

**\*\* NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni**  
**Water Analysis**  
**Apr-2019**

| <b>Mineral Analysis</b>       | <b>Raw</b>                            | <b>Treated</b>                        | <b>Standards</b>                      |                                       |                                       |                                       |
|-------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|                               |                                       |                                       | <b>EPA<br/>Primary</b>                | <b>EPA<br/>Secondary</b>              | <b>TCEQ<br/>Primary</b>               | <b>TCEQ<br/>Secondary</b>             |
|                               | <b>(mg/L)</b>                         | <b>(mg/L)</b>                         | <b>(mg/L)</b>                         | <b>(mg/L)</b>                         | <b>(mg/L)</b>                         | <b>(mg/L)</b>                         |
| Residue on Evaporation        | 106                                   | 146                                   |                                       | 500                                   |                                       | 1000                                  |
| Silica (SiO <sub>2</sub> )    | <2.00                                 | <2.00                                 |                                       |                                       |                                       |                                       |
| Iron (Fe)                     | 0.463                                 | 0.222                                 |                                       | 0.3                                   |                                       | 0.3                                   |
| Calcium (Ca)                  | 30.8                                  | 44.3                                  |                                       |                                       |                                       |                                       |
| Magnesium (Mg)                | 2.14                                  | 2.33                                  |                                       |                                       |                                       |                                       |
| Sodium (Na)                   | 8.69                                  | 15.2                                  |                                       |                                       |                                       |                                       |
| Potassium (K)                 | 3.21                                  | 3.09                                  |                                       |                                       |                                       |                                       |
| Sulfate (SO <sub>4</sub> )    | 8.53                                  | 53.6                                  |                                       | 250                                   |                                       |                                       |
| Nitrite (NO <sub>2</sub> )    | <0.0200                               | <0.0200                               | 1                                     |                                       | 1                                     |                                       |
| Nitrate (NO <sub>3</sub> )    | 0.549                                 | 0.621                                 | 10                                    |                                       | 10                                    |                                       |
| Chloride (Cl)                 | 4.3                                   | 10.0                                  |                                       | 250                                   |                                       | 300                                   |
| Fluoride (F)                  | 0.142                                 | 0.256                                 | 4.0                                   | 2.0                                   | 4                                     | 2.0                                   |
| Phosphates (PO <sub>4</sub> ) | 0.0870                                | <0.0100                               |                                       |                                       |                                       |                                       |
|                               | <b>(mg/L as<br/>CaCO<sub>3</sub>)</b> | <b>(mg/L as<br/>CaCO<sub>3</sub>)</b> | <b>(mg/L as<br/>CaCO<sub>3</sub>)</b> | <b>(mg/L as<br/>CaCO<sub>3</sub>)</b> | <b>(mg/L as<br/>CaCO<sub>3</sub>)</b> | <b>(mg/L as<br/>CaCO<sub>3</sub>)</b> |
| Total Alkalinity              | 73.7 *                                | 57.5 *                                |                                       |                                       |                                       |                                       |
| Total Hardness                | 73.8                                  | 102                                   |                                       |                                       |                                       |                                       |
| Langelier Index               |                                       | -0.6280                               |                                       |                                       |                                       |                                       |

**Trace Element Analysis**

|                | <b>(mg/L)</b> | <b>(mg/L)</b> | <b>(mg/L)</b> | <b>(mg/L)</b> | <b>(mg/L)</b> | <b>(mg/L)</b> |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Arsenic (As)   | 0.00152       | <0.00050      | 0.01          |               | 0.01          |               |
| Barium (Ba)    | 0.0628        | 0.0619        | 2             |               | 2             |               |
| Cadmium (Cd)   | <0.00100      | <0.00100      | 0.005         |               | 0.005         |               |
| Chromium (Cr)  | <0.00250      | <0.00250      | 0.1           |               | 0.1           |               |
| Copper (Cu)    | 0.00147       | 0.0261        | 1.3           | 1             | 1.3           | 1.0           |
| Iron (Fe)      | 0.463         | 0.222         |               | 0.3           |               | 0.3           |
| Lead (Pb)      | <0.000500     | <0.000500     | 0.015         |               | 0.015         |               |
| Manganese (Mn) | 0.0314        | 0.00453       |               | 0.05          |               | 0.05          |
| Mercury (Hg)   | <0.000100     | <0.000100     | 0.002         |               | 0.002         |               |
| Nickel (Ni)    | 0.00150       | 0.00487       |               |               |               |               |
| Selenium (Se)  | <0.00100      | <0.00100      | 0.05          |               | 0.05          |               |
| Silver (Ag)    | <0.00050      | <0.00050      |               | 0.10          |               | 0.1           |
| Zinc (Zn)      | 0.00438       | 0.00262       |               | 5             |               | 5             |

**Other Analysis**

|                                     |        |        |     |           |     |      |
|-------------------------------------|--------|--------|-----|-----------|-----|------|
| Chlorine Residual (mg/L)            | --     | 3.38 * | 4.0 |           | 4.0 |      |
| Total coliform ( Present / Absent ) | --     | A      | A   |           | A   |      |
| pH (Standard Units) @ 25°C          | 7.50   | 7.60 * |     | 6.5 - 8.5 |     | >7.0 |
| Specific Conductance (Umhos)        | 192    | 294    |     |           |     |      |
| Turbidity (NTU)                     | 13.8 * | 0.05 * | 0.3 |           | 0.3 |      |
| Threshold Odor Number               | 4.0    | <1.0   |     |           |     | 3    |

**Note 1: National Primary Drinking Water Regulations or Primary Standards are legally enforceable standards. National Secondary Drinking Water Regulations or Secondary Standards are non-enforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects In Drinking Water.**

**Note 2: TCEQ Primary Standards are the maximum contaminant level allowed for each constituent. TCEQ Primary Standards are legally enforceable standards.**

**Note 3: \* Identifies Monthly Average Process analyses. \*\* No odor analysis performed.**