

The Metropolitan Water District of Southern California

GENERAL MINERAL AND PHYSICAL ANALYSIS OF METROPOLITAN'S WATER SUPPLIES

TABLE D

April 2012

| CONSTITUENTS                          | UNITS | SOURCE WATERS |                    |              |              |                  |             |                     |              | TREATMENT PLANT EFFLUENTS |        |        |         |       |
|---------------------------------------|-------|---------------|--------------------|--------------|--------------|------------------|-------------|---------------------|--------------|---------------------------|--------|--------|---------|-------|
|                                       |       | LAKE HAVASU   | SAN JACINTO TUNNEL | LAKE MATHEWS | CASTAIC LAKE | SILVER-WOOD LAKE | LAKE PERRIS | DIAMOND VALLEY LAKE | LAKE SKINNER | WEY-MOUTH                 | DIEMER | JENSEN | SKINNER | MILLS |
| SILICA                                | mg/L  | 8.3           | 7.7                | 7.8          | 13.4         | 9.8              | 11.8        | 9.8                 | 8.3          | 8.1                       | 7.9    | 12.6   | 8.6     | 9.4   |
| CALCIUM                               | mg/L  | 71            | 71                 | 64           | 23           | 21               | 22          | 28                  | 38           | 45                        | 53     | 23     | 41      | 23    |
| MAGNESIUM                             | mg/L  | 25            | 25                 | 24           | 11           | 12               | 11          | 13                  | 16           | 19                        | 21     | 11     | 17      | 12    |
| SODIUM                                | mg/L  | 84            | 88                 | 88           | 39           | 56               | 48          | 52                  | 60           | 74                        | 81     | 43     | 66      | 60    |
| POTASSIUM                             | mg/L  | 4.4           | 4.4                | 4.5          | 2.4          | 2.9              | 2.7         | 3.2                 | 3.5          | 3.7                       | 4.0    | 2.3    | 3.6     | 2.8   |
| CARBONATE                             | mg/L  | 0             | 0                  | 0            | 0            | 0                | 0           | 0                   | 0            | 0                         | 0      | 1      | 0       | 1     |
| BICARBONATE                           | mg/L  | 165           | 162                | 151          | 88           | 94               | 93          | 95                  | 113          | 118                       | 124    | 89     | 112     | 94    |
| SULFATE                               | mg/L  | 224           | 227                | 213          | 43           | 37               | 41          | 70                  | 104          | 132                       | 164    | 46     | 117     | 44    |
| CHLORIDE                              | mg/L  | 82            | 84                 | 87           | 47           | 80               | 64          | 64                  | 67           | 85                        | 87     | 50     | 75      | 80    |
| NITRATE                               | mg/L  | 1.9           | 1.6                | 0.9          | 1.7          | 2.2              | <0.1        | 1.2                 | 0.8          | 1.5                       | 1.3    | 1.7    | 0.9     | 3.1   |
| FLUORIDE                              | mg/L  | 0.3           | 0.3                | 0.3          | 0.1          | <0.1             | 0.1         | 0.1                 | 0.2          | 0.8                       | 0.9    | 0.8    | 0.8     | 0.6   |
| TOTAL DISSOLVED SOLIDS (TDS)          | mg/L  | 583           | 590                | 565          | 225          | 268              | 247         | 289                 | 354          | 428                       | 482    | 236    | 386     | 283   |
| TOTAL HARDNESS AS CaCO <sub>3</sub>   | mg/L  | 284           | 284                | 264          | 102          | 104              | 102         | 122                 | 160          | 190                       | 223    | 101    | 173     | 107   |
| TOTAL ALKALINITY AS CaCO <sub>3</sub> | mg/L  | 135           | 133                | 124          | 72           | 77               | 76          | 78                  | 93           | 97                        | 102    | 75     | 92      | 79    |
| FREE CARBON DIOXIDE                   | mg/L  | 2.1           | 1.4                | 1.5          | 1.7          | 0.7              | 1.9         | 2.0                 | 0.9          | 1.6                       | 1.6    | 0.6    | 1.2     | 0.6   |
| pH                                    | pH    | 8.11          | 8.27               | 8.23         | 7.93         | 8.35             | 7.91        | 7.89                | 8.32         | 8.10                      | 8.11   | 8.37   | 8.20    | 8.45  |
| SPECIFIC CONDUCTANCE                  | µS/cm | 934           | 953                | 928          | 380          | 498              | 455         | 495                 | 635          | 756                       | 839    | 397    | 683     | 524   |
| COLOR                                 | CU    | 3             | 2                  | 2            | 6            | 8                | 6           | 5                   | 4            | 1                         | 1      | 1      | 1       | 1     |
| TURBIDITY                             | NTU   | 0.49          | 0.50               | 0.30         | 0.86         | 1.1              | 1.3         | 0.35                | 0.51         | 0.05                      | 0.05   | 0.04   | 0.07    | 0.06  |
| TEMPERATURE                           | °C    | 17            | 17                 | 17           | 13           | 12               | 16          | 15                  | 18           | 16                        | 19     | 18     | 20      | 16    |
| BROMIDE                               | mg/L  | 0.07          | 0.05               | 0.07         | 0.14         | 0.25             | 0.20        | 0.18                | 0.14         | --                        | --     | --     | --      | --    |
| TOTAL ORGANIC CARBON                  | mg/L  | 3.04          | 3.00               | 2.93         | 2.44         | 3.08             | 3.69        | 2.52                | 2.82         | --                        | --     | --     | --      | --    |
| SATURATION INDEX                      | --    | --            | --                 | --           | --           | --               | --          | --                  | --           | 0.24                      | 0.38   | 0.19   | 0.35    | 0.25  |
| STATE PROJECT WATER                   | %     | 0             | 0                  | 0            | 100          | 100              | 100         | 95                  | 75           | 55                        | 41     | 100    | 66      | 100   |