



Fluoridation & Chlorination

WSSN 2310

Dec-18

| D A T E | Fluoride Applied F mg/l | Fluoride Analyses mg/l | | | Chlorine App. Mg/l | | | Chlorine Residual mg/l | | | | | | | | |
|------------------|----------------------------|------------------------|------|------|--------------------|--|--------------------|------------------------|------|----------|------|----|----|----|-----|----|
| | | Raw | Tap | Dist | Chlorine App. Mg/l | Chlorine (prior to filtration) mg/L OCl ⁻ | 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 | | 0.71 | 0.71 | | 1.14 | | | | 1.0 | | | | | | 1.6 | |
| 2 | | 0.65 | 0.71 | | 1.02 | | | | 1.0 | | | | | | 1.7 | |
| 3 | | 0.64 | 0.70 | | 1.09 | | | | 1.1 | | | | | | 1.7 | |
| 4 | | 0.74 | 0.77 | | 1.08 | | | | 1.1 | | | | | | 1.7 | |
| 5 | | 0.64 | 0.67 | | 0.82 | | | | 1.1 | | | | | | 1.6 | |
| 6 | | 0.57 | 0.54 | | 1.02 | | | | 1.1 | | | | | | 1.4 | |
| 7 | | 0.60 | 0.70 | | 0.96 | | | | 1.1 | | | | | | 1.6 | |
| 8 | | 0.65 | 0.70 | | 1.00 | | | | 1.1 | | | | | | 1.6 | |
| 9 | | 0.61 | 0.60 | | 0.96 | | | | 1.1 | | | | | | 1.6 | |
| 10 | | 0.64 | 0.67 | | 0.95 | | | | 1.1 | | | | | | 1.6 | |
| 11 | | 0.62 | 0.65 | | 1.03 | | | | 1.0 | | | | | | 1.7 | |
| 12 | | 0.60 | 0.68 | | 0.98 | | | | 1.1 | | | | | | 1.8 | |
| 13 | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | |
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| 31 | | | | | | | | | | | | | | | | |
| AVG | | | 0.68 | | 1.00 | | | | 1.1 | | | | | | 1.6 | |
| MAX | | | 0.77 | | 1.14 | | | | 1.1 | | | | | | 1.8 | |
| MIN | | | 0.54 | | 0.82 | | | | 1.0 | | | | | | 1.4 | |



Chemical Analyses WSSN 2310 Dec-18

| D A T E | pH | | Total Hardness as CaCO ₃ mg/l | | Total Alkalinity as CaCO ₃ mg/l | | NonCarbonate Hardness as CaCO ₃ mg/l | | Iron mg/L | | Calcium Ca ²⁺ mg/l | | Magnesium as Mg ²⁺ mg/l | | Chloride as Cl ⁻ 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 | 38.00 | 39 | 40 | 41 | 42 | 43 | 44 |
| 1 | 7.49 | 7.57 | | 100 | | 82 | | 32 | 0.01 | 0.02 | | 27.3 | | 7.8 | | 16 |
| 2 | 7.32 | 7.54 | | 106 | | 82 | | 36 | 0.0 | 0.01 | | 28.1 | | 8.7 | | 13 |
| 3 | 7.47 | 7.52 | | 100 | | 82 | | 32 | 0.01 | 0.02 | | 27.3 | | 7.8 | | 15 |
| 4 | 7.38 | 7.43 | 100 | 100 | 82 | 80 | 30 | 32 | 0 | 0.04 | 28.1 | 27.3 | 7.29 | 7.8 | 14 | 16 |
| 5 | 7.38 | 7.38 | | 102 | | 78 | | 34 | 0.01 | 0.01 | | 27.3 | | 8.3 | | 16 |
| 6 | 7.44 | 7.48 | | 100 | | 82 | | 30 | 0.01 | 0.01 | | 28.1 | | 7.3 | | 14 |
| 7 | 7.42 | 7.43 | | 102 | | 82 | | 30 | 0.02 | 0.02 | | 28.9 | | 7.3 | | 15 |
| 8 | 7.47 | 7.49 | | 102 | | 100 | | 30 | 0.01 | 0.02 | | 28.9 | | 7.3 | | 16 |
| 9 | 7.36 | 7.61 | | 106 | | 80 | | 36 | 0.01 | 0.02 | | 28.1 | | 8.7 | | 14 |
| 10 | 7.41 | 7.58 | | 104 | | 84 | | 32 | 0.01 | 0.02 | | 28.9 | | 7.8 | | 14 |
| 11 | 7.31 | 7.57 | 102 | 100 | 80 | 82 | 32 | 28 | 0.01 | 0.02 | 28.1 | 28.9 | 7.8 | 6.8 | 14 | 14 |
| 12 | 7.42 | 7.51 | | 98 | | 82 | | 30 | 0.01 | 0.02 | | 27.3 | | 7.3 | | 16 |
| 13 | | | | | | | | | | | | | | | | |
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| 31 | | | | | | | | | | | | | | | | |
| AVG | 7.41 | 7.51 | | 102 | | 83 | | 32 | | 0.02 | | 28.0 | | 7.7 | | 15 |
| MAX | 7.49 | 7.61 | | 106 | | 100 | | 36 | | 0.04 | | 28.9 | | 8.7 | | 16.0 |
| MIN | 7.31 | 7.38 | | 98 | | 78 | | 28 | | 0.01 | | 27.3 | | 6.8 | | 13.0 |



WSSN 2310

Dec-18

| D A T E | Total Coliform | | | | | | 66 | Standard Plate Count | | Conductivity (mS) | Temp deg.C | Color | | Odor | |
|------------------|----------------|----|------|----------|--------|---------|----|----------------------|------|-------------------|------------|-------|-----|------|-----|
| | Plant Tap | | | | | | | Raw | Tap | | | Raw | Tap | Raw | Tap |
| | | | Dort | 3MG Well | Sta II | Lab Tap | | | | | | | | | |
| | 60 | 61 | 62 | 63 | 64 | 65 | | | | | | | | | |
| 1 | | | | | | 2/0 | | | 0.22 | 10.9 | | | | | |
| 2 | | | | | | 2/0 | | | 0.23 | 11.3 | | | | | |
| 3 | | | | | | 2/0 | | | 0.22 | 10.7 | | | | | |
| 4 | | | | | | 2/0 | | | 0.23 | 10.4 | | | | | |
| 5 | | | | | | 2/0 | | | 0.22 | 10.6 | | | | | |
| 6 | | | | | | 2/0 | | | 0.21 | 10.5 | | | | | |
| 7 | | | | | | 2/0 | | | 0.20 | 9.1 | | | | | |
| 8 | | | | | | 2/0 | | | 0.18 | 12.0 | | | | | |
| 9 | | | | | | 2/0 | | | 0.23 | 11.3 | | | | | |
| 10 | | | | | | 2/0 | | | 0.23 | 11.1 | | | | | |
| 11 | | | | | | 2/0 | | | 0.23 | 10.7 | | | | | |
| 12 | | | | | | 2/0 | | | 0.23 | 11.7 | | | | | |
| 13 | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | |
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| 31 | | | | | | | | | | | | | | | |
| AVG | | | | | | | | | 0.22 | 10.9 | | | | | |
| MAX | | | | | | | | | 0.23 | 12.0 | | | | | |
| MIN | | | | | | | | | 0.18 | 9.1 | | | | | |



Distribution System Monitoring WSSN 2310

Dec-18

| DATE | Free Chlorine Residual at Bacteriological Monitoring Stations mg/l | | | | | | | | | | | | | | | | | | | | | | | | | Chlorine only sites mg/l | | | | | Number of Samples | | | | | |
|------------------------------------|--|------|------|-------------|------|------|------|------|------|------|------|----|------|------|------|------|------|------|------|------|----|------|------|------|------|--------------------------|------|------|------|------|-------------------|--|--|---|---|---|
| | 1 | 2 | 3 | 4 | CS | 6 | 7 | 8 | 9 | 10 | WR | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 26 | 27 | 28 | 29 | 30 | 21 | 22 | 23 | 24 | 25 | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | |
| 2 | | | | | | | | | | | 1.07 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 3 | 1.22 | 1.66 | 1.54 | 1.59 | 1.77 | 1.26 | | | | | | | | | | | | | | | | | 1.51 | | | 1.23 | | | | | | | | 8 | | |
| 4 | | | | | | | 1.41 | 1.44 | 1.39 | 1.42 | | | 0.64 | | | | | | | | | 1.29 | | | | | 1.33 | | | | | | | 7 | | |
| 5 | | | | | | | | | | | | | | 1.66 | 1.23 | 1.54 | 1.14 | 1.35 | 0.68 | | | | | 1.62 | | | | 1.44 | | | | | | 8 | | |
| 6 | 1.36 | 1.62 | 1.35 | 1.33 | 1.41 | | | | | | | | | | | | | | | 0.98 | | 1.72 | | | | | | | 1.37 | | | | | 8 | | |
| 7 | | | | | | | | | | 1.31 | | | | | 1.55 | 1.52 | 1.28 | 0.55 | | | | | | | 1.72 | | | | | 0.51 | | | | 7 | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | |
| 9 | | | | | | | | | | | 1.26 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 10 | 1.49 | | 1.55 | 0.95 | 1.71 | 1.38 | | | | | | | | | | | | | | | | | | 1.48 | | 1.14 | | | | | | | | 7 | | |
| 11 | | | | | | | 1.46 | 1.64 | 1.61 | 1.55 | 1.58 | | 1.13 | | | | | | | | | 1.42 | | | | | 1.47 | | | | | | | 8 | | |
| 12 | | | | | | | | | | | | | | | 1.24 | 1.47 | 1.37 | 1.14 | 0.78 | | | | | | | | | 1.53 | | | | | | | 7 | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| Monthly Cl₂ Avg. | | | | 1.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Samples | | | | 54 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Distribution System Monitoring

WSSN 2310

Dec-18

| DATE | Total Chlorine Residual at Bacteriological Monitoring Stations mg/l | | | | | | | | | | | | | | | | | | | | | | | | | Chlorine only sites mg/l | | | | | Number of Samples | | | | | |
|------------------------------------|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|------|--------------------------|------|------|------|------|-------------------|------|------|---|---|---|
| | 1 | 2 | 3 | 4 | CS | 6 | 7 | 8 | 9 | 10 | WR | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 26 | 27 | 28 | 29 | 30 | 21 | 22 | 23 | 24 | 25 | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | |
| 2 | | | | | | | | | | | | 1.19 | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| 3 | 1.46 | 1.91 | 1.72 | 1.81 | 2.05 | 1.68 | | | | | | | | | | | | | | | | | | | 1.75 | | | 1.58 | | | | | | 8 | | |
| 4 | | | | | | | 1.60 | 1.69 | 1.59 | 1.77 | | | | 1.20 | | | | | | | | 1.45 | | | | | | 1.58 | | | | | | 7 | | |
| 5 | | | | | | | | | | | | | | | 1.87 | 1.37 | 1.68 | 1.67 | 1.48 | 0.83 | | | | | | | | | 1.82 | | | | | 8 | | |
| 6 | 1.58 | 1.87 | 1.71 | 1.62 | 1.70 | | | | | | | | | | | | | | | | 1.08 | | 1.94 | | | | | | | 1.59 | | | | 8 | | |
| 7 | | | | | | | | | | | 1.69 | | | | | 1.77 | 1.71 | 1.54 | 0.74 | | | | | | | | | | | 1.89 | | | 1.44 | 7 | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | |
| 9 | | | | | | | | | | | | | 1.26 | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 10 | 1.49 | | 1.55 | 0.95 | 1.71 | 1.38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 | |
| 11 | | | | | | | 1.46 | 1.64 | 1.61 | 1.55 | 1.58 | | 1.13 | | | | | | | | | 1.42 | | | | | 1.48 | | 1.14 | | 1.47 | | | | 8 | |
| 12 | | | | | | | | | | | | | | | | 1.24 | 1.47 | 1.37 | 1.14 | 0.78 | | | | | | | | | | | | 1.59 | | | | 7 |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| Monthly Cl₂ Avg. | | 1.52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Samples | | 54 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



ROUTINE POSITIVE DISTRIBUTION SAMPLES

Dec-18

| Total number of positive routine samples: | | | | Total Coliform: <u>0</u> | | | E.coli Bacteria: <u>0</u> | | Chlorine Residual (mg/L) | |
|--|--------------------|----------------|-----------------|--------------------------|------|--|---------------------------|-----------------|--------------------------|-------|
| Date | Monitoring Station | Total Coliform | E.coli Bacteria | Date | Time | Retest of Station, Upstream & Downstream | Total Coliform | E.coli Bacteria | Free | Total |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
| Total number of routine distribution samples analyzed: | | | | 54 | | | | | | |
| Total number of routine distribution samples required: | | | | 100 | | | | | | |