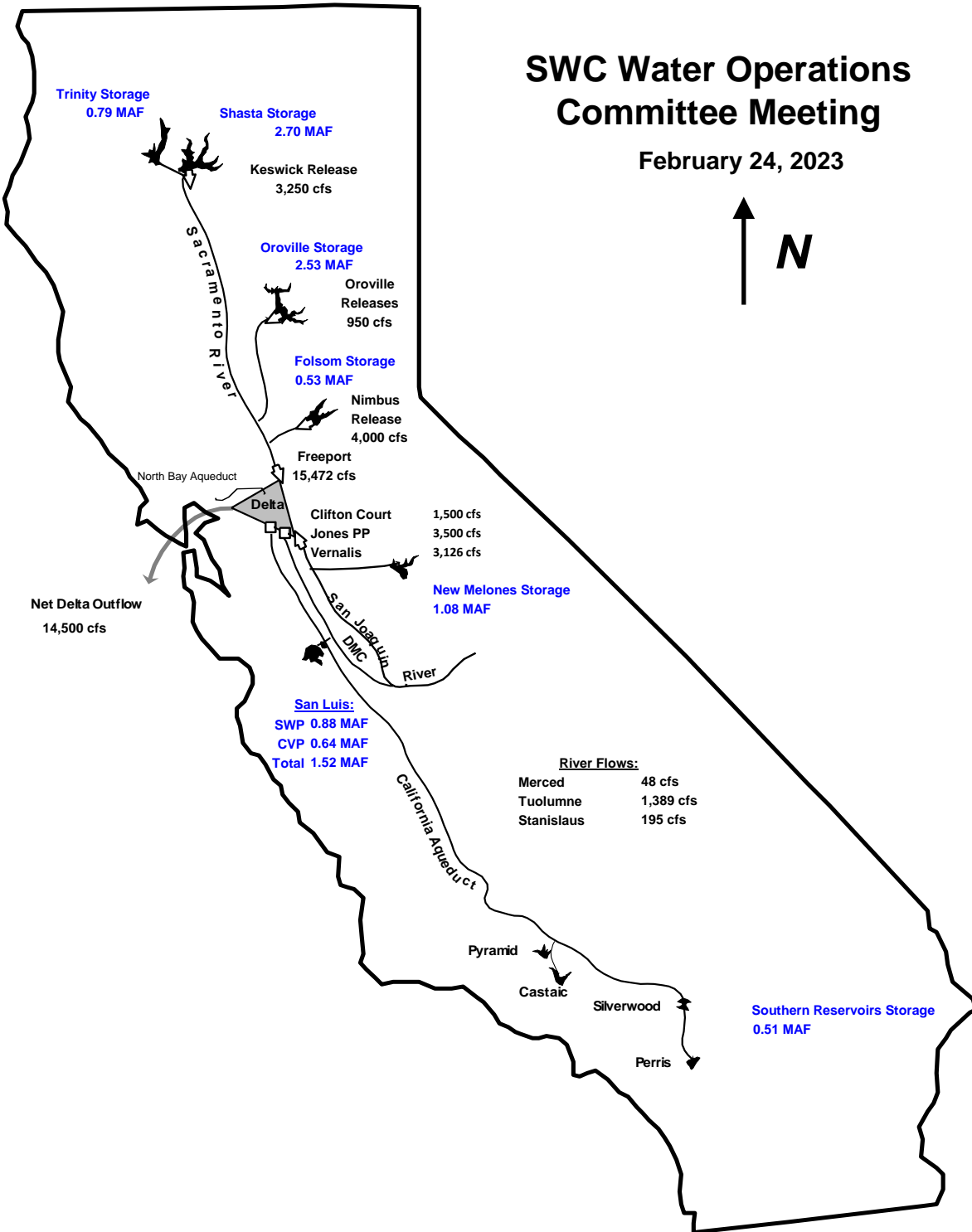
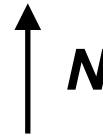


# SWC Water Operations Committee Meeting

February 24, 2023



**River Flows:**

|            |           |
|------------|-----------|
| Merced     | 48 cfs    |
| Tuolumne   | 1,389 cfs |
| Stanislaus | 195 cfs   |

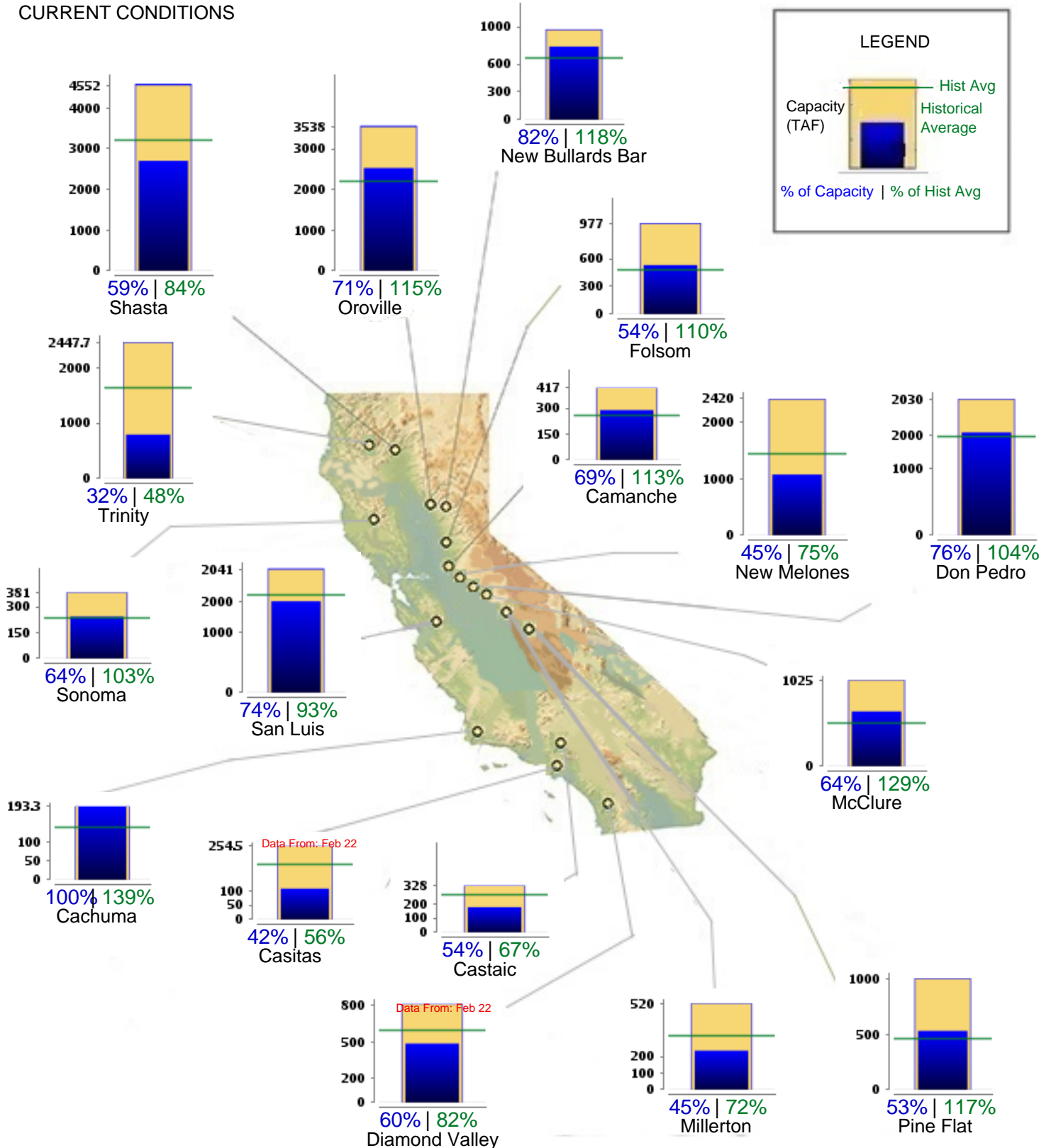


# CURRENT RESERVOIR CONDITIONS

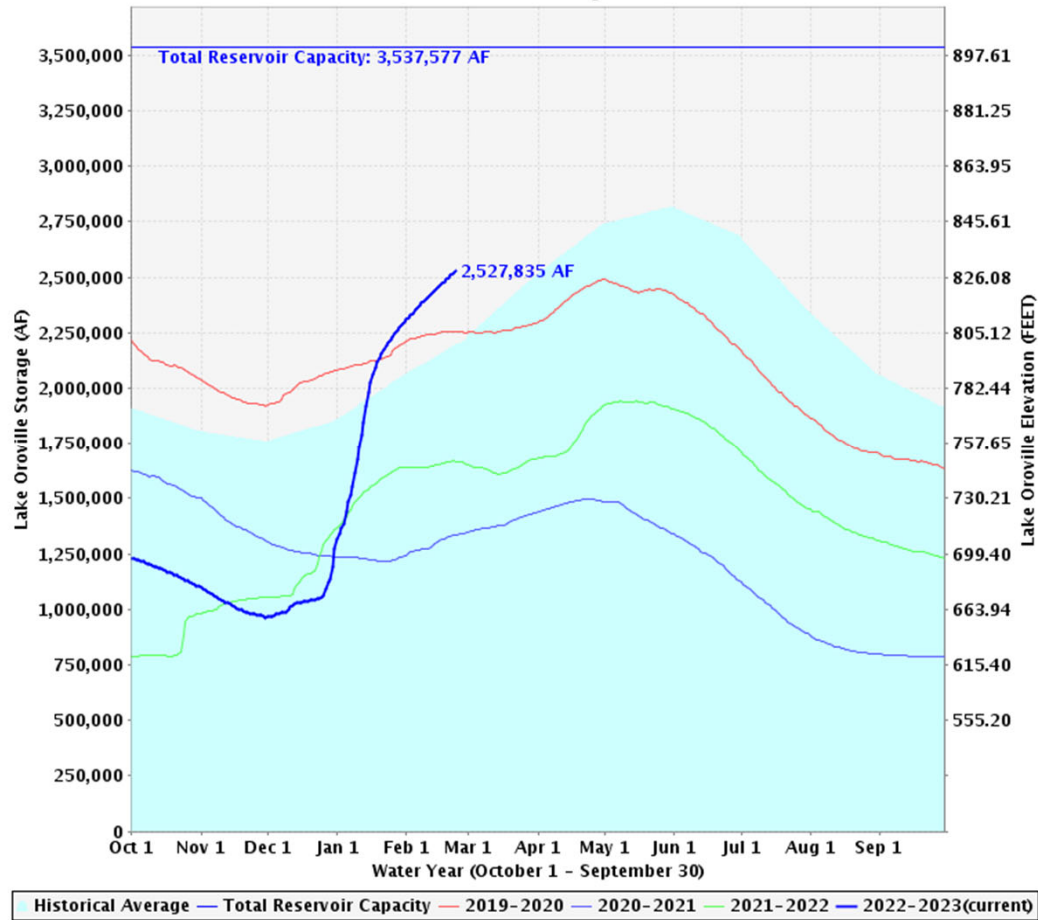
## CALIFORNIA MAJOR WATER SUPPLY RESERVOIRS

Midnight - February 23, 2023

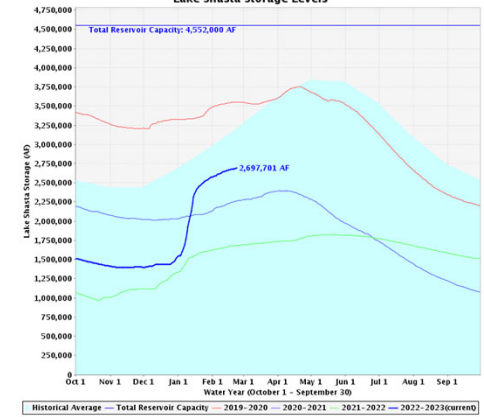
### CURRENT CONDITIONS



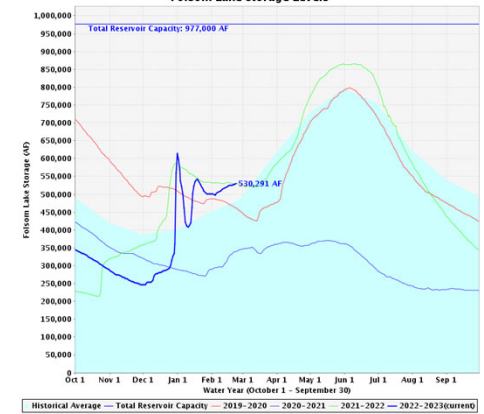
### Lake Oroville Storage Levels



### Lake Shasta Storage Levels

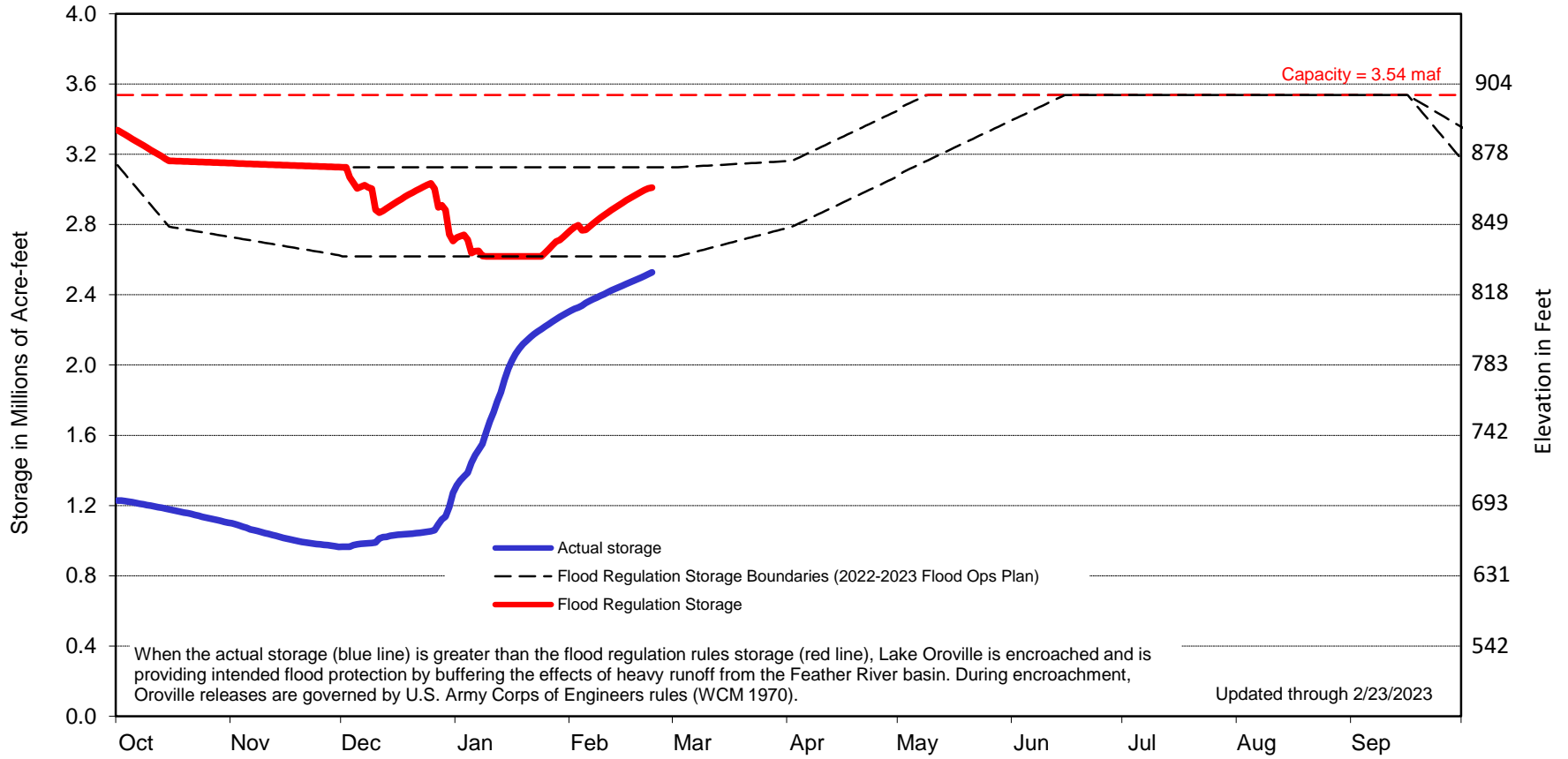


### Folsom Lake Storage Levels

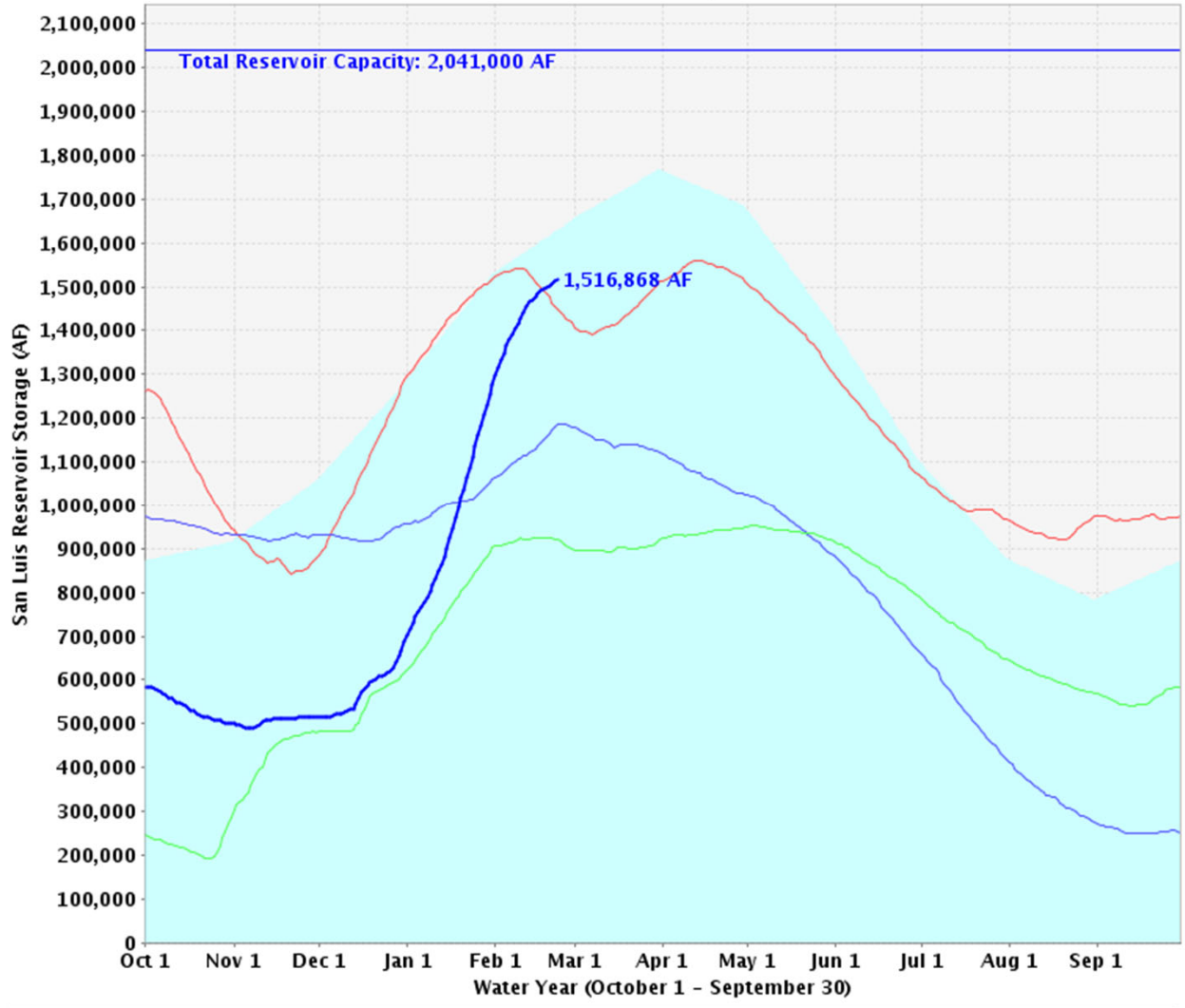


## Lake Oroville Storage

October 1, 2022 to September 30, 2023

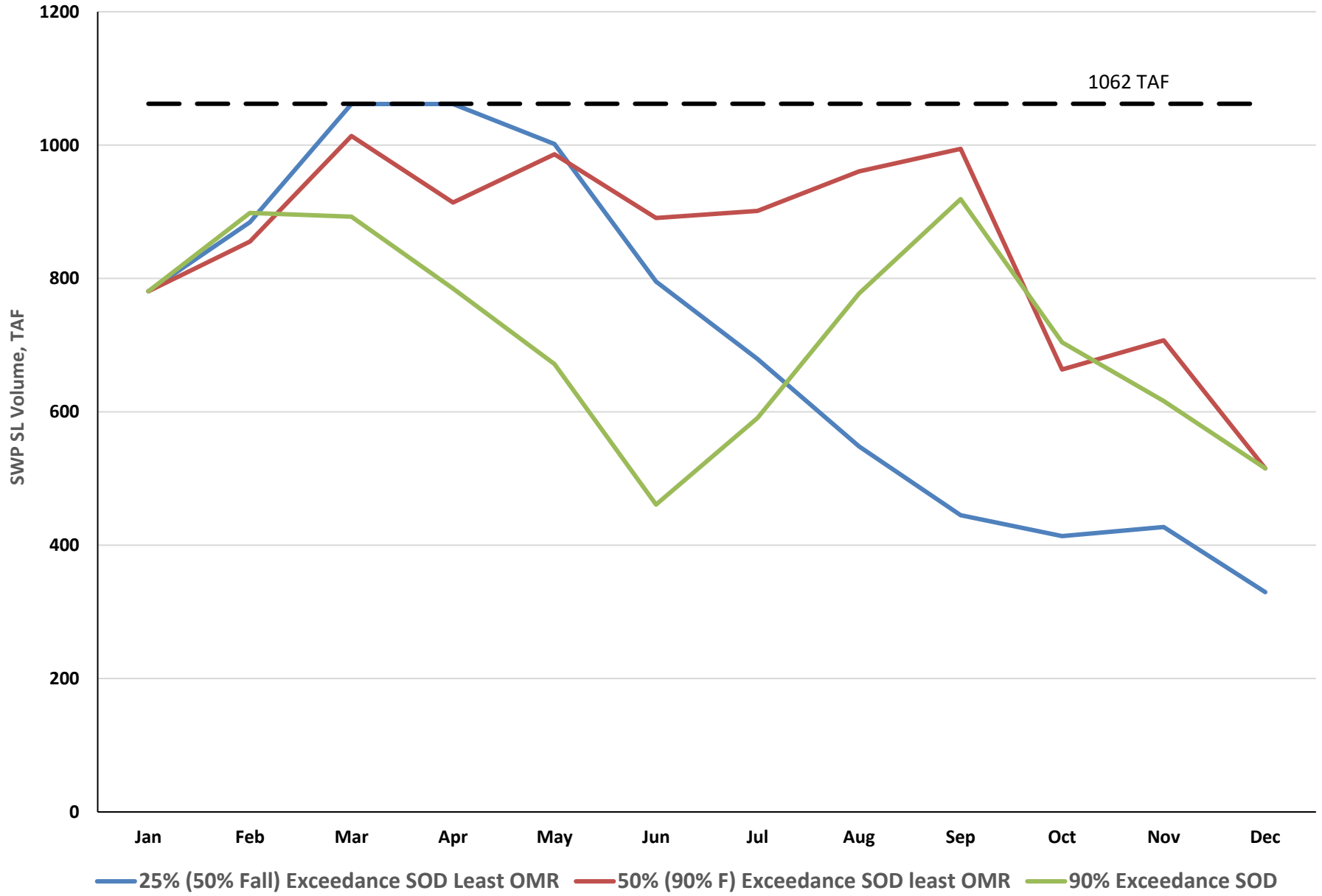


### San Luis Reservoir Storage Levels



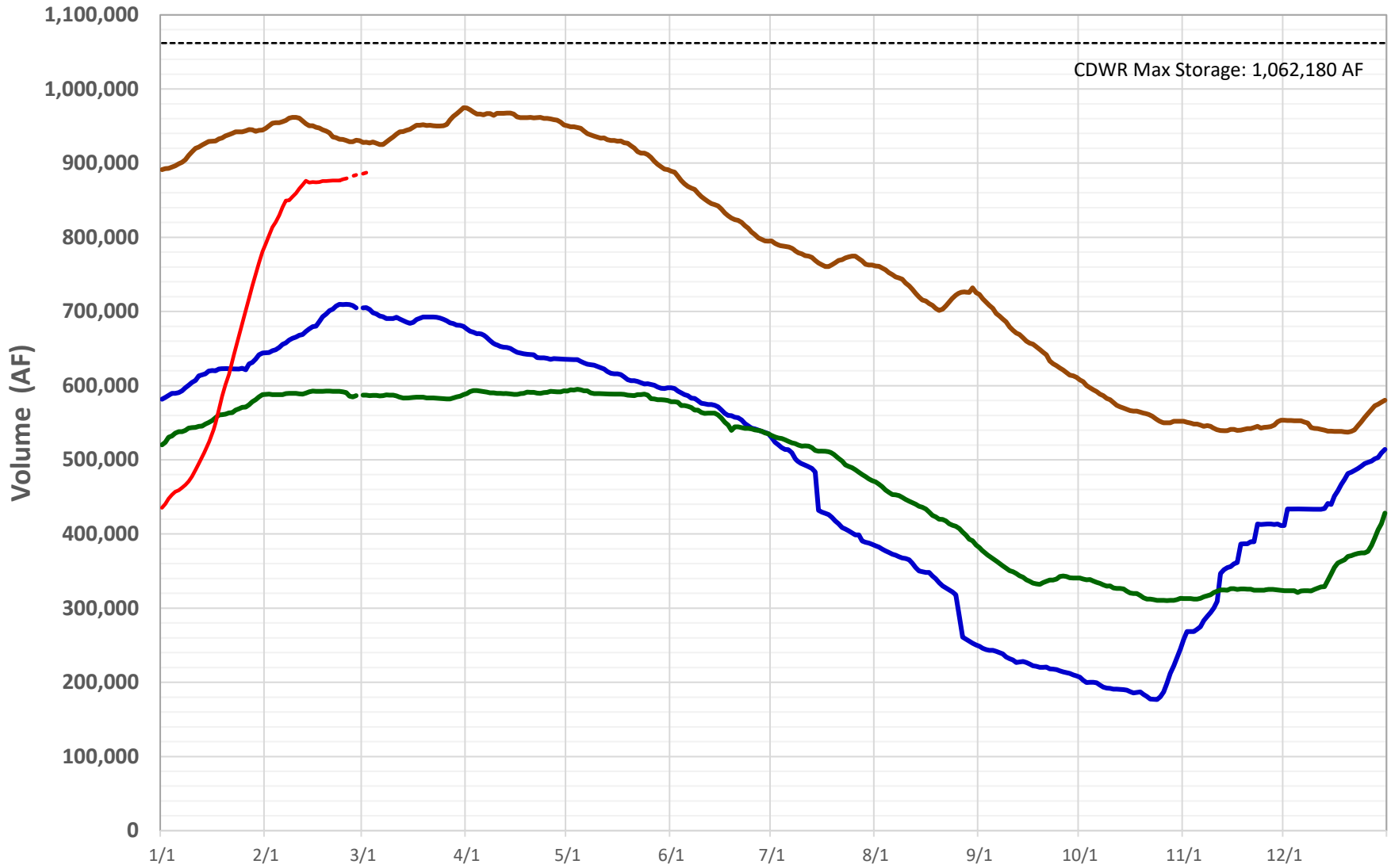
■ Historical Average 
 — Total Reservoir Capacity 
 — 2019-2020 
 — 2020-2021 
 — 2021-2022 
 — 2022-2023(current)

# San Luis SWP Volume



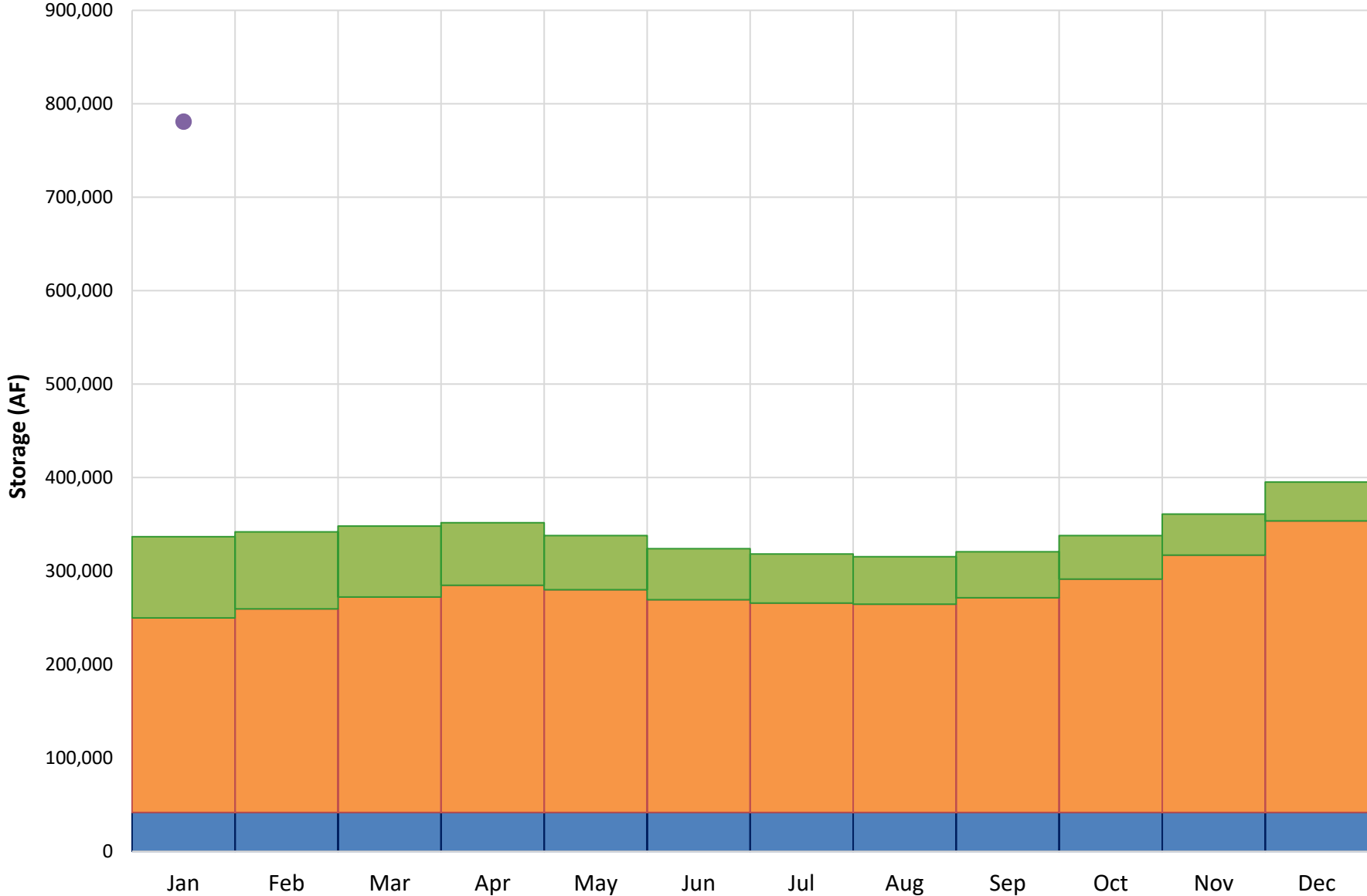
# San Luis Reservoir - SWP Share

— 2020 — 2021 — 2022 — 2023



### San Luis Reservoir (SWP Share)

Dead Pool    Backed Up Water    C/O (2022 & Prior Years)    Actual





**Allocation Analysis for 2023 (TAF)  
WY 2023 Studies Based on February Bulletin 120**

|  | 2022 | 2023 |      |       |                   |      |      |                  |      |                 |      |      |                                | Total<br>(MAF) | Possible<br>Table A % |             |
|--|------|------|------|-------|-------------------|------|------|------------------|------|-----------------|------|------|--------------------------------|----------------|-----------------------|-------------|
|  | Dec  | Jan  | Feb  | Mar   | Apr               | May  | Jun  | Jul              | Aug  | Sep             | Oct  | Nov  | Dec                            |                |                       |             |
| <b>25% (50% Fall) Exceedance SOD Least OMR</b>       |      |      |      |       | <b>SRI = 25.3</b> |      |      | <b>SVI = 9.7</b> |      | <b>WYT = W</b>  |      |      | <b>Possible 2023 Table A =</b> |                | <b>4.172</b>          | <b>100%</b> |
| Oroville EOM Storage                                 | 1273 | 2298 | 2906 | 2950  | 3248              | 3517 | 3517 | 3152             | 2705 | 2456            | 2419 | 2393 | 2439                           |                |                       |             |
| Feather R. release (avg. cfs)                        | 943  | 976  | 972  | 12654 | 11781             | 7872 | 6238 | 7384             | 8034 | 5865            | 1252 | 1242 | 1252                           | -              |                       |             |
| SWP Banks PP exports                                 | 101  | 370  | 192  | 314   | 259               | 250  | 254  | 408              | 409  | 395             | 409  | 398  | 263                            | 3.921          |                       |             |
| <i>Potential South of Delta Art. 21 Water Avail.</i> | 0    | 0    | 0    | 120   | 130               | 0    | 0    | 0                | 0    | 0               | 0    | 0    | 0                              | 0.250          |                       |             |
| SWP San Luis EOM Storage                             | 428  | 781  | 884  | 1062  | 1062              | 1002 | 795  | 679              | 548  | 445             | 414  | 427  | 330                            | -              |                       |             |
| SWP Contractor Deliveries                            | 63   | 72   | 96   | 123   | 255               | 317  | 464  | 529              | 549  | 438             | 383  | 339  | 320                            | 3.885          |                       |             |
| <b>50% (90% Fall) Exceedance NOD</b>                 |      |      |      |       | <b>SRI = 20.0</b> |      |      | <b>SVI = 7.9</b> |      | <b>WYT = AN</b> |      |      | <b>Possible 2023 Table A =</b> |                | <b>3.951</b>          | <b>95%</b>  |
| Oroville EOM Storage                                 | 1273 | 2298 | 2638 | 2991  | 3269              | 3478 | 3478 | 3013             | 2555 | 2260            | 2164 | 2040 | 1977                           |                |                       |             |
| Feather R. release (avg. cfs)                        | 943  | 976  | 1026 | 3290  | 5462              | 3513 | 1597 | 7319             | 7660 | 6470            | 1269 | 1242 | 1252                           | -              |                       |             |
| SWP Banks PP exports                                 | 101  | 572  | 211  | 176   | 252               | 251  | 252  | 408              | 409  | 395             | 80   | 398  | 139                            | 3.543          |                       |             |
| SWP San Luis EOM Storage                             | 428  | 983  | 1061 | 1062  | 1062              | 1062 | 898  | 841              | 840  | 849             | 485  | 502  | 330                            | -              |                       |             |
| SWP Contractor Deliveries                            | 63   | 100  | 140  | 162   | 251               | 262  | 425  | 474              | 419  | 355             | 414  | 363  | 297                            | 3.663          |                       |             |
| <b>50% (90% Fall) Exceedance SOD least OMR</b>       |      |      |      |       | <b>SRI = 20.0</b> |      |      | <b>SVI = 7.9</b> |      | <b>WYT = AN</b> |      |      | <b>Possible 2023 Table A =</b> |                | <b>3.343</b>          | <b>80%</b>  |
| Oroville EOM Storage                                 | 1273 | 2298 | 2627 | 2987  | 3287              | 3522 | 3520 | 3055             | 2597 | 2302            | 2207 | 2083 | 1987                           |                |                       |             |
| Feather R. release (avg. cfs)                        | 943  | 976  | 1224 | 3176  | 5093              | 3090 | 1630 | 7319             | 7660 | 6470            | 1252 | 1242 | 1252                           | -              |                       |             |
| SWP Banks PP exports                                 | 101  | 370  | 199  | 319   | 125               | 300  | 258  | 408              | 409  | 395             | 79   | 398  | 102                            | 3.362          |                       |             |
| <i>Potential South of Delta Art. 21 Water Avail.</i> | 0    | 0    | 0    | 0     | 0                 | 0    | 0    | 0                | 0    | 0               | 0    | 0    | 0                              | 0.000          |                       |             |
| SWP San Luis EOM Storage                             | 428  | 781  | 855  | 1014  | 914               | 986  | 891  | 901              | 961  | 994             | 663  | 707  | 515                            | -              |                       |             |
| SWP Contractor Deliveries                            | 63   | 103  | 132  | 147   | 222               | 237  | 361  | 405              | 358  | 330             | 379  | 336  | 280                            | 3.289          |                       |             |
| <b>50% (90% Fall) Exceedance SOD</b>                 |      |      |      |       | <b>SRI = 20.0</b> |      |      | <b>SVI = 7.9</b> |      | <b>WYT = AN</b> |      |      | <b>Possible 2023 Table A =</b> |                | <b>3.106</b>          | <b>74%</b>  |
| Oroville EOM Storage                                 | 1273 | 2298 | 2627 | 2987  | 3287              | 3522 | 3522 | 3057             | 2599 | 2304            | 2209 | 2085 | 1989                           |                |                       |             |
| Feather R. release (avg. cfs)                        | 943  | 976  | 1224 | 3176  | 5093              | 3090 | 1597 | 7319             | 7660 | 6470            | 1252 | 1242 | 1252                           | -              |                       |             |
| SWP Banks PP exports                                 | 101  | 370  | 199  | 171   | 125               | 300  | 179  | 408              | 409  | 395             | 79   | 398  | 102                            | 3.135          |                       |             |
| <i>Potential South of Delta Art. 21 Water Avail.</i> | 0    | 0    | 0    | 0     | 0                 | 0    | 0    | 0                | 0    | 0               | 0    | 0    | 0                              | 0.000          |                       |             |
| SWP San Luis EOM Storage                             | 428  | 781  | 864  | 885   | 801               | 890  | 742  | 783              | 869  | 925             | 621  | 688  | 515                            | -              |                       |             |
| SWP Contractor Deliveries                            | 63   | 96   | 123  | 137   | 206               | 220  | 334  | 374              | 331  | 307             | 352  | 312  | 261                            | 3.052          |                       |             |
| <b>90% Exceedance NOD</b>                            |      |      |      |       | <b>SRI = 15.4</b> |      |      | <b>SVI = 6.3</b> |      | <b>WYT = D</b>  |      |      | <b>Possible 2023 Table A =</b> |                | <b>2.731</b>          | <b>65%</b>  |
| Oroville EOM Storage                                 | 1273 | 2298 | 2492 | 2751  | 3001              | 3121 | 3007 | 2456             | 1949 | 1600            | 1508 | 1384 | 1320                           |                |                       |             |
| Feather R. release (avg. cfs)                        | 943  | 976  | 954  | 945   | 1042              | 1057 | 2739 | 7546             | 7481 | 6789            | 1252 | 1242 | 1252                           | -              |                       |             |
| SWP Banks PP exports                                 | 101  | 572  | 180  | 134   | 42                | 147  | 13   | 367              | 389  | 386             | 68   | 155  | 138                            | 2.591          |                       |             |
| SWP San Luis EOM Storage                             | 428  | 983  | 1062 | 1062  | 920               | 882  | 610  | 657              | 766  | 849             | 576  | 437  | 330                            | -              |                       |             |
| SWP Contractor Deliveries                            | 63   | 86   | 108  | 120   | 180               | 193  | 290  | 325              | 288  | 270             | 310  | 275  | 230                            | 2.677          |                       |             |
| <b>90% Exceedance SOD</b>                            |      |      |      |       | <b>SRI = 15.4</b> |      |      | <b>SVI = 6.3</b> |      | <b>WYT = D</b>  |      |      | <b>Possible 2023 Table A =</b> |                | <b>2.212</b>          | <b>53%</b>  |
| Oroville EOM Storage                                 | 1273 | 2298 | 2492 | 2751  | 3001              | 3121 | 3056 | 2489             | 1959 | 1600            | 1508 | 1384 | 1320                           |                |                       |             |
| Feather R. release (avg. cfs)                        | 943  | 976  | 954  | 945   | 1042              | 1057 | 1916 | 7806             | 7725 | 6941            | 1252 | 1242 | 1252                           | -              |                       |             |
| SWP Banks PP exports                                 | 101  | 370  | 199  | 105   | 42                | 36   | 15   | 384              | 409  | 395             | 68   | 155  | 102                            | 2.280          |                       |             |
| <i>Potential South of Delta Art. 21 Water Avail.</i> | 0    | 0    | 0    | 0     | 0                 | 0    | 0    | 0                | 0    | 0               | 0    | 0    | 0                              | 0.000          |                       |             |
| SWP San Luis EOM Storage                             | 428  | 781  | 898  | 893   | 785               | 672  | 461  | 591              | 777  | 919             | 704  | 616  | 515                            | -              |                       |             |
| SWP Contractor Deliveries                            | 63   | 72   | 89   | 97    | 145               | 156  | 230  | 258              | 228  | 220             | 251  | 223  | 188                            | 2.158          |                       |             |
| <b>99% (90% Fall) Exceedance NOD</b>                 |      |      |      |       | <b>SRI = 13.3</b> |      |      | <b>SVI = 5.6</b> |      | <b>WYT = D</b>  |      |      | <b>Possible 2023 Table A =</b> |                | <b>1.833</b>          | <b>44%</b>  |
| Oroville EOM Storage                                 | 1273 | 2298 | 2390 | 2522  | 2645              | 2646 | 2431 | 2023             | 1698 | 1600            | 1508 | 1375 | 1278                           |                |                       |             |
| Feather R. release (avg. cfs)                        | 943  | 976  | 954  | 1075  | 1042              | 1057 | 3630 | 4814             | 3952 | 2571            | 1252 | 1242 | 1252                           | -              |                       |             |
| SWP Banks PP exports                                 | 101  | 572  | 163  | 115   | 34                | 88   | 13   | 164              | 178  | 113             | 69   | 159  | 157                            | 1.825          |                       |             |
| SWP San Luis EOM Storage                             | 428  | 983  | 1059 | 1062  | 940               | 890  | 702  | 647              | 620  | 540             | 392  | 372  | 396                            | -              |                       |             |
| SWP Contractor Deliveries                            | 63   | 85   | 94   | 99    | 152               | 145  | 205  | 220              | 211  | 159             | 185  | 160  | 118                            | 1.833          |                       |             |
| <b>99% (90% Fall) Exceedance SOD</b>                 |      |      |      |       | <b>SRI = 13.3</b> |      |      | <b>SVI = 5.6</b> |      | <b>WYT = D</b>  |      |      | <b>Possible 2023 Table A =</b> |                | <b>1.516</b>          | <b>36%</b>  |
| Oroville EOM Storage                                 | 1273 | 2298 | 2390 | 2524  | 2647              | 2648 | 2486 | 2094             | 1753 | 1600            | 1508 | 1384 | 1320                           |                |                       |             |
| Feather R. release (avg. cfs)                        | 943  | 976  | 954  | 1042  | 1042              | 1057 | 2739 | 4554             | 4212 | 3496            | 1252 | 1242 | 1252                           | -              |                       |             |
| SWP Banks PP exports                                 | 101  | 370  | 160  | 90    | 34                | 26   | 22   | 148              | 194  | 168             | 69   | 154  | 112                            | 1.547          |                       |             |
| <i>Potential South of Delta Art. 21 Water Avail.</i> | 0    | 0    | 0    | 0     | 0                 | 0    | 0    | 0                | 0    | 0               | 0    | 0    | 0                              | 0.000          |                       |             |
| SWP San Luis EOM Storage                             | 428  | 781  | 870  | 864   | 767               | 679  | 537  | 509              | 538  | 537             | 419  | 420  | 416                            | -              |                       |             |
| SWP Contractor Deliveries                            | 63   | 72   | 78   | 82    | 126               | 120  | 167  | 177              | 170  | 134             | 155  | 134  | 101                            | 1.516          |                       |             |

**Assumptions for 2023 Allocation Analysis**

**Notes:**

- SWPAO's delivery files: 100% initial request for the 25% hydrology study, 50% initial request for the 50 and 90% hydrology studies and 30% updated deliveries for the 99% hydrology study.
- All studies include 100% FRSA deliveries.
- 25% and 50% studies follow ITP Condition 8.17 SWP export condition limited to 150 TAF export curtailment for spring outflow.

**Estimated Delivery in Details**

| Calendar Year 2023                      | (1)<br>'23 Table A | (2)<br>'23-'24 ANTCO | (3)<br>'22 CO & Others | (1+2)<br>2023 Allocation | (1+3)<br>2023 Delivery | (1+2+3)<br>Total Water Available for '23 |
|---|--------------------|----------------------|------------------------|--------------------------|------------------------|--|
| 25% (50% Fall) Exceedance SOD Least OMR | 3.885 maf          | 0.287 maf            | 0.000 maf              | 4.172 maf                | 3.885 maf              | 4.172 maf                                |
| 50% (90% Fall) Exceedance NOD           | 3.663 maf          | 0.288 maf            | 0.000 maf              | 3.951 maf                | 3.663 maf              | 3.951 maf                                |
| 50% (90% Fall) Exceedance SOD least OMR | 3.055 maf          | 0.288 maf            | 0.234 maf              | 3.343 maf                | 3.289 maf              | 3.577 maf                                |
| 50% (90% Fall) Exceedance SOD           | 2.818 maf          | 0.288 maf            | 0.234 maf              | 3.106 maf                | 3.052 maf              | 3.340 maf                                |
| 90% Exceedance NOD                      | 2.443 maf          | 0.288 maf            | 0.234 maf              | 2.731 maf                | 2.677 maf              | 2.965 maf                                |
| 90% Exceedance SOD                      | 1.924 maf          | 0.288 maf            | 0.234 maf              | 2.212 maf                | 2.158 maf              | 2.446 maf                                |
| 99% (90% Fall) Exceedance NOD           | 1.565 maf          | 0.223 maf            | 0.268 maf              | 1.788 maf                | 1.610 maf              | 3.576 maf                                |
| 99% (90% Fall) Exceedance SOD           | 1.248 maf          | 0.223 maf            | 0.268 maf              | 1.471 maf                | 1.293 maf              | 2.942 maf                                |

**Reservoir Targets**

- Lake Oroville storage target = 1.600 MAF
- SWP San Luis storage targets for 2023

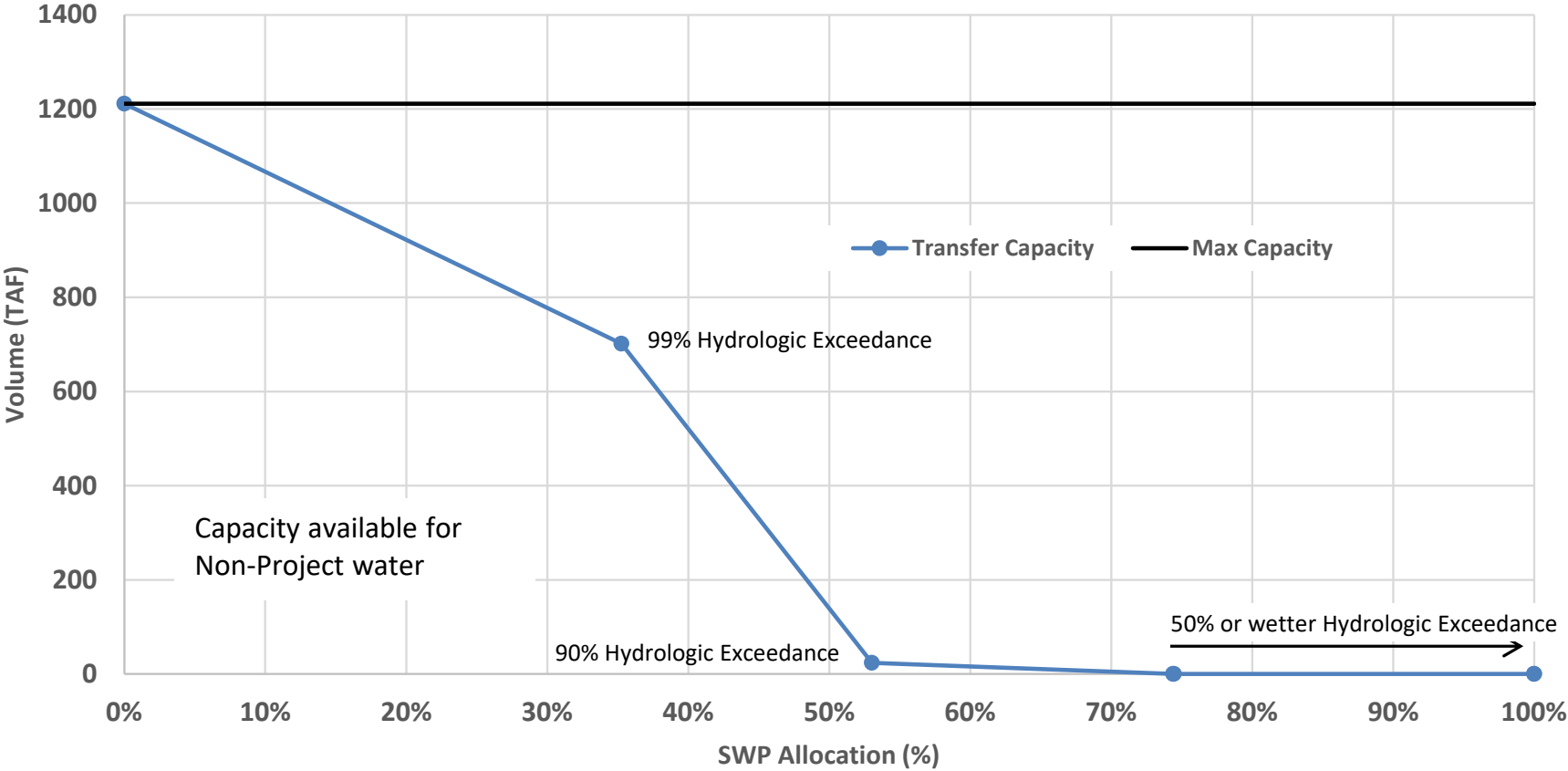
| <u>Exceedance</u>                                 | <u>Deadpool</u> | = | <u>Total</u> |                       |                         |   |
|---|-----------------|---|--------------|-----------------------|-------------------------|---|
| All   | 42 taf          |   | 42 taf       |                       |                         |   |
| >>>>> for 25% (50% Fall) Exceedance SOD Least OMR |                 |   |              |                       |                         |   |
|   | <u>Deadpool</u> |   |              | ANTCO, Unscheduled CO |                         |   |
|   |                 |   |              | & Backed up Water     | <u>Required Storage</u> |   |
| Oct-23  | 42 taf          |   |              | 225 taf               | 267 >>> 1/3             | of '23-'24 ANTCO is available in Oct. '23 |
| Nov-23  | 42 taf          |   |              | 257 taf               | 299 >>> 2/3             | of '23-'24 ANTCO is available in Nov. '23 |
| Dec-23  | 42 taf          |   |              | 288 taf               | 330 >>> 100%            | of '23-'24 ANTCO is available in Dec. '23 |
| >>>>> for 50% (90% Fall) Exceedance NOD           |                 |   |              |                       |                         |   |
|   | <u>Deadpool</u> |   |              | ANTCO, Unscheduled CO |                         |   |
|   |                 |   |              | & Backed up Water     | <u>Required Storage</u> |   |
| Oct-23  | 42 taf          |   |              | 221 taf               | 263 >>> 1/3             | of '23-'24 ANTCO is available in Oct. '23 |
| Nov-23  | 42 taf          |   |              | 255 taf               | 297 >>> 2/3             | of '23-'24 ANTCO is available in Nov. '23 |
| Dec-23  | 42 taf          |   |              | 288 taf               | 330 >>> 100%            | of '23-'24 ANTCO is available in Dec. '23 |
| >>>>> for 50% (90% Fall) Exceedance SOD least OMR |                 |   |              |                       |                         |   |
|   | <u>Deadpool</u> |   |              | ANTCO, Unscheduled CO |                         |   |
|   |                 |   |              | & Backed up Water     | <u>Required Storage</u> |   |
| Oct-23  | 42 taf          |   |              | 250 taf               | 292 >>> 1/3             | of '23-'24 ANTCO is available in Oct. '23 |
| Nov-23  | 42 taf          |   |              | 362 taf               | 404 >>> 2/3             | of '23-'24 ANTCO is available in Nov. '23 |
| Dec-23  | 42 taf          |   |              | 473 taf               | 515 >>> 100%            | of '23-'24 ANTCO is available in Dec. '23 |
| >>>>> for 50% (90% Fall) Exceedance SOD           |                 |   |              |                       |                         |   |
|   | <u>Deadpool</u> |   |              | ANTCO, Unscheduled CO |                         |   |
|   |                 |   |              | & Backed up Water     | <u>Required Storage</u> |   |
| Oct-23  | 42 taf          |   |              | 250 taf               | 292 >>> 1/3             | of '23-'24 ANTCO is available in Oct. '23 |
| Nov-23  | 42 taf          |   |              | 362 taf               | 404 >>> 2/3             | of '23-'24 ANTCO is available in Nov. '23 |
| Dec-23  | 42 taf          |   |              | 473 taf               | 515 >>> 100%            | of '23-'24 ANTCO is available in Dec. '23 |
| >>>>> for 90% Exceedance NOD                      |                 |   |              |                       |                         |   |
|   | <u>Deadpool</u> |   |              | ANTCO, Unscheduled CO |                         |   |
|   |                 |   |              | & Backed up Water     | <u>Required Storage</u> |   |
| Oct-23  | 42 taf          |   |              | 188 taf               | 230 >>> 1/3             | of '23-'24 ANTCO is available in Oct. '23 |
| Nov-23  | 42 taf          |   |              | 238 taf               | 280 >>> 2/3             | of '23-'24 ANTCO is available in Nov. '23 |
| Dec-23  | 42 taf          |   |              | 288 taf               | 330 >>> 100%            | of '23-'24 ANTCO is available in Dec. '23 |
| >>>>> for 90% Exceedance SOD                      |                 |   |              |                       |                         |   |
|   | <u>Deadpool</u> |   |              | Unscheduled CO        |                         |   |
|   |                 |   |              | & Backed up Water     | <u>Required Storage</u> |   |
| Oct-23  | 42 taf          |   |              | 250 taf               | 292 >>> 1/3             | of '23-'24 ANTCO is available in Oct. '23 |
| Nov-23  | 42 taf          |   |              | 362 taf               | 404 >>> 2/3             | of '23-'24 ANTCO is available in Nov. '23 |
| Dec-23  | 42 taf          |   |              | 473 taf               | 515 >>> 100%            | of '23-'24 ANTCO is available in Dec. '23 |
| >>>>> for 99% (90% Fall) Exceedance NOD           |                 |   |              |                       |                         |   |
|   | <u>Deadpool</u> |   |              | Unscheduled CO        |                         |   |
|   |                 |   |              | & Backed up Water     | <u>Required Storage</u> |   |
| Oct-23  | 42 taf          |   |              | 185 taf               | 227 >>> 1/3             | of '23-'24 ANTCO is available in Oct. '23 |
| Nov-23  | 42 taf          |   |              | 269 taf               | 311 >>> 2/3             | of '23-'24 ANTCO is available in Nov. '23 |
| Dec-23  | 42 taf          |   |              | 354 taf               | 396 >>> 100%            | of '23-'24 ANTCO is available in Dec. '23 |
| >>>>> for 99% (90% Fall) Exceedance SOD           |                 |   |              |                       |                         |   |
|   | <u>Deadpool</u> |   |              | Unscheduled CO        |                         |   |
|   |                 |   |              | & Backed up Water     | <u>Required Storage</u> |   |
| Oct-23  | 42 taf          |   |              | 192 taf               | 234 >>> 1/3             | of '23-'24 ANTCO is available in Oct. '23 |
| Nov-23  | 42 taf          |   |              | 283 taf               | 325 >>> 2/3             | of '23-'24 ANTCO is available in Nov. '23 |
| Dec-23  | 42 taf          |   |              | 374 taf               | 416 >>> 100%            | of '23-'24 ANTCO is available in Dec. '23 |

**OMR Management**

| OMR Restrictions | Moderate Flow (CFS) | Least Restrictive Flow (CFS) |
|------------------|---------------------|------------------------------|
| January          | -3500               | -3500                        |
| February         | -3500               | -5000                        |
| March            | -2500               | -5000                        |
| April            | -2500               | -5000                        |
| May              | -2500               | -5000                        |
| June             | -3500               | -5000                        |
| Dec 1-17         | -2000               | -2000                        |
| Dec 18-31        | -2000               | -2000                        |

\* Targets in accordance with the USFWS Delta Smelt BO, NMFS Salmon BO and the Longfin Incidental Take Permit.

### Total Estimated Conveyance Capacity at Banks July through September of 2023



Based on February's Allocation Analysis for 2023.  
 Assumed the lesser of maximum permitted capacity of 6,680 cfs at Clifton Court Forebay and unit availability at Banks PP.  
 Capacity may be further reduced up to a maximum of 128 TAF for the CVC Contractors.