

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Dec-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	160	174		500		1000
Silica (SiO ₂)	<2.00	<2.00				
Iron (Fe)	0.211	0.223		0.3		0.3
Calcium (Ca)	29.3	44.3				
Magnesium (Mg)	2.46	3.08				
Sodium (Na)	9.71	15.6				
Potassium (K)	4.57	4.99				
Sulfate (SO ₄)	8.91	131		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.226	0.344	10		10	
Chloride (Cl)	5.2	29.8		250		300
Fluoride (F)	<0.250	0.321	4.0	2.0		2.0
Phosphates (PO ₄)	0.0260	<0.0100				
	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)
Total Alkalinity	85.5 *	74.0 *				
Total Hardness	78.0	110				
Langelier Index		-0.3438				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00138	0.00056	0.01		0.01	
Barium (Ba)	0.0718	0.0553	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00250	<0.00250	0.1		0.1	
Copper (Cu)	<0.00100	0.0493	1.3		1.3	1.0
Iron (Fe)	0.211	0.223		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0314	0.00176		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00153	0.00384				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	<0.00250	<0.00250		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.56 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	7.80	7.80 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	211	314				
Turbidity (NTU)	3.4 *	0.04 *	0.3		0.3	
Threshold Odor Number	17E	8Cl				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Nov-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	116	178		500		1000
Silica (SiO ₂)	2.15	2.24				
Iron (Fe)	<0.200	0.250		0.3		0.3
Calcium (Ca)	26.3	41.3				
Magnesium (Mg)	2.81	3.04				
Sodium (Na)	8.78	15.2				
Potassium (K)	4.52	4.79				
Sulfate (SO ₄)	8.82	50.3		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.253	0.330	10		10	
Chloride (Cl)	5.1	12.5		250		300
Fluoride (F)	<0.250	0.282	4.0	2.0		2.0
Phosphates (PO ₄)	0.0350	<0.0100				
	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)
Total Alkalinity	61.0 *	57.5 *				
Total Hardness	87.4	114				
Langelier Index		-0.0680				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00177	<0.00050	0.01		0.01	
Barium (Ba)	0.0802	0.0587	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00250	<0.00250	0.1		0.1	
Copper (Cu)	<0.00100	0.0353	1.3		1.3	1.0
Iron (Fe)	<0.200	0.250		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0191	0.00171		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00125	0.00326				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	<0.00250	0.00277		5		5

Other Analysis

Chlorine Residual (mg/L)	--	2.88 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	7.80	8.00 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	211	322				
Turbidity (NTU)	14.9 *	0.08 *	0.3		0.3	
Threshold Odor Number	6F	ND				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Oct-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	118	190		500		1000
Silica (SiO ₂)	3.96	3.56				
Iron (Fe)	<0.200	0.241		0.3		0.3
Calcium (Ca)	27.6	45.8				
Magnesium (Mg)	2.54	2.77				
Sodium (Na)	8.76	15.2				
Potassium (K)	4.55	4.64				
Sulfate (SO ₄)	7.91	52.0		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.314	0.425	10		10	
Chloride (Cl)	4.5	11.5		250		300
Fluoride (F)	<0.250	0.270	4.0	2.0		2.0
Phosphates (PO ₄)	0.0510	<0.0100				
	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)
Total Alkalinity	81.3 *	78.0 *				
Total Hardness	84.6	116				
Langelier Index		-0.0510				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00292	<0.00050	0.01		0.01	
Barium (Ba)	0.0865	0.0665	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00250	<0.00250	0.1		0.1	
Copper (Cu)	<0.00100	0.0509	1.3		1.3	1.0
Iron (Fe)	<0.200	0.241		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0188	0.00370		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00111	0.00371				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	<0.00250	0.00256		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.56 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	7.60	7.80 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	204	315				
Turbidity (NTU)	2.4 *	0.06 *	0.3		0.3	
Threshold Odor Number	4E	1Cl				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Sep-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	130	198		500		1000
Silica (SiO ₂)	3.76	3.77				
Iron (Fe)	<0.200	<0.200		0.3		0.3
Calcium (Ca)	25.2	40.1				
Magnesium (Mg)	2.58	2.91				
Sodium (Na)	10.5	14.5				
Potassium (K)	3.89	4.09				
Sulfate (SO ₄)	8.06	56.0		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.271	0.354	10		10	
Chloride (Cl)	5.1	12.9		250		300
Fluoride (F)	<0.250	0.271	4.0	2.0		2.0
Phosphates (PO ₄)	0.0230	0.0540				
	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)
Total Alkalinity	80.5 *	76.0 *				
Total Hardness	95.6	128				
Langelier Index		-2.0650				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00329	<0.00050	0.01		0.01	
Barium (Ba)	0.0776	0.0649	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00250	<0.00100	0.1		0.1	
Copper (Cu)	<0.00100	0.0374	1.3		1.3	1.0
Iron (Fe)	<0.200	<0.200		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0175	0.00314		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00127	0.00361				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	<0.00250	<0.00500		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.66 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	7.50	7.90 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	198	316				
Turbidity (NTU)	1.7 *	0.06 *	0.3		0.3	
Threshold Odor Number	3E	1Cl				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Aug-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	136	208		500		1000
Silica (SiO ₂)	3.21	3.11				
Iron (Fe)	<0.200	0.235		0.3		0.3
Calcium (Ca)	29.3	47.7				
Magnesium (Mg)	2.65	3.51				
Sodium (Na)	9.97	16.9				
Potassium (K)	4.71	4.68				
Sulfate (SO ₄)	9.10	61.5		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.169	0.350	10		10	
Chloride (Cl)	4.5	12.5		250		300
Fluoride (F)	<0.250	0.270	4.0	2.0		2.0
Phosphates (PO ₄)	0.0590	0.0160				
	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)
Total Alkalinity	82.1 *	72.5 *				
Total Hardness	82.4	116				
Langelier Index		0.2950				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00374	0.00074	0.01		0.01	
Barium (Ba)	0.0822	0.0703	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00250	<0.00250	0.1		0.1	
Copper (Cu)	0.00382	0.0276	1.3		1.3	1.0
Iron (Fe)	<0.200	0.235		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0414	0.0169		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00112	0.00401				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	0.00289	<0.00250		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.48 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	7.50	8.10 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	200	321				
Turbidity (NTU)	2.3 *	0.06 *	0.3		0.3	
Threshold Odor Number	12F	1.4Cl				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Jul-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	79.0	230		500		1000
Silica (SiO ₂)	2.45	2.37				
Iron (Fe)	<0.200	<0.200		0.3		0.3
Calcium (Ca)	28.3	48.0				
Magnesium (Mg)	2.87	3.35				
Sodium (Na)	8.54	16.7				
Potassium (K)	4.34	4.62				
Sulfate (SO ₄)	8.35	57.7		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.194	0.296	10		10	
Chloride (Cl)	4.2	11.3		250		300
Fluoride (F)	<0.250	0.269	4.0	2.0		2.0
Phosphates (PO ₄)	0.0610	0.0150				
	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)
Total Alkalinity	81.9 *	65.5 *				
Total Hardness	76.6	115				
Langelier Index		0.1960				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00321	<0.00050	0.01		0.01	
Barium (Ba)	0.0742	0.0663	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00100	<0.00100	0.1		0.1	
Copper (Cu)	0.00155	0.0313	1.3		1.3	1.0
Iron (Fe)	<0.200	<0.200		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0273	0.00581		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00171	0.00412				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	<0.00500	<0.00500		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.50 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	7.60	8.10 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	205	321				
Turbidity (NTU)	2.3 *	0.06 *	0.3		0.3	
Threshold Odor Number	17G	17Cl				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Jun-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	122	194		500		1000
Silica (SiO ₂)	<2.00	<2.00				
Iron (Fe)	<0.200	<0.200		0.3		0.3
Calcium (Ca)	30.6	64.1				
Magnesium (Mg)	3.07	3.53				
Sodium (Na)	9.53	16.8				
Potassium (K)	4.74	5.14				
Sulfate (SO ₄)	9.08	57.4		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.138	0.267	10		10	
Chloride (Cl)	4.3	11.7		250		300
Fluoride (F)	<0.250	0.250	4.0	2.0		2.0
Phosphates (PO ₄)	0.0490	<0.0100				
	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)
Total Alkalinity	80.7 *	84.0 *				
Total Hardness	71.8	112				
Langelier Index		-0.0710				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00222	<0.00050	0.01		0.01	
Barium (Ba)	0.0692	0.0669	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00100	<0.00100	0.1		0.1	
Copper (Cu)	<0.00100	0.0438	1.3		1.3	1.0
Iron (Fe)	<0.200	<0.200		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0317	0.00301		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00166	0.00439				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	<0.00500	<0.00500		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.37 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	7.60	7.80 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	200	319				
Turbidity (NTU)	4.0 *	0.07 *	0.3		0.3	
Threshold Odor Number	4G	12Cl				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
May-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	144	206		500		1000
Silica (SiO ₂)	<2.00	<2.00				
Iron (Fe)	0.258	<0.200		0.3		0.3
Calcium (Ca)	31.7	40.8				
Magnesium (Mg)	3.09	2.72				
Sodium (Na)	9.47	13.2				
Potassium (K)	4.79	4.17				
Sulfate (SO ₄)	8.73	57.7		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.0920	0.185	10		10	
Chloride (Cl)	4.2	9.9		250		300
Fluoride (F)	<0.250	0.314	4.0	2.0		2.0
Phosphates (PO ₄)	0.0520	<0.0100				
	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)
Total Alkalinity	81.1 *	76.0 *				
Total Hardness	88.4	120				
Langelier Index		0.2000				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00144	<0.00050	0.01		0.01	
Barium (Ba)	0.0722	0.0667	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00100	<0.00100	0.1		0.1	
Copper (Cu)	0.00108	0.0272	1.3		1.3	1.0
Iron (Fe)	0.258	<0.200		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	<0.100	0.00310		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00176	0.00466				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	<0.00500	<0.00500		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.59 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	7.80	8.10 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	199	321				
Turbidity (NTU)	5.1 *	0.06 *	0.3		0.3	
Threshold Odor Number	6G	1Cl				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Apr-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	148	210		500		1000
Silica (SiO ₂)	<2.00	<2.00				
Iron (Fe)	0.293	0.226		0.3		0.3
Calcium (Ca)	32.1	51.3				
Magnesium (Mg)	3.30	3.30				
Sodium (Na)	10.1	14.7				
Potassium (K)	4.75	4.63				
Sulfate (SO ₄)	9.00	59.0		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.243	0.358	10		10	
Chloride (Cl)	4.0	8.7		250		300
Fluoride (F)	<0.250	0.347	4.0	2.0		2.0
Phosphates (PO ₄)	0.0470	<0.0100				
	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)	(mg/L as CaCO ₃)
Total Alkalinity	79.3 *	65.4 *				
Total Hardness	73.0	108				
Langelier Index		-2.2270				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00135	0.00051	0.01		0.01	
Barium (Ba)	0.0762	0.0654	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00250	<0.00250	0.1		0.1	
Copper (Cu)	0.00117	0.0506	1.3		1.3	1.0
Iron (Fe)	0.293	0.226		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0252	<0.100		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00183	0.00462				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	0.00320	0.00238		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.70 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	7.80	7.90 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	197	306				
Turbidity (NTU)	5.3 *	0.04 *	0.3		0.3	
Threshold Odor Number	8F	2Cl				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Mar-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	128	192		500		1000
Silica (SiO ₂)	<2.00	<2.00				
Iron (Fe)	0.301	<0.200		0.3		0.3
Calcium (Ca)	30.7	45.2				
Magnesium (Mg)	2.81	2.77				
Sodium (Na)	10.1	16.0				
Potassium (K)	5.00	4.52				
Sulfate (SO ₄)	9.08	64.4		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.264	0.383	10		10	
Chloride (Cl)	4.2	10.7		250		300
Fluoride (F)	<0.250	0.333	4.0	2.0		2.0
Phosphates (PO ₄)	0.0380	<0.0100				
	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)
Total Alkalinity	79.7 *	66.0 *				
Total Hardness	74.8	112				
Langelier Index		--				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00065	<0.00050	0.01		0.01	
Barium (Ba)	0.0775	0.0642	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00100	<0.00100	0.1		0.1	
Copper (Cu)	<0.00100	0.0445	1.3		1.3	1.0
Iron (Fe)	0.301	<0.200		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0339	0.00285		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00170	0.00416				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	<0.00500	<0.00500		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.67 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	8.00	8.00 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	197	324				
Turbidity (NTU)	7.5 *	0.04 *	0.3		0.3	
Threshold Odor Number	6F	17Cl				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Feb-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	138	204		500		1000
Silica (SiO ₂)	<2.00	<2.00				
Iron (Fe)	0.291	<0.200		0.3		0.3
Calcium (Ca)	30.0	47.1				
Magnesium (Mg)	3.25	3.61				
Sodium (Na)	9.54	15.4				
Potassium (K)	5.45	5.58				
Sulfate (SO ₄)	8.92	63.4		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.384	0.463	10		10	
Chloride (Cl)	3.9	9.3		250		300
Fluoride (F)	<0.250	0.369	4.0	2.0		2.0
Phosphates (PO ₄)	0.0430	0.0120				
	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)
Total Alkalinity	79.0 *	98.4 *				
Total Hardness	71.8	108				
Langelier Index		-0.3013				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00115	<0.00050	0.01		0.01	
Barium (Ba)	0.0722	0.0554	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00250	<0.00250	0.1		0.1	
Copper (Cu)	<0.00100	0.0448	1.3		1.3	1.0
Iron (Fe)	0.291	<0.200		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0234	0.00364		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00132	0.00358				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	0.00168	0.00325		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.80 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	8.00	7.80 *		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	198	318				
Turbidity (NTU)	6.1 *	0.46 *	0.3		0.3	
Threshold Odor Number	17F	1.4Cl				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.

NORTH TEXAS MUNICIPAL WATER DISTRICT - Tawakoni
Water Analysis
Jan-2017

Mineral Analysis	Raw	Treated	Standards			
			EPA Primary	EPA Secondary	TCEQ Primary	TCEQ Secondary
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Residue on Evaporation	122	178		500		1000
Silica (SiO ₂)	2.22	2.00				
Iron (Fe)	0.221	<0.200		0.3		0.3
Calcium (Ca)	26.0	39.8				
Magnesium (Mg)	2.63	3.03				
Sodium (Na)	9.12	15.2				
Potassium (K)	4.17	4.41				
Sulfate (SO ₄)	8.25	57.7		250		
Nitrite (NO ₂)	<0.0200	<0.0200	1		1	
Nitrate (NO ₃)	0.371	0.444	10		10	
Chloride (Cl)	3.8	9.7		250		300
Fluoride (F)	<0.250	0.332	4.0	2.0		2.0
Phosphates (PO ₄)	0.0330	<0.0100				
	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)	(mg/L as CaCO₃)
Total Alkalinity	81.9 *	66.0 *				
Total Hardness	78.1	116				
Langelier Index		--				

Trace Element Analysis

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Arsenic (As)	0.00113	<0.00050	0.01		0.01	
Barium (Ba)	0.0695	0.0438	2		2	
Cadmium (Cd)	<0.00100	<0.00100	0.005		0.005	
Chromium (Cr)	<0.00250	<0.00250	0.1		0.1	
Copper (Cu)	<0.00100	0.0557	1.3		1.3	1.0
Iron (Fe)	0.221	<0.200		0.3		
Lead (Pb)	<0.000500	<0.000500	0.15		0.15	
Manganese (Mn)	0.0329	0.00285		0.05		0.05
Mercury (Hg)	<0.000100	<0.000100	0.002		0.002	
Nickel (Ni)	0.00129	0.00340				
Selenium (Se)	<0.00100	<0.00100	0.05		0.05	
Silver (Ag)	<0.00050	<0.00050		0.10		0.1
Zinc (Zn)	<0.00100	0.00581		5		5

Other Analysis

Chlorine Residual (mg/L)	--	3.60 *	4.0		4.0	
Total coliform (Present / Absent)	--	A	A		A	
pH (Standard Units) @ 25°C	--	*		6.5 - 8.5		>7.0
Specific Conductance (Umhos)	191	292				
Turbidity (NTU)	4.8 *	0.04 *	0.3		0.3	
Threshold Odor Number	100F	2Cl				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.