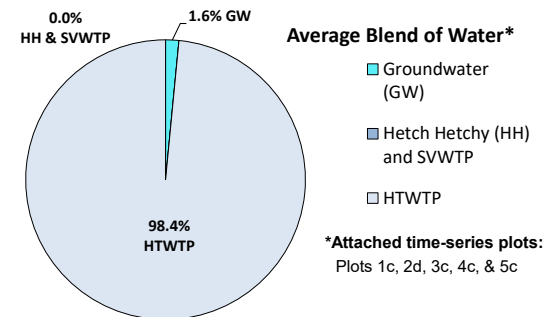


**San Francisco Groundwater Supply Project**  
**SFPUC Surface Water - Groundwater Blend Report [2/15/20 - 2/28/21]**  
 (Posted on 3/5/21)

During the period 2/15/2021 through 2/28/2021, Sunset and Sutro Reservoirs received a combination of surface water from Bay Area reservoirs and local groundwater wells. Table 1 below summarizes the water quality characteristics of the blended water in the reservoirs.

**Table 1: Blended Water Characteristics**

Parameter	California Title 22 Regulatory Standard	Unit	2019 Maximum Value <sup>2</sup>	2019 Minimum Value <sup>2</sup>	Latest Data from Sunset Reservoir Outlet	Attached Time-Series Plots
Alkalinity	Other <sup>1</sup>	mg/L (as CaCO <sub>3</sub> )	97	3.5	38	Plot 1a
Chloride	250 <sup>1</sup>	mg/L	17	<3	12	Plot 2a
Hardness	Other <sup>1</sup>	mg/L (as CaCO <sub>3</sub> )	77	8.9	39	Plot 1b
Total Dissolved Solids	500 <sup>1</sup>	mg/L	119	<20	81	Plot 2b
Specific Conductance	900 <sup>1</sup>	µS/cm	234	32	157	Plot 2c



The blended water is routinely sampled to ensure the quality of deliveries and safety of drinking water supplied to our customers. **Over one hundred parameters are sampled**, in accordance with the California Code of Regulations (CCR), Title 22 Drinking Water Regulations. Table 2 below summarizes water quality parameters for which blending is required. While the levels of these parameters may vary slightly from week to week, they will not exceed the drinking water standards set by the California State Water Resources Control Board (SWRCB) Division of Drinking Water and the United States Environmental Protection Agency (USEPA).

**Table 2: Water Quality Data for Groundwater Parameters that Require Blending - Sunset Reservoir**

Parameter	California Title 22 Regulatory Standard	Unit	Current Sampling Frequency <sup>5</sup>	Water Quality Monitoring Results in Sunset Reservoir						Attached Time-Series Plots
				Number of Samples to Date	Date of Latest Sample	Blending Results				
						Latest <sup>6</sup>	High <sup>7</sup>	Low <sup>7</sup>	Average <sup>7</sup>	
Chromium VI	0.01 <sup>3</sup>	mg/L	Weekly	448	2/16/2021	0.00092	0.0012	0.000034	0.00027	Plot 3a
Manganese (Mn)	0.05 <sup>1</sup>	mg/L	Weekly	380	2/9/2021	0.0043	0.0084	<0.002	<0.002	Plot 4a
Nitrate	10 <sup>4</sup>	mg/L (as N)	Weekly	447	2/23/2021	0.13	0.53	<0.07	0.11	Plot 5a

Groundwater serving the Sutro Reservoir only comes from the Lake Merced Well, which does not require blending, Table 3 provides the most recent data of blended water quality.

**Table 3: Water Quality Data for Groundwater Parameters that Require Blending - Sutro Reservoir**

Parameter	California Title 22 Regulatory Standard	Unit	Current Sampling Frequency <sup>5</sup>	Water Quality Monitoring Results in Sutro Reservoir						Attached Time-Series Plots
				Number of Samples to Date	Date of Latest Sample	Blending Results				
						Latest <sup>6</sup>	High <sup>7</sup>	Low <sup>7</sup>	Average <sup>7</sup>	
Chromium VI	0.01 <sup>3</sup>	mg/L	Weekly	199	2/16/2021	0.00034	0.00058	0.000027	0.00014	Plot 3b
Manganese (Mn)	0.05 <sup>1</sup>	mg/L	Weekly	193	2/9/2021	0.0032	0.050	<0.002	0.0031	Plot 4b
Nitrate	10 <sup>4</sup>	mg/L (as N)	Weekly	197	2/23/2021	0.16	0.44	<0.07	0.07	Plot 5b

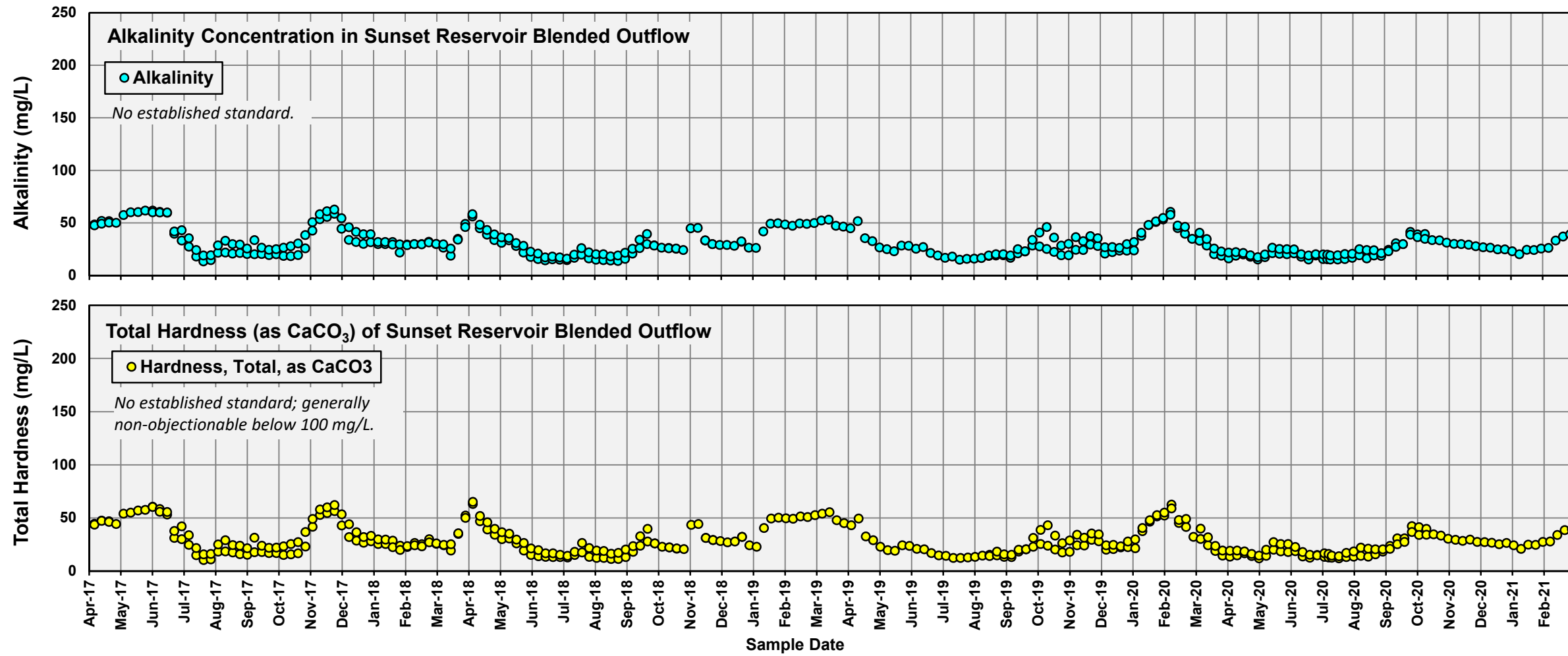
**Notes:**

- 1) SMCL as discussed in Article 16, Section §64449 (b) of Title 22. Division 4. Chapter 15 of the CCR. Provided numbers are "recommended" limits.
- 2) Values from SFPUC 2019 Annual Water Quality Report.
- 3) CA State Standard for Chromium VI was deleted from the CCR in August 2017. However, the SWRCB will implement a new standard as soon as possible. In the interim the SFPUC will continue to monitor for Chromium VI.
- 4) MCL as discussed in Article 16, Section §64449 (b) of Title 22. Division 4. Chapter 15 of the CCR.
- 5) Before each drinking water well goes into routine production, rigorous start-up testing is conducted for eight weeks, after which a long-term sampling schedule begins. The start-up and long-term sampling schedules are in accordance with a water quality compliance monitoring plan that was reviewed and approved by the SWRCB.
- 6) Single sample data point.
- 7) Historical high, low and average blend values based on data from 4/23/2017, after groundwater was first introduced to the water supply, through the latest sampling date for which laboratory results are available.

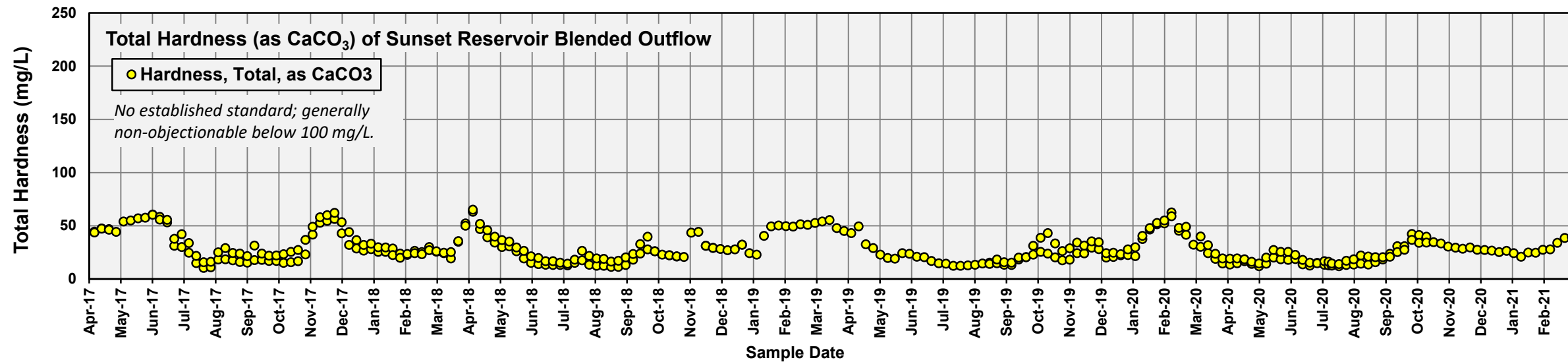
**Acronyms:**

- GW - Groundwater
- HTWTP - Harry Tracy Water Treatment Plant
- HH - Hetch Hetchy Aqueduct
- MCL - Maximum Contaminant Level
- mg/L - Milligrams per Liter
- SMCL - Secondary Maximum Contaminant Level
- SVWTP - Sunol Valley Water Treatment Plant
- µS/cm - Micro-Siemens per Centimeter

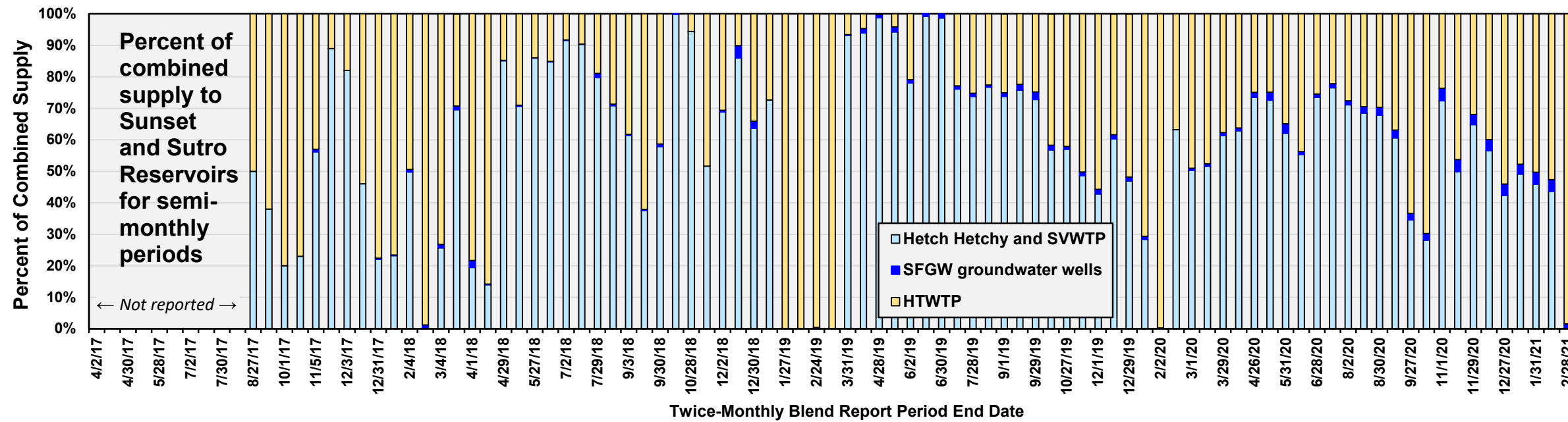
(a)



(b)



(c)

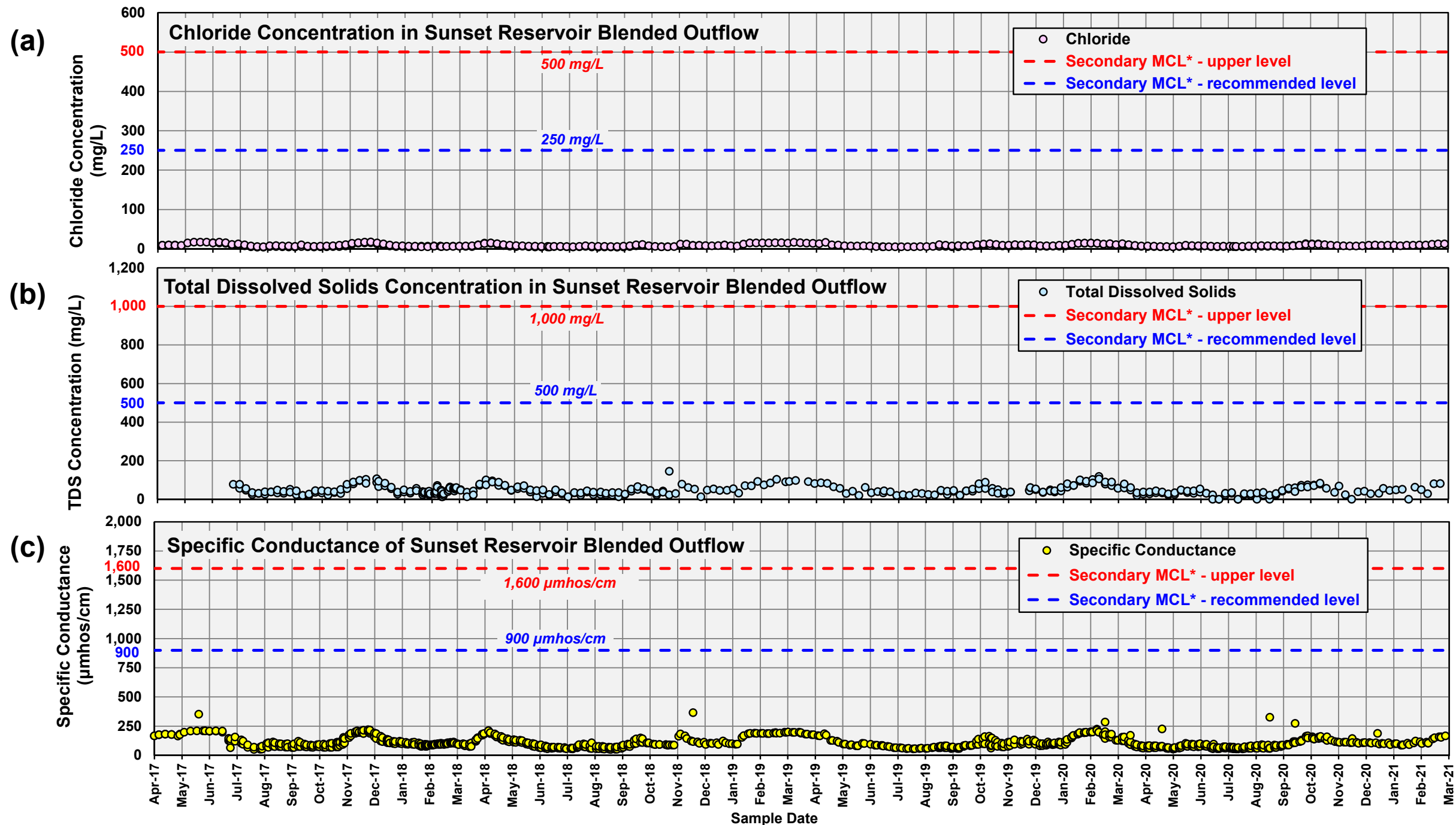


Acronyms and Abbreviations

- CaCO<sub>3</sub> calcium carbonate
- HTWTP Harry Tracy Water Treatment Plant
- mg/L milligrams per liter
- SFGW San Francisco Groundwater Supply Project
- SVWTP Sunol Valley Water Treatment Plant

Source: SFPUC San Francisco Groundwater Supply Project semi-monthly surface water- groundwater blend reports.

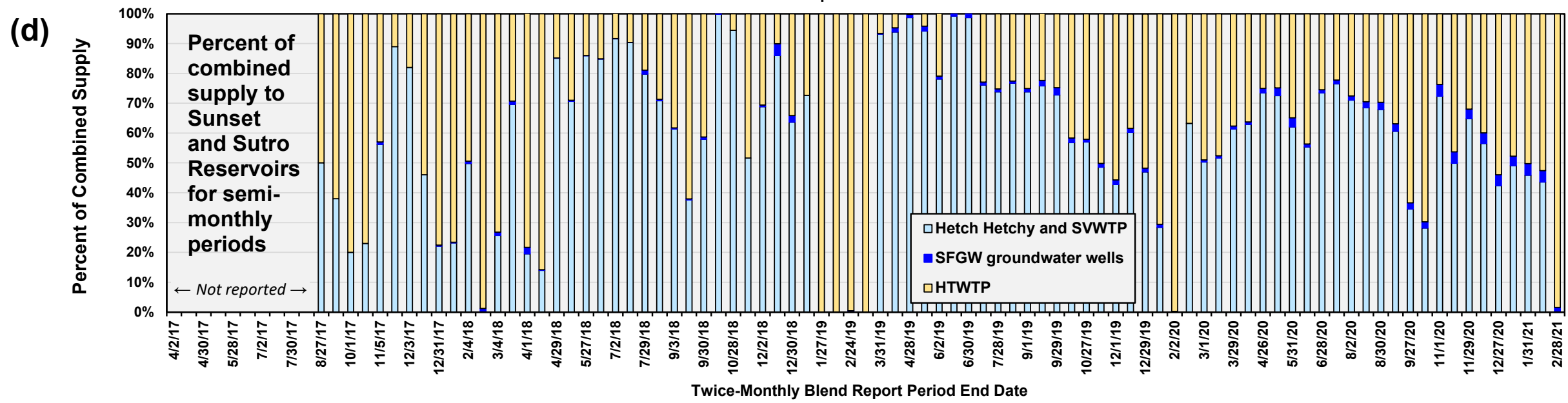
**Plot 1**  
**Alkalinity and Hardness of Reservoir Blended Outflow, April 2017 - February 2021**



\* Consumer acceptance contaminant level: concentrations that may adversely affect drinking water taste, odor, or appearance.

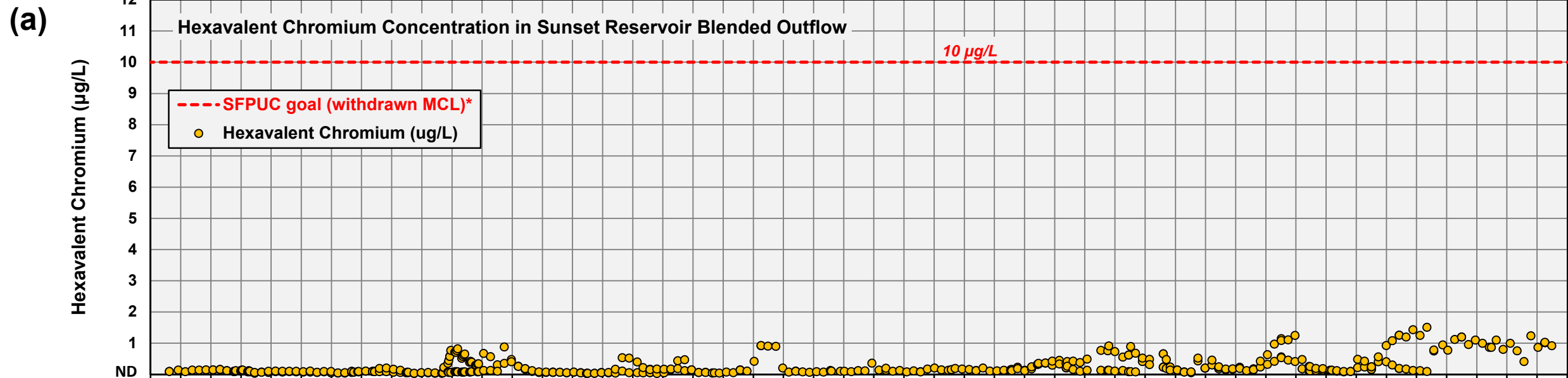
Acronyms and Abbreviations

- HTWTP Harry Tracy Water Treatment Plant
- mg/L milligrams per liter
- MCL maximum contaminant level
- SFGW San Francisco Groundwater Supply Project
- SVWTP Sunol Valley Water Treatment Plant

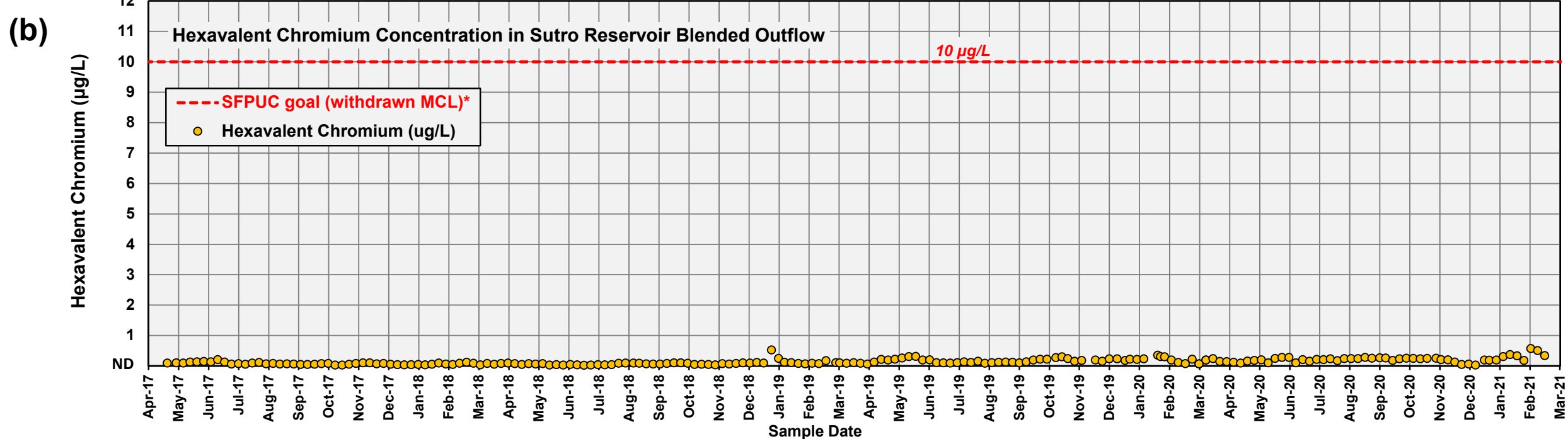


Source: SFPUC San Francisco Groundwater Supply Project semi-monthly surface water- groundwater blend reports.

**Plot 2**  
**Chloride Concentration, Total Dissolved Solids, and Specific Conductance of Reservoir Blended Outflow, April 2017 - February 2021**

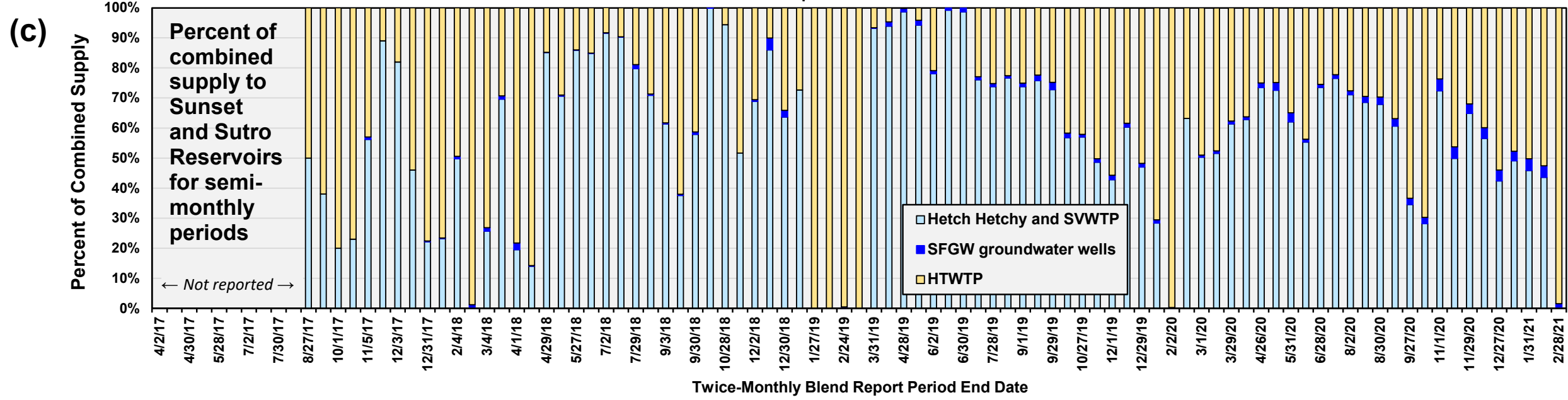


\* The former 10 µg/L MCL for hexavalent chromium was withdrawn by California SWRCB-DDW in September 2017. Currently, all chromium is regulated under the 50 µg/L MCL for total chromium. SFPUC maintains the former MCL as a water quality goal.



Acronyms and Abbreviations

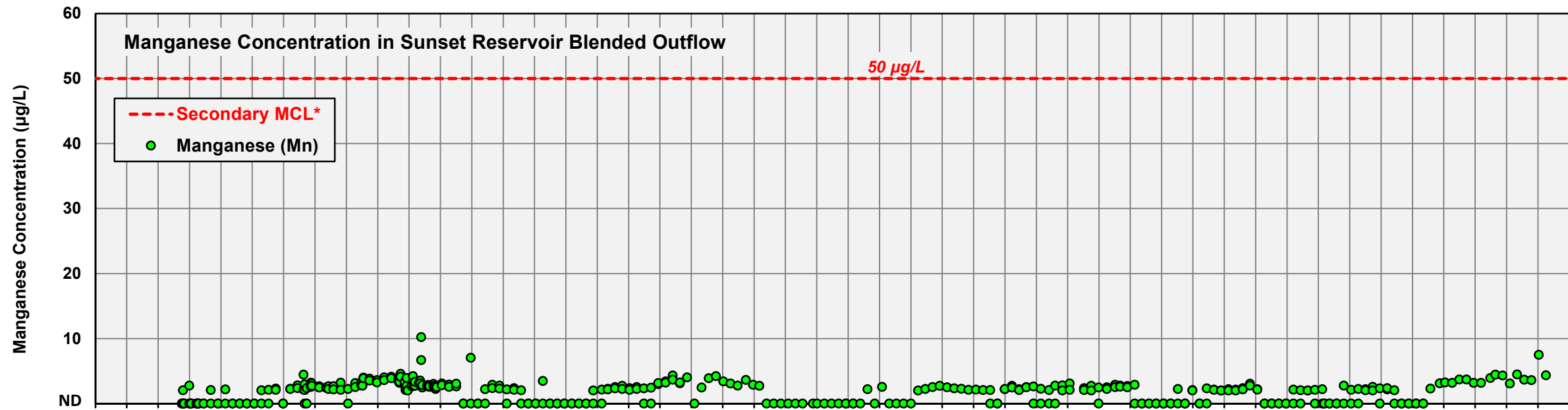
- µg/L micrograms per liter
- HTWTP Harry Tracy Water Treatment Plant
- MCL maximum contaminant level
- ND not detected
- SFGW San Francisco Groundwater Supply Project
- SVWTP Sunol Valley Water Treatment Plant



Source: SFPUC San Francisco Groundwater Supply Project semi-monthly surface water- groundwater blend reports.

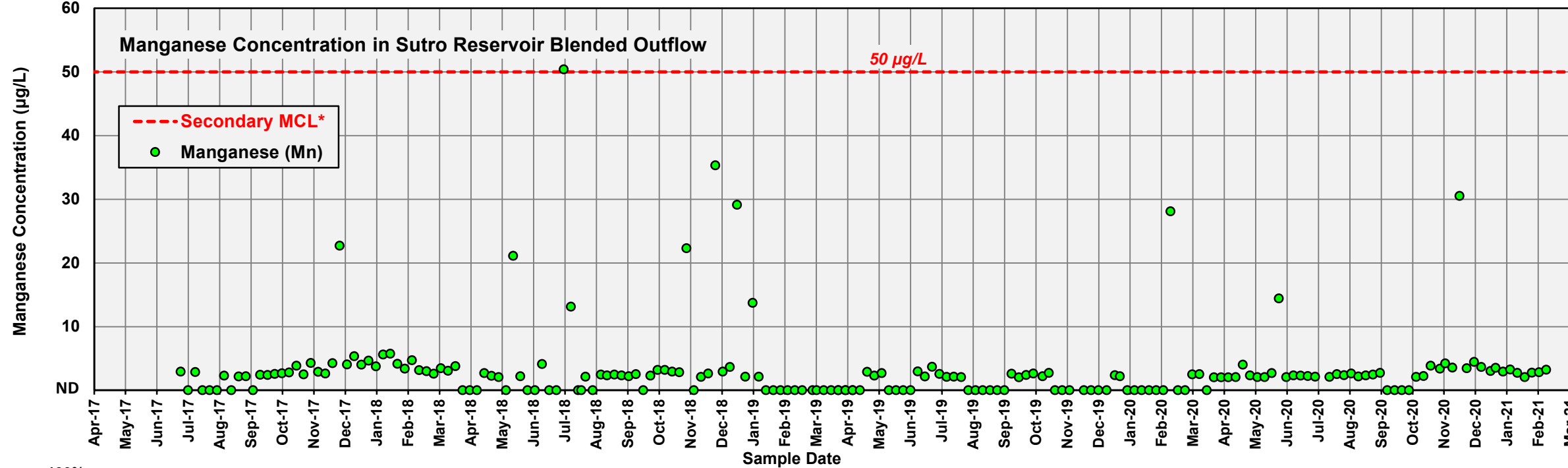
**Plot 3**  
Hexavalent Chromium Concentration of Reservoir Blended Outflow, April 2017 - February 2021

(a)



\* Consumer acceptance contaminant level: concentrations that may adversely affect drinking water taste, odor, or appearance.

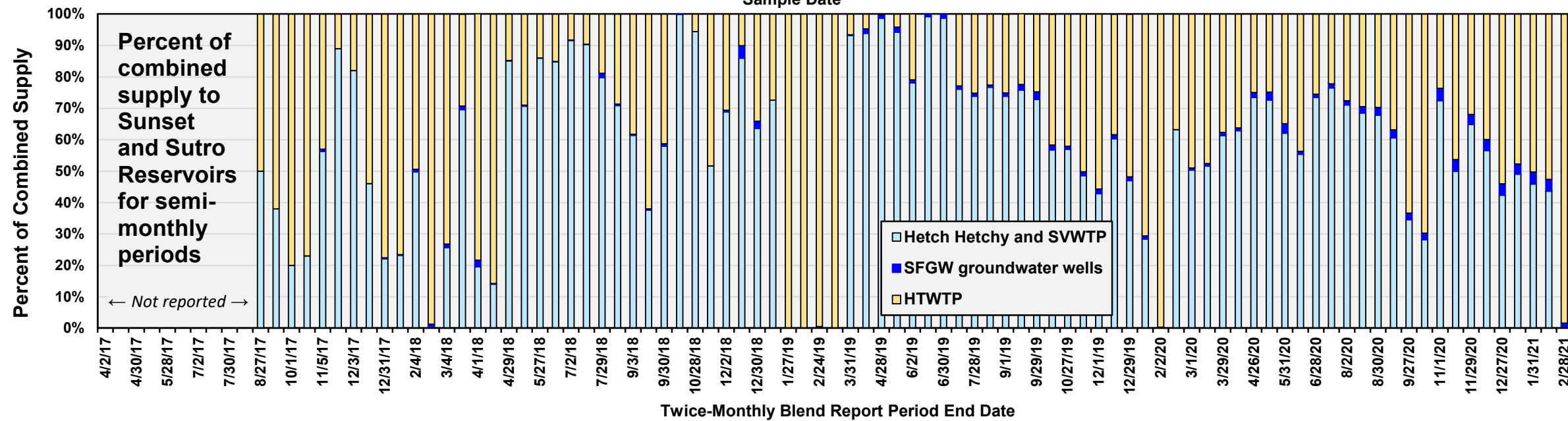
(b)



Acronyms and Abbreviations

- µg/L micrograms per liter
- HTWTP Harry Tracy Water Treatment Plant
- MCL maximum contaminant level
- ND not detected
- SFGW San Francisco Groundwater Supply Project
- SWWTP Sunol Valley Water Treatment Plant

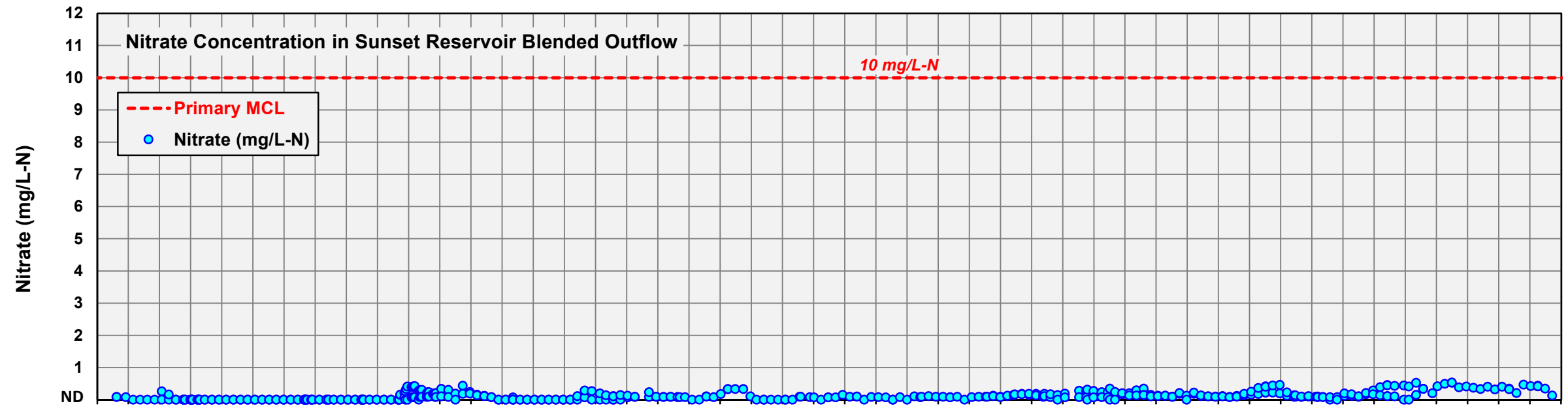
(c)



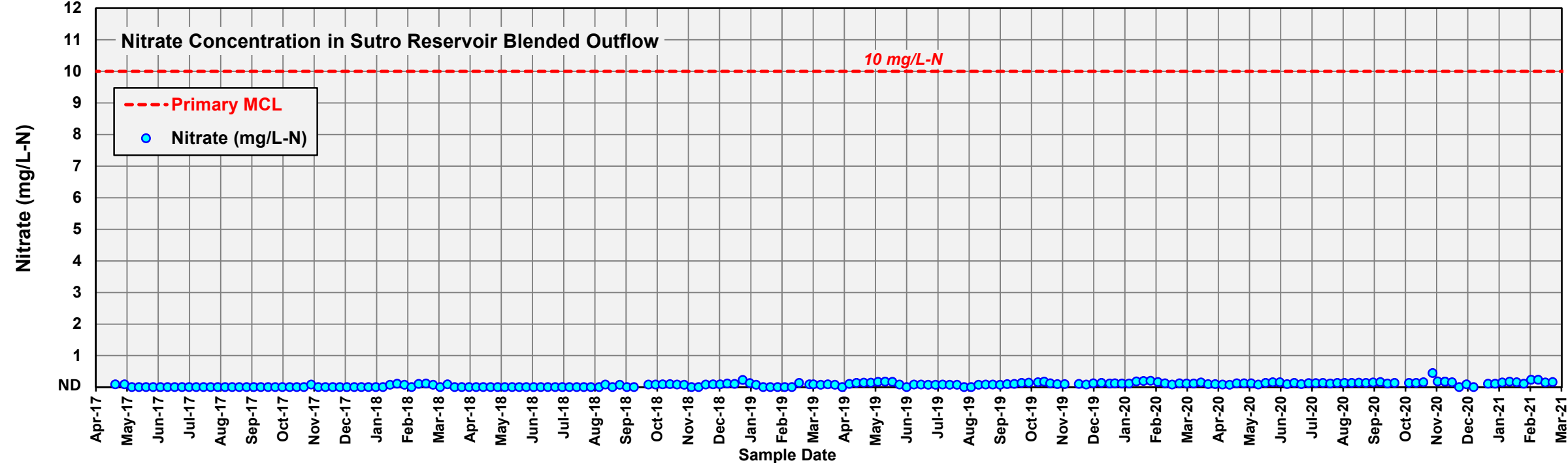
Source: SFPUC San Francisco Groundwater Supply Project semi-monthly surface water- groundwater blend reports.

**Plot 4**  
**Manganese Concentration of Reservoir Blended Outflow, April 2017 - February 2021**

(a)



(b)

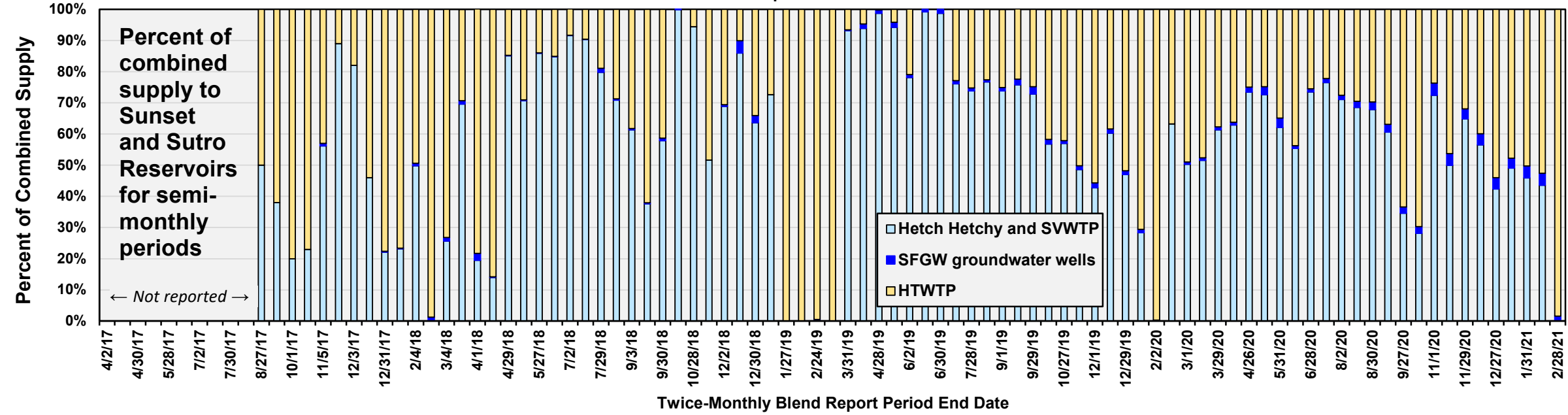


Acronyms and Abbreviations

- HTWTP Harry Tracy Water Treatment Plant
- mg/L-N milligrams per liter as nitrogen
- MCL maximum contaminant level
- ND not detected
- SFGW San Francisco Groundwater Supply Project
- SWWTP Sunol Valley Water Treatment Plant

Source: SFPUC San Francisco Groundwater Supply Project semi-monthly surface water- groundwater blend reports.

(c)



**Plot 5**  
**Nitrate Concentration of Reservoir Blended Outflow, April 2017 - February 2021**