





**Fluoridation & Chlorination**

**WSSN 2310**

**Dec-16**

| D<br>A<br>T<br>E | Fluoride Applied<br>F <sup>-</sup> mg/l | Fluoride Analyses<br>mg/l |      |      | Chlorine App. Mg/l |  |                    | Chlorine Residual mg/l |      |          |     |    |    |    |     |    |
|------------------|---|---------------------------|------|------|--------------------|--|--------------------|------------------------|------|----------|-----|----|----|----|-----|----|
|                  |   |                           |      |      | Chlorine App. Mg/l | Chlorine (prior to filtration)<br>mg/L<br>OCI <sup>-</sup> | Post Chlorine mg/L | Sta II                 | Dort | 3MG Well | Tap |    |    |    |     |    |
|                  |   | Free                      | Free | Free |                    |  |                    | Free                   |      |          |     |    |    |    |     |    |
|                  |   | 14                        | 15   | 16   | 17                 | 18   | 19                 | 20                     | 21   | 22       | 23  | 24 | 25 | 26 | 27  | 28 |
| 1                |   |                           | 0.79 |      | 1.11               |  |                    |                        | 0.8  |          |     |    |    |    | 1.7 |    |
| 2                |   |                           | 0.79 |      | 1.06               |  |                    |                        | 0.9  |          |     |    |    |    | 1.6 |    |
| 3                |   |                           | 0.81 |      | 1.07               |  |                    |                        | 0.7  |          |     |    |    |    | 1.8 |    |
| 4                |   |                           | 0.77 |      | 1.10               |  |                    |                        | 0.9  |          |     |    |    |    | 1.7 |    |
| 5                |   |                           | 0.78 |      | 1.12               |  |                    |                        | 0.9  |          |     |    |    |    | 1.8 |    |
| 6                |   |                           | 0.73 |      | 1.11               |  |                    |                        | 0.9  |          |     |    |    |    | 1.6 |    |
| 7                |   |                           | 0.77 |      | 1.04               |  |                    |                        | 0.8  |          |     |    |    |    | 1.7 |    |
| 8                |   |                           | 0.81 |      | 1.04               |  |                    |                        | 0.9  |          |     |    |    |    | 1.7 |    |
| 9                |   |                           | 0.77 |      | 1.05               |  |                    |                        | 0.8  |          |     |    |    |    | 1.7 |    |
| 10               |   |                           | 0.80 |      | 1.07               |  |                    |                        | 0.9  |          |     |    |    |    | 1.7 |    |
| 11               |   |                           | 0.76 |      | 1.06               |  |                    |                        | 0.9  |          |     |    |    |    | 1.6 |    |
| 12               |   |                           | 0.78 |      | 1.13               |  |                    |                        | 0.9  |          |     |    |    |    | 1.7 |    |
| 13               |   |                           | 0.77 |      | 1.02               |  |                    |                        | 0.8  |          |     |    |    |    | 1.6 |    |
| 14               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 15               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 16               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 17               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 18               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 19               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 20               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 21               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 22               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 23               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 24               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 25               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 26               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 27               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 28               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 29               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 30               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| 31               |   |                           |      |      |                    |  |                    |                        |      |          |     |    |    |    |     |    |
| AVG              |   |                           | 0.78 |      | 1.08               |  |                    |                        | 0.8  |          |     |    |    |    | 1.7 |    |
| MAX              |   |                           | 0.81 |      | 1.13               |  |                    |                        | 0.9  |          |     |    |    |    | 1.8 |    |
| MIN              |   |                           | 0.73 |      | 1.02               |  |                    |                        | 0.7  |          |     |    |    |    | 1.6 |    |



**Chemical Analyses**

**WSSN 2310**

**Dec-16**

| D<br>A<br>T<br>E | pH   |      | Total Hardness as CaCO <sub>3</sub> mg/l |     | Total Alkalinity as CaCO <sub>3</sub> mg/l |     | NonCarbonate Hardness as CaCO <sub>3</sub> mg/l |     | Iron mg/L |      | Calcium Ca <sup>2+</sup> mg/l |      | Magnesium as Mg <sup>2+</sup> mg/l |     | Chloride as Cl <sup>-</sup> mg/l |      |
|------------------|------|------|--|-----|--|-----|---|-----|-----------|------|-------------------------------|------|------------------------------------|-----|----------------------------------|------|
|                  | CSII | Tap  | Raw                                      | Tap | Raw  | Tap | Raw   | Tap | Raw       | Tap  | Raw                           | Tap  | Raw                                | Tap | Raw                              | Tap  |
|                  | 29   | 30   | 31                                       | 32  | 33   | 34  | 35  | 36  | 37        | 38   | 39                            | 40   | 41                                 | 42  | 43                               | 44   |
| 1                | 7.38 | 7.36 |  | 100 |  | 70  |   | 30  |           | 0.01 |                               | 32.9 |                                    | 4.4 |                                  | 13   |
| 2                | 7.38 | 7.28 |  | 100 |  | 68  |   | 32  |           | 0.01 |                               | 32.9 |                                    | 4.4 |                                  | 13   |
| 3                | 7.33 | 7.25 |  | 98  |  | 70  |   | 28  |           | 0.01 |                               | 32.1 |                                    | 4.4 |                                  | 12   |
| 4                | 7.40 | 7.27 |  | 98  |  | 70  |   | 28  |           | 0.01 |                               | 32.1 |                                    | 4.4 |                                  | 12   |
| 5                | 7.39 | 7.34 |  | 96  |  | 70  |   | 26  |           | 0.01 |                               | 35.3 |                                    | 1.9 |                                  | 12   |
| 6                | 7.34 | 7.31 |  | 96  |  | 68  |   | 28  |           | 0.01 |                               | 32.1 |                                    | 3.4 |                                  | 12   |
| 7                | 7.36 | 7.29 |  | 96  |  | 70  |   | 26  |           | 0.01 |                               | 30.5 |                                    | 4.9 |                                  | 13   |
| 8                | 7.38 | 7.29 |  | 96  |  | 70  |   | 26  |           | 0.01 |                               | 32.9 |                                    | 3.4 |                                  | 13   |
| 9                | 7.40 | 7.28 |  | 96  |  | 68  |   | 28  |           | 0.01 |                               | 32.1 |                                    | 3.9 |                                  | 13   |
| 10               | 7.37 | 7.28 |  | 96  |  | 70  |   | 26  |           | 0.01 |                               | 33.7 |                                    | 2.9 |                                  | 13   |
| 11               | 7.36 | 7.25 |  | 98  |  | 68  |   | 30  |           | 0.01 |                               | 33.7 |                                    | 3.4 |                                  | 12   |
| 12               | 7.50 | 7.33 |  | 98  |  | 70  |   | 28  |           | 0.01 |                               | 31.3 |                                    | 4.9 |                                  | 13   |
| 13               | 7.39 | 7.29 |  | 96  |  | 70  |   | 26  |           | 0.01 |                               | 31.3 |                                    | 4.4 |                                  | 13   |
| 14               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 15               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 16               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 17               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 18               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 19               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 20               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 21               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 22               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 23               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 24               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 25               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 26               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 27               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 28               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 29               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 30               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| 31               |      |      |  |     |  |     |   |     |           |      |                               |      |                                    |     |                                  |      |
| AVG              | 7.38 | 7.29 |  | 97  |  | 69  |   | 28  |           | 0.01 |                               | 32.5 |                                    | 3.9 |                                  | 13   |
| MAX              | 7.50 | 7.36 |  | 100 |  | 70  |   | 32  |           | 0.01 |                               | 35.3 |                                    | 4.9 |                                  | 13.0 |
| MIN              | 7.33 | 7.25 |  | 96  |  | 68  |   | 26  |           | 0.01 |                               | 30.5 |                                    | 1.9 |                                  | 12.0 |



**WSSN 2310**

**Dec-16**

| D<br>A<br>T<br>E | Total Coliform |    |      |             |        |            | Standard<br>Plate<br>Count | Conductivity<br>(mS) | Temp<br>deg.C | Color |     | Odor |     |     |     |
|------------------|----------------|----|------|-------------|--------|------------|----------------------------|----------------------|---------------|-------|-----|------|-----|-----|-----|
|                  | Plant Tap      |    |      |             |        |            |                            |                      |               | Raw   | Tap | Raw  | Tap | Raw | Tap |
|                  |                |    | Dort | 3MG<br>Well | Sta II | Lab<br>Tap |                            |                      |               |       |     |      |     |     |     |
|                  | 60             | 61 | 62   | 63          | 64     | 65         |                            |                      |               | 66    | 67  | 68   | 69  | 71  | 72  |
| 1                |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.21          | 12.9  |     |      |     |     |     |
| 2                |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.20          | 13.0  |     |      |     |     |     |
| 3                |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.20          | 12.9  |     |      |     |     |     |
| 4                |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.21          | 12.9  |     |      |     |     |     |
| 5                |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.21          | 12.5  |     |      |     |     |     |
| 6                |                |    |      |             | 2 / 0  | 2 / 0      | < 2                        |                      | 0.20          | 12.7  |     |      |     |     |     |
| 7                |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.21          | 12.5  |     |      |     |     |     |
| 8                |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.21          | 12.0  |     |      |     |     |     |
| 9                |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.20          | 12.0  |     |      |     |     |     |
| 10               |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.20          | 12.0  |     |      |     |     |     |
| 11               |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.20          | 11.8  |     |      |     |     |     |
| 12               |                |    |      |             | 2 / 0  | 2 / 0      |                            |                      | 0.20          | 11.9  |     |      |     |     |     |
| 13               |                |    |      |             |        |            |                            |                      | 0.20          | 12.9  |     |      |     |     |     |
| 14               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 15               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 16               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 17               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 18               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 19               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 20               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 21               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 22               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 23               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 24               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 25               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 26               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 27               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 28               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 29               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 30               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| 31               |                |    |      |             |        |            |                            |                      |               |       |     |      |     |     |     |
| AVG              |                |    |      |             |        |            |                            |                      | 0.20          | 12.5  |     |      |     |     |     |
| MAX              |                |    |      |             |        |            |                            |                      | 0.21          | 13.0  |     |      |     |     |     |
| MIN              |                |    |      |             |        |            |                            |                      | 0.20          | 11.8  |     |      |     |     |     |



**Distribution System Monitoring      WSSN 2310      Dec-16**

| DATE                               | Free Chlorine Residual at Bacteriological Monitoring Stations mg/l |      |       |              |      |   |      |      |      |  |                   |
|------------------------------------|--|------|-------|--------------|------|---|------|------|------|--|-------------------|
|                                    | 1  | 2    | 3     | 4            | 5    | 6   | 7    | 8    | CS   | WR**   | Number of Samples |
| 1                                  | 1.65   | 1.44 | 1.54  | 1.33         | 1.13 | 0.46  | 1.57 | 1.62 | 1.19 | 0.83   | 10                |
| 2                                  |  |      |       |              |      |   |      |      |      |  | 0                 |
| 3                                  |  |      |       |              |      |   |      |      |      |  | 0                 |
| 4                                  |  |      |       |              |      |   |      |      |      |  | 0                 |
| 5                                  |  |      |       |              |      |   |      |      |      |  | 0                 |
| 6                                  | 1.56   | 1.42 | 1.41  | 1.32         | 1.04 | 0.48  | 1.33 | 1.35 | 1.62 | 1.27   | 10                |
| 7                                  | 1.57   | 1.52 | 1.37  | 1.29         | 1.18 | 0.53  | 1.42 | 1.52 | 1.54 | 1.16   | 10                |
| 8                                  | 1.58   | 1.54 | 1.41* | 1.35         | 1.16 | 0.48  | 1.38 | 1.60 | 1.26 | 0.83   | 9                 |
| 9                                  |  |      |       |              |      |   |      |      |      |  | 10                |
| 10                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 11                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 12                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 13                                 | 1.54   | 1.40 | 1.46  | 1.40         | 1.24 | 0.45  | 1.50 | 1.49 | 1.30 | 0.85   | 10                |
| 14                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 15                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 16                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 17                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 18                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 19                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 20                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 21                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 22                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 23                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 24                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 25                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 26                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 27                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 28                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 29                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| 30                                 |  |      |       |              |      |   |      |      |      |  | 10                |
| 31                                 |  |      |       |              |      |   |      |      |      |  | 0                 |
| <b>Monthly Cl<sub>2</sub> Avg.</b> |  |      |       | <b>1.275</b> |      | **Midway Market is being used until West Side Reservoir activities are complete and until further notice (11/15/2016) |      |      |      | *On 12/8/16, Premier Insurance was used. Water was shut of at Liquor Palace. |                   |
| <b>Total Samples</b>               |  |      |       | <b>49</b>    |      |   |      |      |      |  |                   |



**Distribution System Monitoring      WSSN 2310      Dec-16**

| D<br>A<br>T<br>E                   | Total Chlorine Residual at Bacteriological Monitoring Stations mg/l |      |       |              |      |   |      |      |      |  |                   |
|------------------------------------|---|------|-------|--------------|------|---|------|------|------|--|-------------------|
|                                    | 1   | 2    | 3     | 4            | 5    | 6   | 7    | 8    | CS   | WR**   | Number of Samples |
| 1                                  | 1.83  | 1.59 | 1.66  | 1.53         | 1.30 | 0.61  | 1.80 | 1.75 | 1.32 | 0.92   | 10                |
| 2                                  |   |      |       |              |      |   |      |      |      |  | 0                 |
| 3                                  |   |      |       |              |      |   |      |      |      |  | 0                 |
| 4                                  |   |      |       |              |      |   |      |      |      |  | 0                 |
| 5                                  |   |      |       |              |      |   |      |      |      |  | 0                 |
| 6                                  | 1.68  | 1.62 | 1.69  | 1.51         | 1.33 | 0.63  | 1.50 | 1.60 | 1.80 | 1.40   | 10                |
| 7                                  | 1.77  | 1.65 | 1.56  | 1.41         | 1.35 | 0.73  | 1.69 | 1.72 | 1.74 | 1.31   | 10                |
| 8                                  | 1.82  | 1.66 | 1.68* | 1.47         | 1.37 | 0.67  | 1.66 | 1.74 | 1.40 | 0.99   | 9                 |
| 9                                  |   |      |       |              |      |   |      |      |      |  | 0                 |
| 10                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 11                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 12                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 13                                 | 1.74  | 1.65 | 1.70  | 1.66         | 1.41 | 0.55  | 1.63 | 1.67 | 1.57 | 1.27   | 10                |
| 14                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 15                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 16                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 17                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 18                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 19                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 20                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 21                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 22                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 23                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 24                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 25                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 26                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 27                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 28                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 29                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| 30                                 |   |      |       |              |      |   |      |      |      |  | 10                |
| 31                                 |   |      |       |              |      |   |      |      |      |  | 0                 |
| <b>Monthly Cl<sub>2</sub> Avg.</b> |   |      |       | <b>1.462</b> |      | **Midway Market is being used until West Side Reservoir activities are complete and until further notice (11/15/2016) |      |      |      | *On 12/8/16, Premier Insurance was used. Water was shut of at Liquor Palace. |                   |
| <b>Total Samples</b>               |   |      |       | <b>59</b>    |      |   |      |      |      |  |                   |

