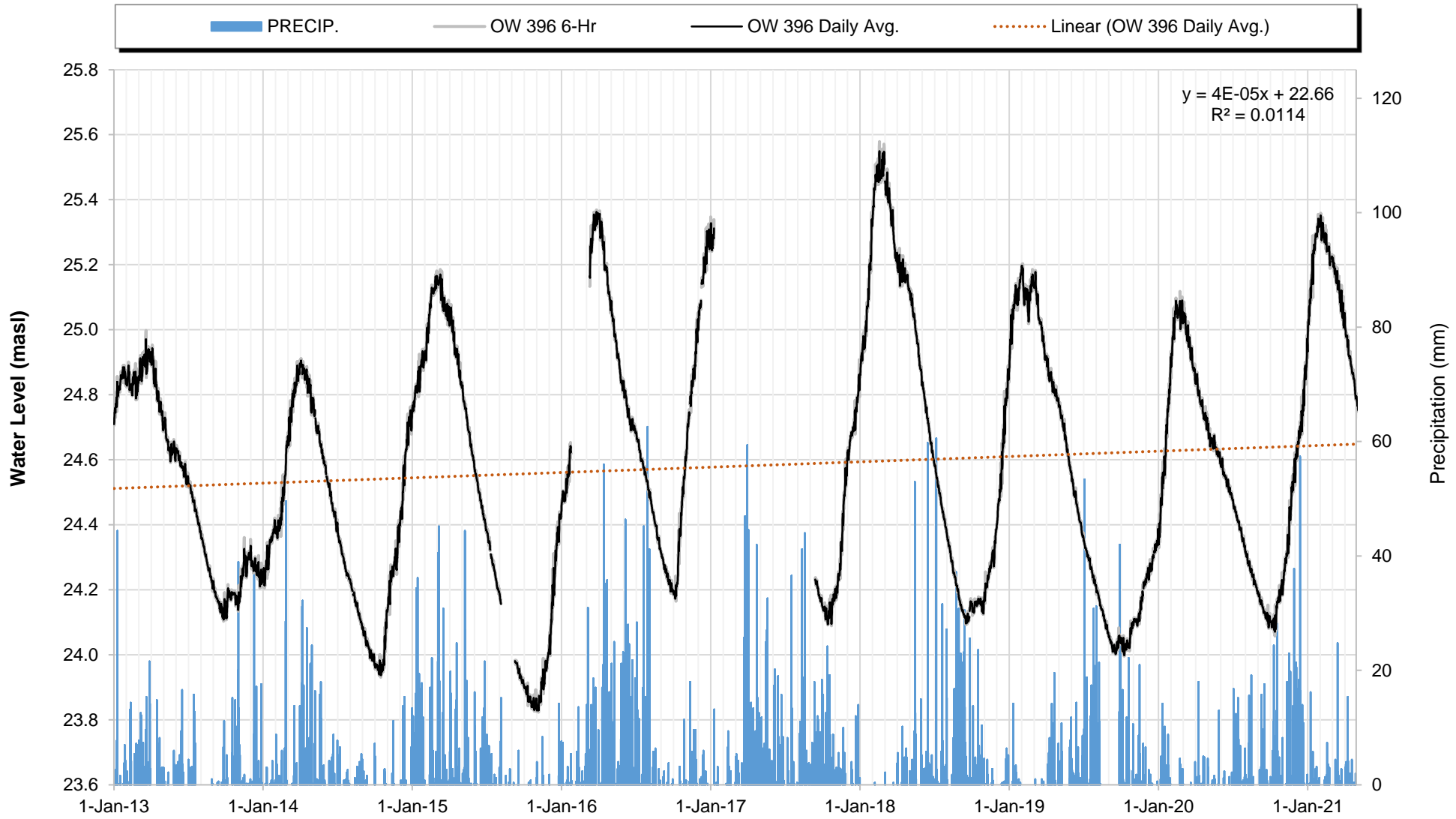


**NOTES:**

Observation Well is Associated with Aquifer 219


Aquifer 219 is Confined Surficial Sediments

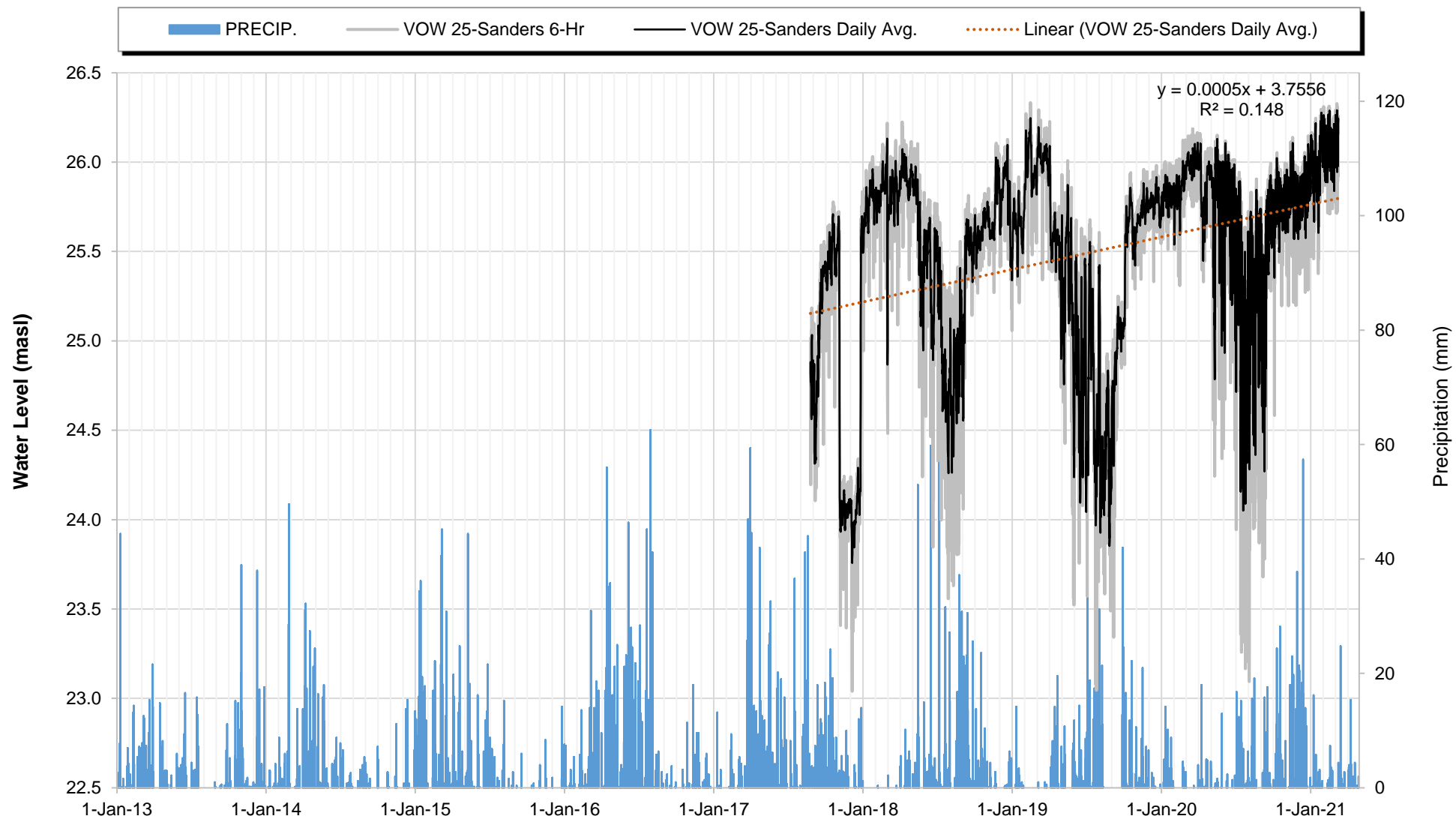
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART OW 393 (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-23</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**


Observation Well is Associated with Aquifer 219  
 Aquifer 219 is Confined Surficial Sediments

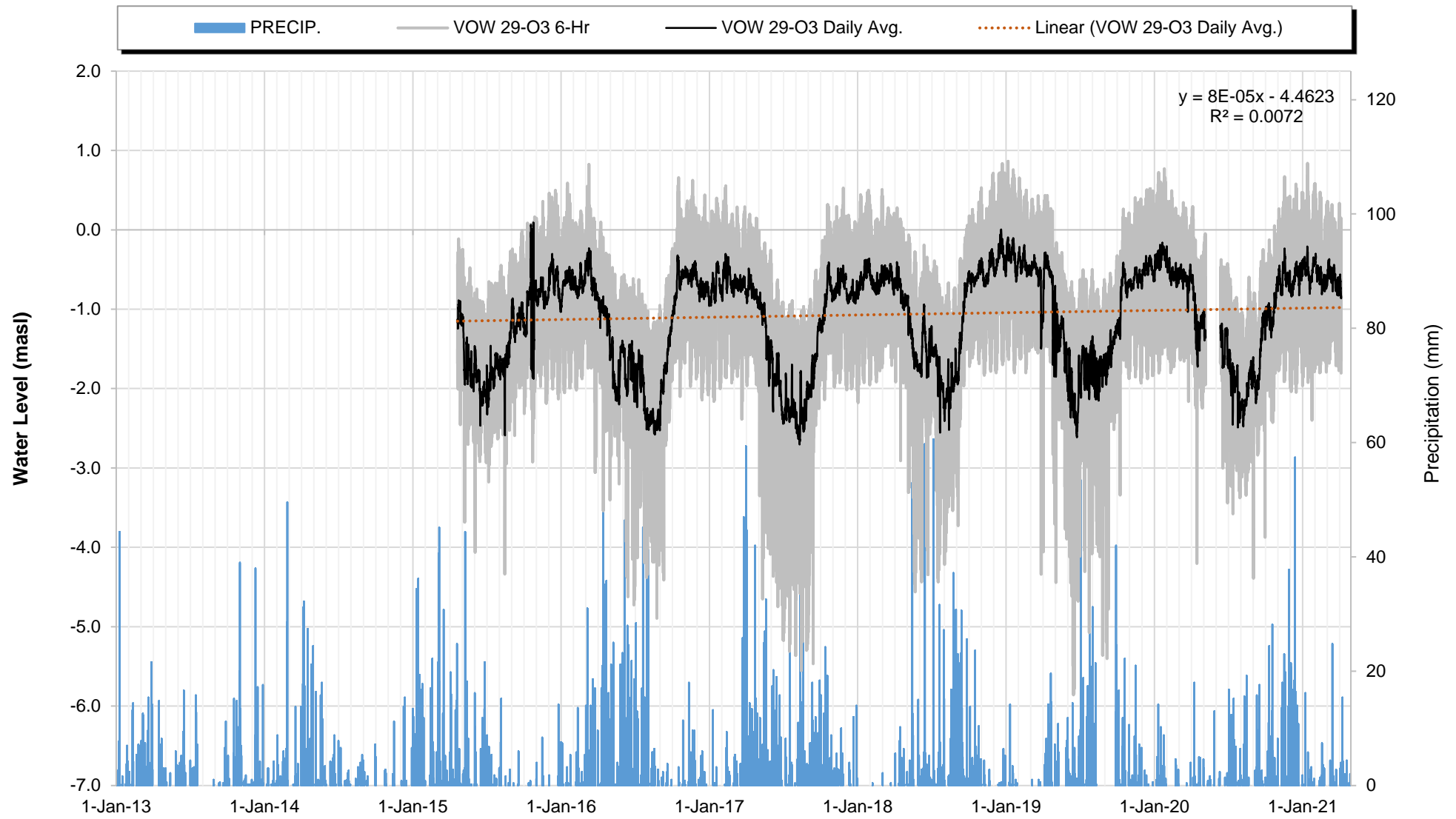
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART OW 396 (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-24</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**

Observation Well is Associated with Aquifer 219  
 Aquifer 219 is Confined Surficial Sediments


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 25 - Sanders (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-25</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



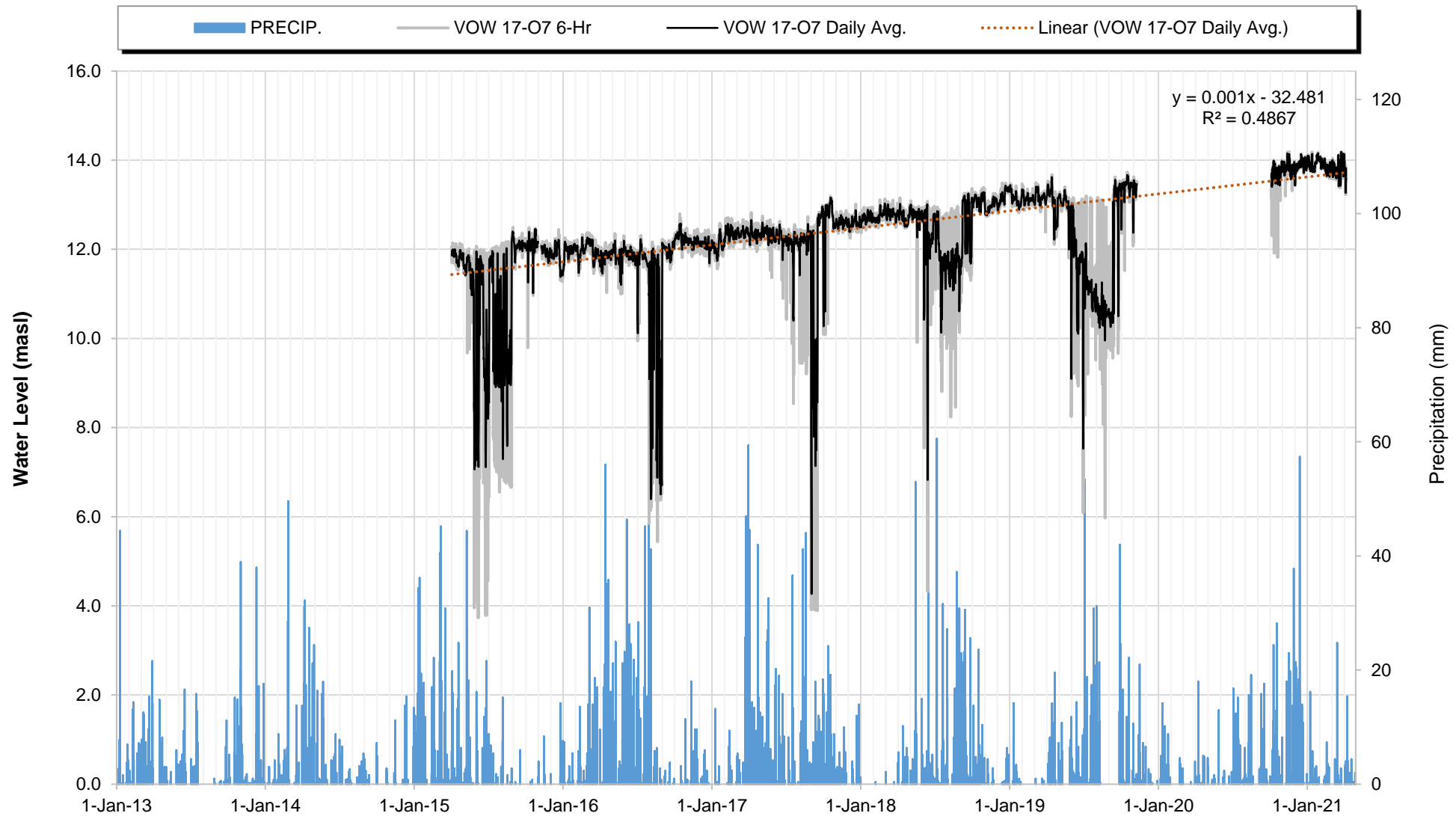
**NOTES:**

Observation Well is Associated with Aquifer 1098

Aquifer 1098 is Confined Surficial Sediments

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 29 - O3 (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-26</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		




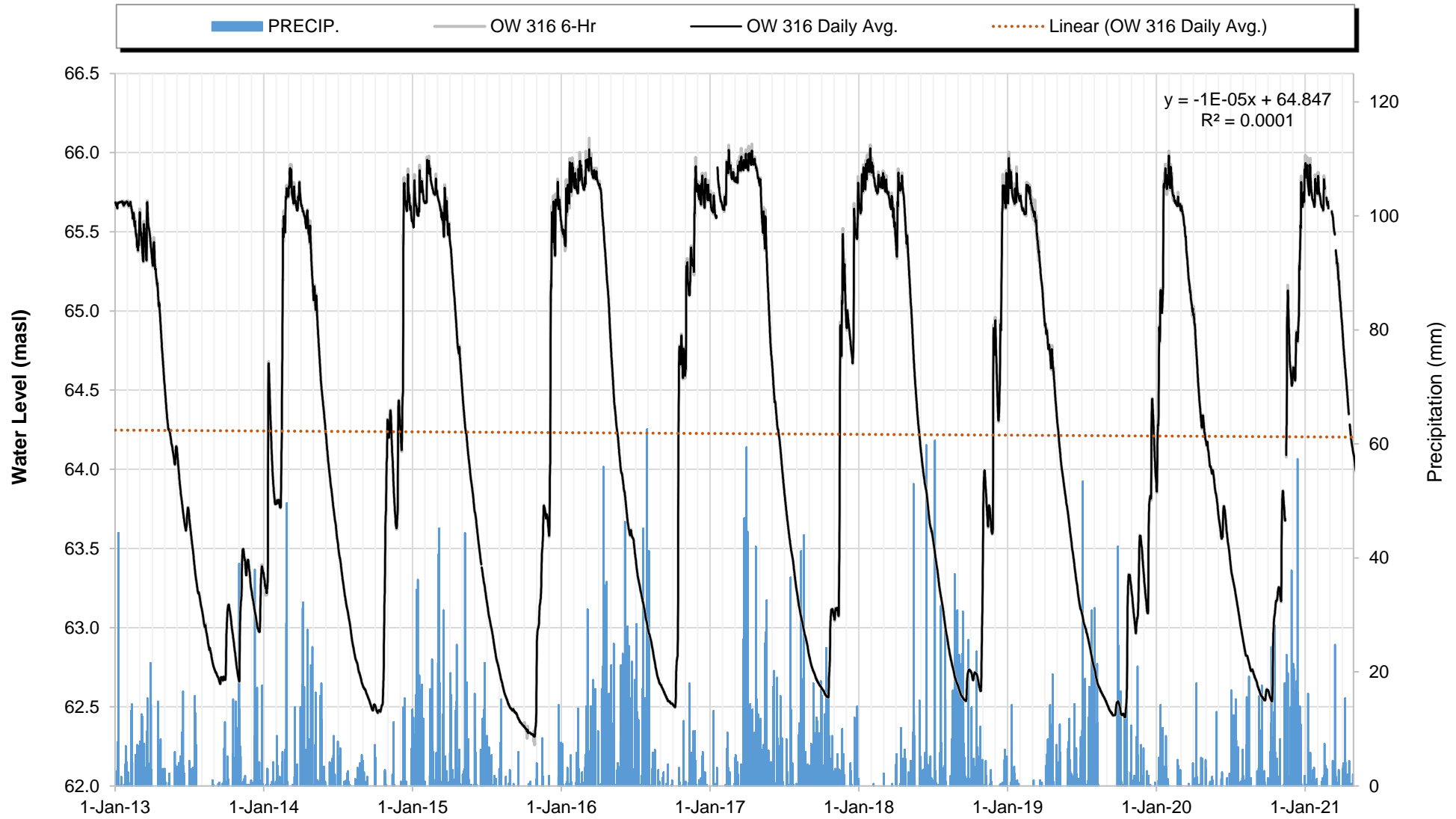


**NOTES:**

Observation Well is Associated with Aquifer 1098


Aquifer 1098 is Confined Surficial Sediments

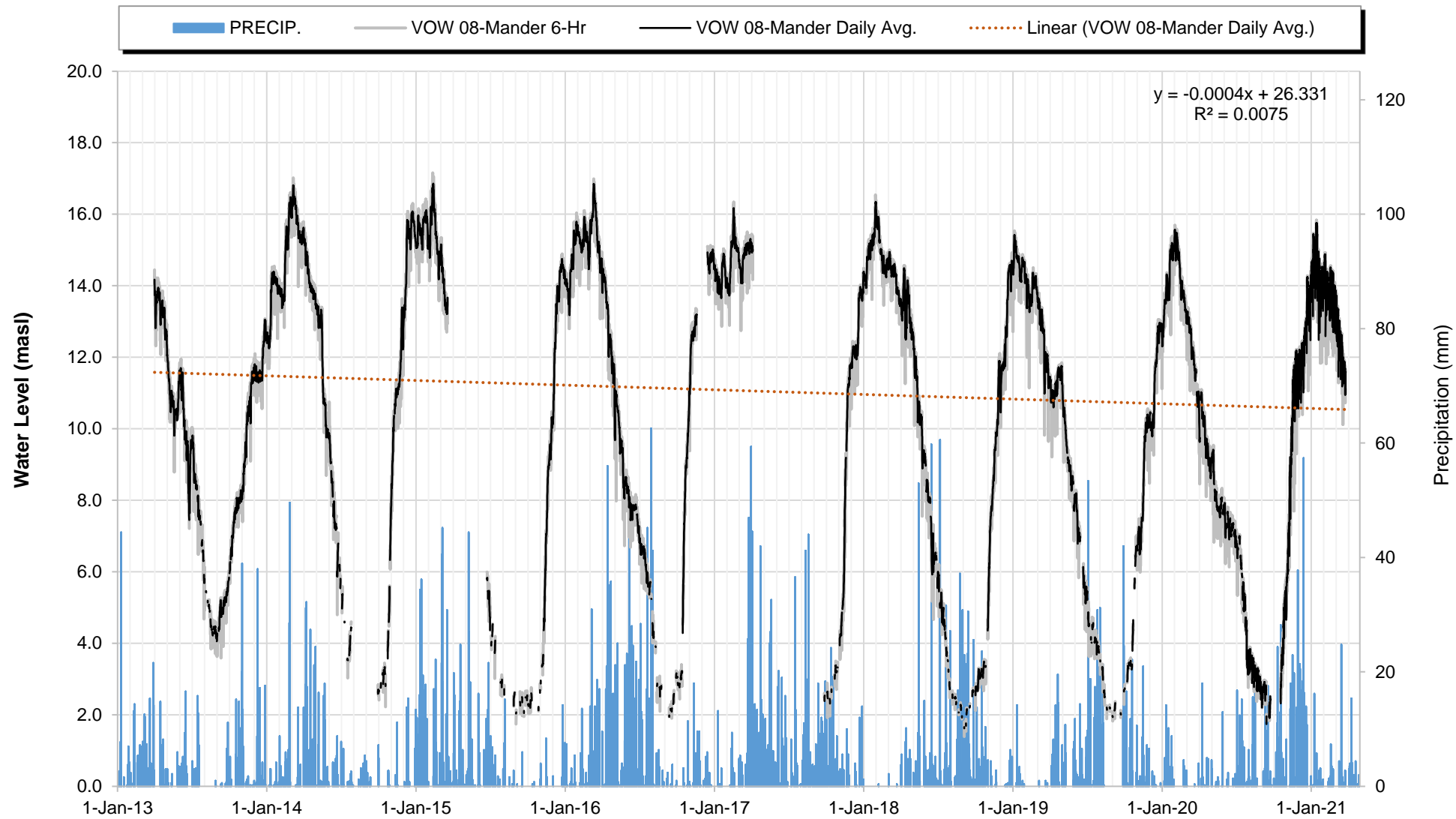
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 17 - O7 (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-27</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**


Observation Well is Associated with Aquifer 709  
 Aquifer 709 is Fractured Bedrock

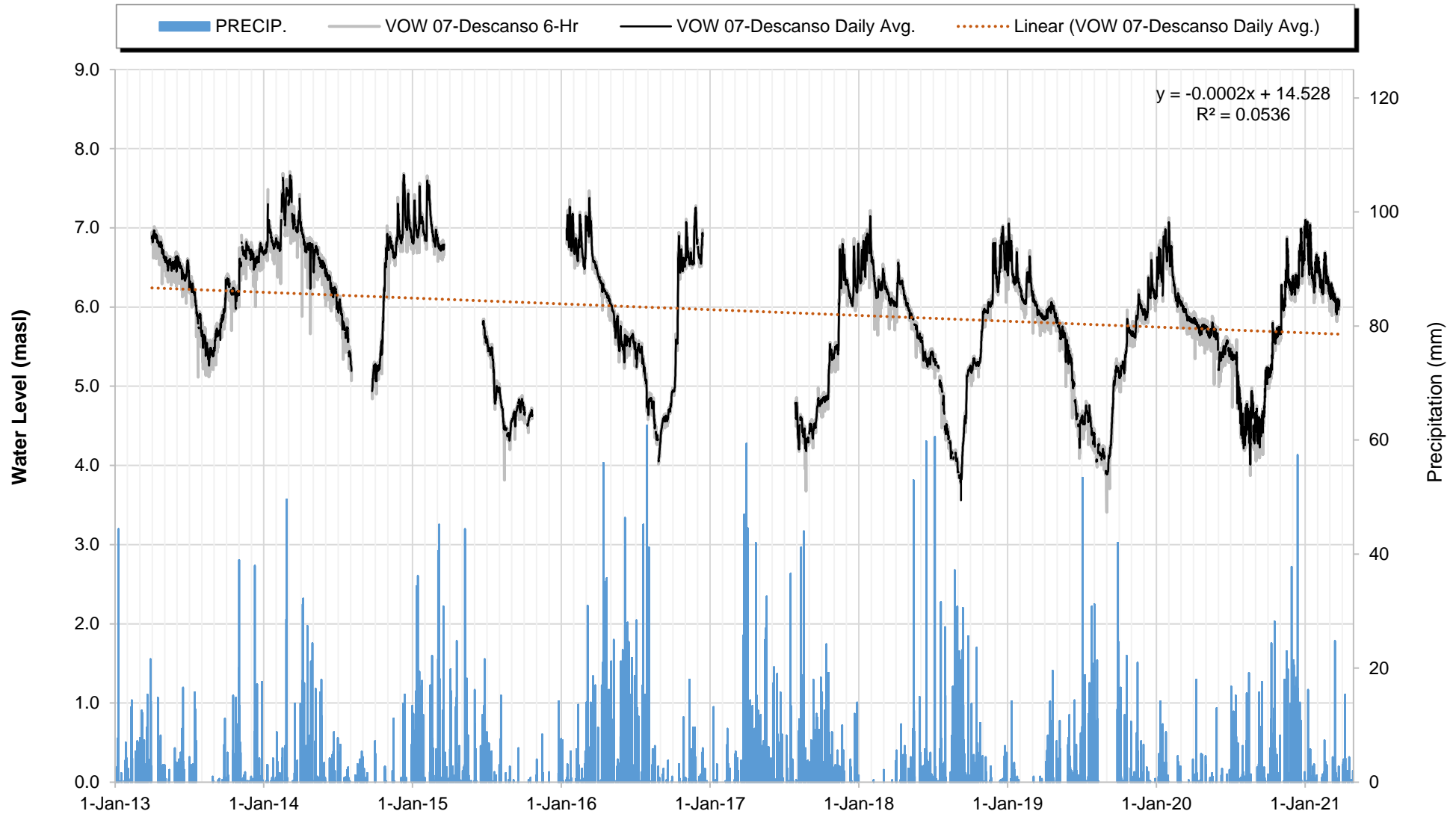
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART OW 316 (WR7 - Gabriola)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-28</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**


Observation Well is Associated with Aquifer 709  
 Aquifer 709 is Fractured Bedrock

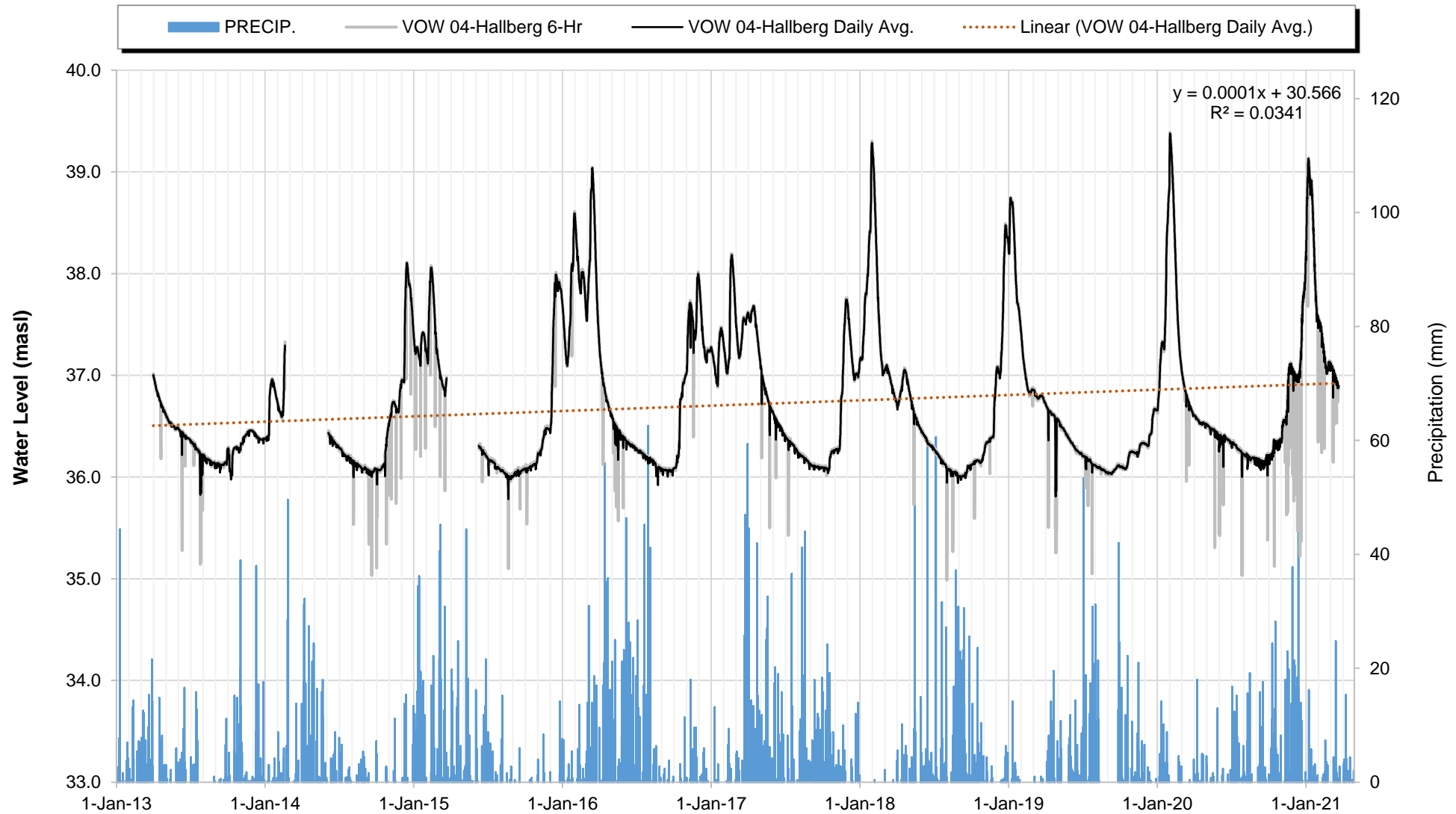
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 08 - Mander (WR7 - Gabriola)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-29</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**


Observation Well is Associated with Aquifer 709  
 Aquifer 709 is Fractured Bedrock

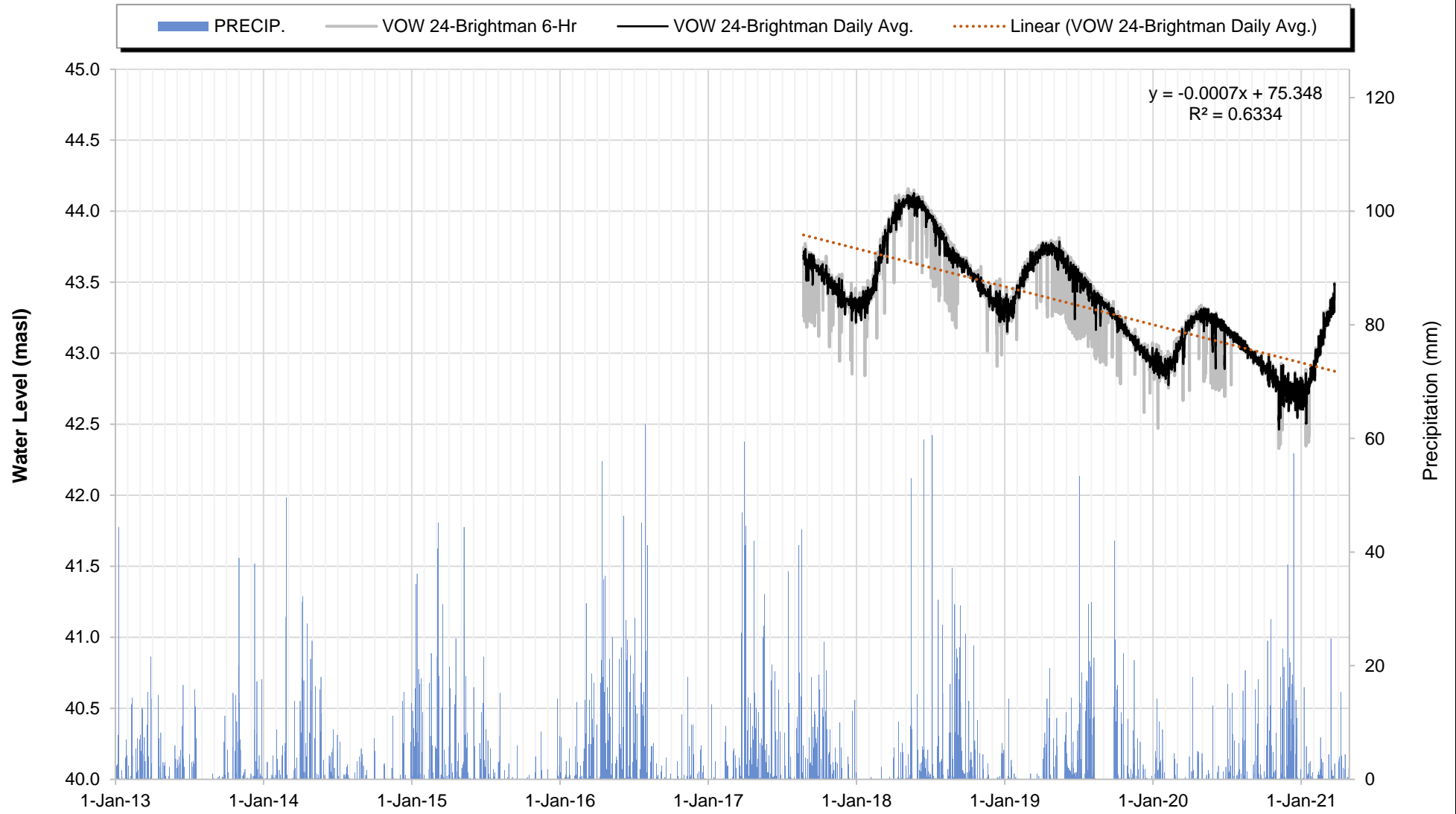
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 07 - Descanso (WR7 - Gabriola)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-30</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**

Observation Well is Associated with Aquifer 160  
 Aquifer 160 is Confined Surficial Sediments


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 04 - Hallberg (WR6 - Nanaimo River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-31</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

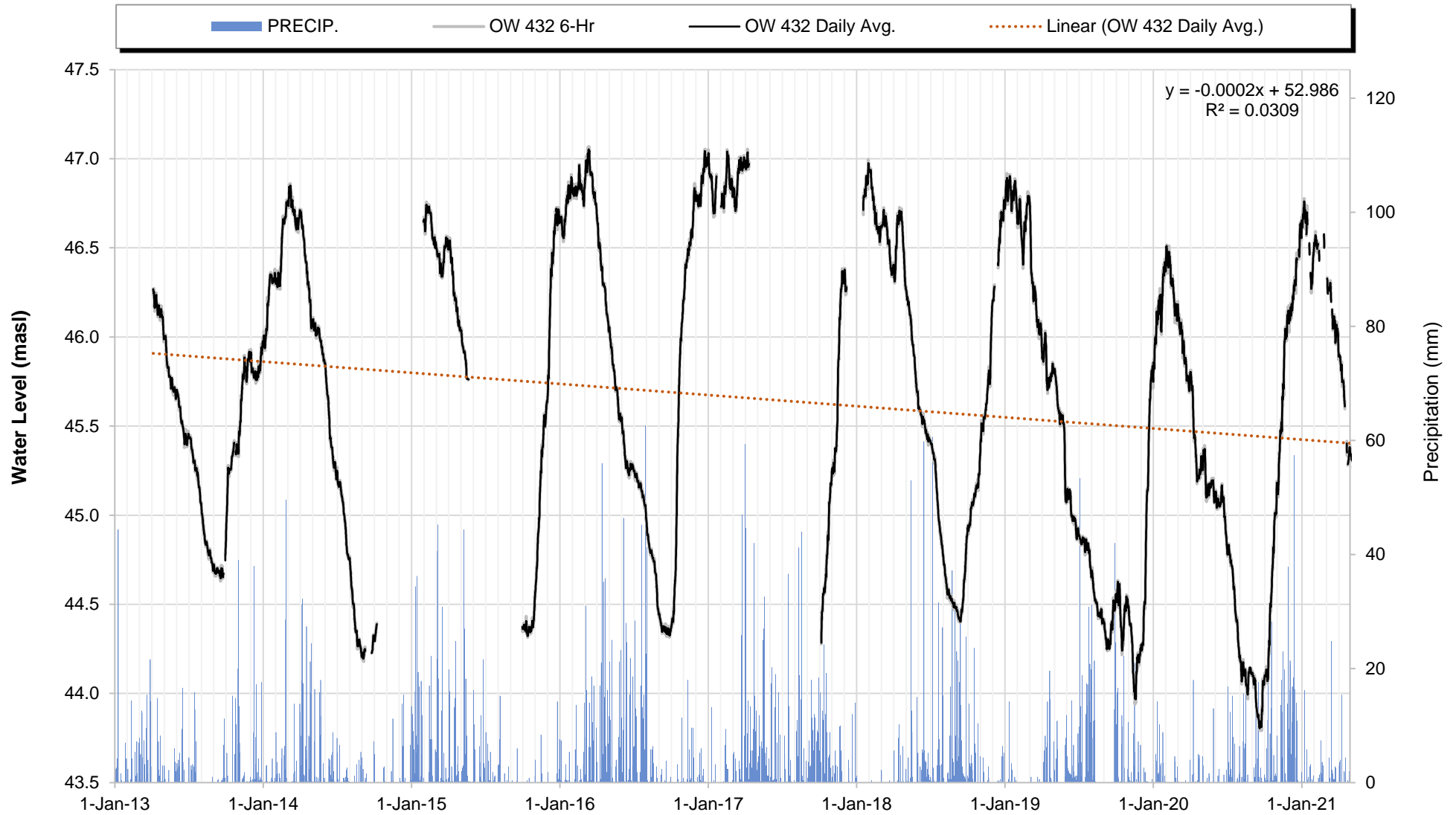


**NOTES:**

Observation Well is Associated with Aquifer 163


Aquifer 163 is Confined Surficial Sediments

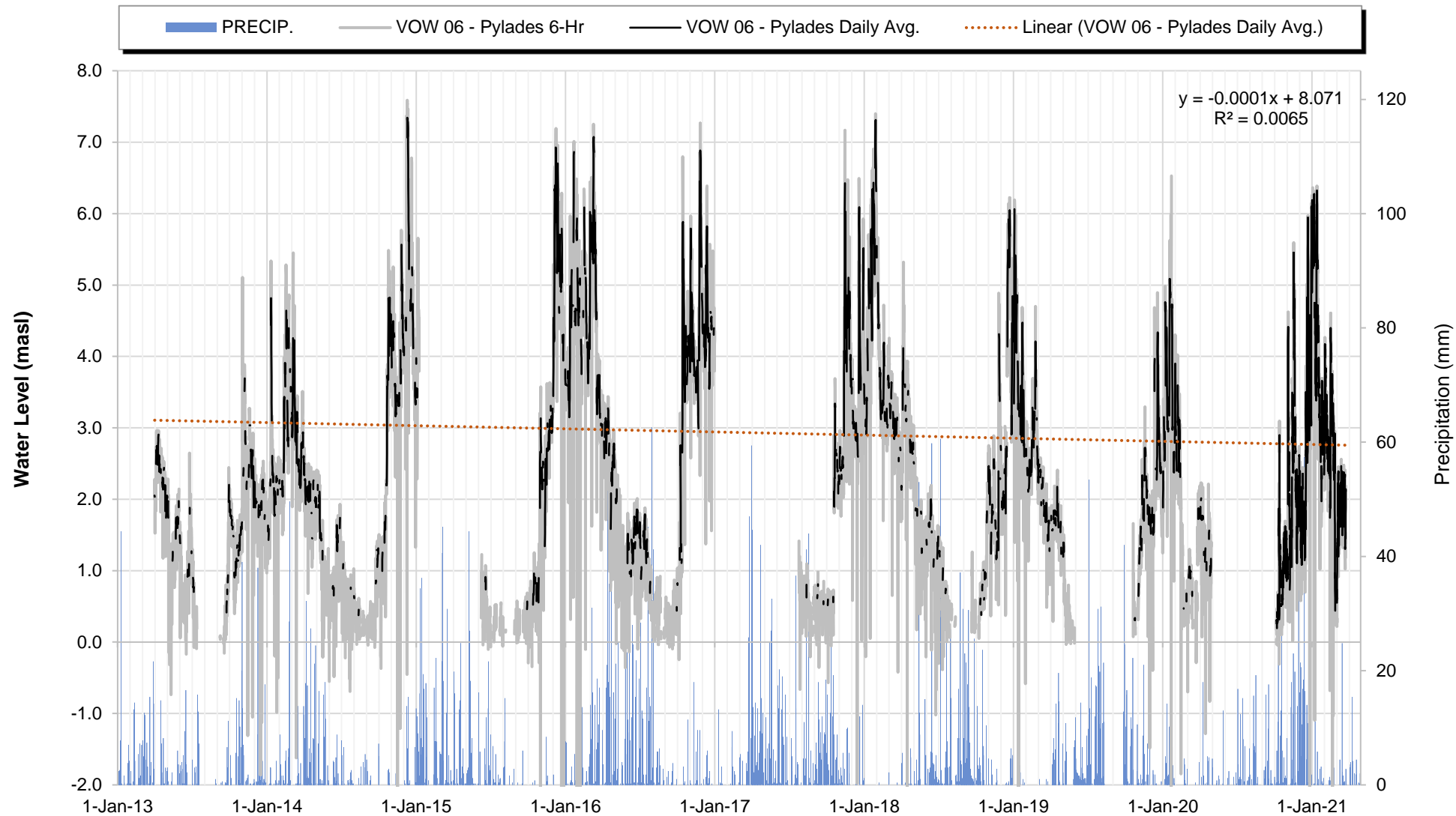
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 24 - Brightman (WR6 - Nanaimo River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-32</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**


Observation Well is Associated with Aquifer 162  
 Aquifer 162 is Fractured Bedrock

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION -          REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
<b>HISTORICAL GROUNDWATER LEVEL CHART          OW 432 (WR6 - Nanaimo River)</b>		<b>FIGURE B-33</b>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

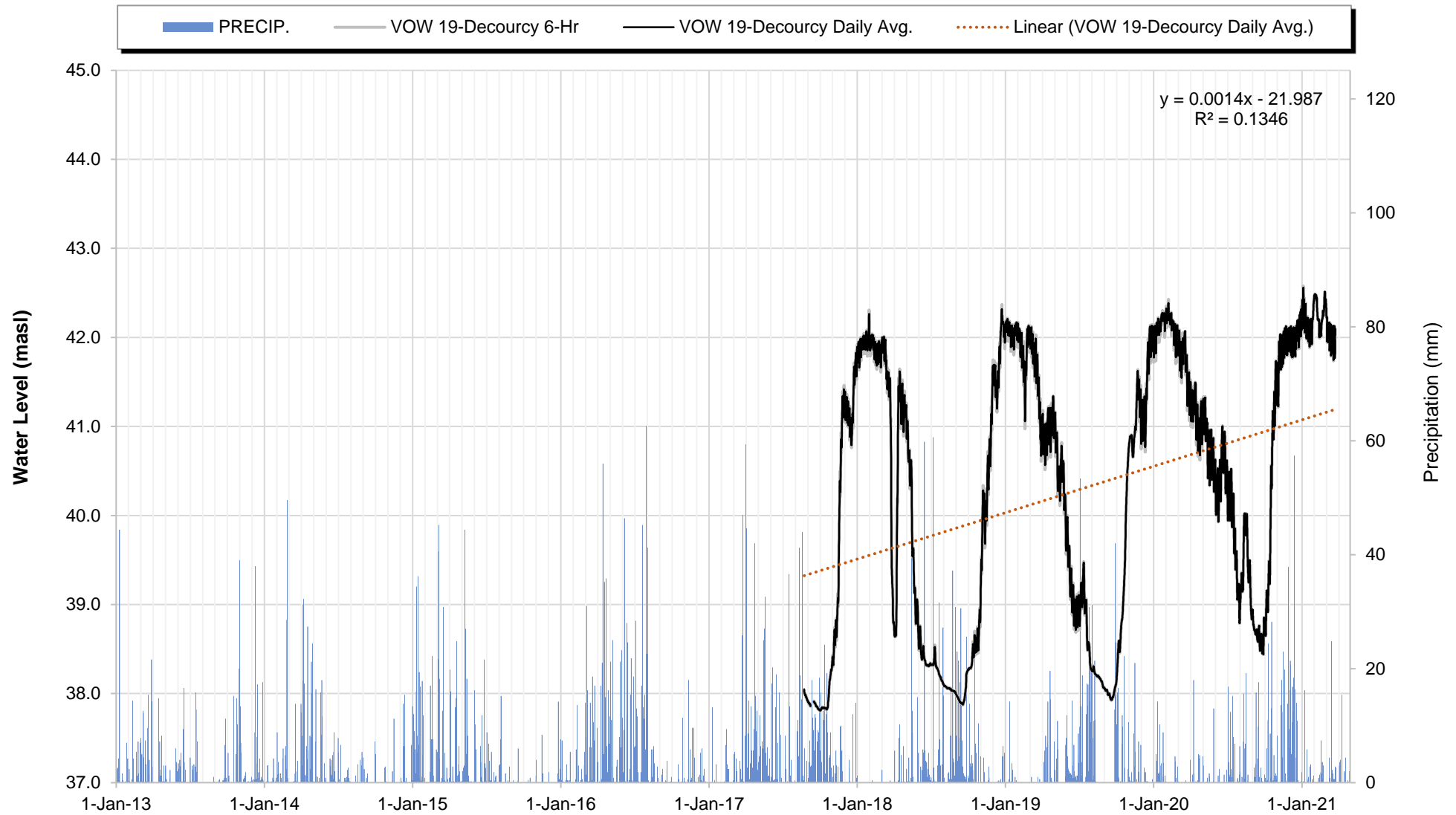


**NOTES:**

Observation Well is Associated with Aquifer 162  
 Aquifer 162 is Fractured Bedrock

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 06 - Pylades (WR6 - Nanaimo River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-34</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		




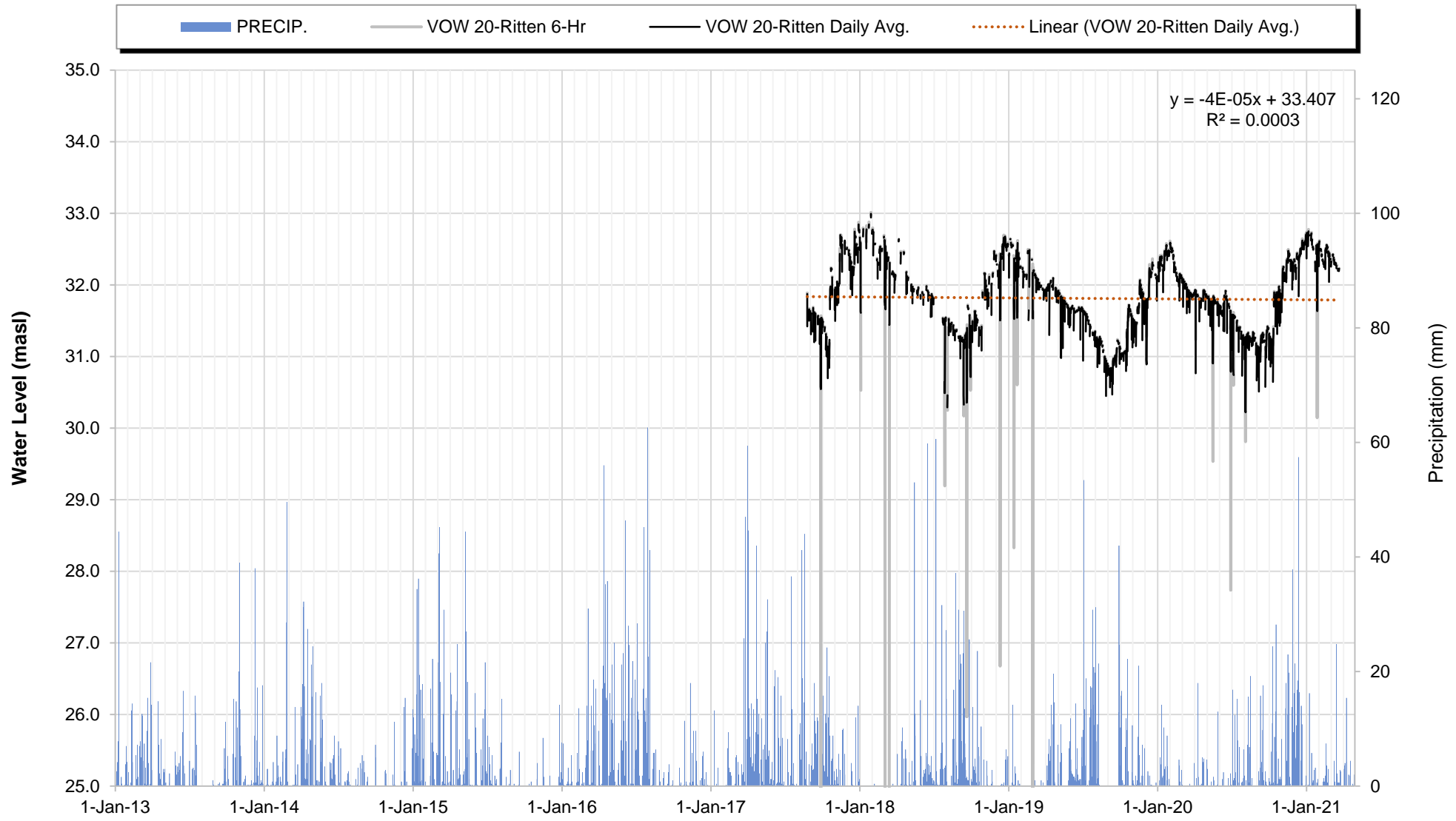


**NOTES:**

Observation Well is Associated with Aquifer 162


Aquifer 162 is Fractured Bedrock

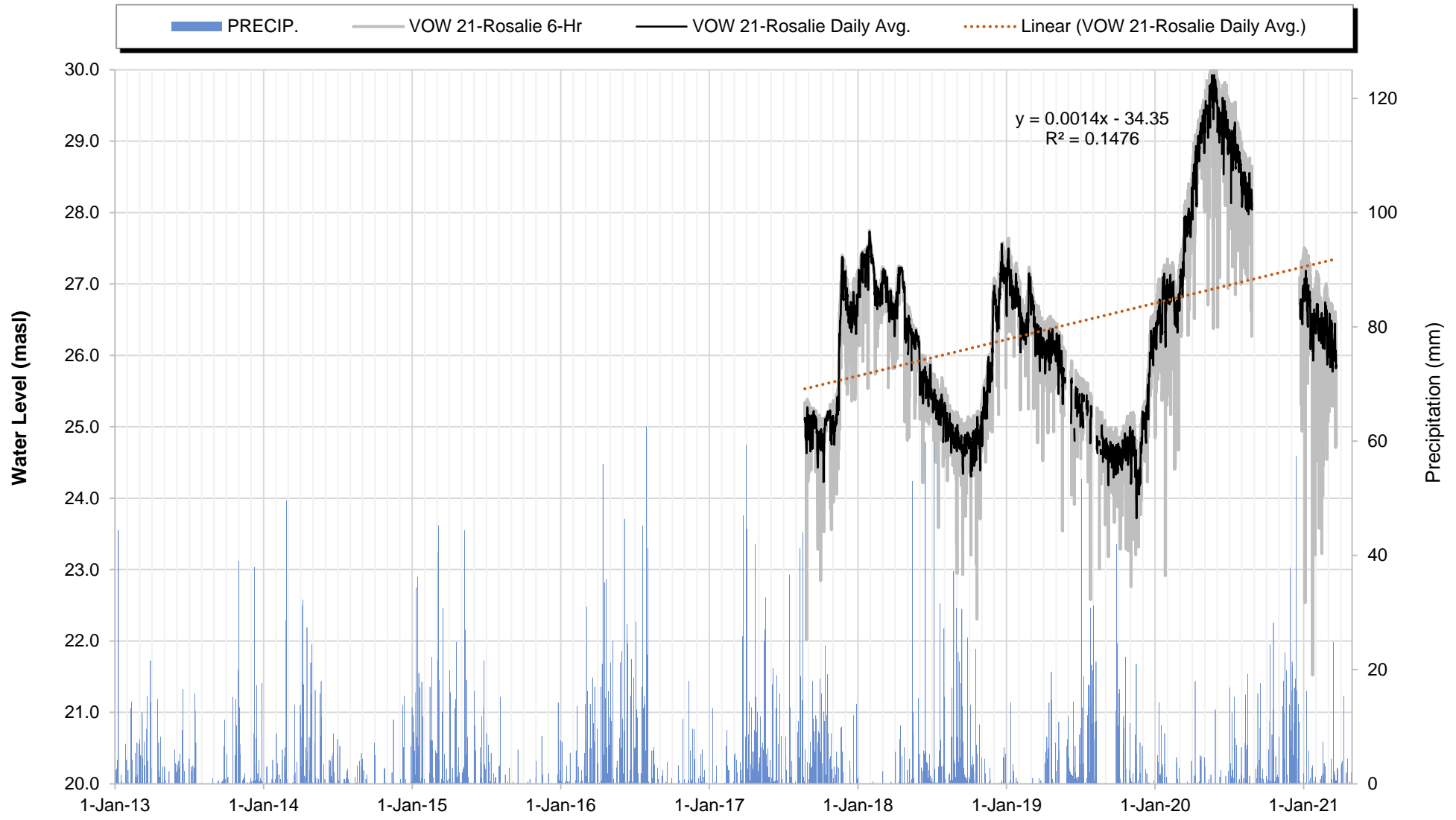
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 19 - DeCourcy (WR6 - Nanaimo River)</b>	
	PREPARED BY:	WATERLINE RESOURCES INC.	
	PROJECT:	2590-21-001	
	COMPILED BY:	SR	
	DATE ISSUED:	May 2021	
	REVISED:	FINAL	
			<b>FIGURE B-35</b>



**NOTES:**

Observation Well is Associated with Aquifer 162  
 Aquifer 162 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 20 - Ritten (WR6 - Nanaimo River)</b>	
	PREPARED BY:	WATERLINE RESOURCES INC.	
	PROJECT:	2590-21-001	
	COMPILED BY:	SR	
	DATE ISSUED:	May 2021	
	REVISED:	FINAL	
			<b>FIGURE B-36</b>

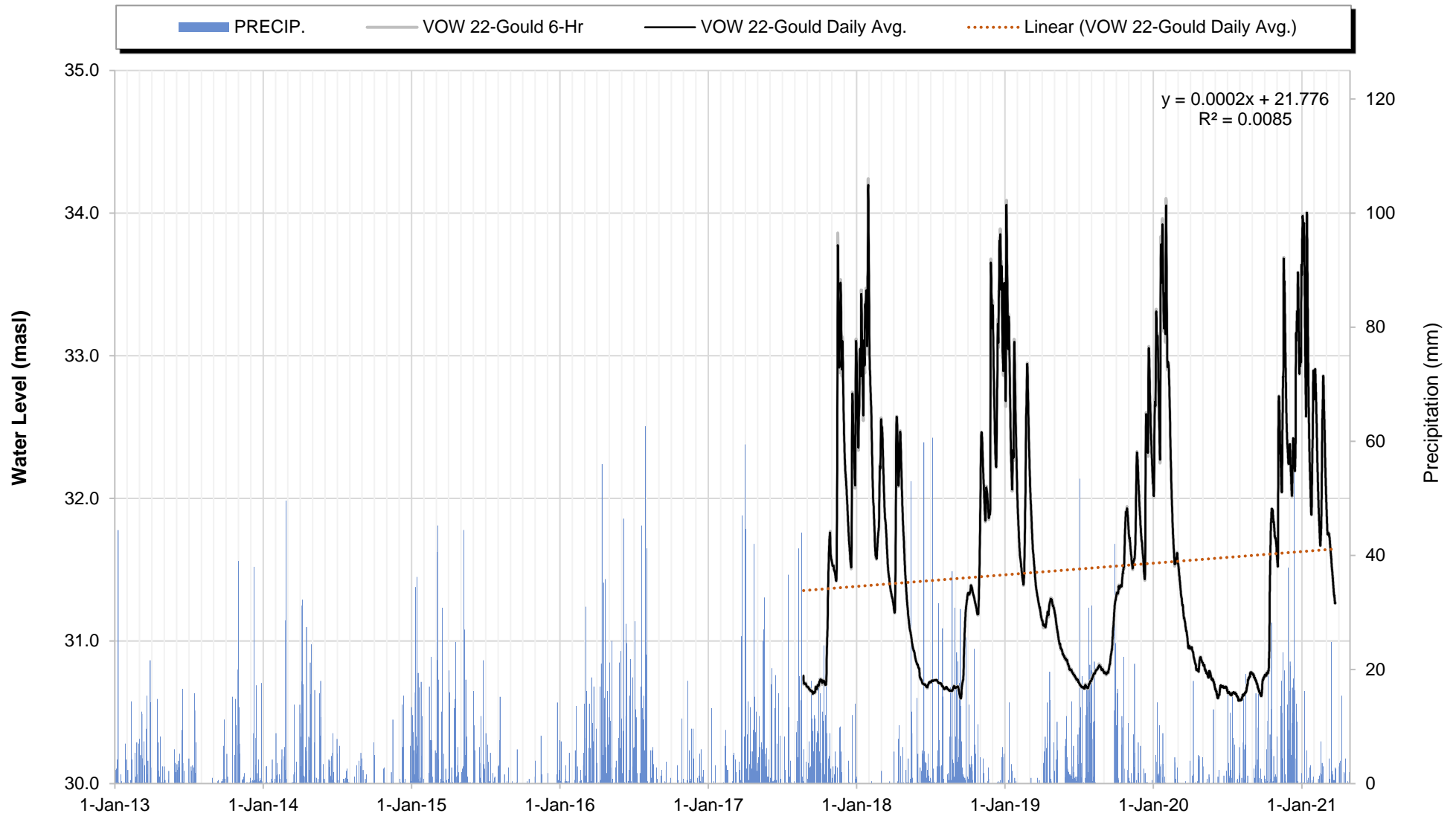


**NOTES:**

Observation Well is Associated with Aquifer 162

Aquifer 162 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 21 - Rosalie (WR6 - Nanaimo River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE B-37</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

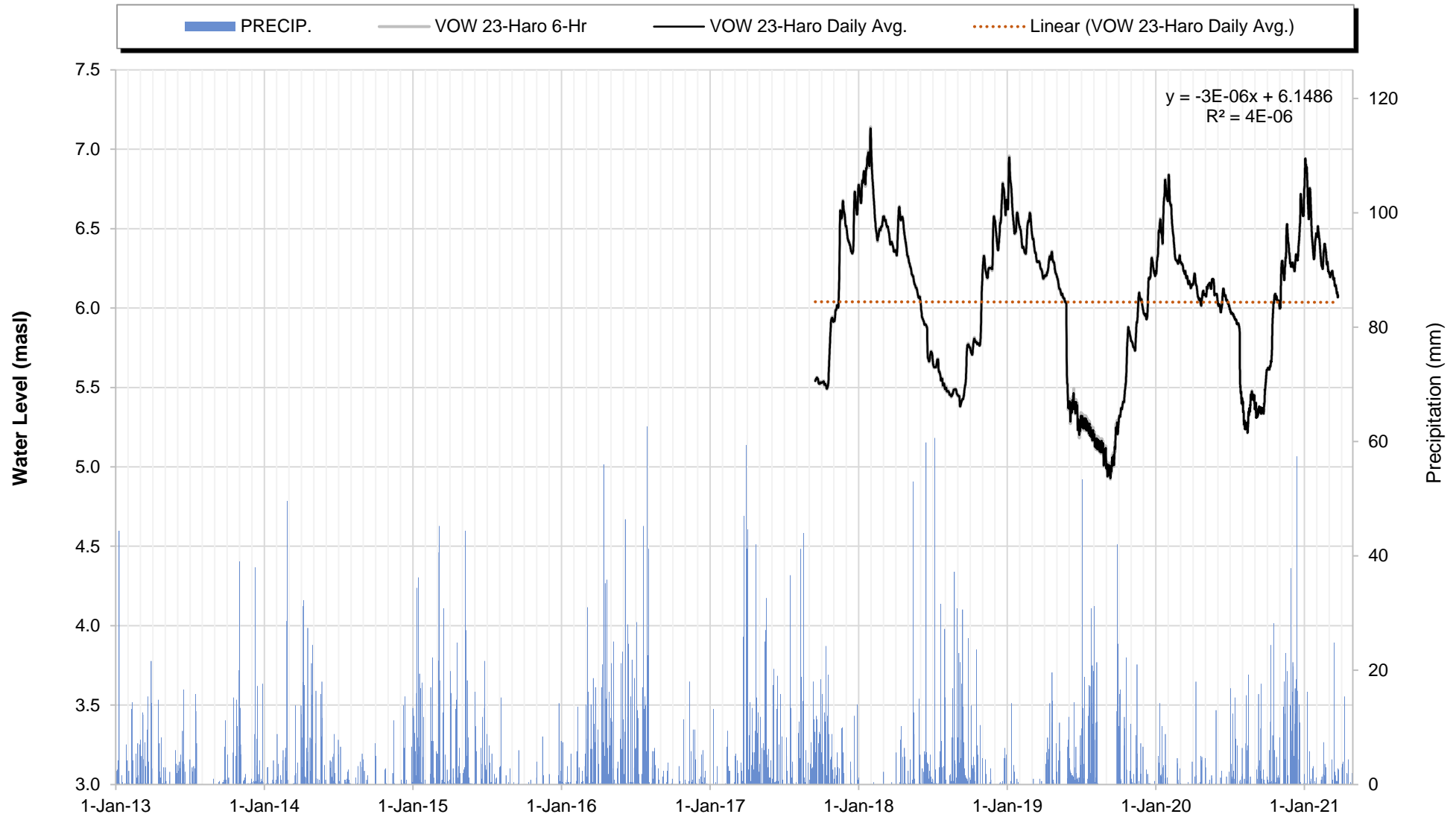


**NOTES:**

Observation Well is Associated with Aquifer 162

Aquifer 162 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 22 - Gould (WR6 - Nanaimo River)</b>	
	PREPARED BY:	WATERLINE RESOURCES INC.	
	PROJECT:	2590-21-001	
	COMPILED BY:	SR	
	DATE ISSUED:	May 2021	
	REVISED:	FINAL	
			<b>FIGURE B-38</b>

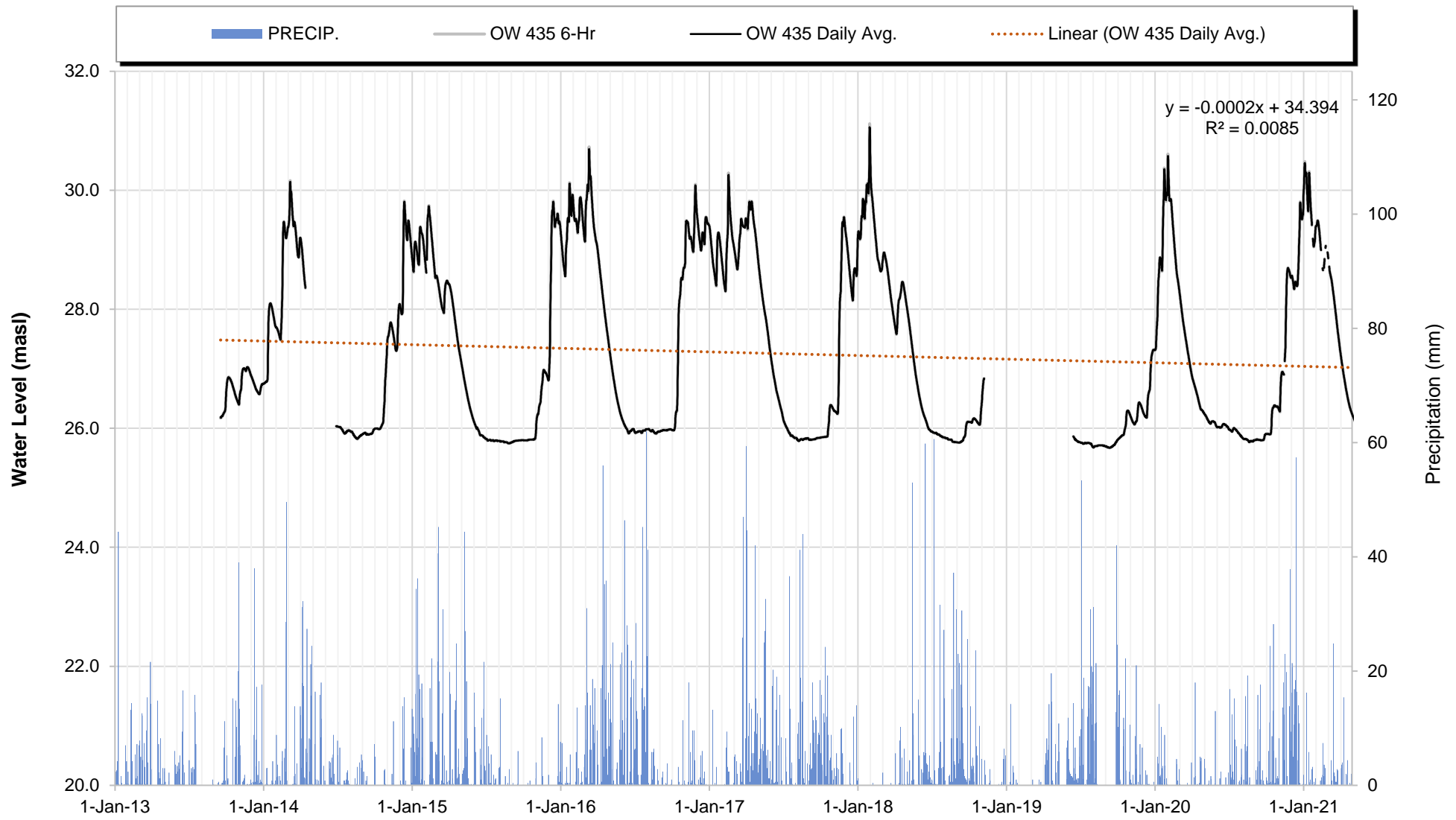


**NOTES:**

Observation Well is Associated with Aquifer 162


Aquifer 162 is Fractured Bedrock

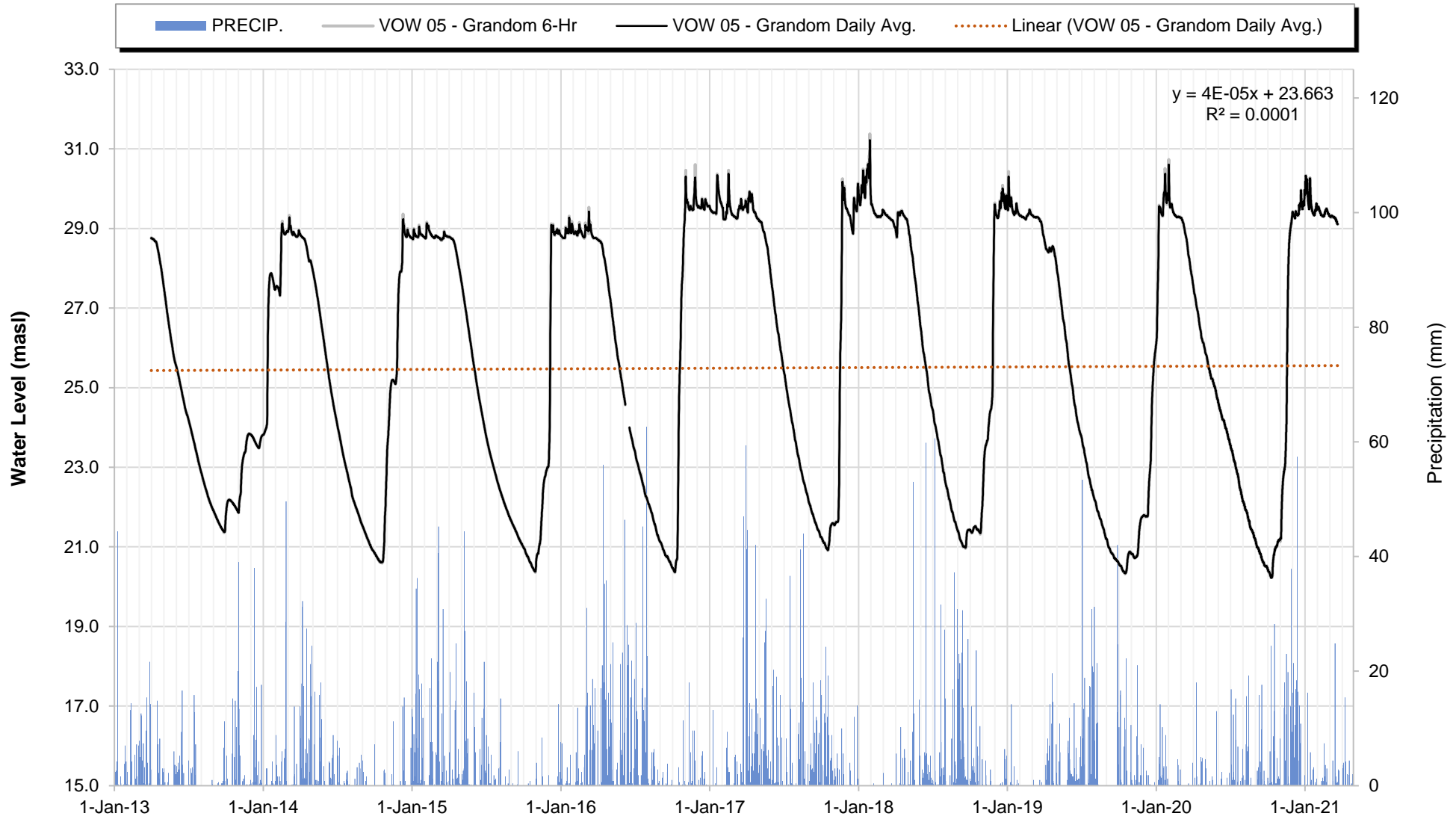
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 23 - Haro (WR6 - Nanaimo River)</b>	
	PREPARED BY:	WATERLINE RESOURCES INC.	
	PROJECT:	2590-21-001	
	COMPILED BY:	SR	
	DATE ISSUED:	May 2021	
	REVISED:	FINAL	
			<b>FIGURE B-39</b>



**NOTES:**

Observation Well Associated with Aquifer 165  
 Aquifer 165 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION -          REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
<b>HISTORICAL GROUNDWATER LEVEL CHART          OW 435 (WR6 - Nanaimo River)</b>		<b>FIGURE B-40</b>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	



**NOTES:**

Observation Well is Associated with Aquifer 165

Aquifer 165 is Fractured Bedrock

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>HISTORICAL GROUNDWATER LEVEL CHART VOW 05 - Grandom (WR6 - Nanaimo River)</b>	
	PREPARED BY:	WATERLINE RESOURCES INC.	
	PROJECT:	2590-21-001	
	COMPILED BY:	SR	
	DATE ISSUED:	May 2021	
	REVISED:	FINAL	
			<b>FIGURE B-41</b>

## **Appendix C – Seasonal Groundwater Level Trend Results**





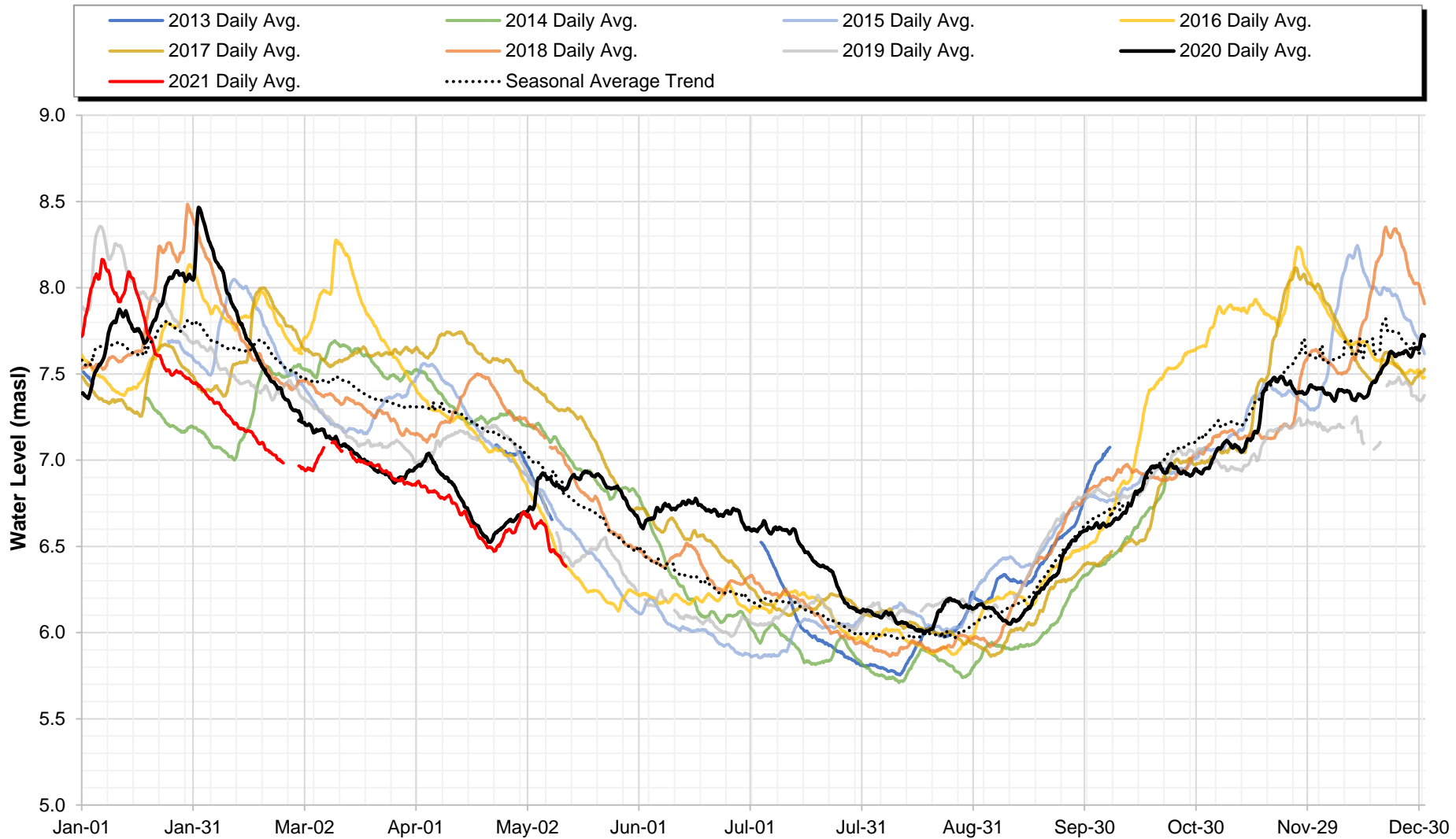
**Table C1: Seasonal Groundwater Level Trend Results for the VOWN and PGOWN in 2021**

CHART ID	WATER REGION	OBS WELL NUMBER	AQUIFER	AQUIFER TYPE	TREND RESULTS
1	Little Qualicum	OW389	664	Surficial	BELOW
2	French Creek	VOW 16	217	Surficial	BELOW
3		VOW 15	212	Bedrock	AVERAGE
4	Englishman River	OW 314	216	Surficial	ABOVE (HR)
5		OW 424	216	Surficial	BELOW
6		VOW 14	216	Surficial	ABOVE (HR)
7		VOW 01	216	Surficial	AVERAGE
8		OW 287	220	Bedrock	BELOW
9		VOW 18	220	Bedrock	AVERAGE
10		Nanoose and South Wellington	VOW 12	167	Surficial
11	OW 388		211	Bedrock	BELOW
12	VOW 02		213	Bedrock	AVERAGE
13	VOW 03		213	Bedrock	BELOW
14	VOW 13		213	Bedrock	BELOW (LR)
15	VOW 30		214	Bedrock	ABOVE
16	VOW 31		214	Bedrock	BELOW
17	VOW 32		214	Bedrock	ABOVE
18	VOW 33		214	Bedrock	BELOW (LR)
19	VOW 34		214	Bedrock	NO DATA
20	VOW 27		218	Bedrock	AVERAGE
21	VOW 26		218	Bedrock	AVERAGE
22	VOW 28		215	Surficial	BELOW
23	OW 393		219	Surficial	ABOVE
24	OW 396		219	Surficial	BELOW
25	VOW 25		219	Surficial	ABOVE
26	VOW 29		1098	Surficial	AVERAGE
27	VOW 17	1098	Surficial	ABOVE (HR)	
28	Gabriola	OW 316	709	Bedrock	BELOW
29		VOW 08	709	Bedrock	BELOW
30		VOW 07	709	Bedrock	BELOW
31	Nanaimo River	VOW 04	160	Surficial	BELOW
32		VOW 24	163	Surficial	BELOW
33		OW 432	162	Bedrock	BELOW
34		VOW 06	162	Bedrock	AVERAGE
35		VOW 19	162	Bedrock	ABOVE (HR)
36		VOW 20	162	Bedrock	AVERAGE
37		VOW 21	162	Bedrock	BELOW (LR)
38		VOW 22	162	Bedrock	AVERAGE
39		VOW 23	162	Bedrock	BELOW (LR)
40		OW 435	165	Bedrock	BELOW
41		VOW 05	165	Bedrock	ABOVE

**Notes:**


- OW** - Wells associated with the PGOWN
- VOW** - Wells associated with the VOWN
- HR** - Indicates the 2021 Groundwater Level Trend is the Highest on Record
- LR** - Indicates the 2021 Groundwater Level Trend is the Lowest on Record

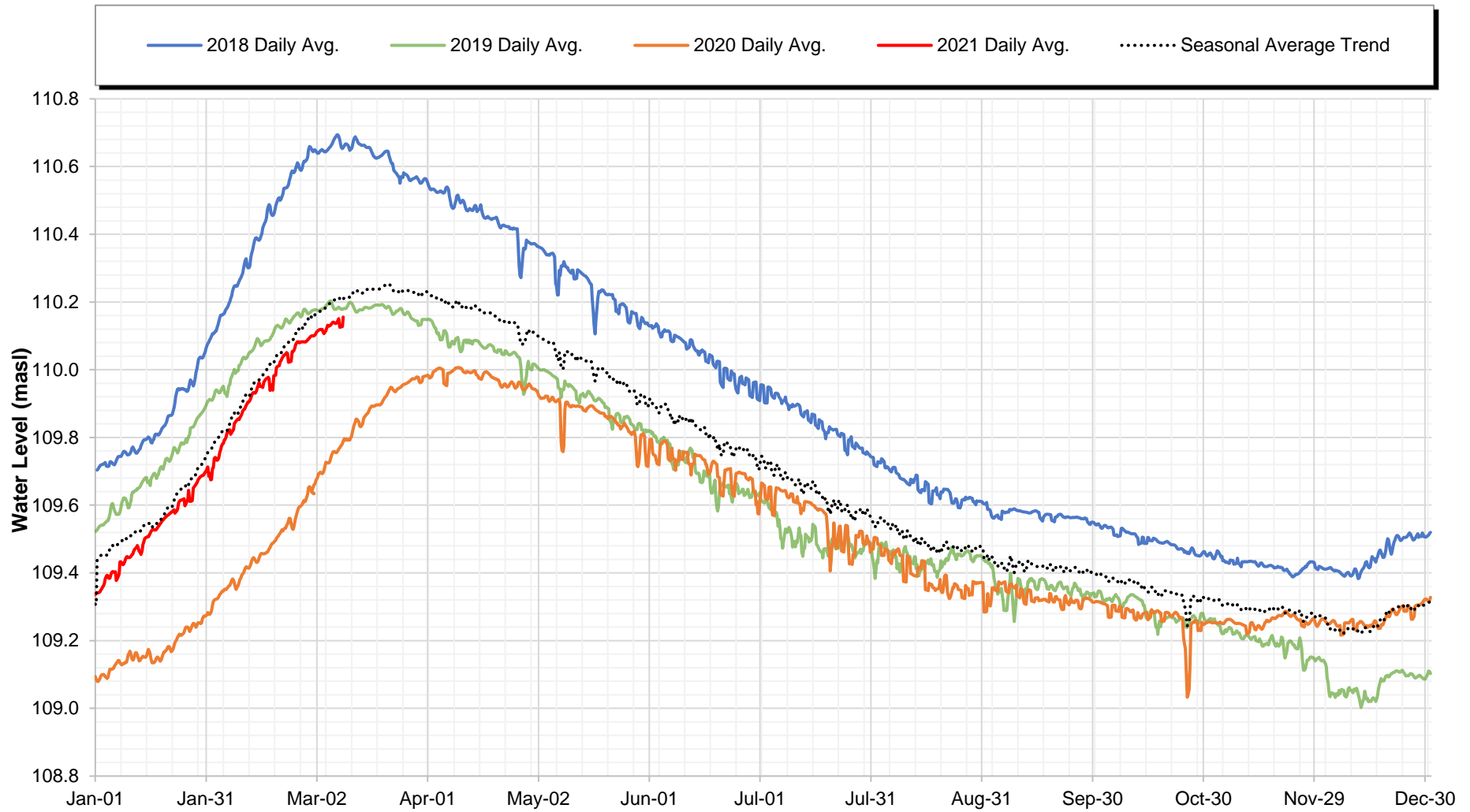




**NOTES:**


Observation Well is Associated with Aquifer 664  
 Aquifer 664 is Unconfined Surficial Sediments

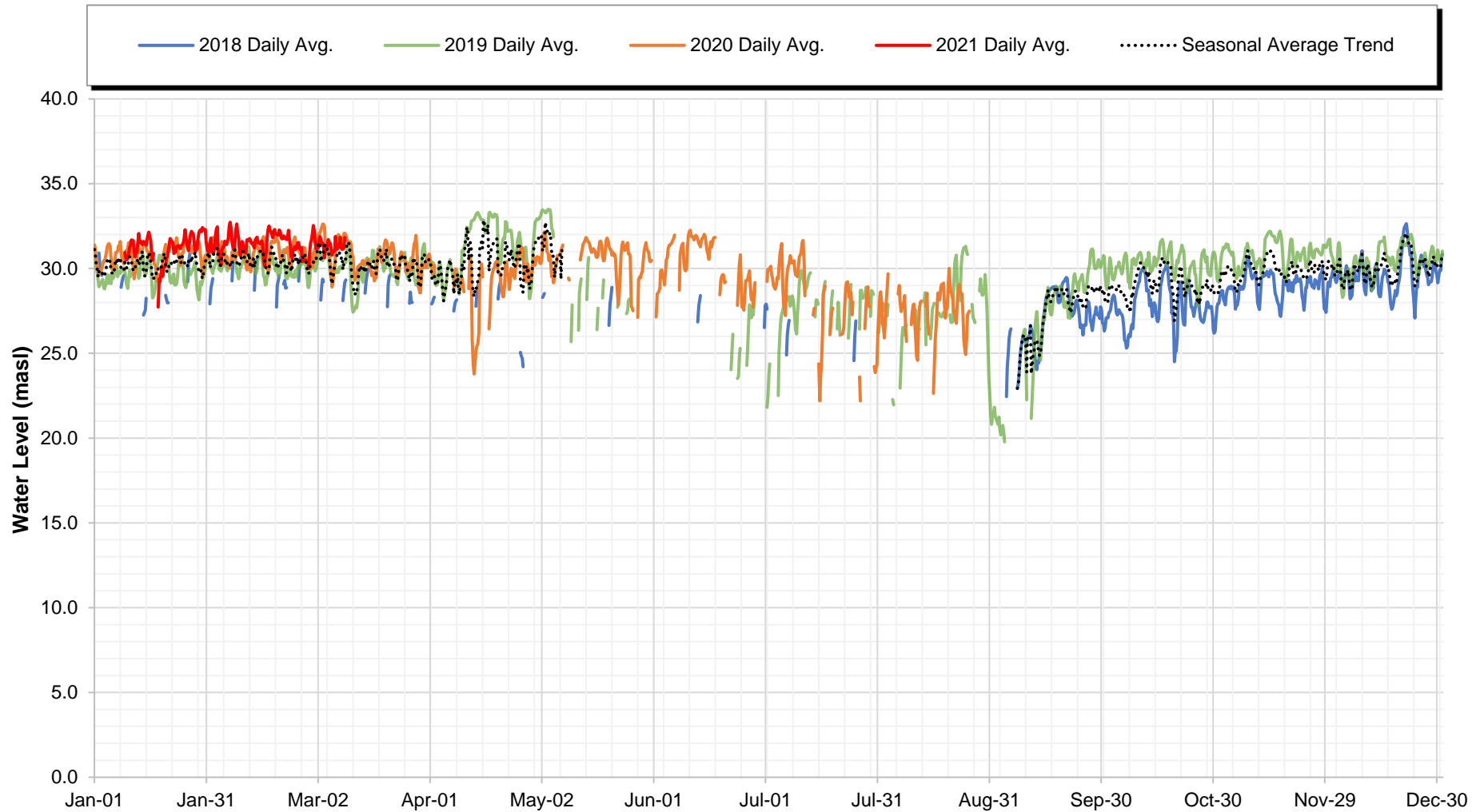
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART OW 389 (WR2 - Little Qaulicum)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-1</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**


Observation Well is Associated with Aquifer 217  
 Aquifer 217 is Confined Surficial Sediments

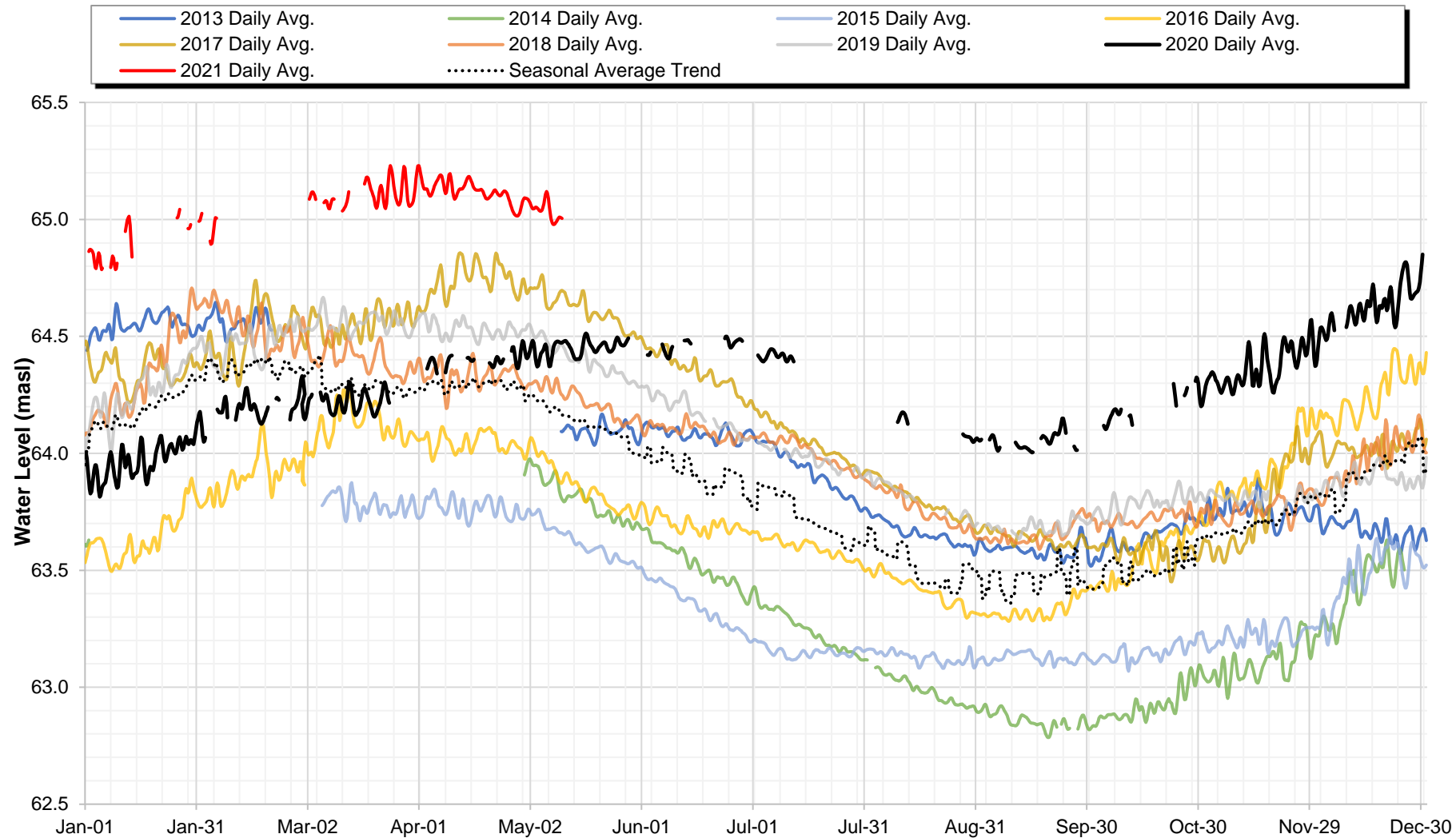
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 16 - Rinvold (WR3 - French Creek)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-2</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**

Observation Well is Associated with Aquifer 212  
 Aquifer 212 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 15 - Lowrys (WR3 - French Creek)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-3</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

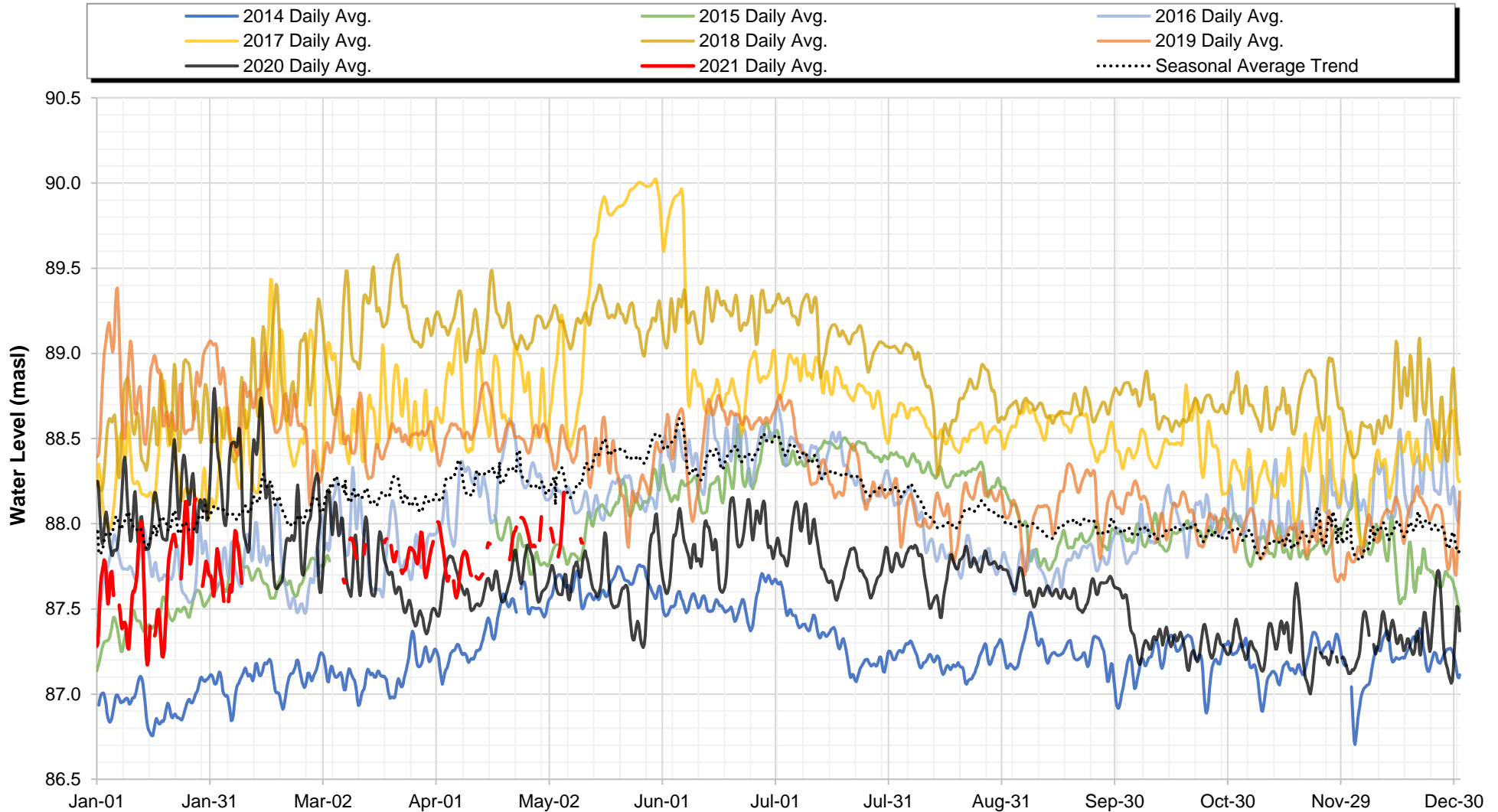


**NOTES:**

Observation Well is Associated with Aquifer 216

Aquifer 216 is Confined Surficial Sediments


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART OW 314 (WR4 - Englishman River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-4</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

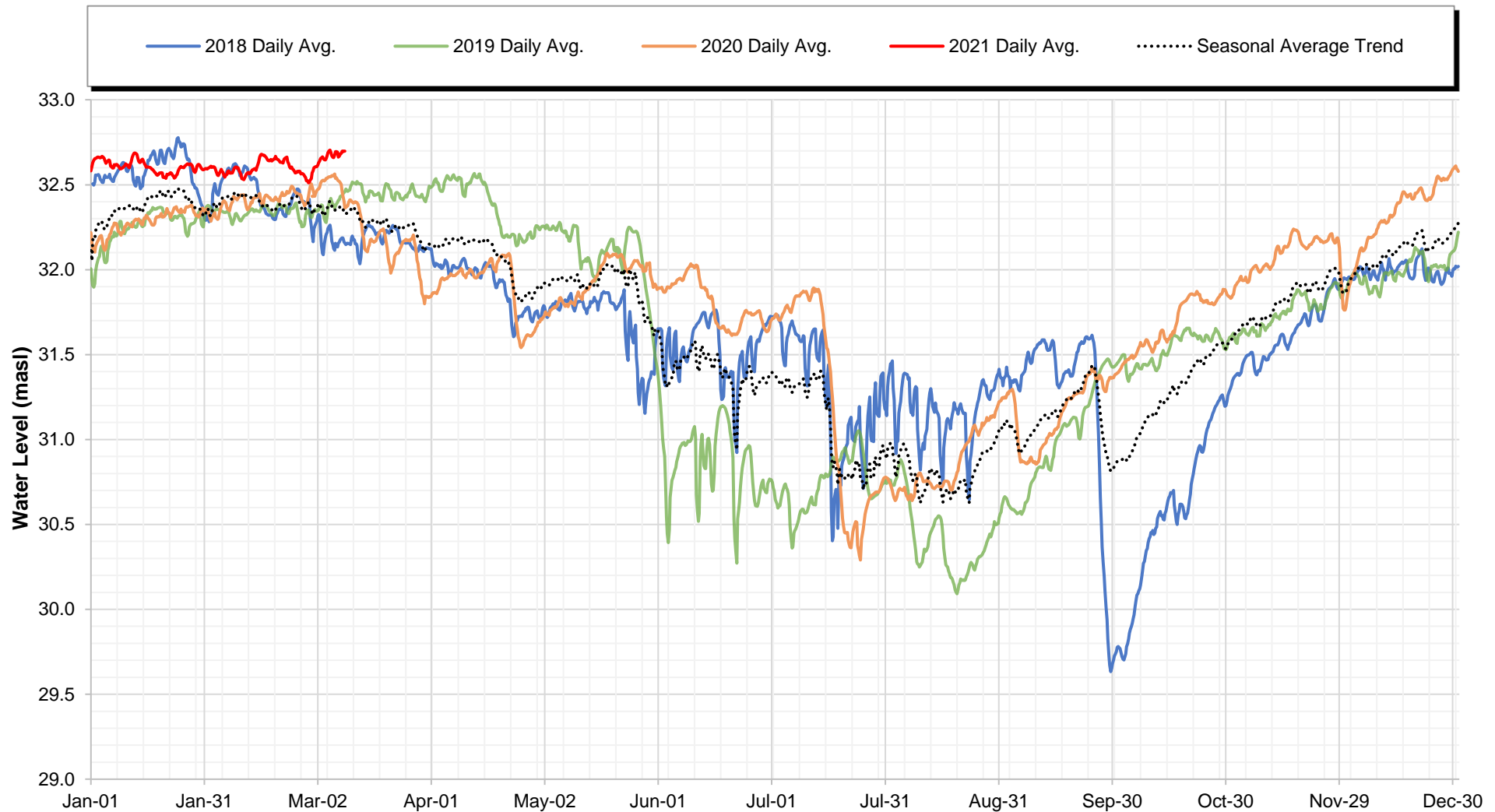


**NOTES:**

Observation Well is Associated with Aquifer 216


Aquifer 216 is Confined Surficial Sediments

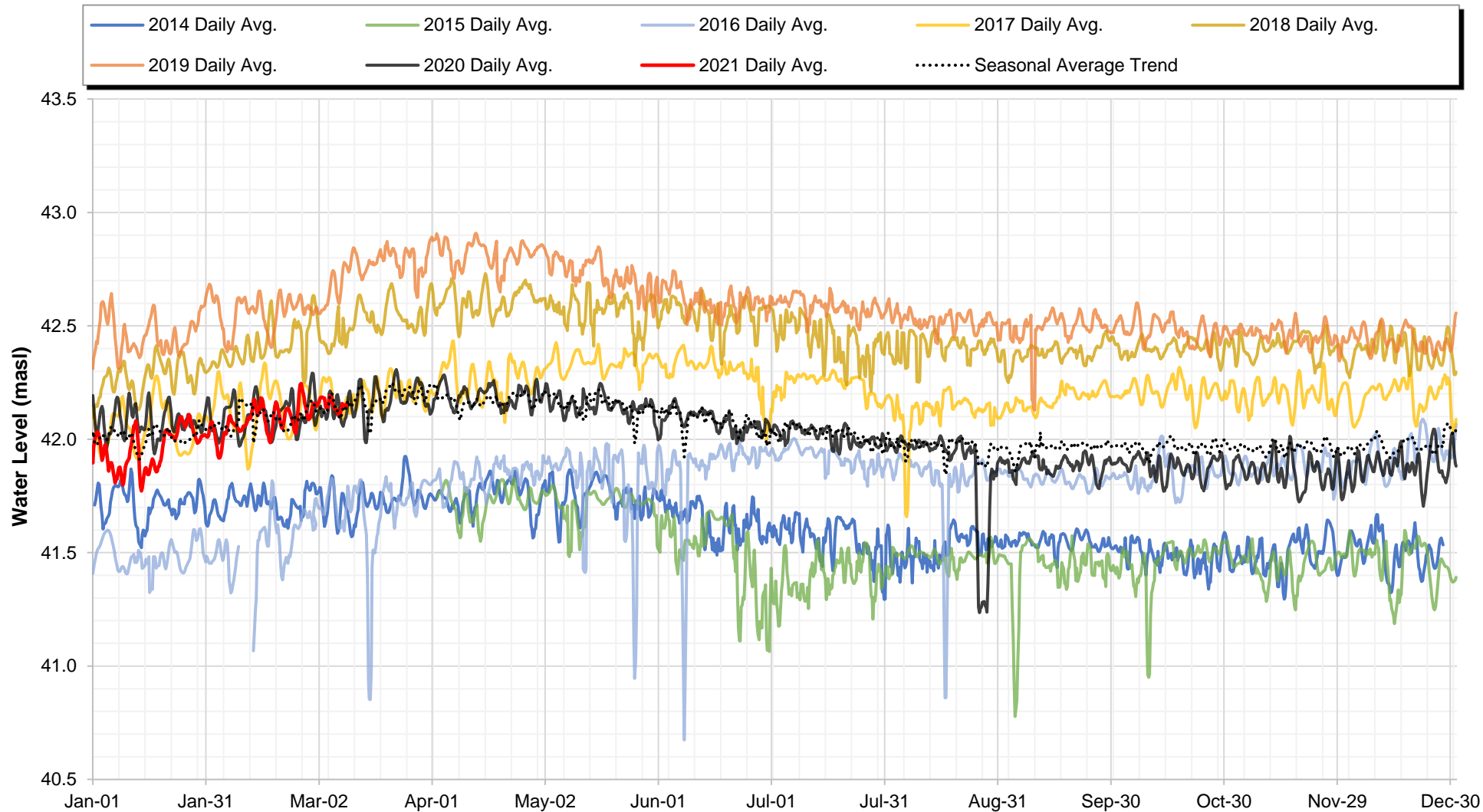
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART OW 424 (WR4 - Englishman River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-5</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
REVISED: FINAL			



**NOTES:**

Observation Well is Associated with Aquifer 216  
 Aquifer 216 is Confined Surficial Sediments


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 14 - Hodges (WR4 - Englishman River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-6</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



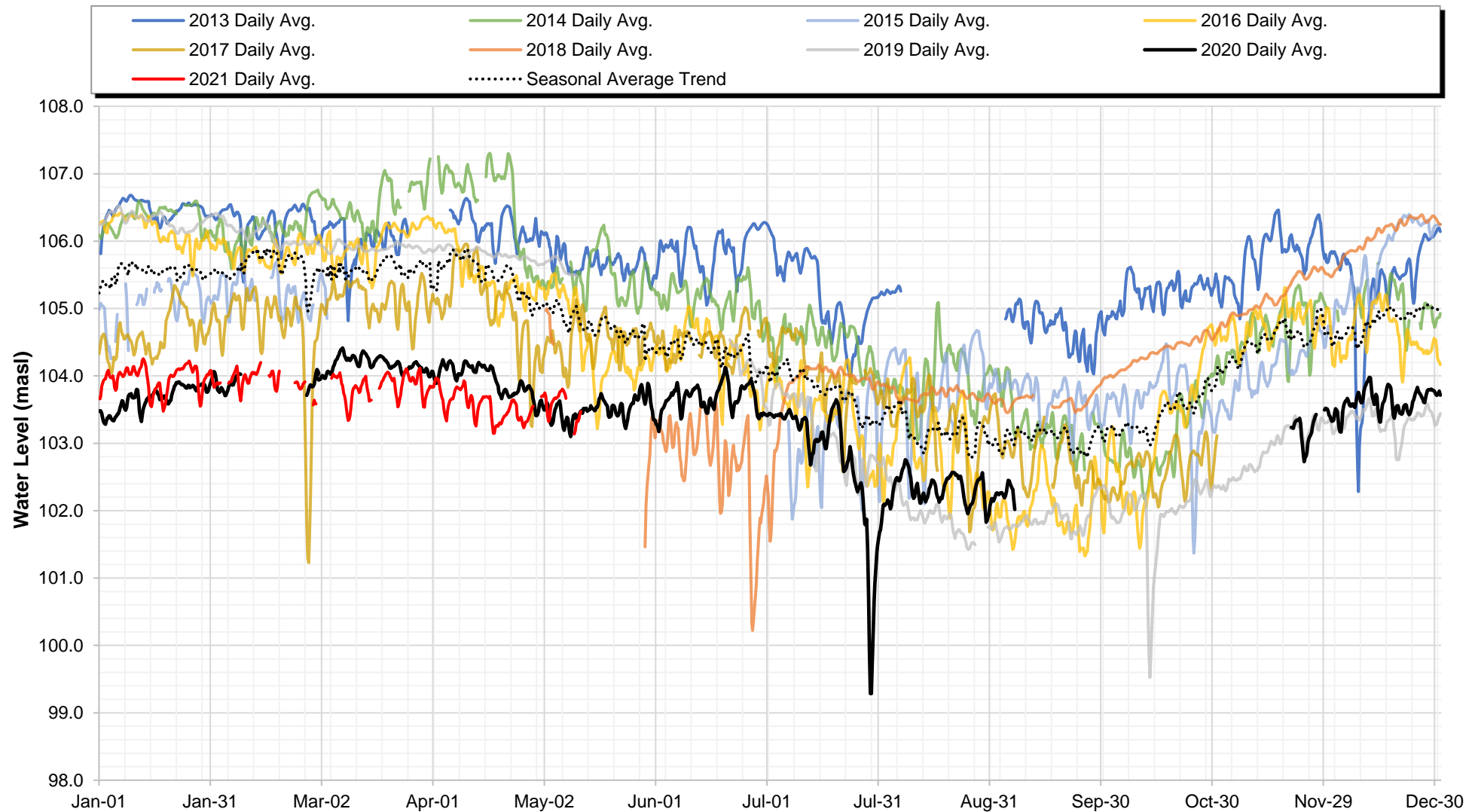
**NOTES:**

Observation Well is Associated with Aquifer 216

Aquifer 216 is Confined Surficial Sediments

PROJECT		<p><b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b></p>
TITLE		
<p><b>SEASONAL GROUNDWATER LEVEL CHART VOW 01 - Fournneau (WR4 - Englishman River)</b></p>		<p><b>FIGURE C-7</b></p>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	




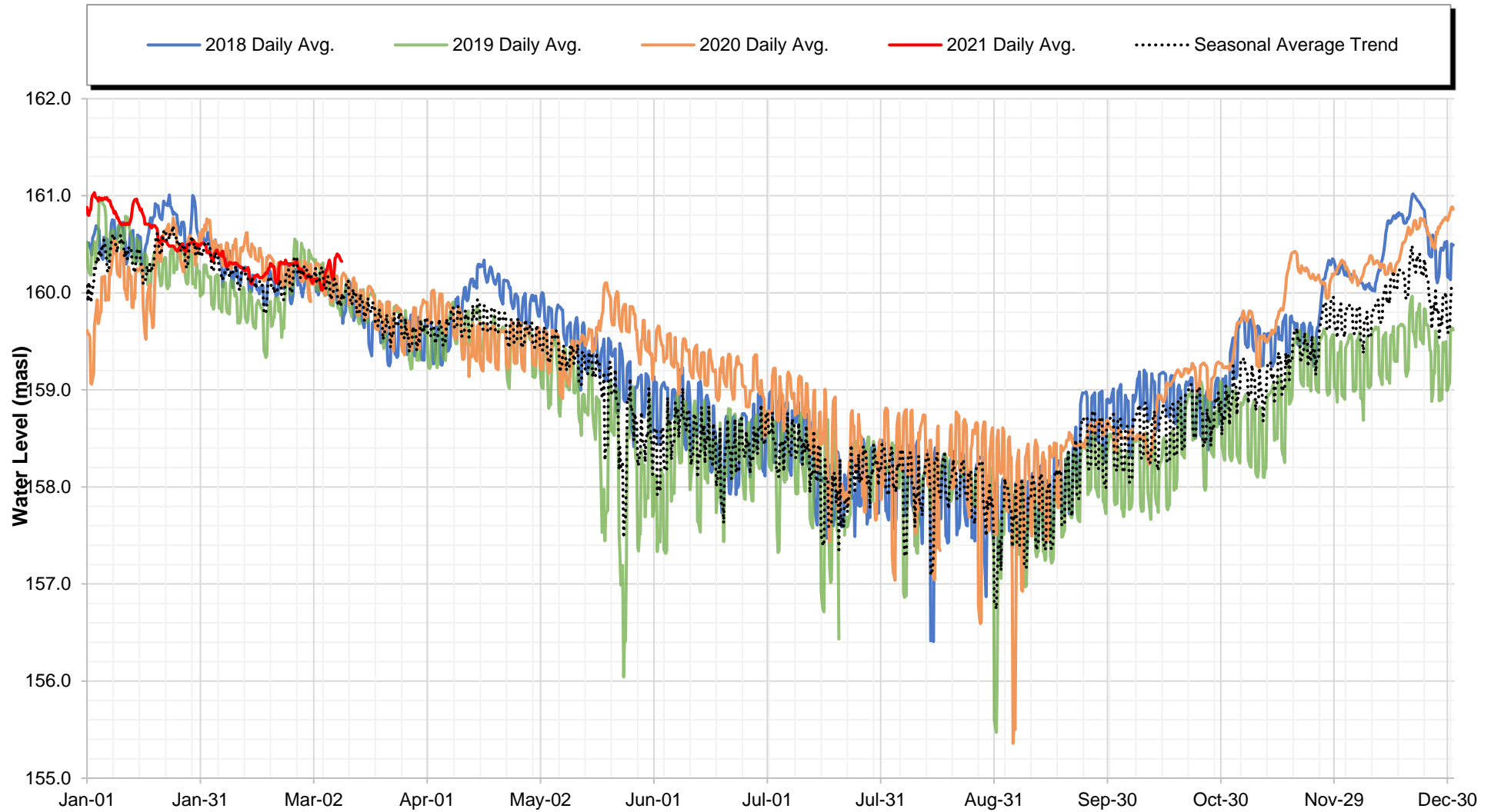


**NOTES:**

Observation Well is Associated with Aquifer 220

Aquifer 220 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART OW 287 (WR4 - Englishman River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-8</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
REVISED: FINAL			

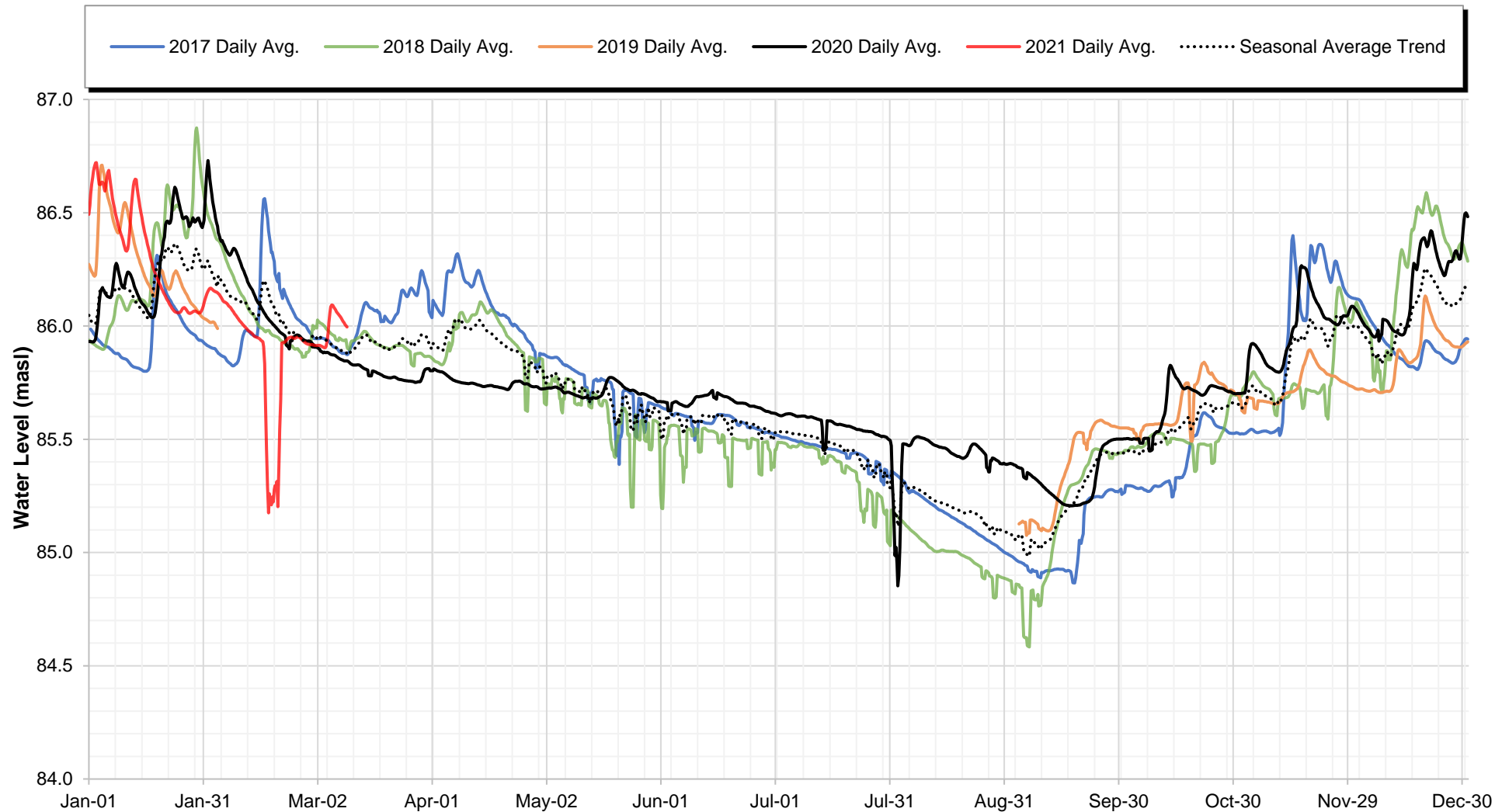


**NOTES:**

Observation Well is Associated with Aquifer 220


Aquifer 220 is Fractured Bedrock

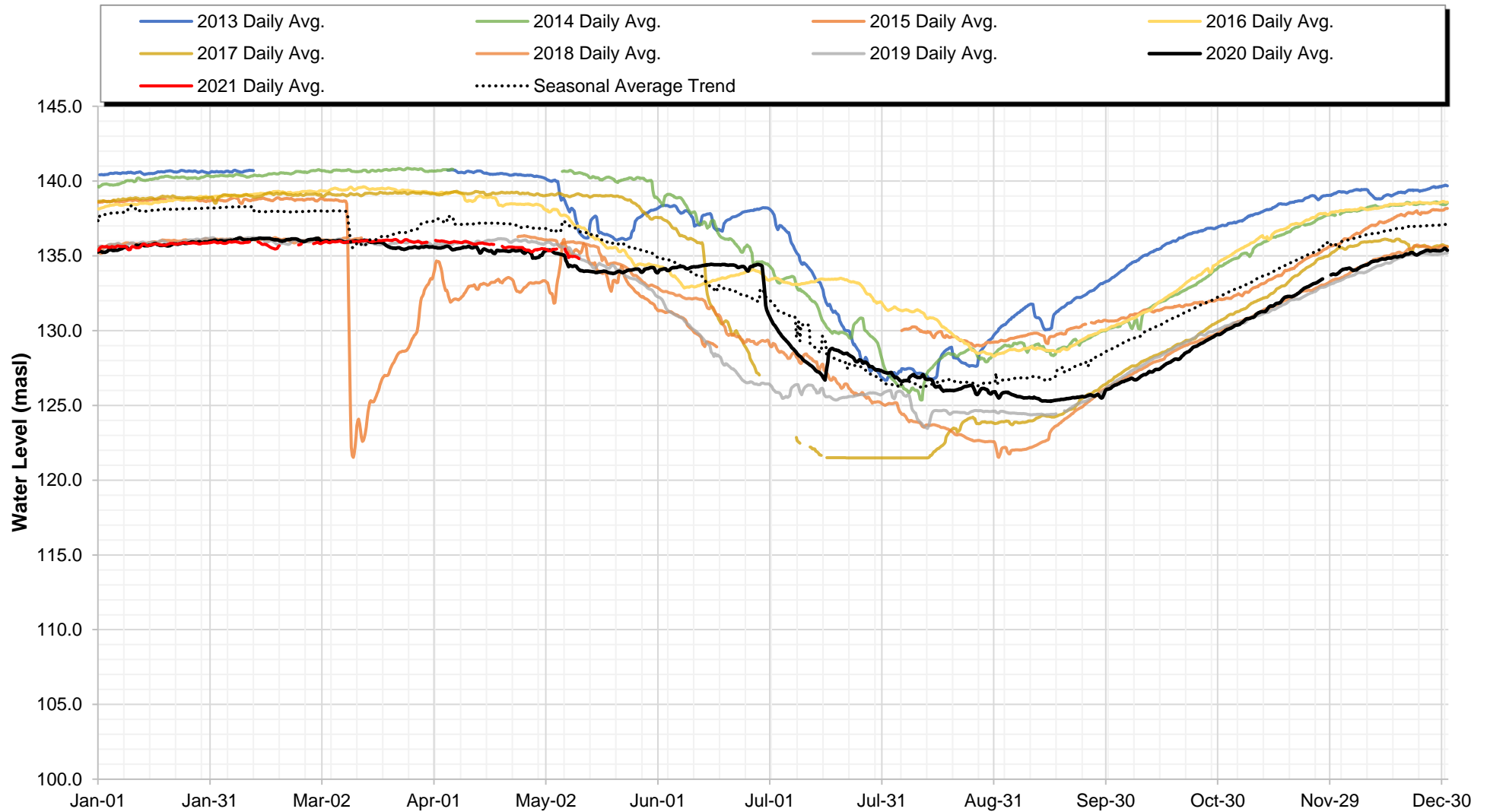
PROJECT		<p><b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b></p>
TITLE		
<p><b>SEASONAL GROUNDWATER LEVEL CHART VOW 18 - Middlegate (WR4 - Englishman River)</b></p>		<p><b>FIGURE C-9</b></p>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	



**NOTES:**

Observation Well is Associated with Aquifer 167  
 Aquifer 167 is Confined Surficial Sediments


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 12 - Biggs (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-10</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

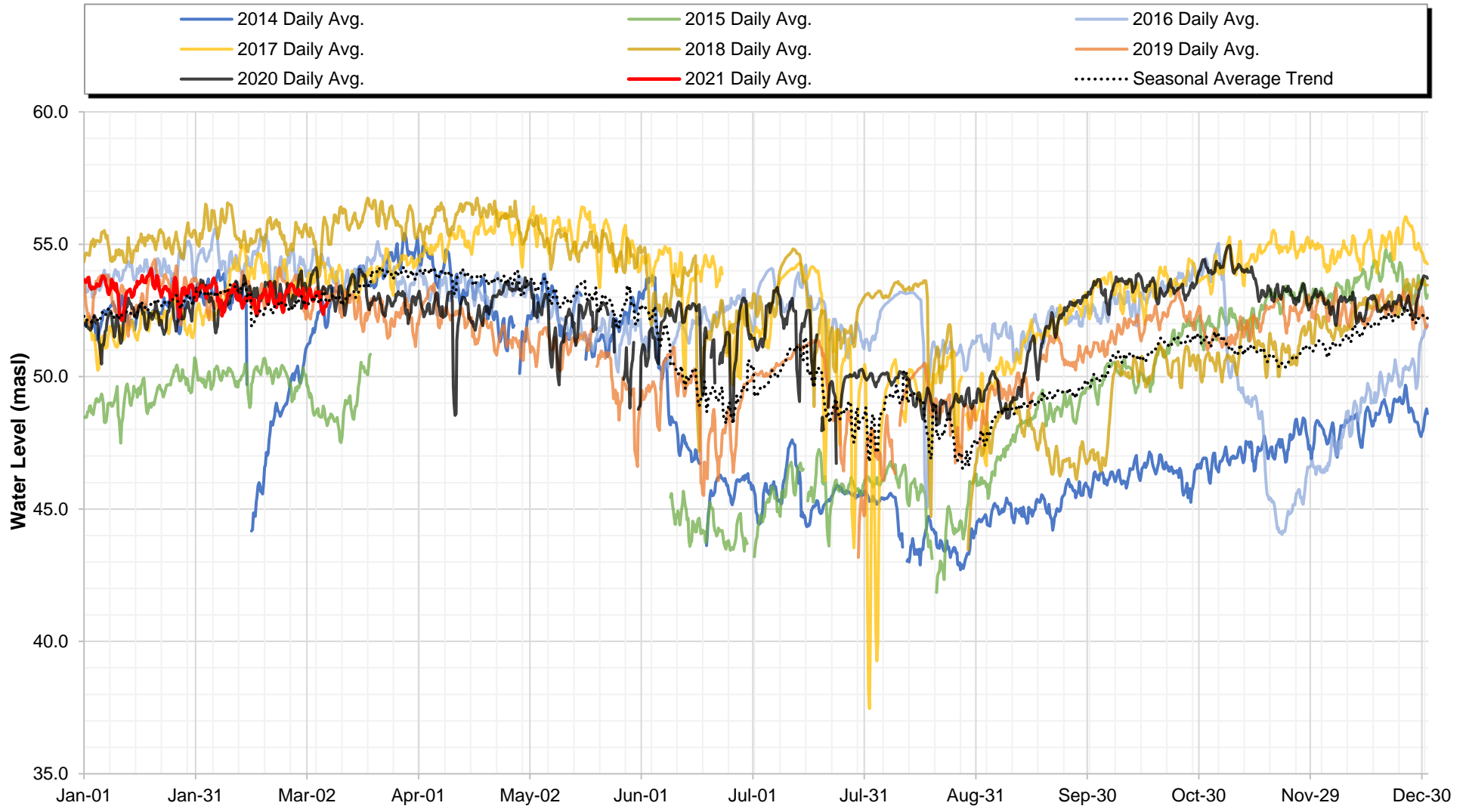


**NOTES:**

Observation Well is Associated with Aquifer 211

Aquifer 211 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART OW 388 (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-11</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

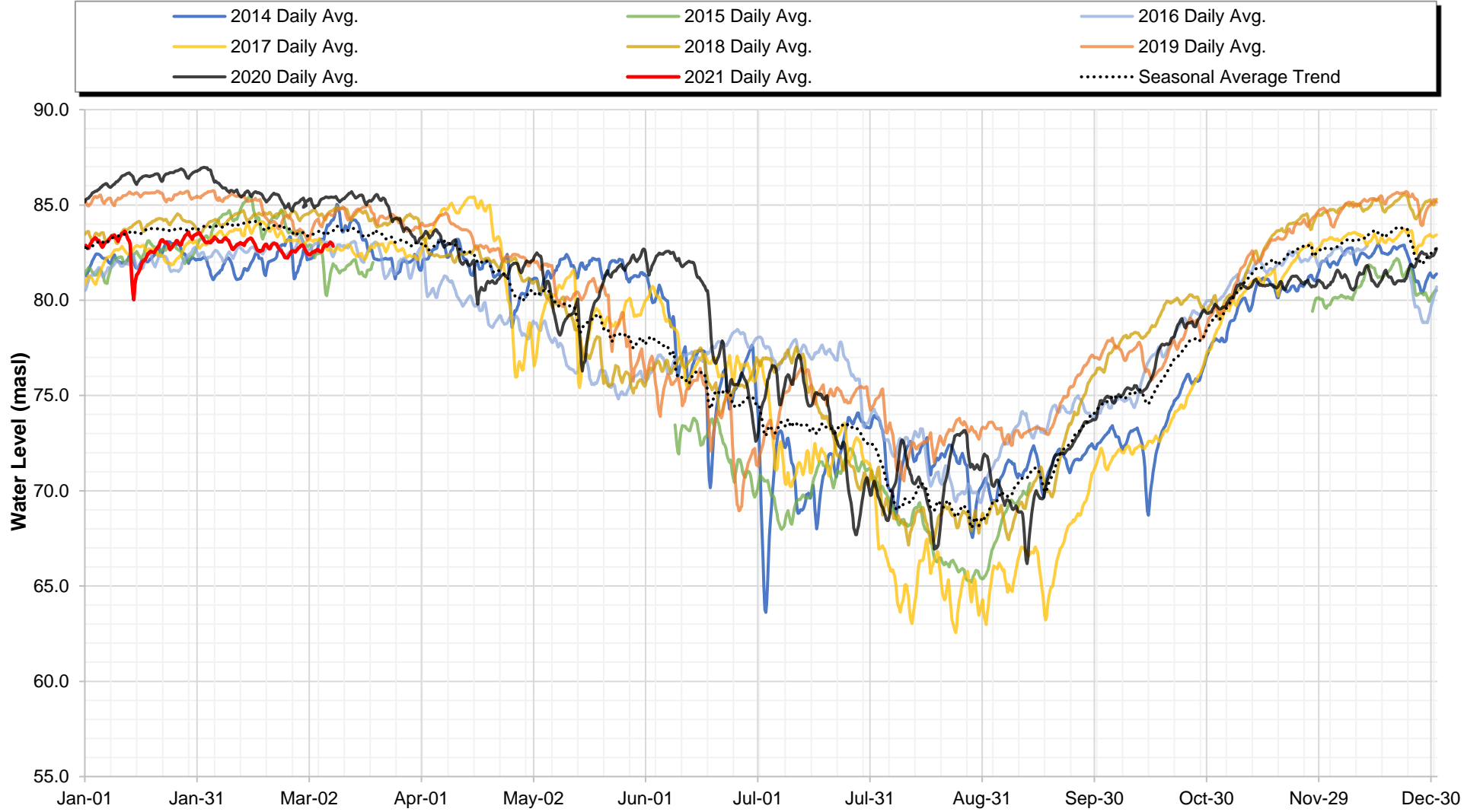


**NOTES:**

Observation Wellis Associated with Aquifer 213


Aquifer 213 is Fractured Bedrock

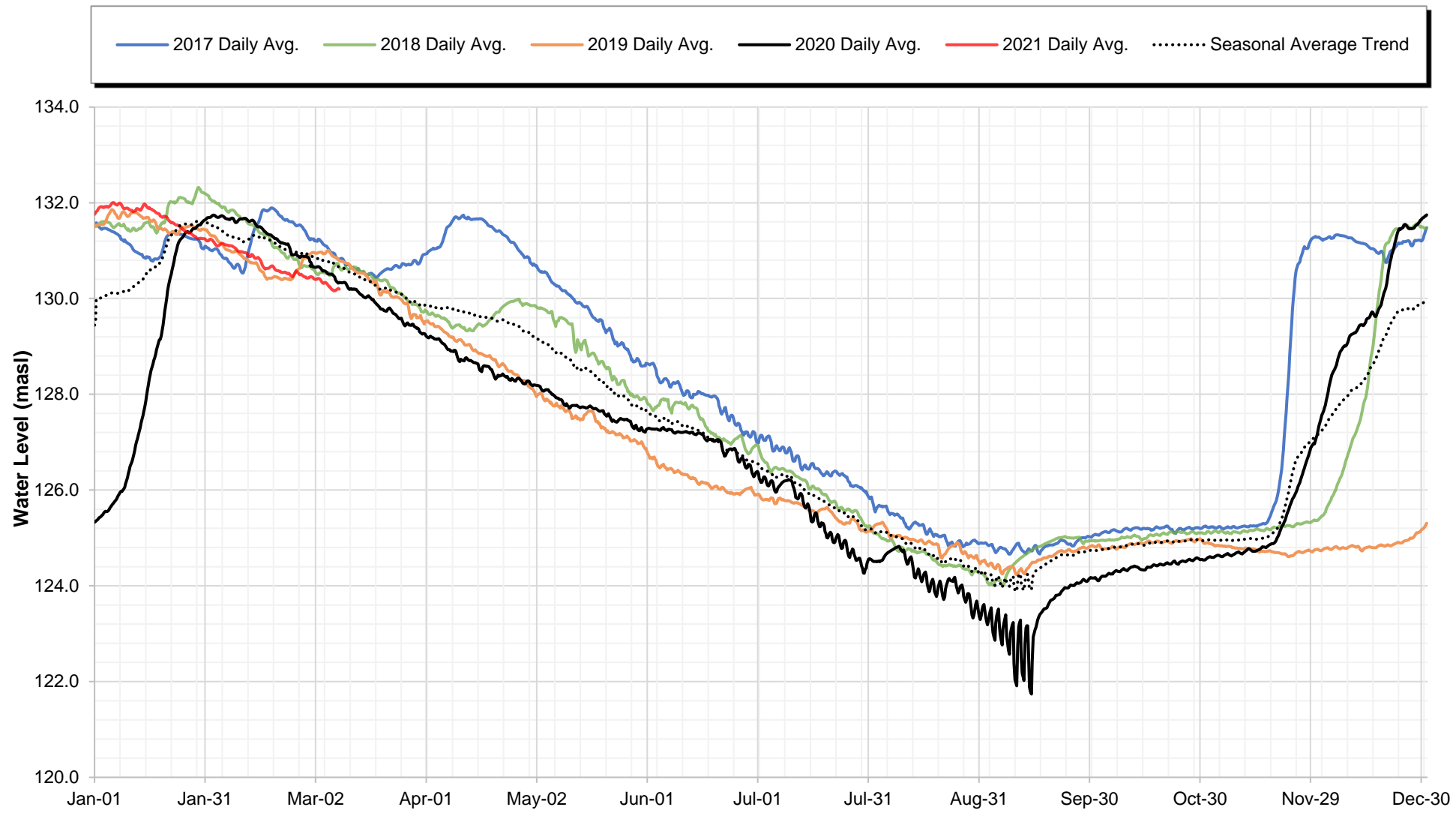
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 02 - Northwind (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-12</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**


Observation Well is Associated with Aquifer 213  
 Aquifer 213 is Fractured Bedrock

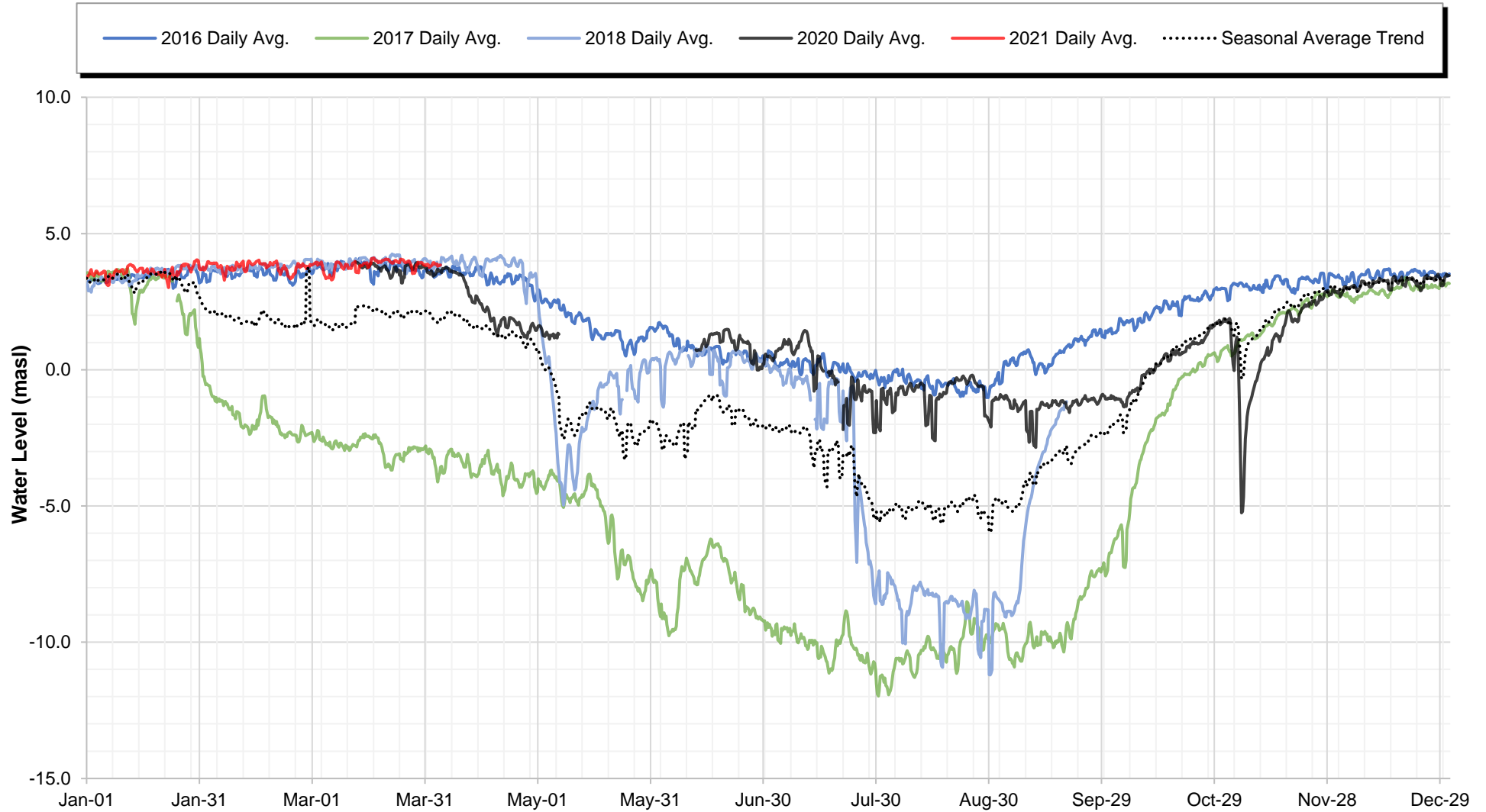
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 03 - Elm (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-13</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**

Observation Well is Associated with Aquifer 213  
 Aquifer 213 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 13 - Sea Blush (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-14</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
REVISED: FINAL			



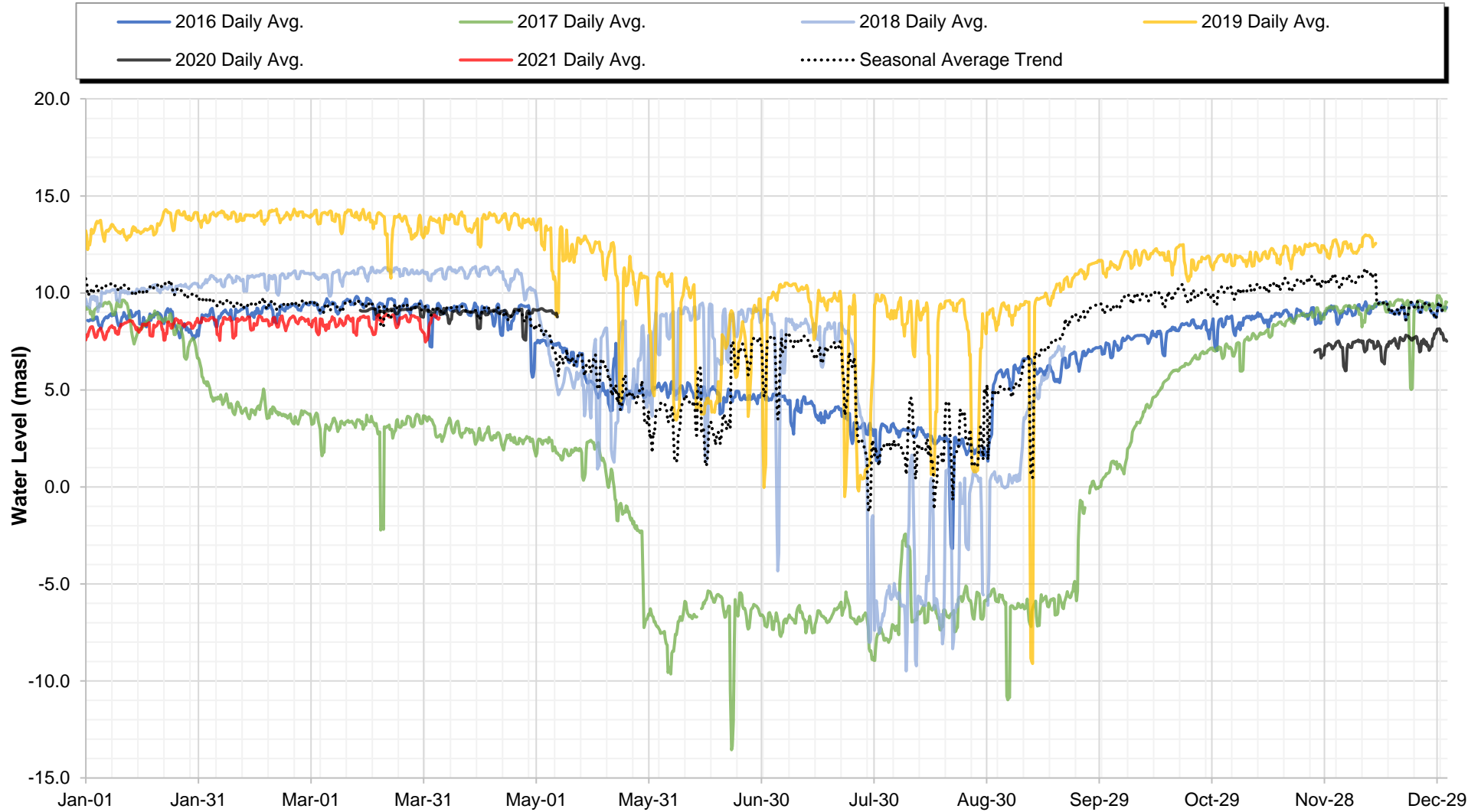
**NOTES:**

Observation Well is Associated with Aquifer 214

Aquifer 214 is Fractured Bedrock

PROJECT		<p><b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b></p>
TITLE		
<p><b>SEASONAL GROUNDWATER LEVEL CHART VOW 30 - B2 (WR5 - Nanoose)</b></p>		<p><b>FIGURE C-15</b></p>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	




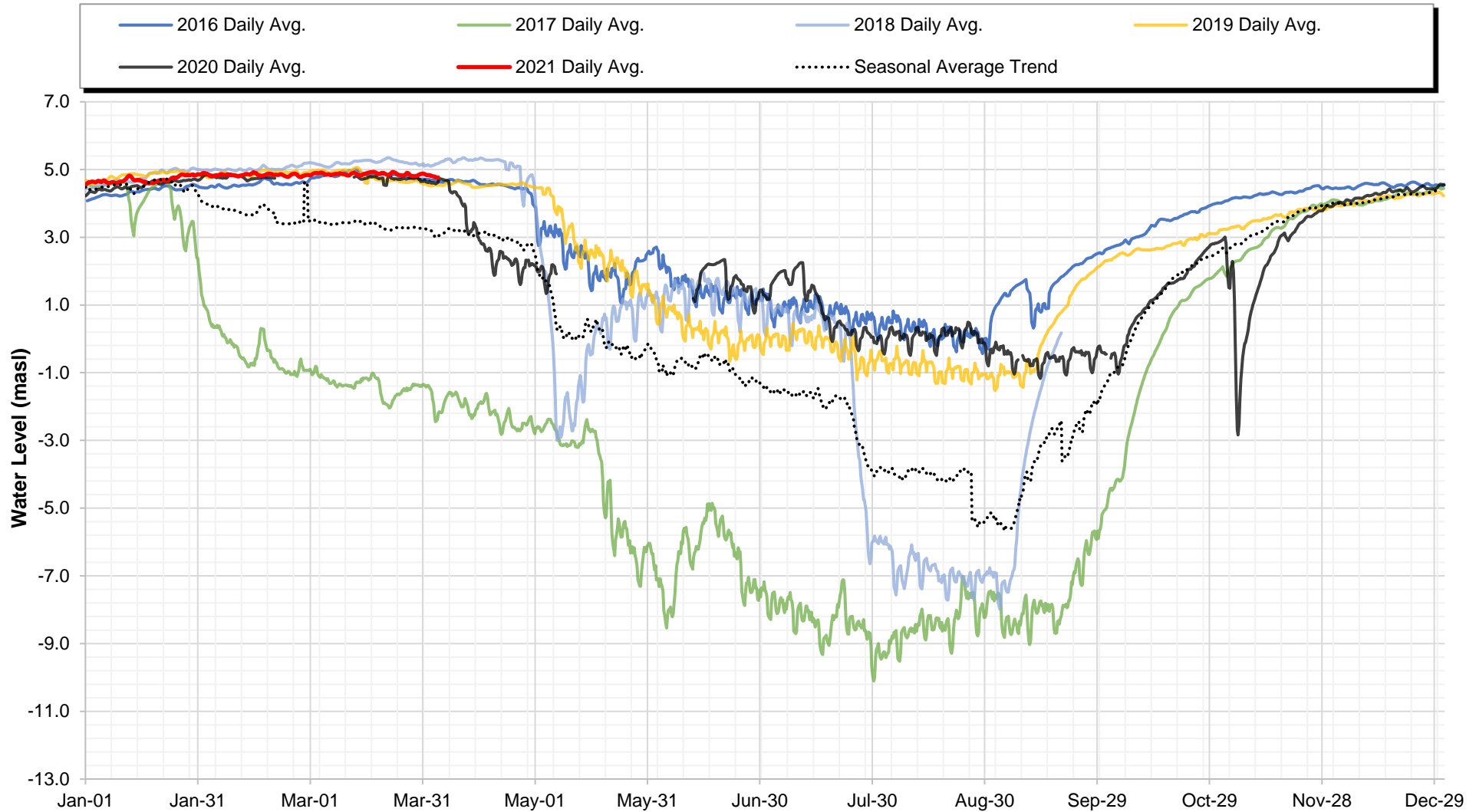


**NOTES:**

Observation Well is Associated with Aquifer 214

Aquifer 214 is Fractured Bedrock


PROJECT		<p><b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b></p>
TITLE		
<p><b>SEASONAL GROUNDWATER LEVEL CHART VOW 31 - B3 (WR5 - Nanoose)</b></p>		<p><b>FIGURE C-16</b></p>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

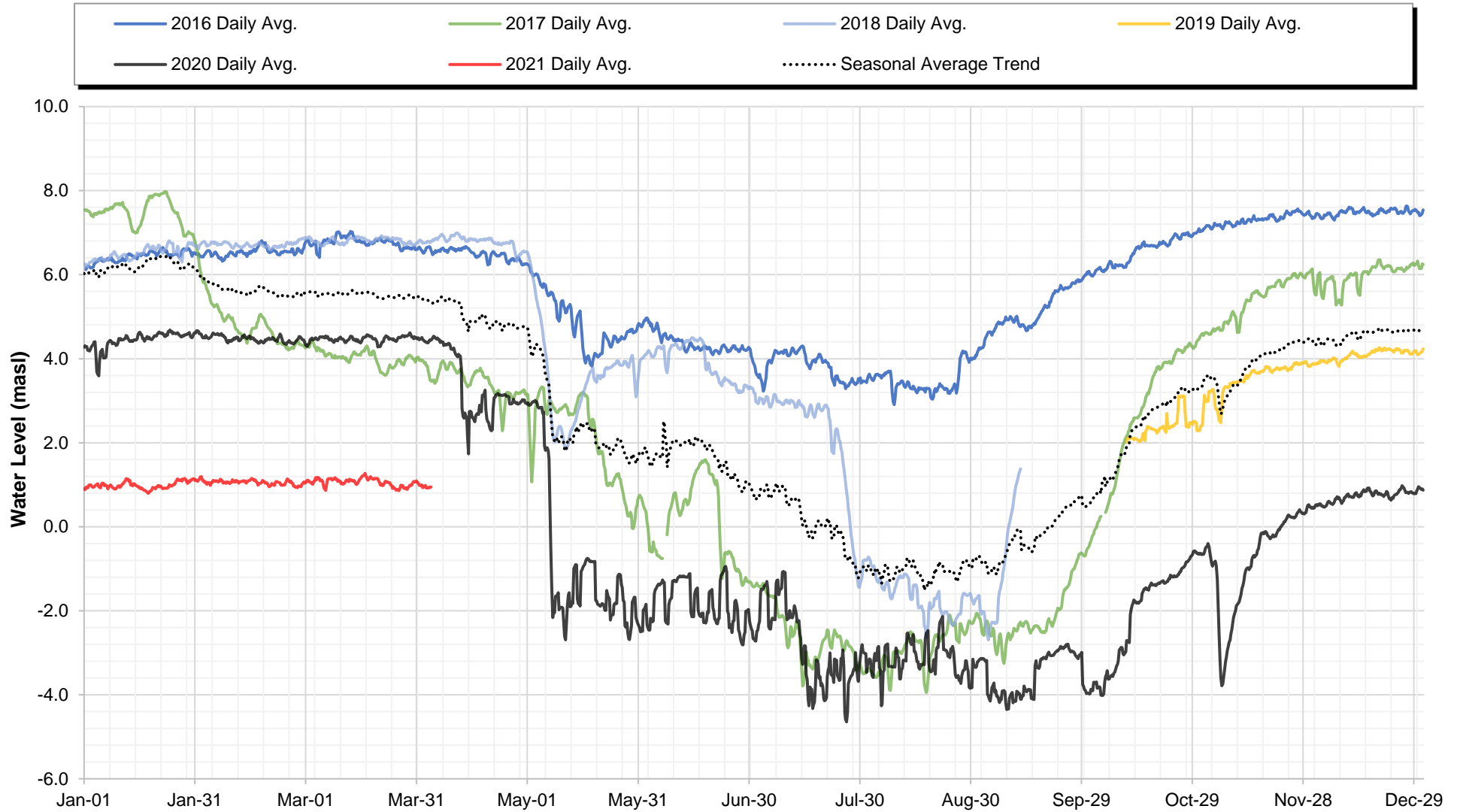


**NOTES:**

Observation Well is Associated with Aquifer 214


Aquifer 214 is Fractured Bedrock

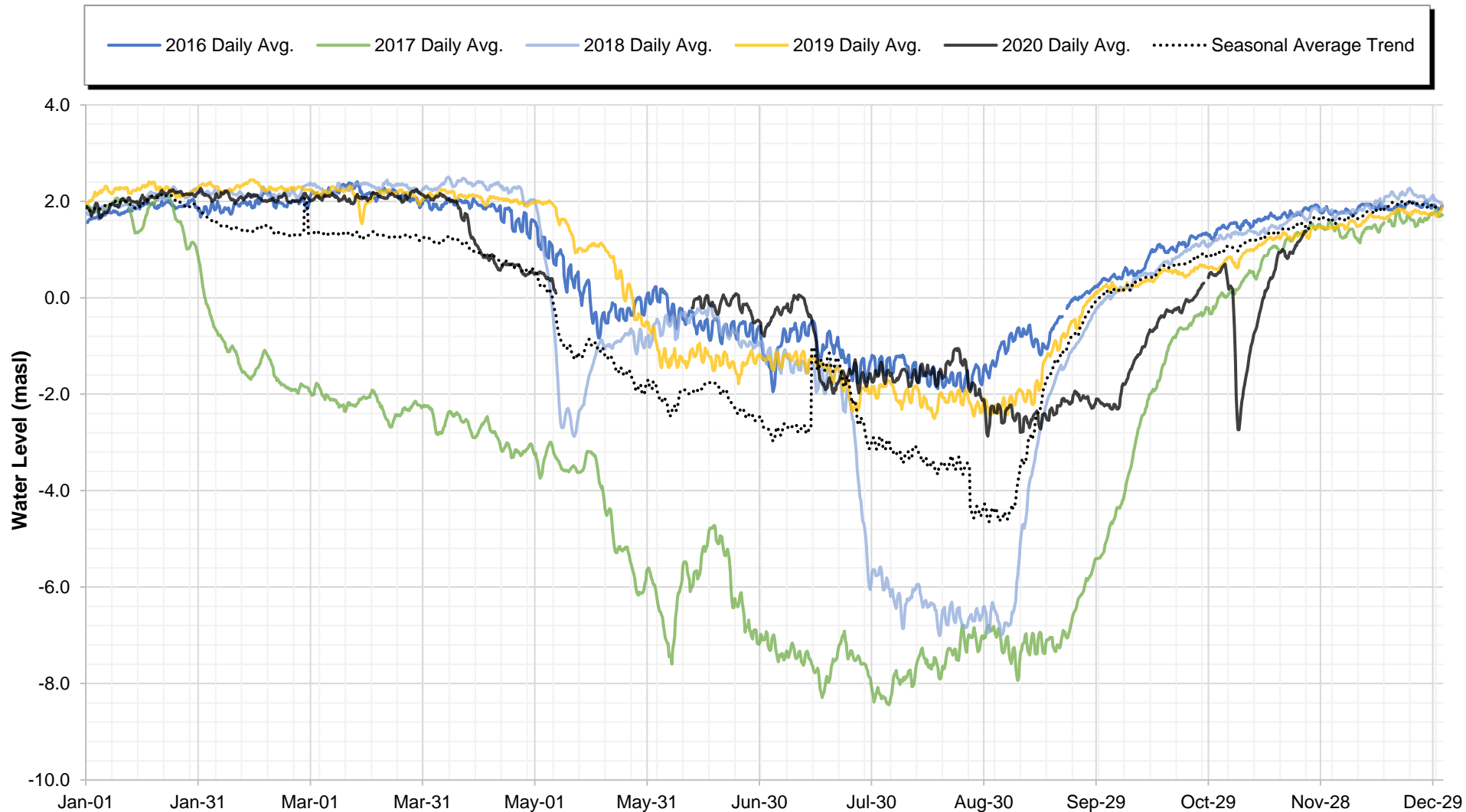
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 32 - B4 (WR5 - Nanoose)</b>	
	PREPARED BY:	WATERLINE RESOURCES INC.	
	PROJECT:	2590-21-001	
	COMPILED BY:	SR	
	DATE ISSUED:	May 2021	
	REVISED:	FINAL	
			<b>FIGURE C-17</b>



**NOTES:**

Observation Well is Associated with Aquifer 214  
 Aquifer 214 is Fractured Bedrock

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION -          REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
<b>SEASONAL GROUNDWATER LEVEL CHART          VOW33 - B7 (WR5 - Nanoose)</b>		<b>FIGURE C-18</b>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	




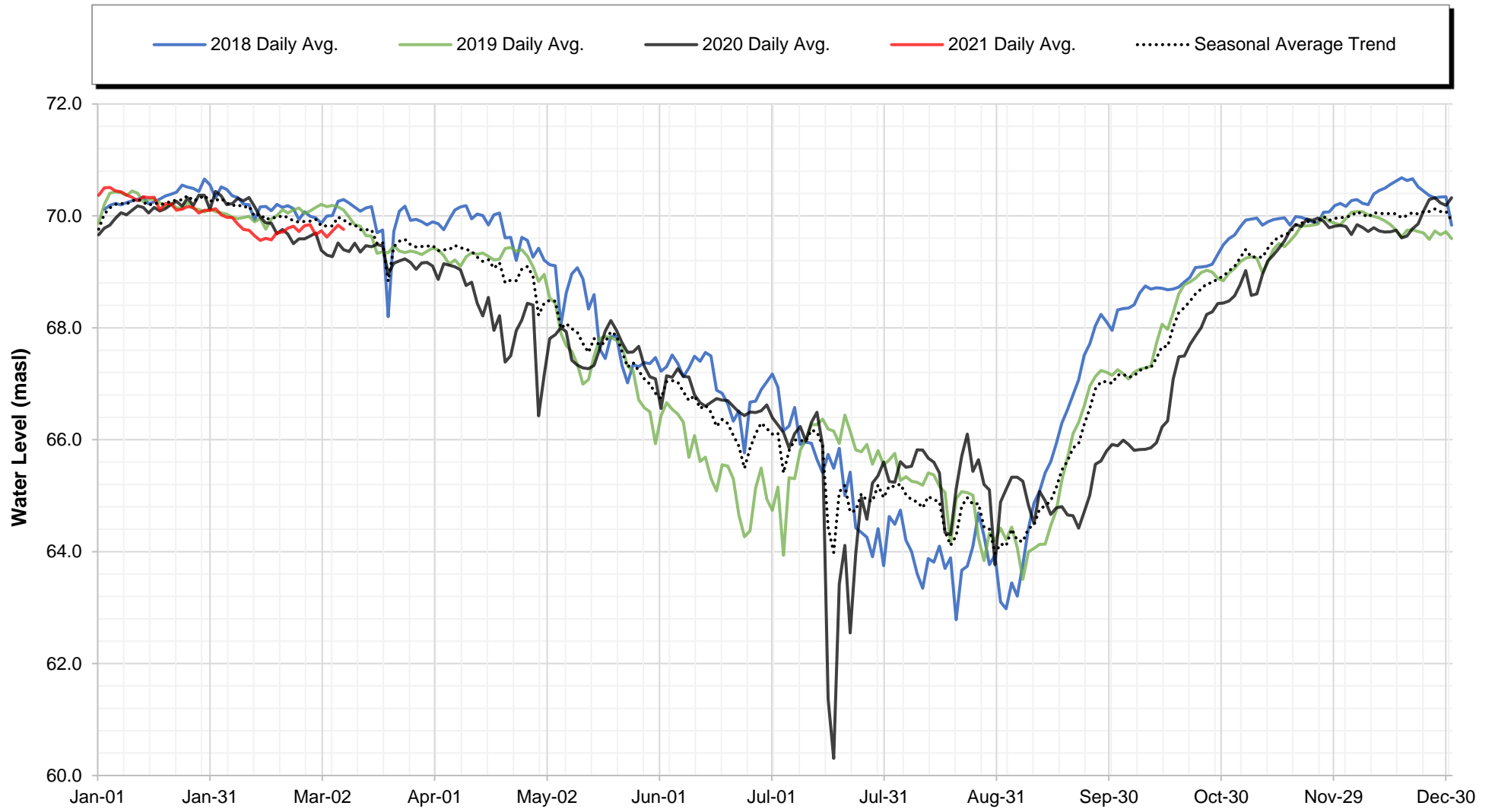
**NOTES:**

Observation Well is Associated with Aquifer 214

Aquifer 214 is Fractured Bedrock

No 2021 Groundwater Level Data Available

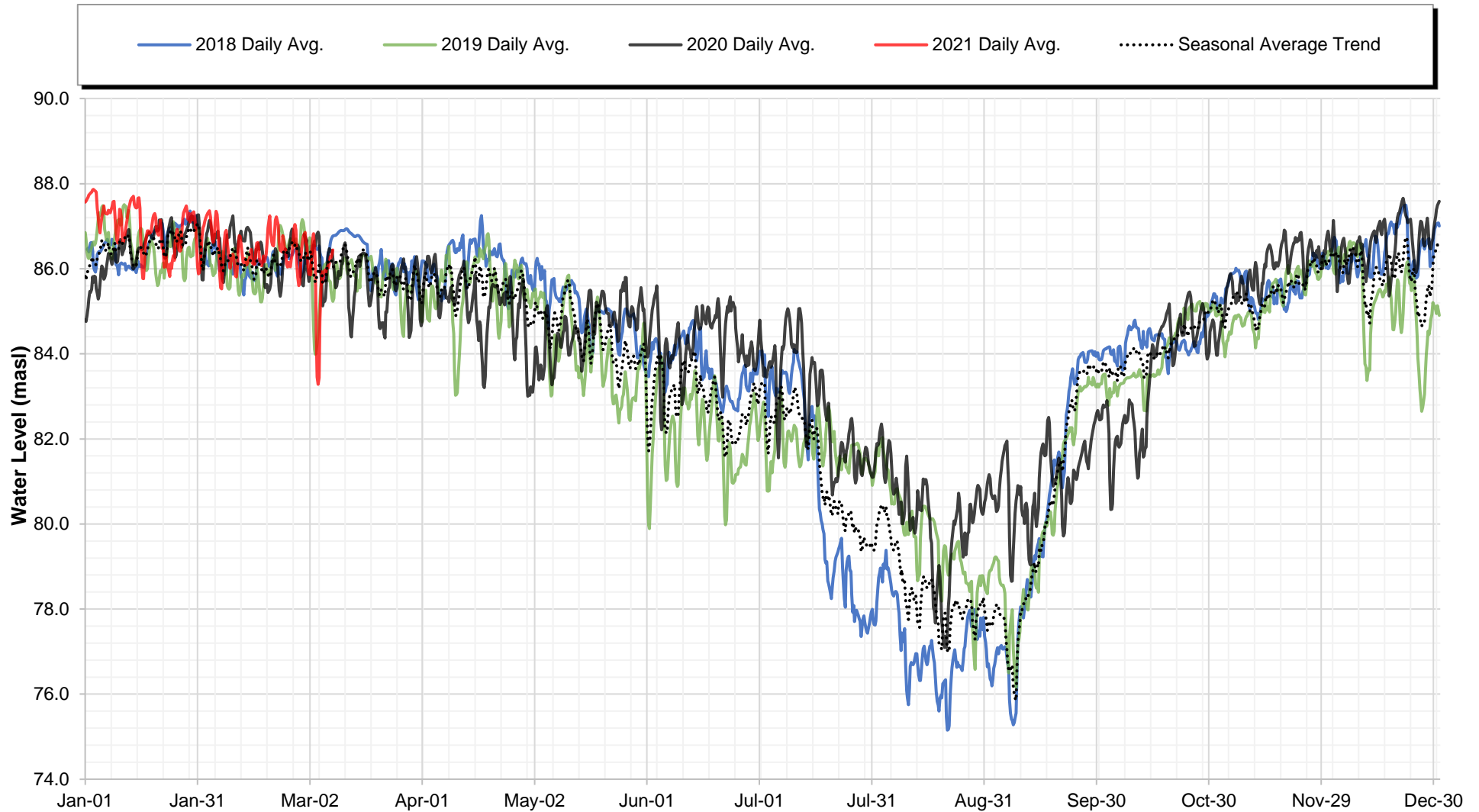
PROJECT		<p><b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b></p>
TITLE		
<p><b>SEASONAL GROUNDWATER LEVEL CHART VOW 34 - B9 (WR5 - Nanoose)</b></p>		<p><b>FIGURE C-19</b></p>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	



**NOTES:**

Observation Well is Associated with Aquifer 218  
 Aquifer 218 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 27 - NWB (WR5 - Nanoose)</b>
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-20</b>
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

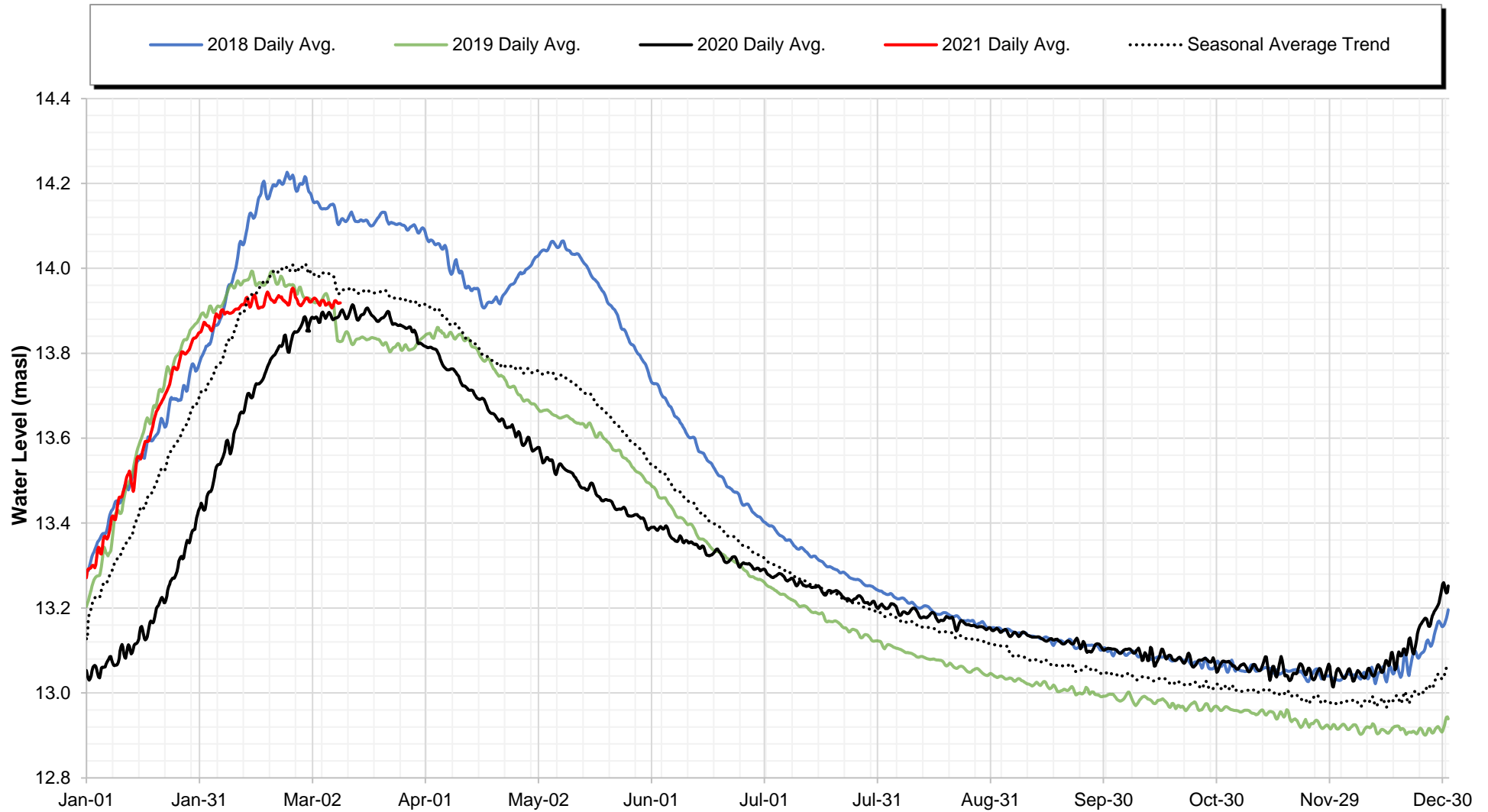


**NOTES:**

Observation Well is Associated with Aquifer 218

Aquifer 218 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 26 - Florence (WR5 - Nanoose)</b>
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-21</b>
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

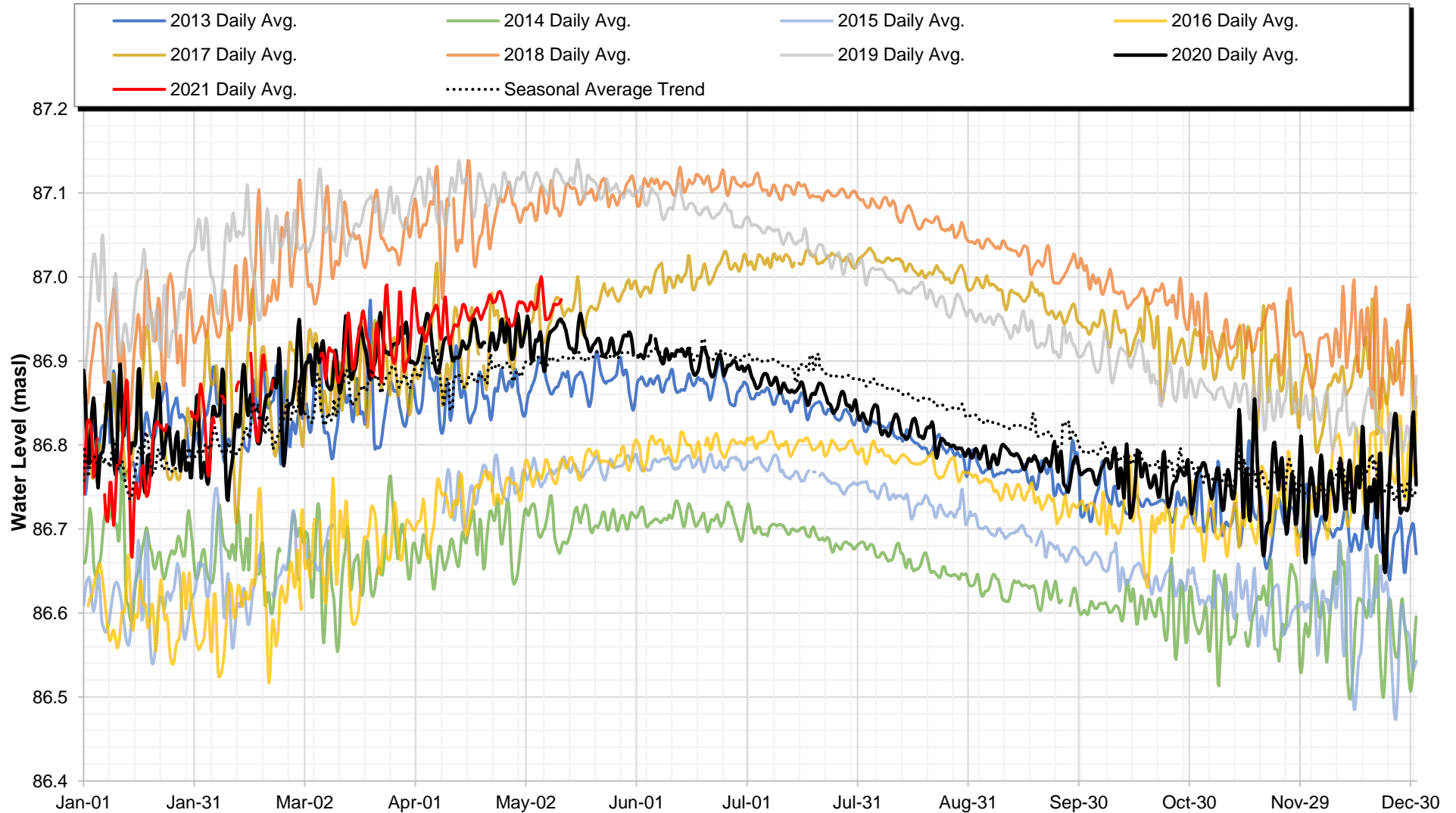


**NOTES:**

Observation Well is Associated with Aquifer 215

Aquifer 215 is Confined Surficial Sediments

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
<b>SEASONAL GROUNDWATER LEVEL CHART VOW 28 - Southwind (WR5 - Nanoose)</b>		<b>FIGURE C-22</b>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	



**NOTES:**

Observation Well is Associated with Aquifer 219

Aquifer 219 is Confined Surficial Sediments

PROJECT  
**DRINKING WATER AND WATERSHED PROTECTION -  
 REGIONAL GROUNDWATER LEVEL ANALYSIS 2021**

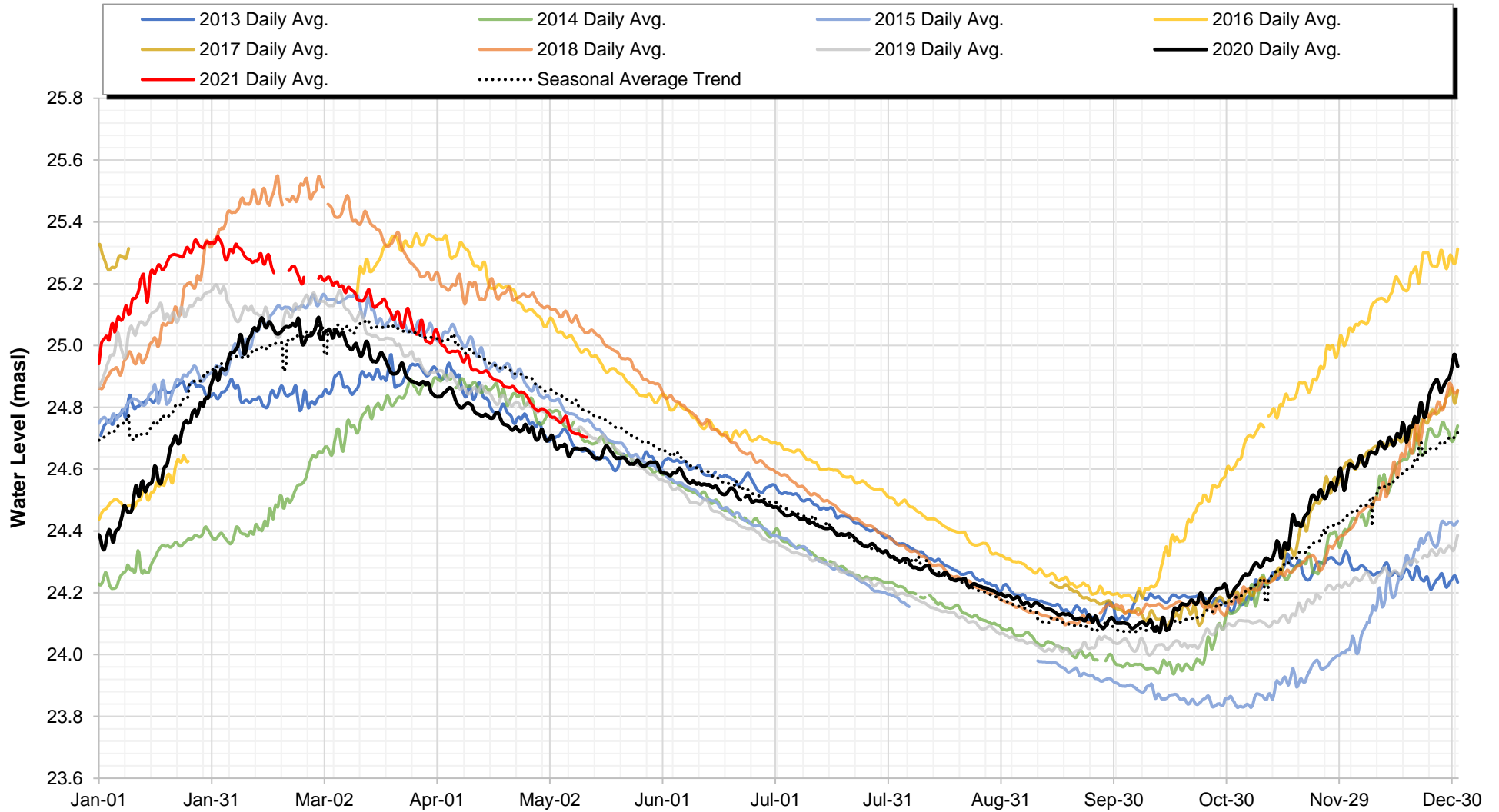
TITLE  
**SEASONAL GROUNDWATER LEVEL CHART  
 OW 393 (WR5 - Nanoose)**

PREPARED BY: WATERLINE RESOURCES INC.  
 PROJECT: 2590-21-001  
 COMPILED BY: SR  
 DATE ISSUED: May 2021  
 REVISED: FINAL

**FIGURE C-23**







**NOTES:**

Observation Well is Associated with Aquifer 219

Aquifer 219 is Confined Surficial Sediments

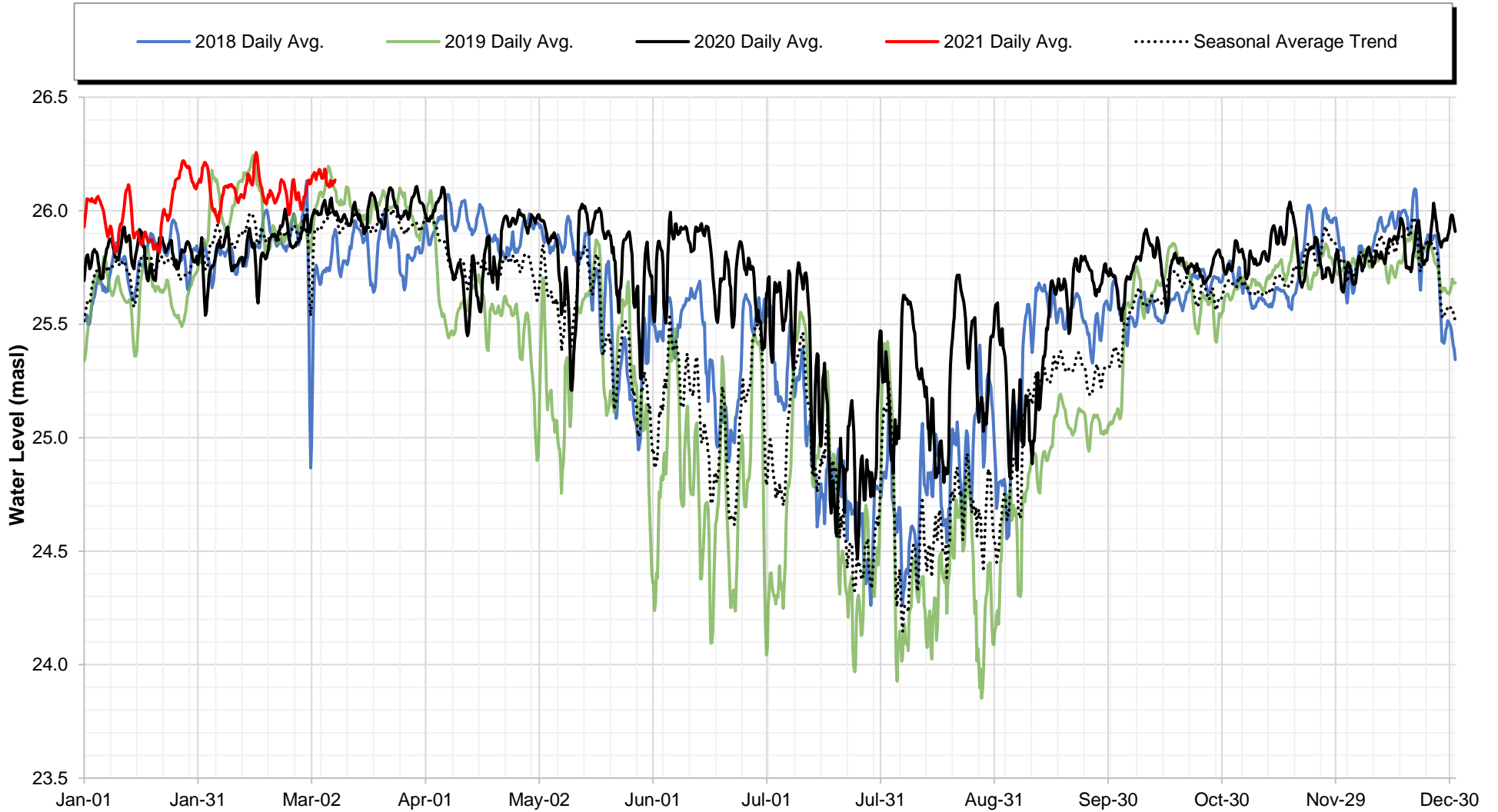
PROJECT  
**DRINKING WATER AND WATERSHED PROTECTION -  
 REGIONAL GROUNDWATER LEVEL ANALYSIS 2021**

TITLE  
**SEASONAL GROUNDWATER LEVEL CHART  
 OW 396 (WR5 - Nanoose)**

PREPARED BY: WATERLINE RESOURCES INC.  
 PROJECT: 2590-21-001  
 COMPILED BY: SR  
 DATE ISSUED: May 2021  
 REVISED: FINAL

**FIGURE C-24**




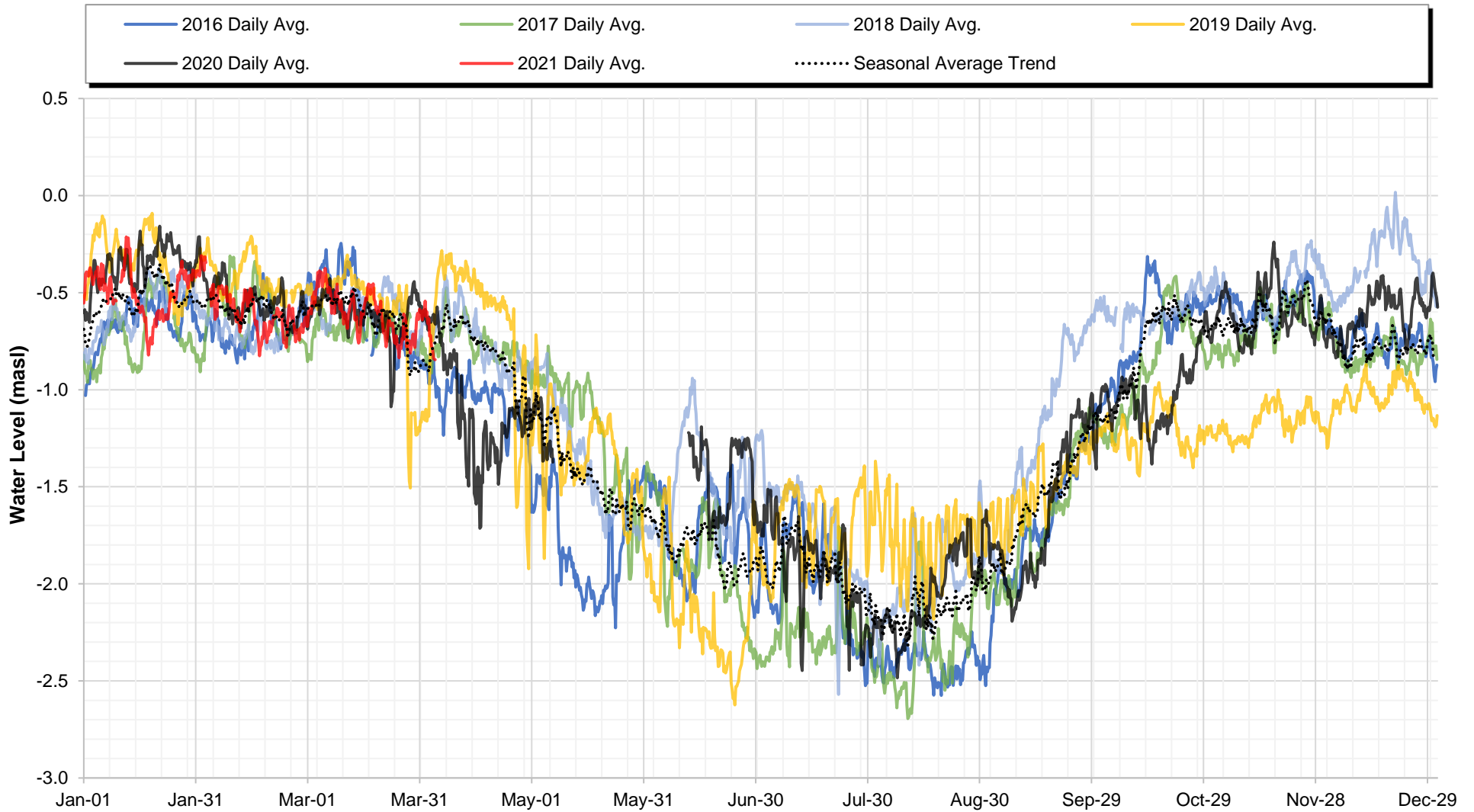


**NOTES:**

Observation Well is Associated with Aquifer 219

Aquifer 219 is Confined Surficial Sediments

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 25 - Sanders (WR5 - Nanoose)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-25</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**

Observation Well is Associated with Aquifer 1098

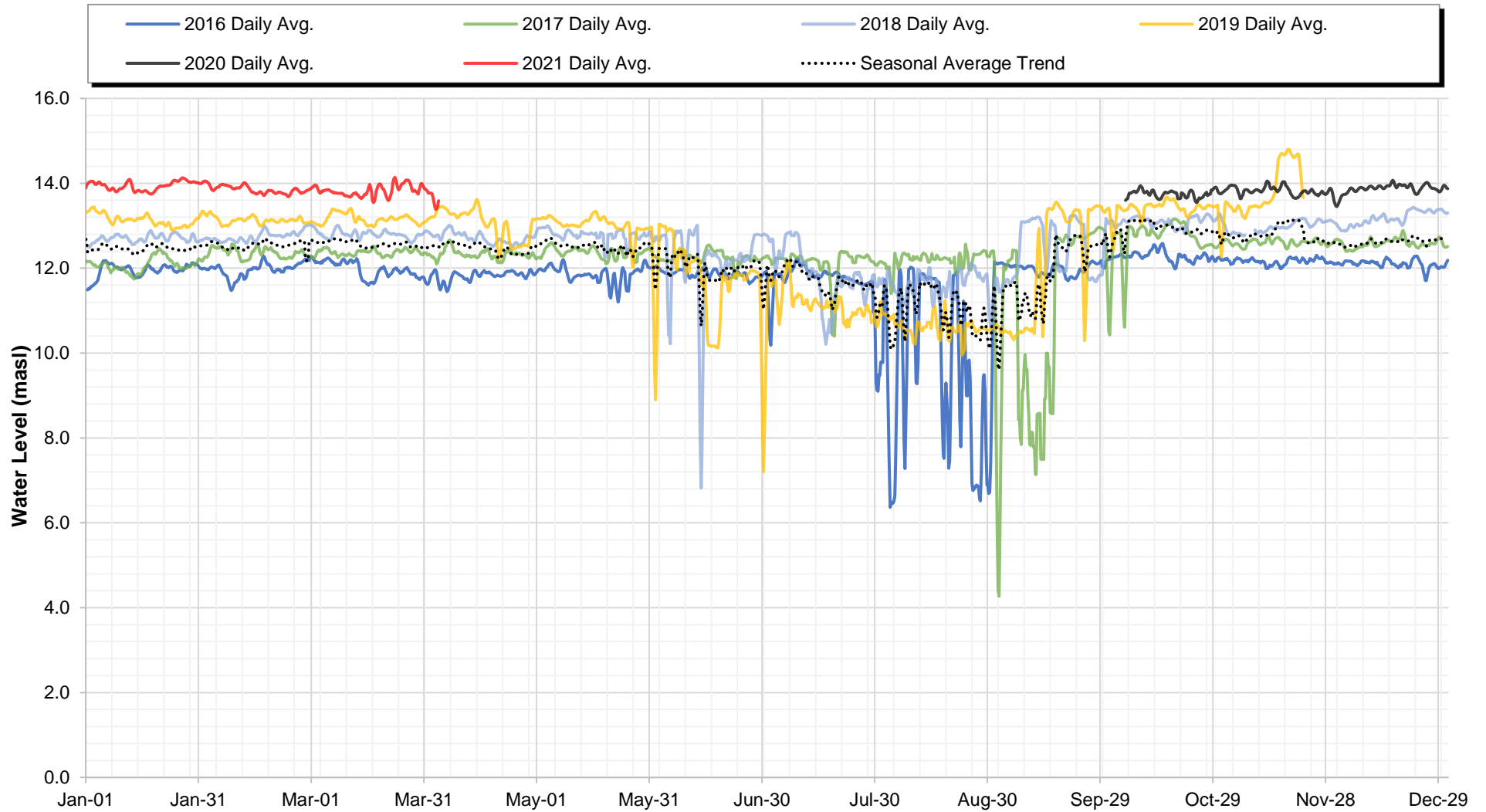
Aquifer 1098 is Confined Surficial Sediments

PROJECT  
**DRINKING WATER AND WATERSHED PROTECTION -  
 REGIONAL GROUNDWATER LEVEL ANALYSIS 2021**

TITLE  
**SEASONAL GROUNDWATER LEVEL CHART  
 VOW 29-O3 (WR5 - Nanoose)**

	PREPARED BY: WATERLINE RESOURCES INC.
	PROJECT: 2590-21-001
	COMPILED BY: SR
	DATE ISSUED: May 2021
	REVISED: FINAL


**FIGURE C-26**

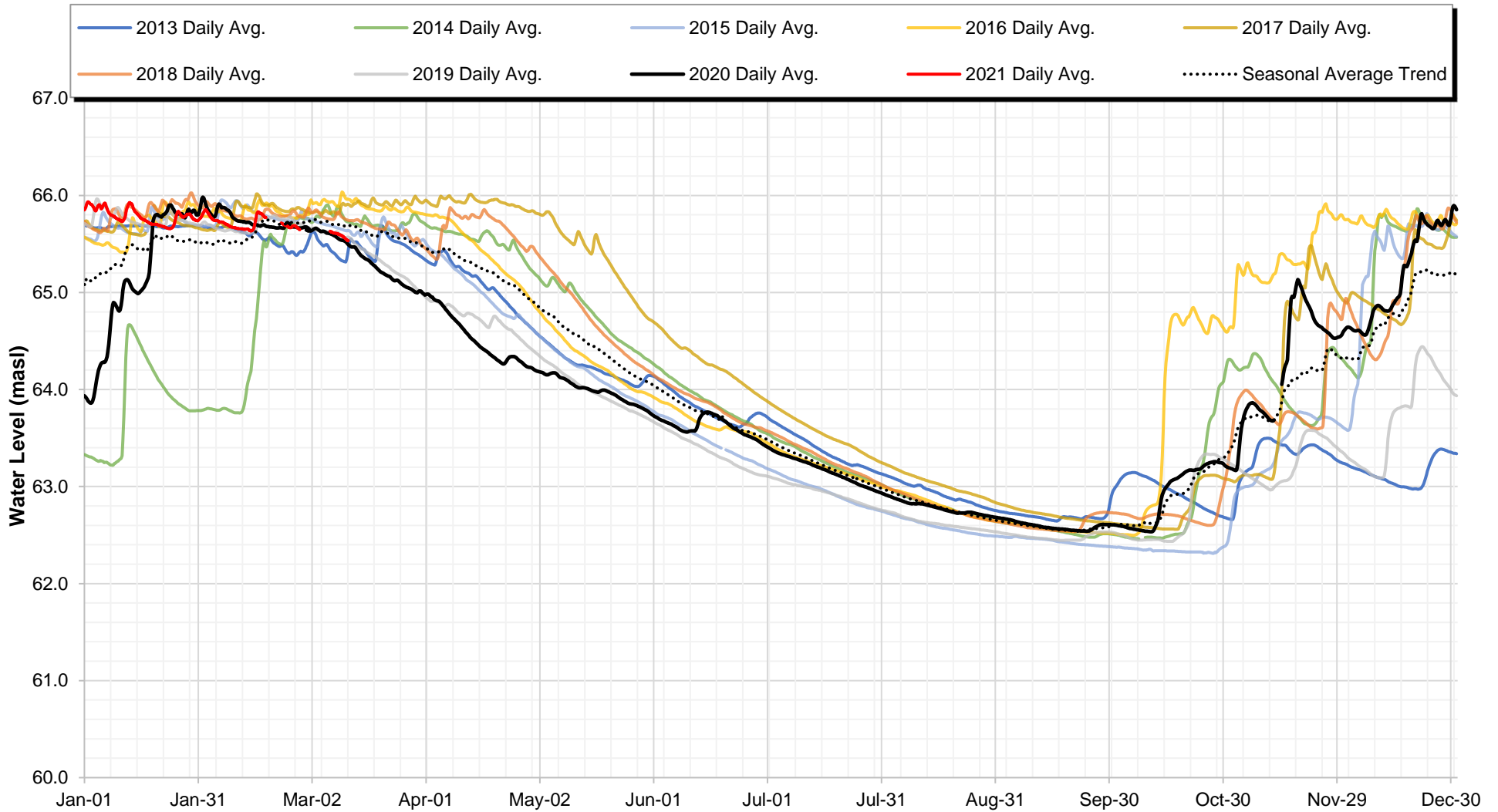


**NOTES:**

Observation Well is Associated with Aquifer 1098

Aquifer 1098 is Confined Surficial Sediments


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 17 - O7 (WR5 - Nanoose)</b>
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-27</b>
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

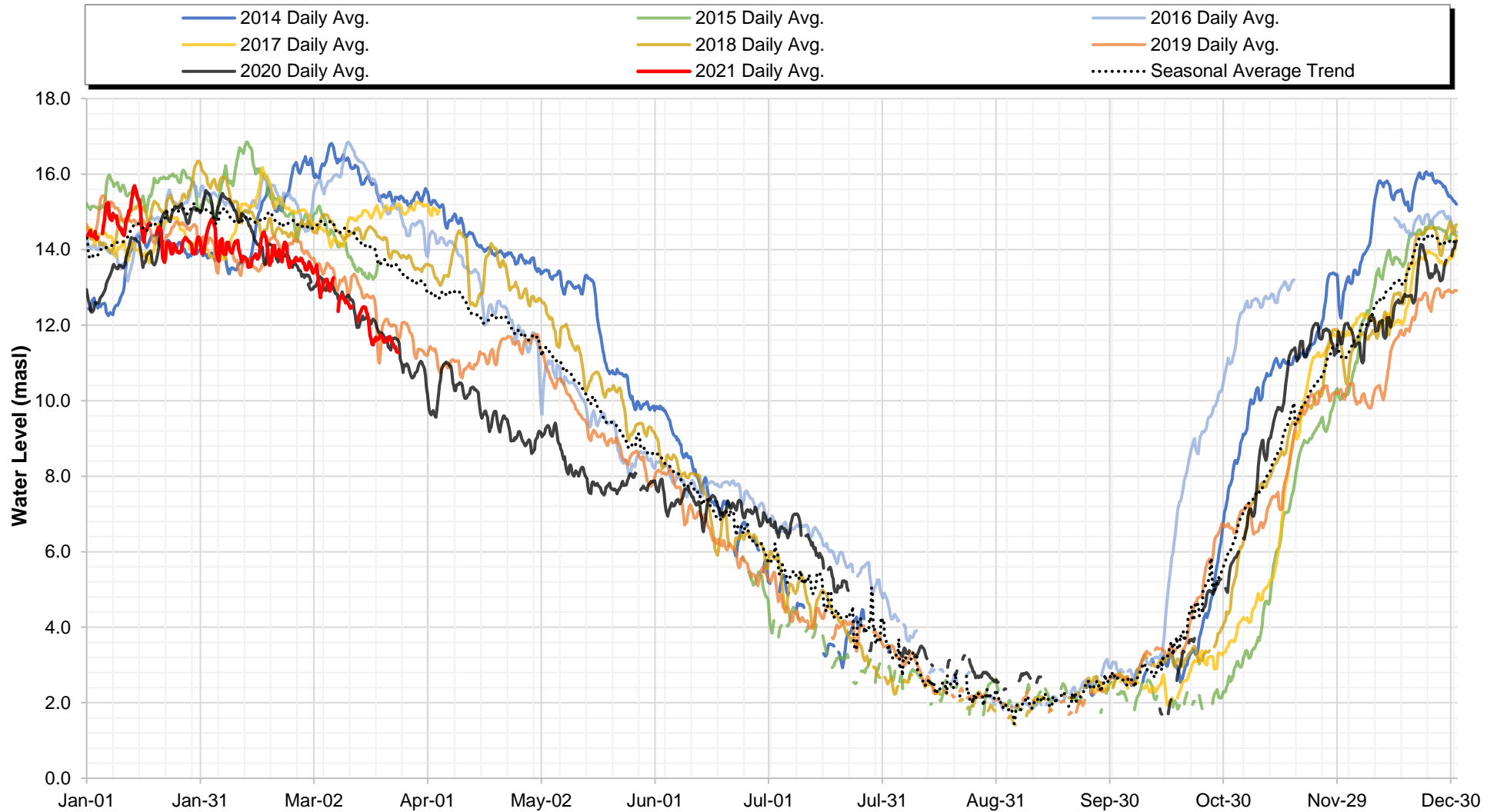


**NOTES:**

Observation Well is Associated with Aquifer 709

Aquifer 709 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHART OW 316 (WR7 - Gabriola)</b>
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-28</b>
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

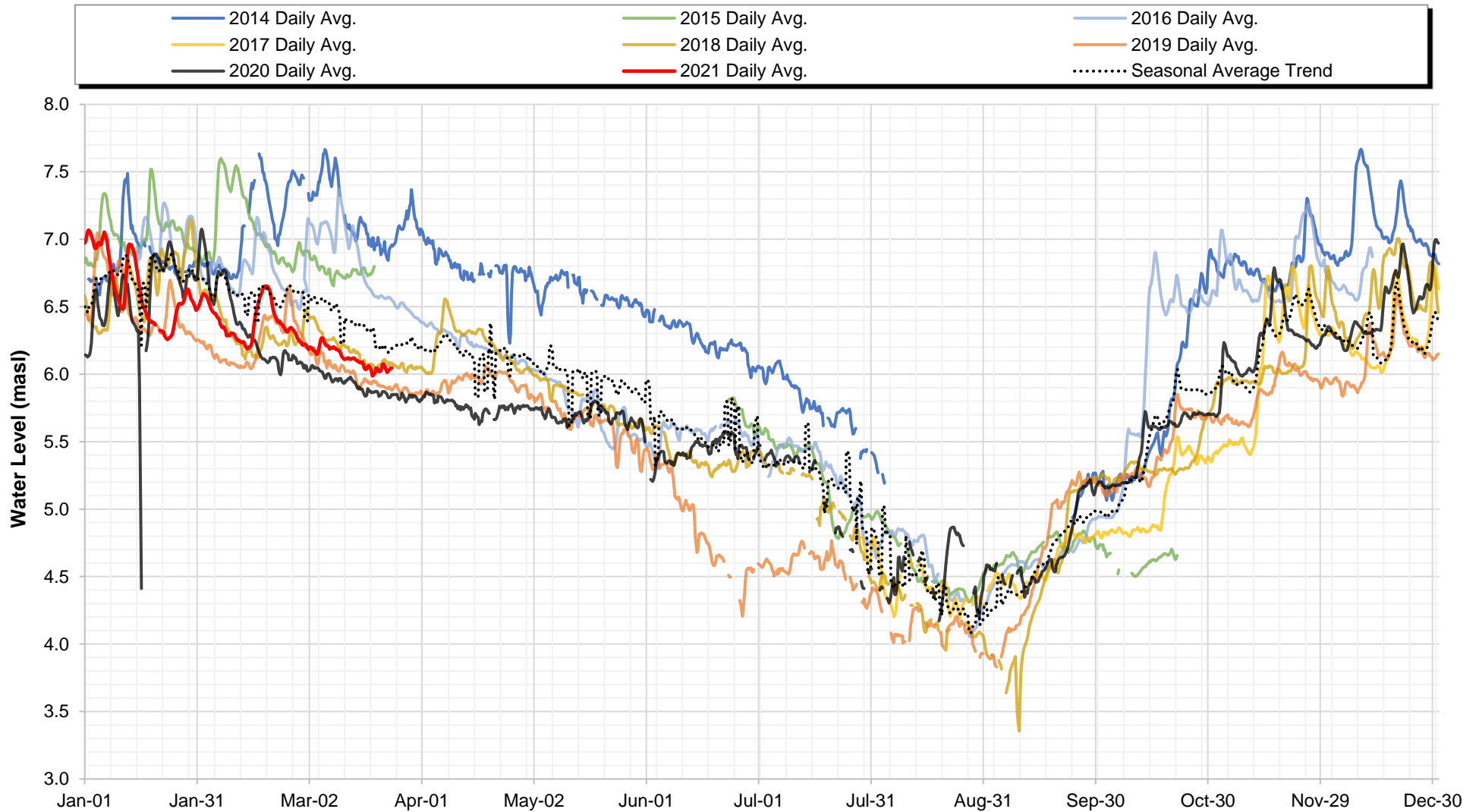


**NOTES:**

Observation Well is Associated with Aquifer 709

Aquifer 709 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 08 - Mander (WR7 - Gabriola)</b>
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-29</b>
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

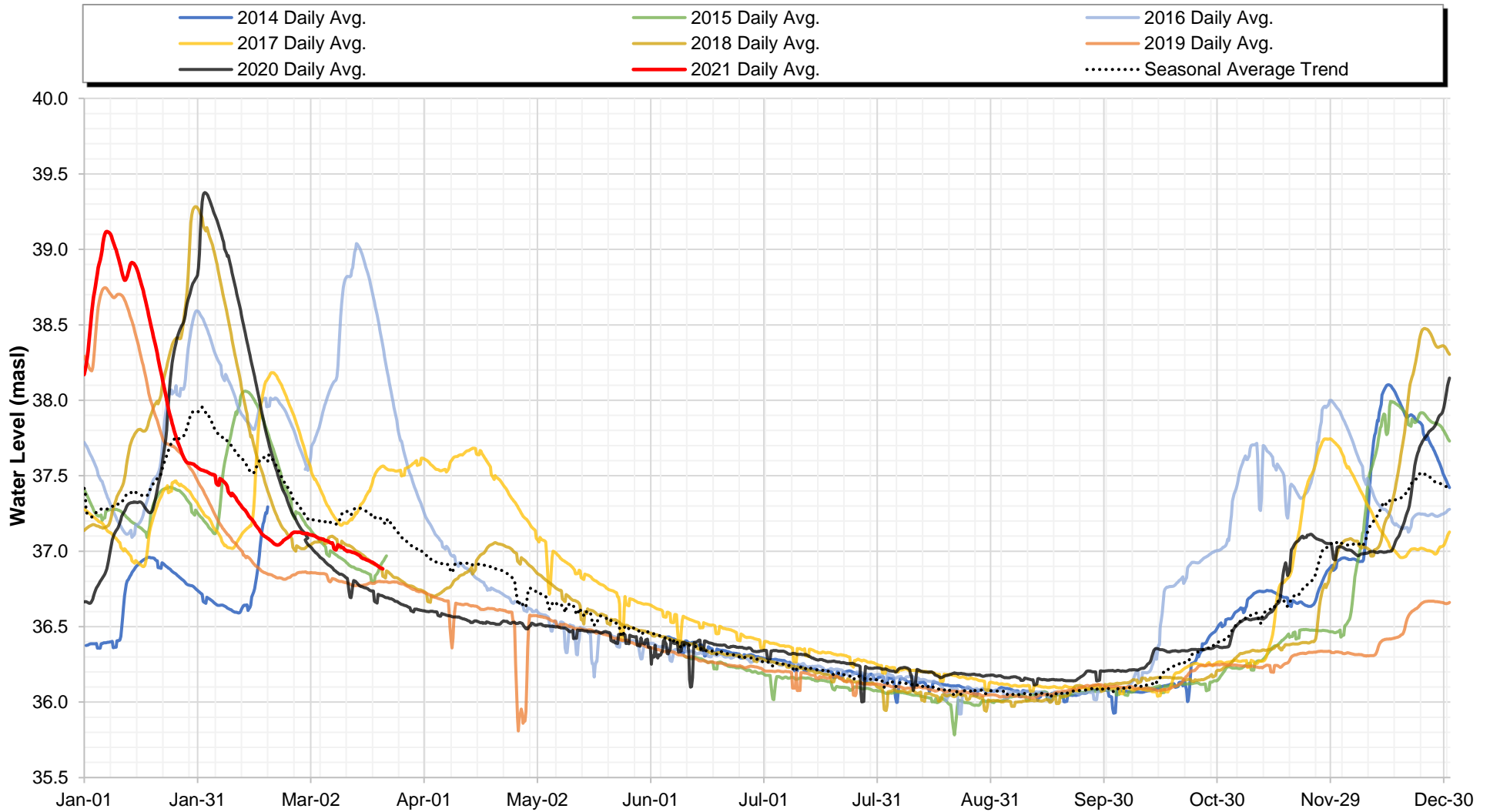


**NOTES:**

Observation Well is Associated with Aquifer 709

Aquifer 709 is Fractured Bedrock

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
		<b>SEASONAL GROUNDWATER LEVEL CHART VOW 07 - Descanso (WR7 - Gabriola)</b>
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-30</b>
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	



**NOTES:**

Observation Well is Associated with Aquifer 160

Aquifer 160 is Confined Surficial Sediments

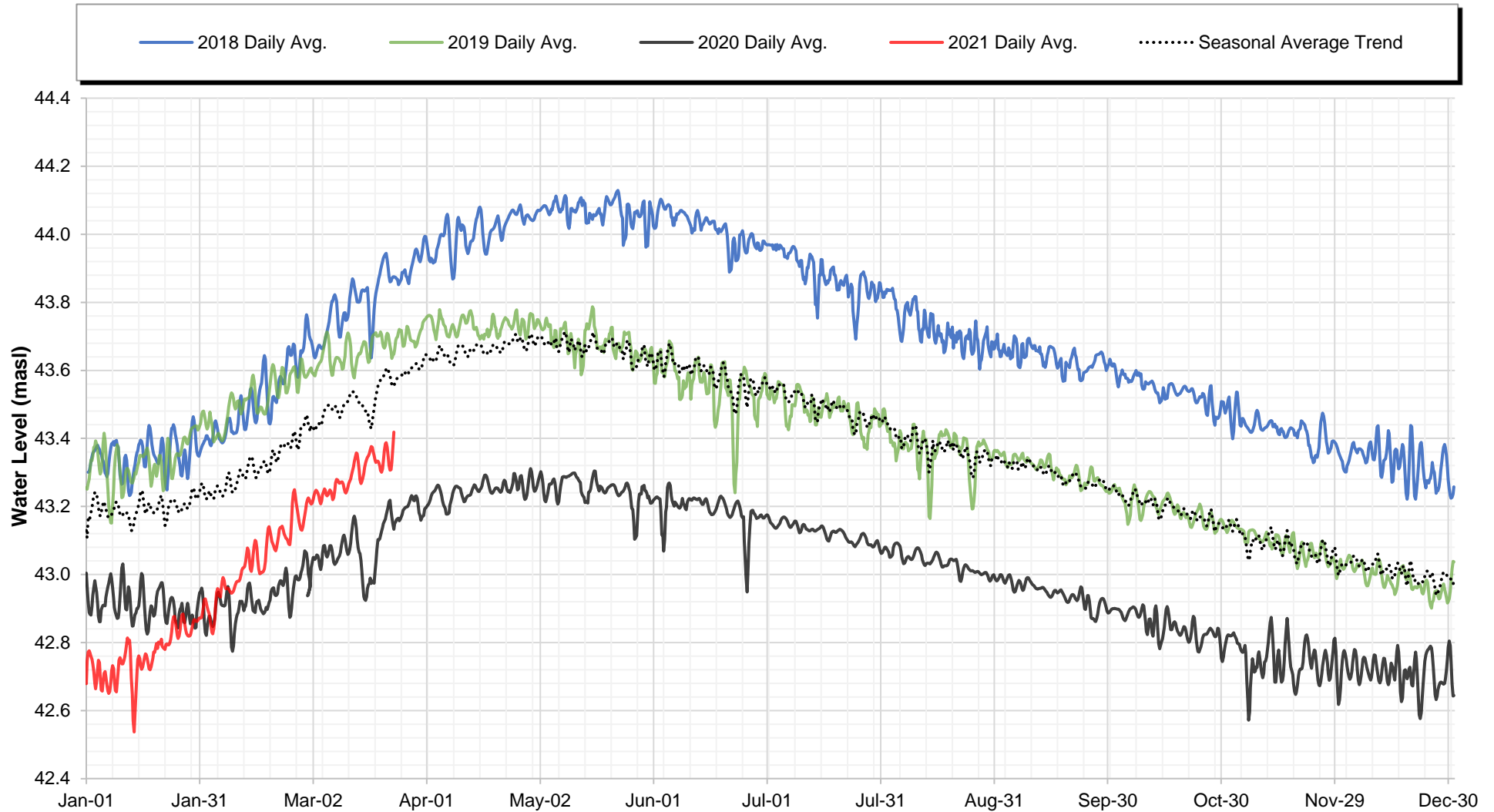
PROJECT  
**DRINKING WATER AND WATERSHED PROTECTION -  
 REGIONAL GROUNDWATER LEVEL ANALYSIS 2021**

TITLE  
**SEASONAL GROUNDWATER LEVEL CHART  
 VOW 04 - Hallberg (WR6 - Nanaimo River)**

**Waterline**  
 PREPARED BY: WATERLINE RESOURCES INC.  
 PROJECT: 2590-21-001  
 COMPILED BY: SR  
 DATE ISSUED: May 2021  
 REVISED: FINAL


**FIGURE C-31**

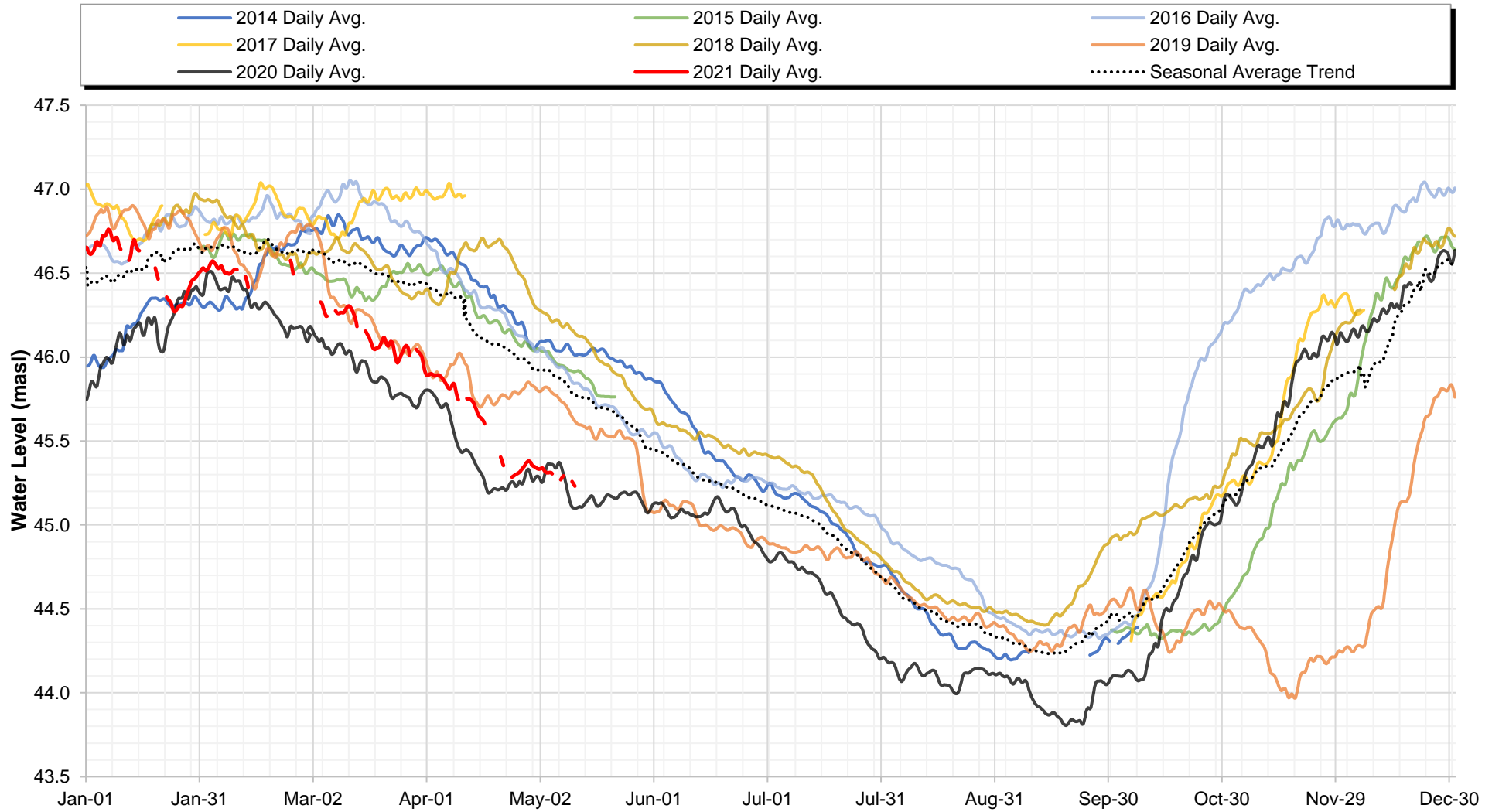




**NOTES:**


Observation Well is Associated with Aquifer 163  
 Aquifer 163 is Confined Surficial Sediments

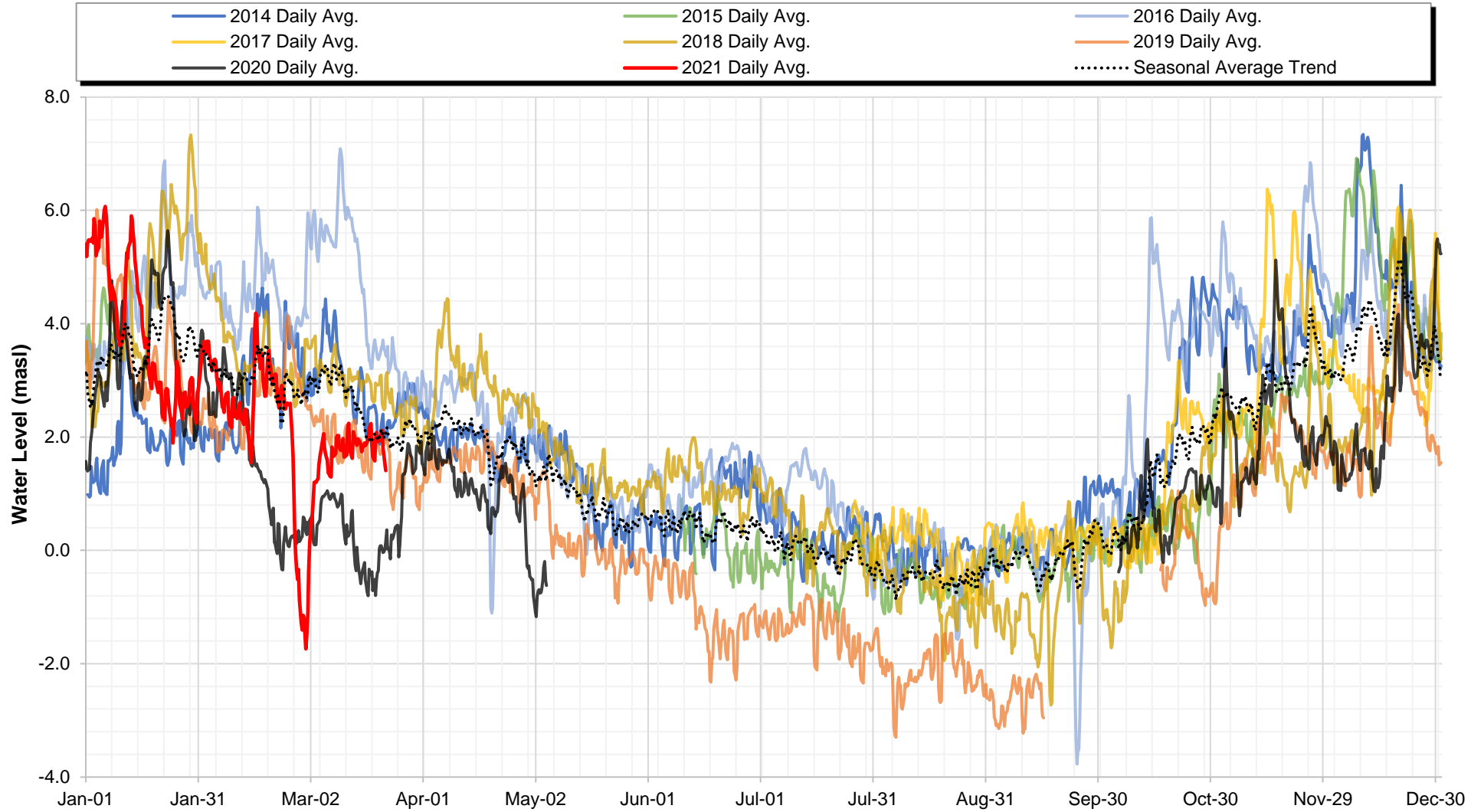
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
		<b>SEASONAL GROUNDWATER LEVEL CHARTS VOW 24 - Brightman (WR6 - Nanaimo River)</b>
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-32</b>
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	



**NOTES:**

Observation Well is Associated with Aquifer 162  
 Aquifer 162 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHARTS OW 432 (WR6 - Nanaimo River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-33</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

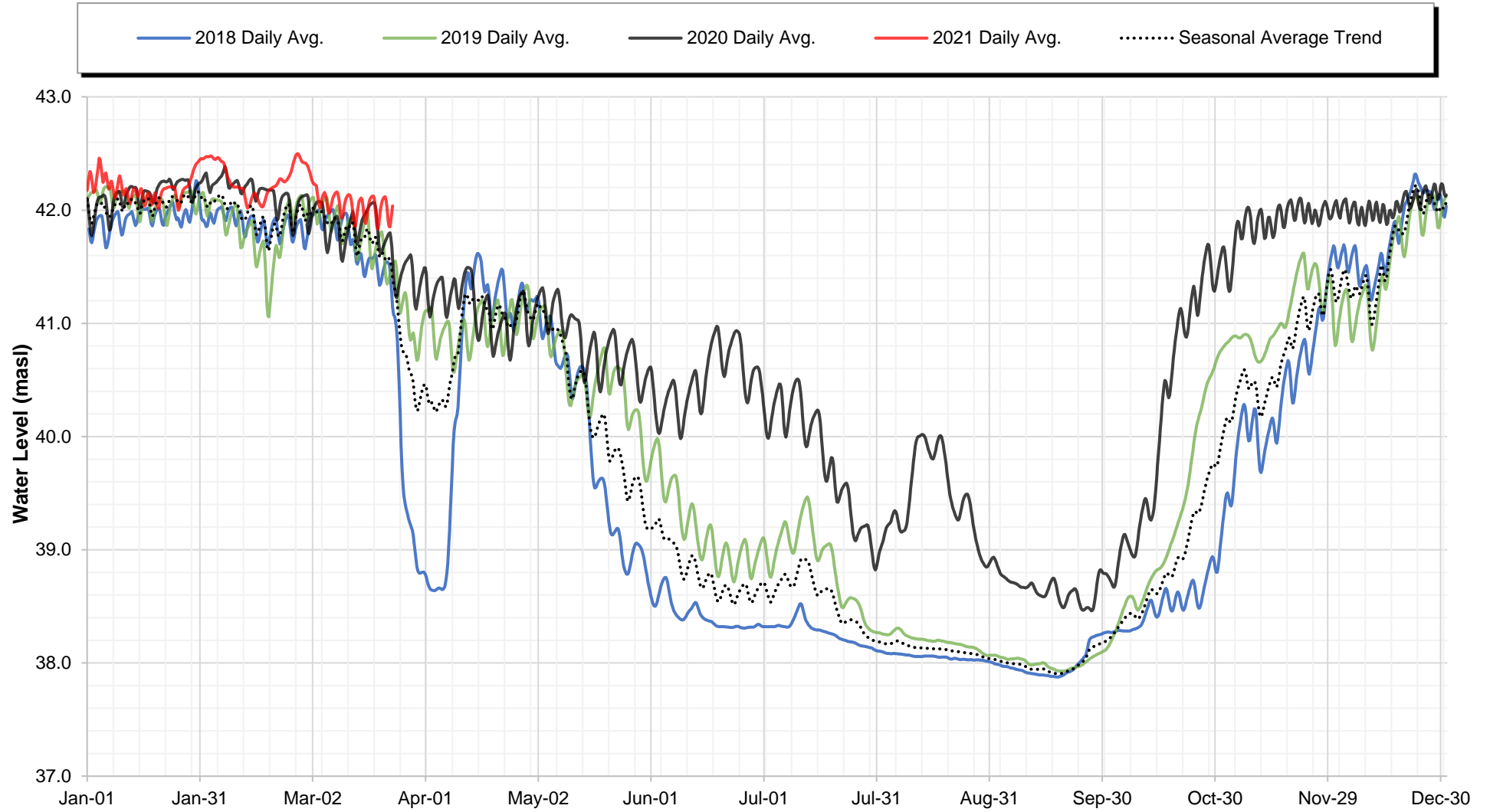


**NOTES:**

Observation Well is Associated with Aquifer 162


Aquifer 162 is Fractured Bedrock

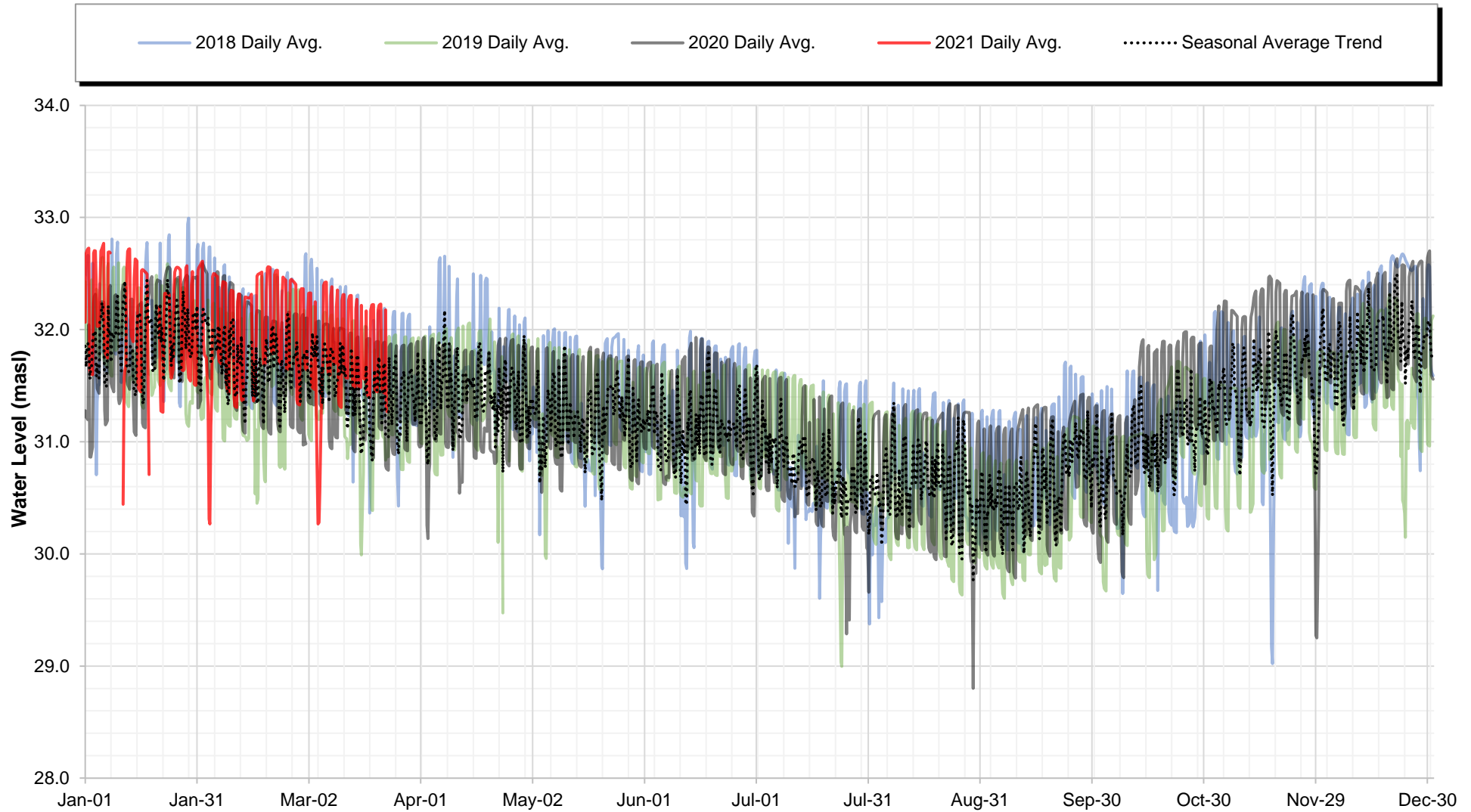
PROJECT		<p><b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b></p>
TITLE		
<p><b>SEASONAL GROUNDWATER LEVEL CHARTS VOW 06 - Pylades (WR6 - Nanaimo River)</b></p>		<p><b>FIGURE C-34</b></p>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	



**NOTES:**

Observation Well is Associated with Aquifer 162  
 Aquifer 162 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHARTS VOW 19 - DeCourcy (WR6 - Nanaimo River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-35</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
REVISED: FINAL			

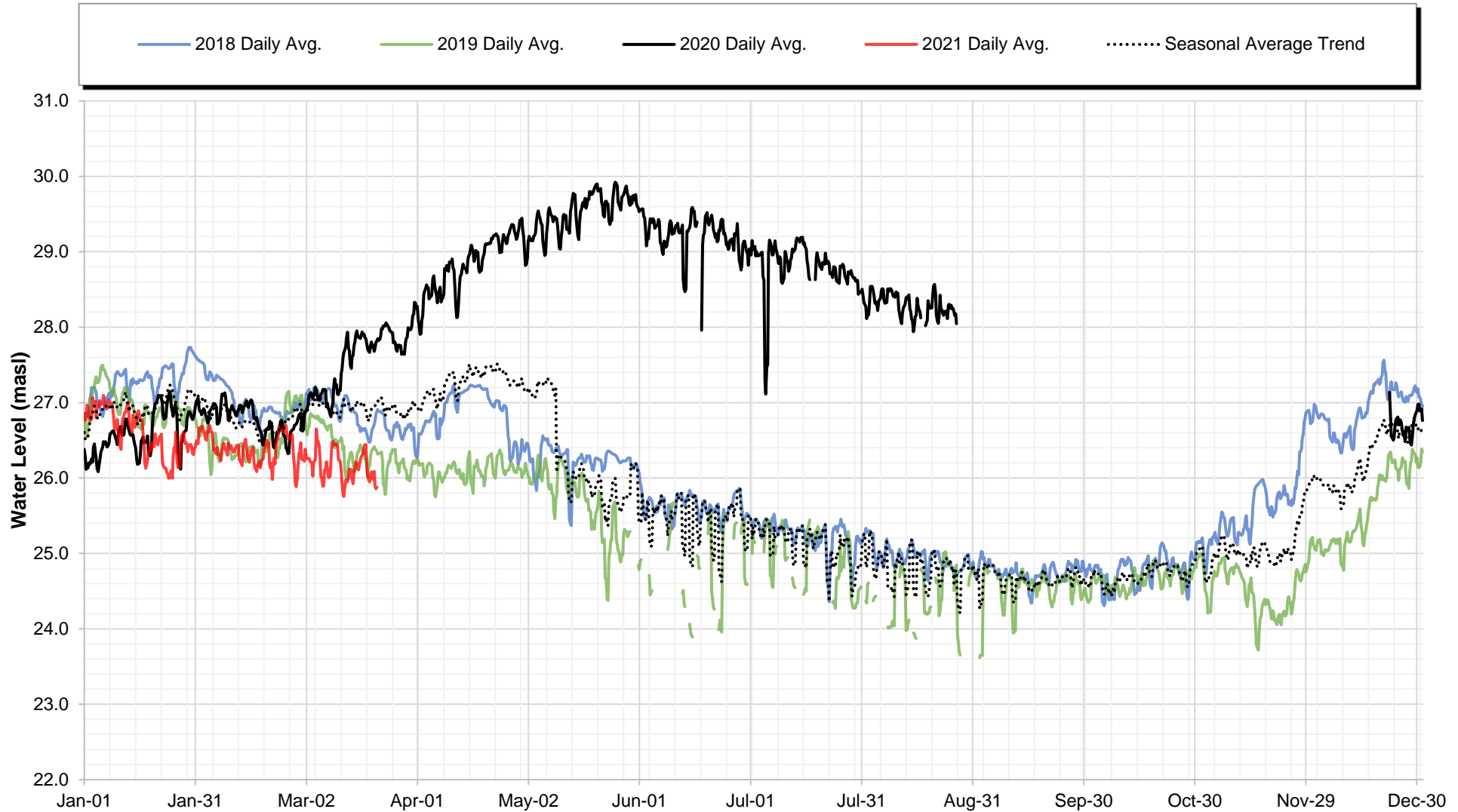


**NOTES:**

Observation Well is Associated with Aquifer 162

Aquifer 162 is Fractured Bedrock

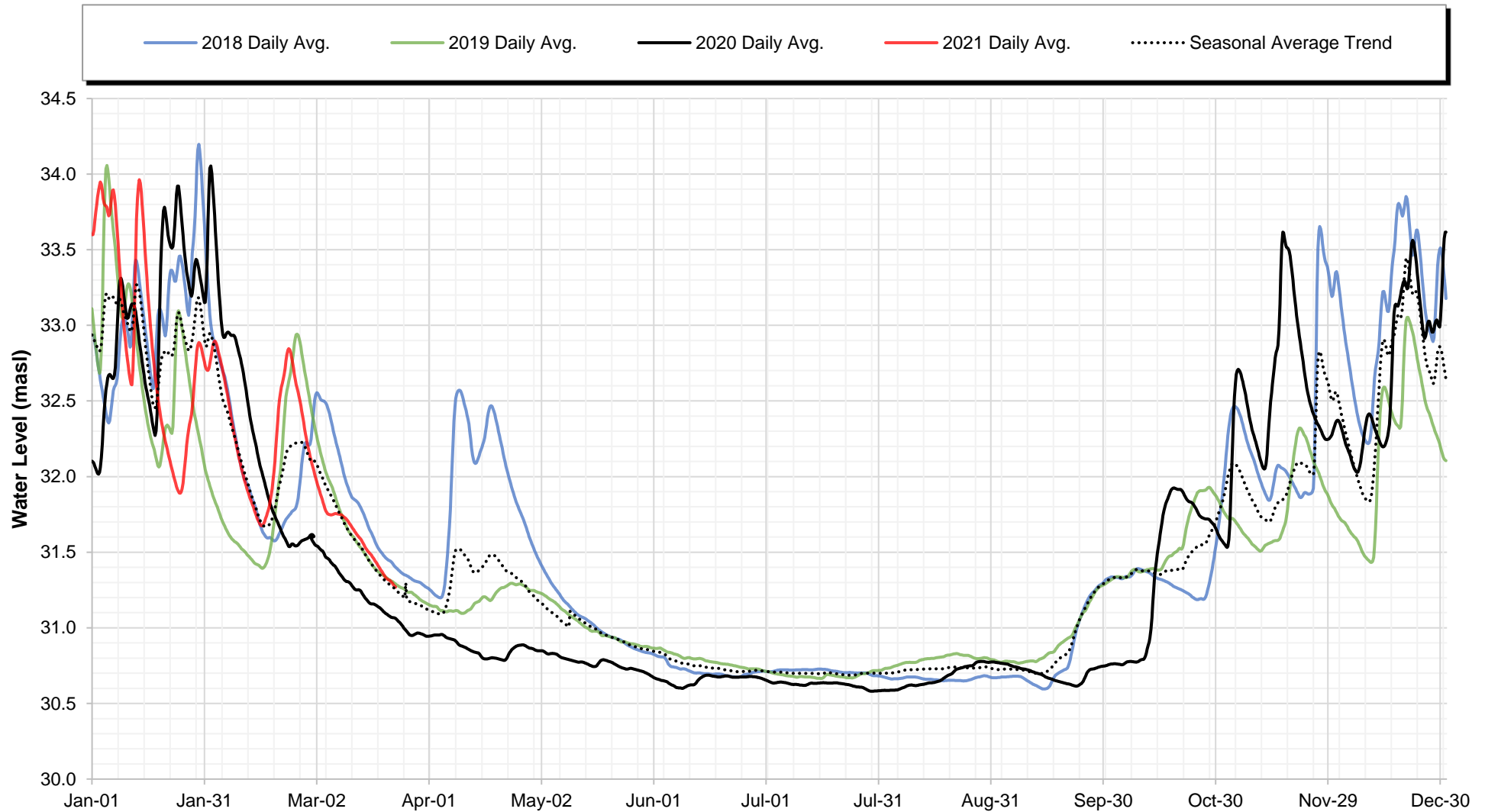
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
<b>SEASONAL GROUNDWATER LEVEL CHARTS VOW 20 - Ritten (WR6 - Nanaimo River)</b>		<b>FIGURE C-36</b>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	



**NOTES:**

Observation Well is Associated with Aquifer 162  
 Aquifer 162 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
		<b>SEASONAL GROUNDWATER LEVEL CHARTS VOW 21 - Rosalie (WR6 - Nanaimo River)</b>
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-37</b>
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

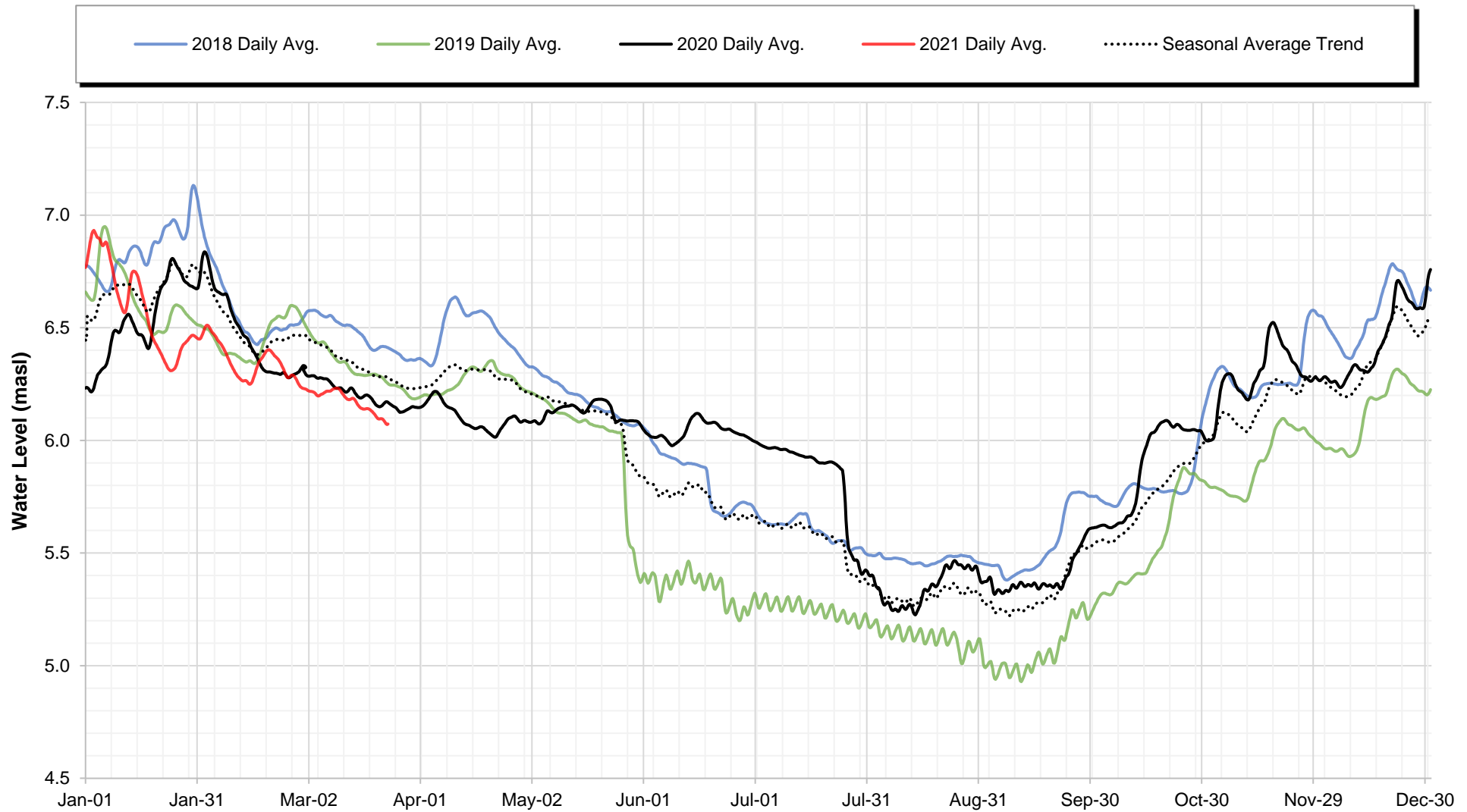


**NOTES:**

Observation Well is Associated with Aquifer 162


Aquifer 162 is Fractured Bedrock

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>
TITLE		
<b>SEASONAL GROUNDWATER LEVEL CHARTS VOW 22 - Gould (WR6 - Nanaimo River)</b>		<b>FIGURE C-38</b>
	PREPARED BY: WATERLINE RESOURCES INC.	
	PROJECT: 2590-21-001	
	COMPILED BY: SR	
	DATE ISSUED: May 2021	
	REVISED: FINAL	

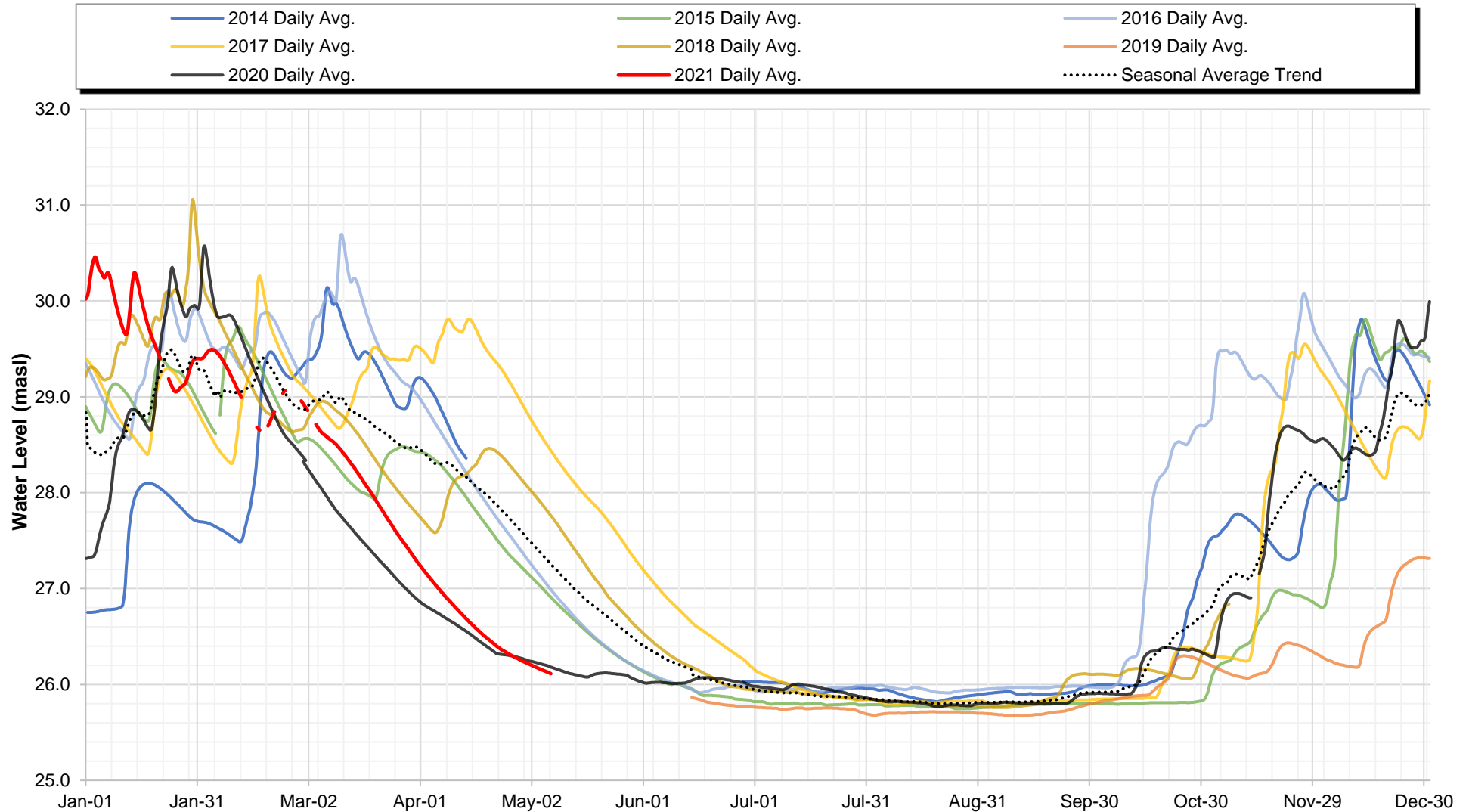


**NOTES:**

Observation Well is Associated with Aquifer 162  
 Aquifer 162 is Fractured Bedrock


PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHARTS VOW 23 - Haro (WR6 - Nanaimo River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-39</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		

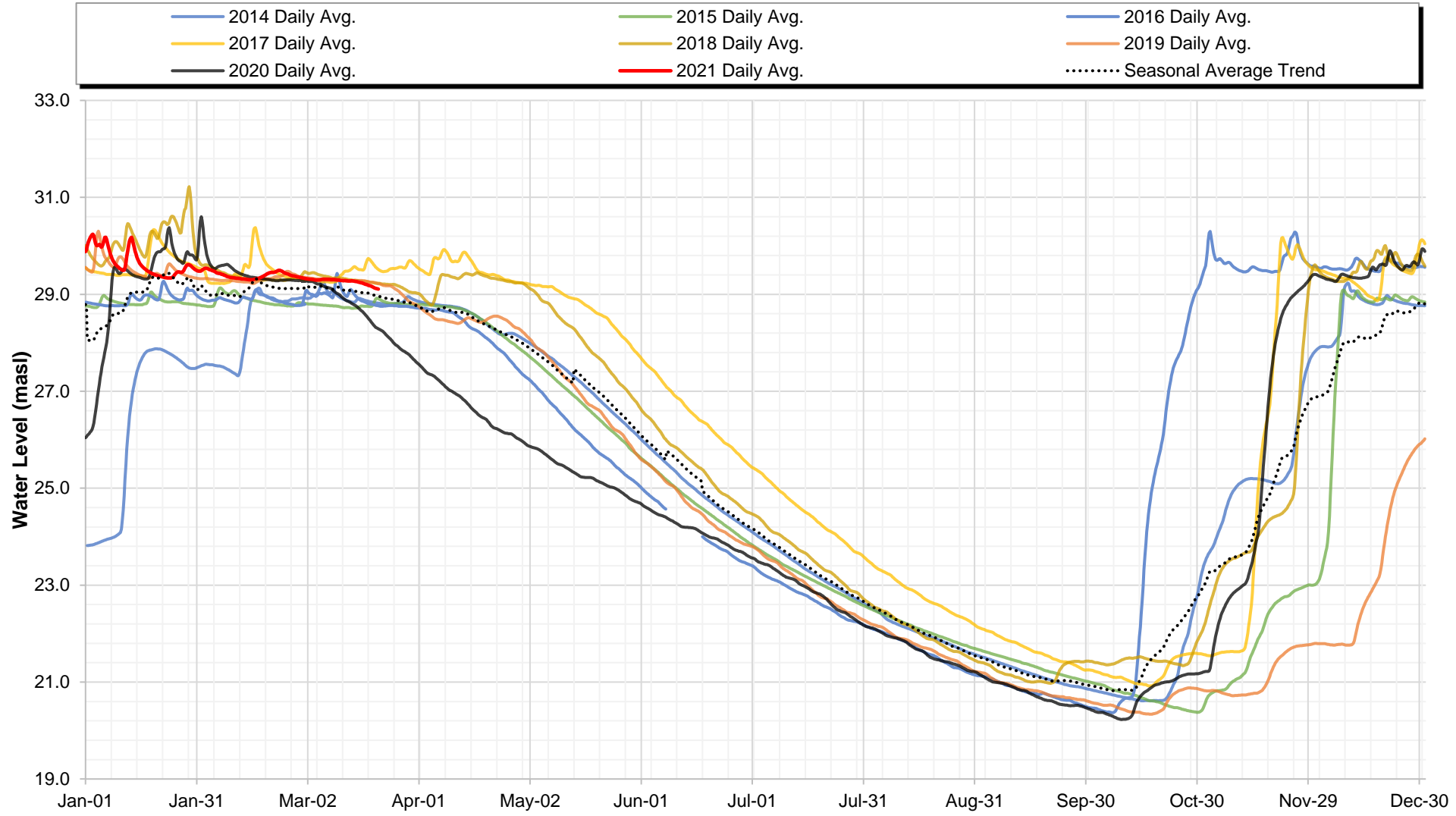




**NOTES:**


Observation Well is Associated with Aquifer 165  
 Aquifer 165 is Fractured Bedrock

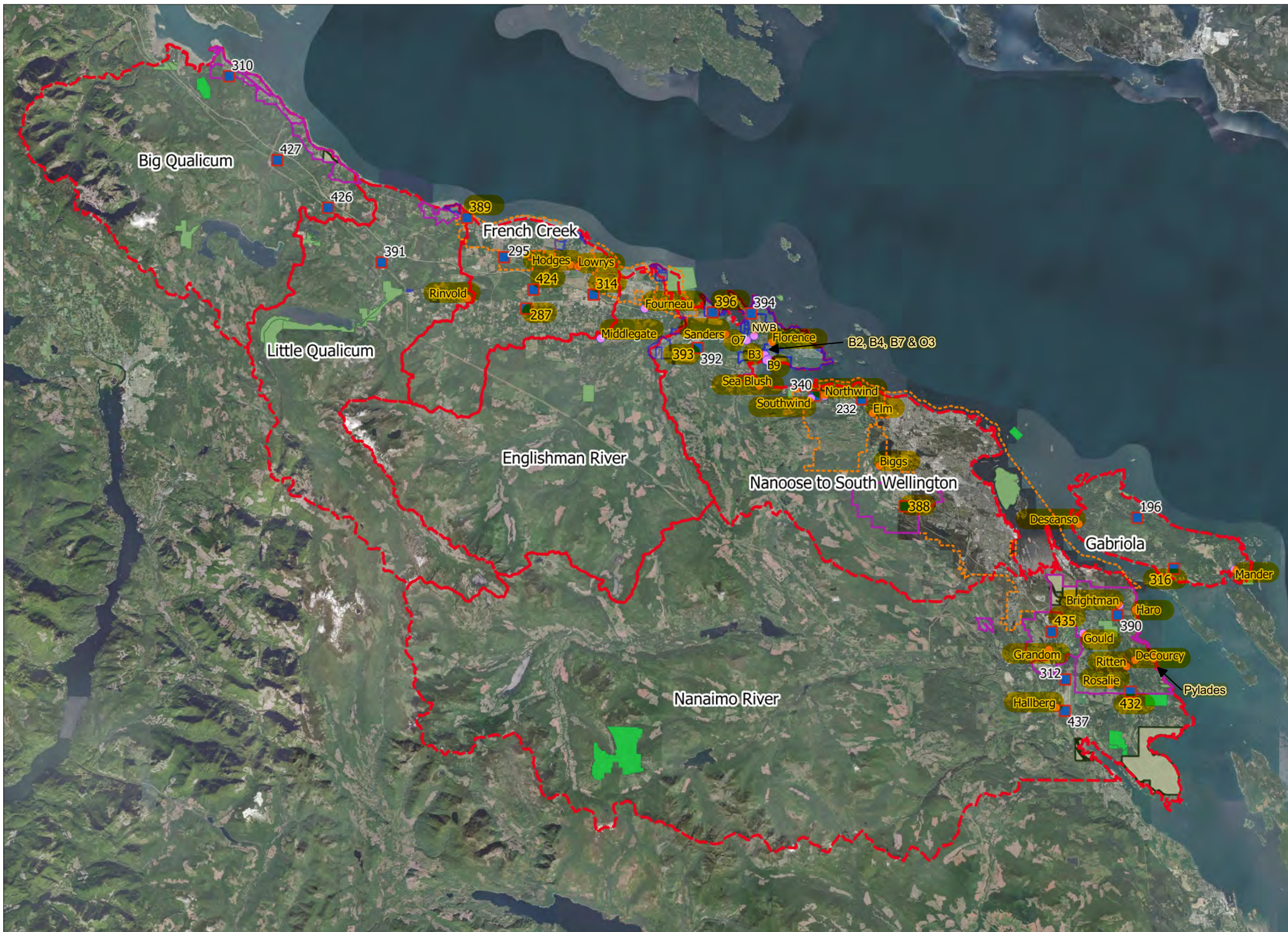
PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHARTS OW 435 (WR6 - Nanaimo River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-40</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
	REVISED: FINAL		



**NOTES:**

Observation Well is Associated with Aquifer 165  
 Aquifer 165 is Fractured Bedrock

PROJECT		<b>DRINKING WATER AND WATERSHED PROTECTION - REGIONAL GROUNDWATER LEVEL ANALYSIS 2021</b>	
TITLE		<b>SEASONAL GROUNDWATER LEVEL CHARTS VOW 05 - Grandom (WR6 - Nanaimo River)</b>	
	PREPARED BY: WATERLINE RESOURCES INC.	<b>FIGURE C-41</b>	
	PROJECT: 2590-21-001		
	COMPILED BY: SR		
	DATE ISSUED: May 2021		
REVISED: FINAL			

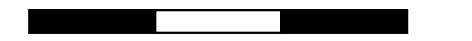


**LEGEND:**

- RDN Volunteer Observation Well Network (VOWN)
- Provincial Observation Well Network (PGOWN)
- RDN Water Service Areas
- Water Works/Improvement Districts
- Municipal Water Service Areas
- Water Regions
- First Nations Reserve
- Parks and Protected Areas
- Provincial Park
- Ecological Reserve

Yellow highlighted labels indicate which PGOWN and VOW wells were included in the 2021 data analysis.

0 5 10 15 km



Scale: 1:300000

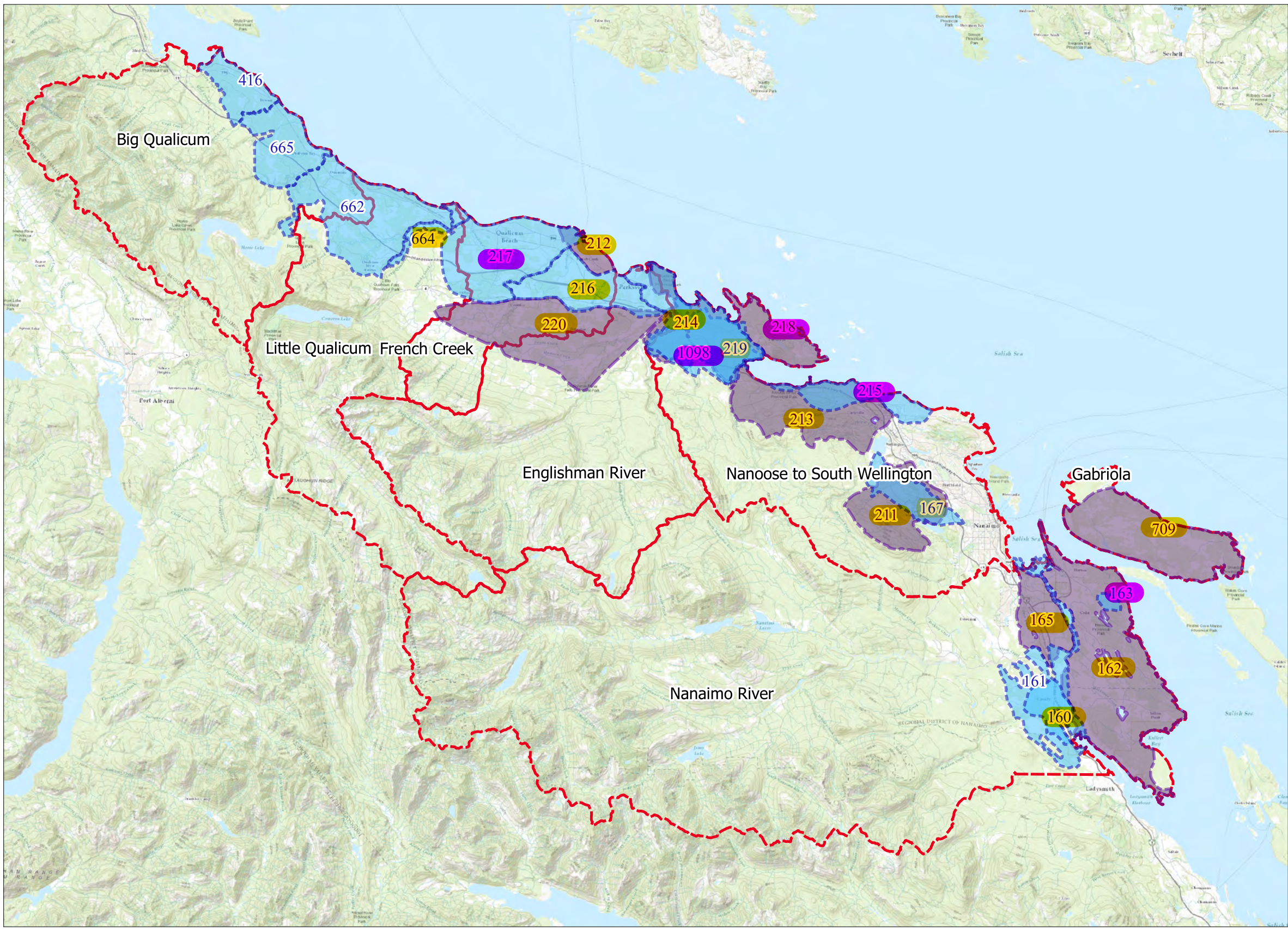
Coordinate system: WGS 84 / Pseudo Mercator

PROJECT  
Drinking Water and Watershed Protection Program - Regional Groundwater Level Analysis May 2021  
Submitted to the Regional District of Nanaimo Water Services

TITLE  
**VOW and PGOWN Locations**

	PREPARED BY: Waterline Resources Inc.	<b>FIGURE 2</b>
	PROJECT: 2590-20-001	
	COMPILED BY: MS	
	DATE ISSUED: 2020-May-27	
	REVISED: 2020-June-2 by RDN	

Sources:  
This map contains data licensed under the Open Government License - British Columbia.  
Regional District of Nanaimo.  
World Imagery: ESRI wms service, [http://server.arcgisonline.com/arcgis/rest/services/World\\_Imagery/MapServer/WMTS](http://server.arcgisonline.com/arcgis/rest/services/World_Imagery/MapServer/WMTS)



**LEGEND:**

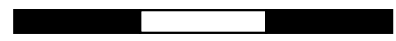
- Water Regions
- Aquifer in Overburden (ID #)
- Aquifer in Bedrock (ID #)

\*Note: only mapped aquifers associated with known VOWN and PGOWN locations are displayed.

Yellow highlighted labels indicate which aquifers were included in the 2021 data analysis.

Pink highlighted labels indicate aquifers included in the 2021 analysis where PGOWN data was not available, and only RDN VOW data was used for the trend analysis.

0 5 10 15 km



Scale: 1:300000

Coordinate system: WGS 84 / Pseudo Mercator

Sources:  
 This map contains data licensed under the Open Government License - British Columbia.  
 Mapped aquifers: British Columbia, Ministry of Environment Water Protection and Sustainability (BC MoE). 2020. Ground Water Aquifers Database. <https://apps.nrs.gov.bc.ca/gwells/>. Accessed May 2020  
 Regional District of Nanaimo.  
 World Topographic Map: ESRI wms service, [http://server.arcgisonline.com/arcgis/rest/services/World\\_Topo\\_Map/MapServer/WMTS?](http://server.arcgisonline.com/arcgis/rest/services/World_Topo_Map/MapServer/WMTS?)

PROJECT  
 Drinking Water and Watershed Protection Program - Regional  
 Groundwater Level Analysis May 2021  
 Submitted to the Regional District of Nanaimo Water Services

TITLE  
**Regionally Mapped Surficial and  
 Bedrock Aquifers**

PREPARED BY: Waterline Resources Inc.
PROJECT: 2590-20-001
COMPILED BY: MS
DATE ISSUED: 2020-May-27
REVISED: 2021-June-2 by RDN