

The Metropolitan Water District of Southern California

GENERAL MINERAL AND PHYSICAL ANALYSIS OF METROPOLITAN'S WATER SUPPLIES

TABLE D

September 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  | 8.6           | 8.7                | 7.0          | 13.0         | 11.1              | 13.0        | 10.4                | 8.6          | 7.4                       | 7.9    | 12.8   | 9.2     | 10.2  |
| CALCIUM                               | mg/L  | 71            | 68                 | 65           | 25           | 16                | 23          | 29                  | 42           | 56                        | 48     | 25     | 40      | 15    |
| MAGNESIUM                             | mg/L  | 24            | 24                 | 25           | 11           | 10                | 12          | 13                  | 17           | 22                        | 20     | 11     | 16      | 10    |
| SODIUM                                | mg/L  | 81            | 82                 | 85           | 44           | 39                | 49          | 51                  | 62           | 83                        | 75     | 50     | 67      | 48    |
| POTASSIUM                             | mg/L  | 4.2           | 4.2                | 4.3          | 2.4          | 2.2               | 2.8         | 3.0                 | 3.5          | 4.1                       | 3.7    | 2.4    | 3.6     | 2.3   |
| CARBONATE                             | mg/L  | 0             | 0                  | 2            | 0            | 0                 | 0           | 0                   | 2            | 0                         | 0      | 0      | 1       | 1     |
| BICARBONATE                           | mg/L  | 161           | 155                | 142          | 98           | 79                | 101         | 101                 | 116          | 127                       | 118    | 102    | 116     | 78    |
| SULFATE                               | mg/L  | 211           | 217                | 223          | 49           | 19                | 37          | 64                  | 117          | 185                       | 159    | 52     | 112     | 24    |
| CHLORIDE                              | mg/L  | 75            | 78                 | 82           | 57           | 56                | 67          | 64                  | 70           | 84                        | 81     | 59     | 78      | 68    |
| NITRATE                               | mg/L  | 1.1           | 0.8                | 0.5          | 2.4          | 0.7               | 0.1         | 1.6                 | <0.1         | 0.7                       | 0.7    | 2.4    | 0.4     | 1.9   |
| 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     | 0.8   |
| TOTAL DISSOLVED SOLIDS (TDS)          | mg/L  | 557           | 560                | 565          | 253          | 194               | 254         | 287                 | 380          | 506                       | 455    | 266    | 386     | 220   |
| TOTAL HARDNESS AS CaCO <sub>3</sub>   | mg/L  | 276           | 271                | 264          | 110          | 78                | 104         | 124                 | 173          | 233                       | 207    | 110    | 170     | 80    |
| TOTAL ALKALINITY AS CaCO <sub>3</sub> | mg/L  | 132           | 127                | 120          | 80           | 65                | 83          | 83                  | 99           | 104                       | 97     | 84     | 97      | 66    |
| FREE CARBON DIOXIDE                   | mg/L  | 3.6           | 1.3                | 0.9          | 4.8          | 1.4               | 1.8         | 4.0                 | 0.5          | 1.8                       | 1.6    | 1.0    | 0.8     | 0.5   |
| pH                                    | pH    | 7.87          | 8.30               | 8.42         | 7.53         | 7.98              | 7.96        | 7.62                | 8.62         | 8.07                      | 8.09   | 8.25   | 8.39    | 8.40  |
| SPECIFIC CONDUCTANCE                  | µS/cm | 899           | 909                | 906          | 459          | 342               | 458         | 513                 | 651          | 851                       | 787    | 487    | 688     | 384   |
| COLOR                                 | CU    | --            | --                 | --           | --           | --                | --          | --                  | --           | --                        | --     | --     | --      | --    |
| TURBIDITY                             | NTU   | 0.55          | 0.48               | 0.73         | 0.41         | 1.1               | 1.4         | 0.41                | 0.88         | 0.05                      | 0.03   | 0.04   | 0.06    | 0.05  |
| TEMPERATURE                           | °C    | 25            | 29                 | 27           | 18           | 24                | 27          | 18                  | 24           | 25                        | 21     | 24     | 27      | 27    |
| BROMIDE                               | mg/L  | 0.07          | 0.04               | 0.06         | 0.18         | 0.16              | 0.22        | 0.19                | 0.14         | --                        | --     | --     | --      | --    |
| TOTAL ORGANIC CARBON                  | mg/L  | 3.08          | 3.08               | 3.14         | 2.38         | 2.70              | 3.52        | 2.45                | 3.13         | --                        | --     | --     | --      | --    |
| SATURATION INDEX                      | --    | --            | --                 | --           | --           | --                | --          | --                  | --           | 0.45                      | 0.33   | 0.24   | 0.66    | 0.17  |
| STATE PROJECT WATER                   | %     | 0             | 0                  | 0            | 100          | 100               | 100         | 79                  | 54           | 21                        | 39     | 100    | 56      | 100   |