San Francisco Groundwater Supply Project
(Posted on 6/21/2024)

During the period 6/3/24 through 6/16/24, Sunset and Sutro reservoirs received surface water from Bay Area reservoirs and Hetch Hetchy Reservoir, with a minor contribution from local groundwater. Table 1 below summarizes the water quality characteristics of the blended water in the reservoirs.

Table 1: Blended Water Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>California Title 22 Regulatory Standard</th>
<th>Unit</th>
<th>2023 Maximum Value ¹</th>
<th>2023 Minimum Value ²</th>
<th>Latest Data from Sunset Reservoir Outlet</th>
<th>Attached Time-Series Plots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkalinity</td>
<td>Other ¹</td>
<td>mg/L (as CaCO₃)</td>
<td>103</td>
<td>3.1</td>
<td>22</td>
<td>Plot 1a</td>
</tr>
<tr>
<td>Chloride</td>
<td></td>
<td>mg/L</td>
<td>17</td>
<td>&lt;3</td>
<td>6</td>
<td>Plot 2a</td>
</tr>
<tr>
<td>Hardness</td>
<td>Other ¹</td>
<td>mg/L (as CaCO₃)</td>
<td>86</td>
<td>7.5</td>
<td>18</td>
<td>Plot 1b</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td></td>
<td>mg/L</td>
<td>153</td>
<td>&lt;20</td>
<td>45</td>
<td>Plot 2b</td>
</tr>
<tr>
<td>Specific Conductance</td>
<td></td>
<td>µS/cm</td>
<td>289</td>
<td>32</td>
<td>80</td>
<td>Plot 2c</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>California Title 22 Regulatory Standard</th>
<th>Unit</th>
<th>Current Sampling Frequency ³</th>
<th>Number of Samples to Date</th>
<th>Date of Latest Sample</th>
<th>Blending Results</th>
<th>Attached Time-Series Plots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium VI</td>
<td>0.01 ³</td>
<td>mg/L</td>
<td>Weekly</td>
<td>715</td>
<td>6/11/2024</td>
<td>0.000051</td>
<td>Plot 3a</td>
</tr>
<tr>
<td>Manganese (Mn)</td>
<td>0.05 ³</td>
<td>mg/L</td>
<td>Weekly</td>
<td>611</td>
<td>6/4/2024</td>
<td>&lt;0.002</td>
<td>Plot 4a</td>
</tr>
<tr>
<td>Nitrate</td>
<td>10 ⁴</td>
<td>mg/L (as N)</td>
<td>Weekly</td>
<td>731</td>
<td>6/11/2024</td>
<td>&lt;0.04</td>
<td>0.11</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>California Title 22 Regulatory Standard</th>
<th>Unit</th>
<th>Current Sampling Frequency ³</th>
<th>Number of Samples to Date</th>
<th>Date of Latest Sample</th>
<th>Blending Results</th>
<th>Attached Time-Series Plots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium VI</td>
<td>0.01 ³</td>
<td>mg/L</td>
<td>Weekly</td>
<td>354</td>
<td>6/11/2024</td>
<td>0.000057</td>
<td>Plot 3b</td>
</tr>
<tr>
<td>Manganese (Mn)</td>
<td>0.05 ³</td>
<td>mg/L</td>
<td>Weekly</td>
<td>365</td>
<td>6/4/2024</td>
<td>&lt;0.002</td>
<td>0.0027</td>
</tr>
<tr>
<td>Nitrate</td>
<td>10 ⁴</td>
<td>mg/L (as N)</td>
<td>Weekly</td>
<td>368</td>
<td>6/11/2024</td>
<td>&lt;0.04</td>
<td>0.081</td>
</tr>
</tbody>
</table>

Notes:
1) SMCL as discussed in Article 16, Section §64449 (b) of Title 22. Division 4. Chapter 15 of the CCR.
2) Values are obtained from SFPUC 2023 Consumer Confidence Report data table.
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
SFGW - San Francisco Groundwater Supply Project
SMCL - Secondary Maximum Contaminant Level
SVWTP - Sunol Valley Water Treatment Plant
µS/cm - micro-Siemens per centimeter

Latest Data from Sunset Reservoir
Plots 1c, 2d, 3c, 4c, & 5c

Latest Data from Sutro Reservoir
Plots 1c, 2d, 3c, 4c, & 5c

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**Acronyms and Abbreviations**

HTWTP   Harry Tracy Water Treatment Plant  
mg/L   milligrams per liter  
SVWTP   Sunol Valley Water Treatment Plant  
CaCO₃   calcium carbonate  
SFGW   San Francisco Groundwater Supply Project

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**Alkalinity Concentration in Sunset Reservoir Blended Outflow**

*No established standard.*

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**Total Hardness (as CaCO₃) of Sunset Reservoir Blended Outflow**

*No established standard; generally non-objectionable below 100 mg/L.*

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**Percent of combined supply to Sunset and Sutro reservoirs for semi-monthly periods**

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**Source:** SFPUC San Francisco Groundwater Supply Project semi-monthly surface water-groundwater blend reports.
### Chloride Concentration in Sunset Reservoir Blended Outflow

- **Chloride**
  - Maximum Contaminant Level (MCL)
  - Recommended Level

#### Legends:
- **Chloride**
- **Secondary MCL** - upper level
- **Secondary MCL** - recommended level

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

![Chloride Concentration Chart](chart-1.png)

### Total Dissolved Solids Concentration in Sunset Reservoir Blended Outflow

- **Total Dissolved Solids**
  - Maximum Contaminant Level (MCL)
  - Recommended Level

#### Legends:
- **Total Dissolved Solids**
- **Secondary MCL** - upper level
- **Secondary MCL** - recommended level

![Total Dissolved Solids Chart](chart-2.png)

### Specific Conductance of Sunset Reservoir Blended Outflow

- **Specific Conductance**
  - Maximum Contaminant Level (MCL)
  - Recommended Level

#### Legends:
- **Specific Conductance**
- **Secondary MCL** - upper level
- **Secondary MCL** - recommended level

![Specific Conductance Chart](chart-3.png)

### Percent of Combined Supply to Sunset and Sutro reservoirs for semi-monthly periods

- **Percent of combined supply to Sunset and Sutro reservoirs**
- **Not reported**

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

![Percent of Combined Supply Chart](chart-4.png)
Hexavalent Chromium Concentration in Sunset Reservoir Blended Outflow

- Hexavalent Chromium (μg/L)
- Proposed MCL*
- SFPUC goal

Hexavalent Chromium Concentration in Sutro Reservoir Blended Outflow

- Hexavalent Chromium (μg/L)
- Proposed MCL*
- SFPUC goal

Percent of Combined Supply to Sunset and Sutro Reservoirs for Semi-Monthly Periods

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

*The California SWRCB-DDW proposed a 10 μg/L MCL for hexavalent chromium in March 2022. Currently, all chromium is regulated under the 50 μg/L MCL for total chromium. SFPUC maintains a goal equal to 40 percent of the proposed MCL.
Manganese Concentration in Sunset Reservoir Blended Outflow

Manganese Concentration in Sutro Reservoir Blended Outflow

Percent of Combined Supply to Sunset and Sutro reservoirs for semi-monthly periods

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

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

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

Plot 4
Manganese Concentration of Reservoir Blended Outflow, April 2017 - June 2024
Nitrate Concentration of Reservoir Blended Outflow, April 2017 - June 2024

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