

Water Forum
League of Women Voters
of Collin County
February 2, 2017

Presenter
David T. Brown P.E.
Director of Public Works

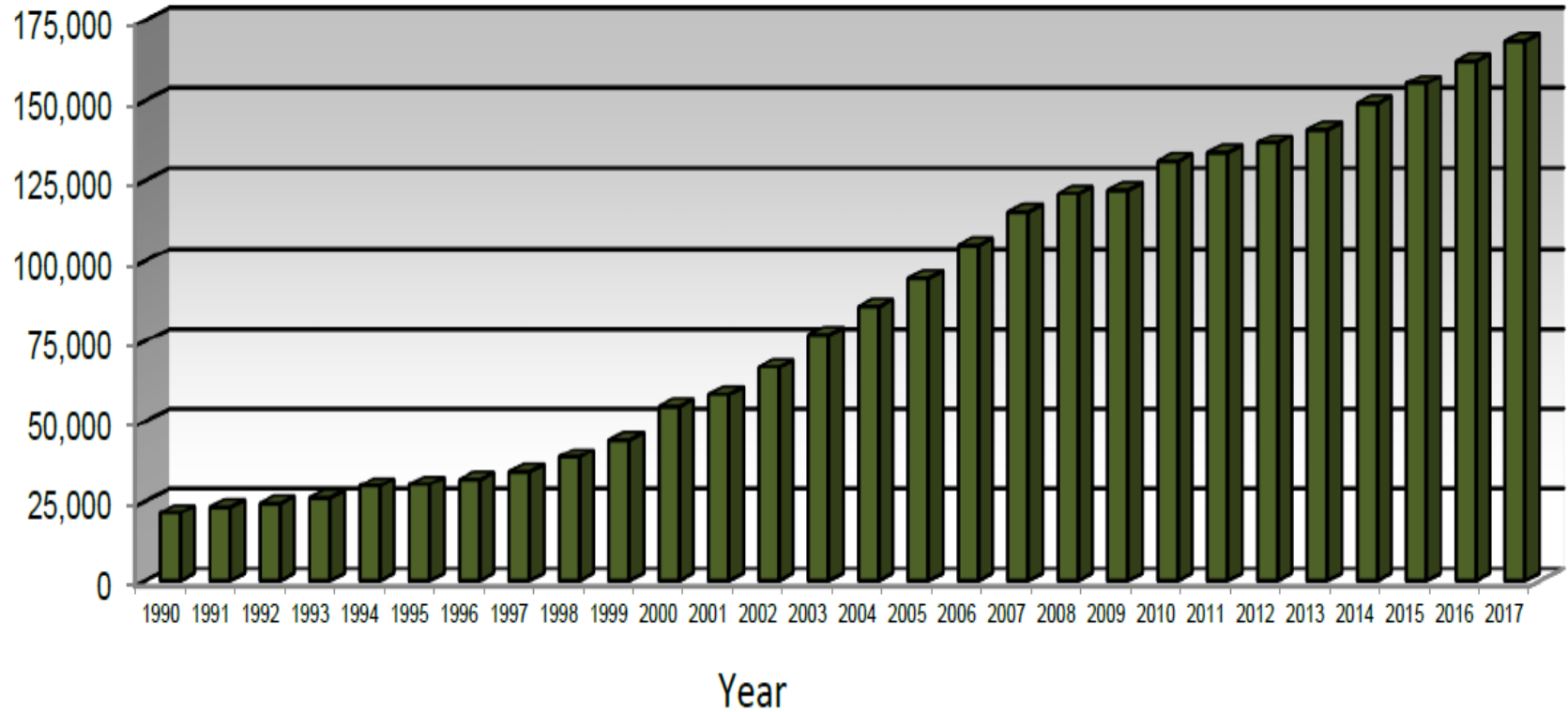


Background

- The City of McKinney operates a public water distribution system
- Water Supply - treated surface water purchased from the North Texas Municipal Water District (NTMWD)
- Population – 168,000
- City Limits – 67.62 square miles
- Extra Territorial Jurisdiction – 115.8 square miles



Population Estimates (1990-2017)



Growth has averaged about 4% to 5% per year for the last couple of years

Department of Public Works – Water Utility Division

Superintendent

Administration

GIS

Inspections

Wastewater

Pumping

Fire Hydrants/
Valves

Water Repairs

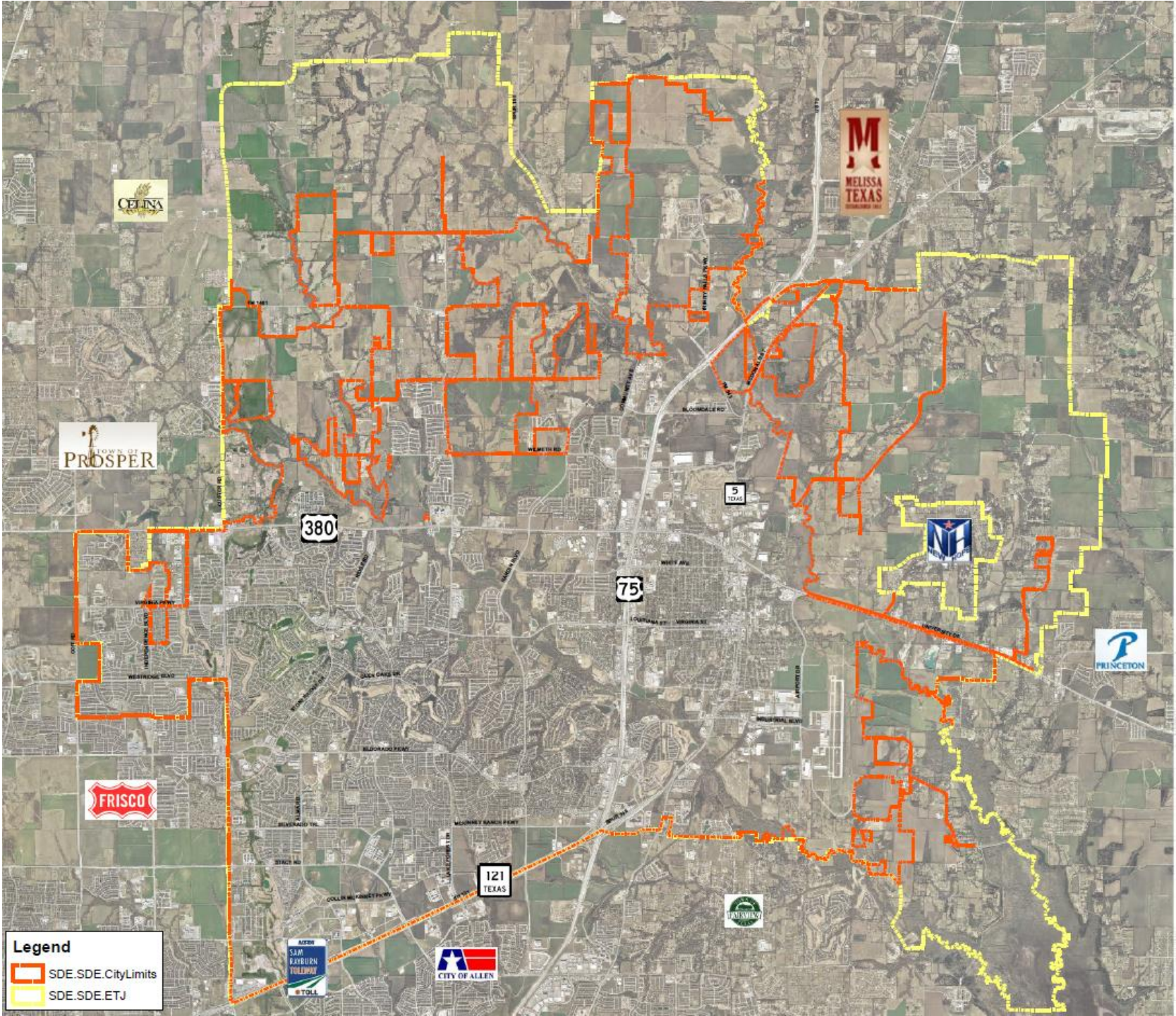
Service Line
Replacements

Current WUD staffing - 64 Employees

City of McKinney's Water Distribution System

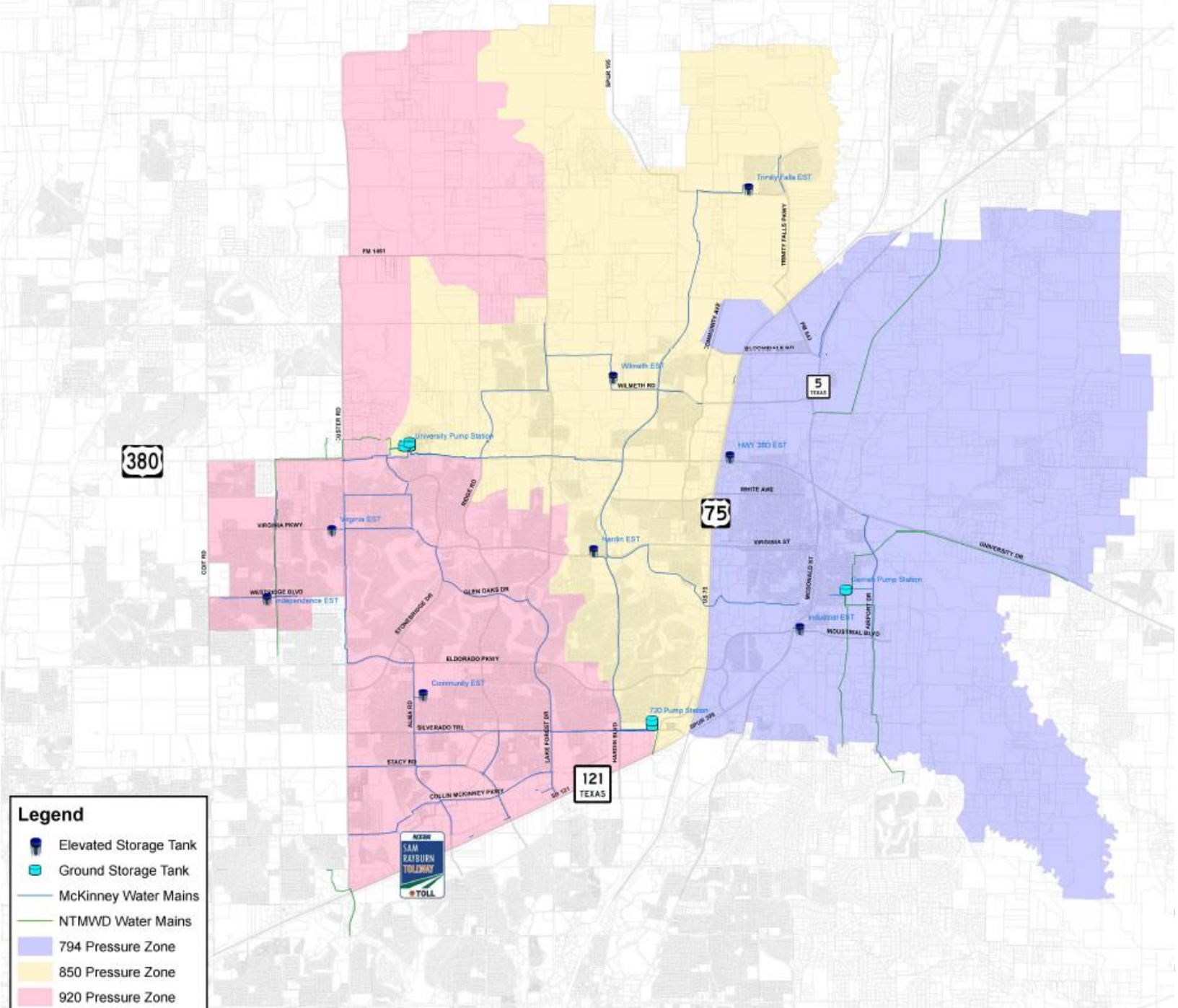
- 58,611 Customer Service Connections
- 883 Miles of Water Mains (various sizes)
- Type of Pipe (Age varies)
 - Cast Iron (12.2 Miles)
 - AC (24.4 Miles)
 - Ductile Iron & PVC (840 Miles)
 - Liner (4 Miles)
 - HDPE (2.4 Miles)
- 3 Pump Stations
- 3 Pressure Zones
- Storage Tanks (7 elevated and 6 ground)





Legend

-  SDE.SDE.CityLimits
-  SDE.SDE.ETJ



Legend

-  Elevated Storage Tank
-  Ground Storage Tank
-  McKinney Water Mains
-  NTMWD Water Mains
-  794 Pressure Zone
-  850 Pressure Zone
-  920 Pressure Zone



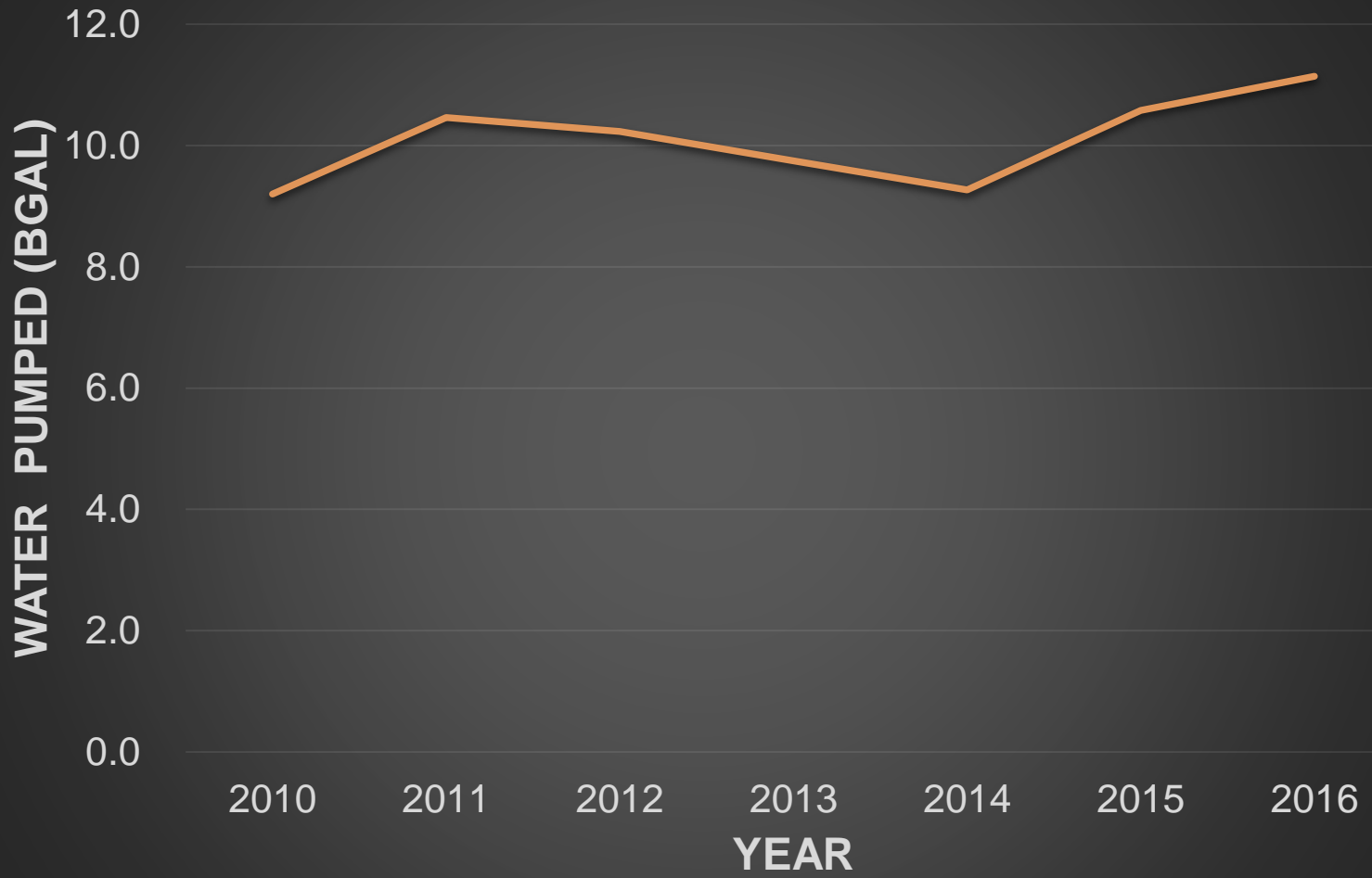
City of McKinney
Yearly Water Consumption
(Unit - Gallons)

	2010	2011	2012	2013	2014	2015	2016
January	416,915,000	531,043,000	612,413,000	580,239,000	625,670,000	669,091,000	647,246,000
February	384,342,000	500,544,000	461,742,000	514,633,000	571,571,000	594,062,000	660,591,000
March	479,960,000	693,346,000	541,548,000	664,741,000	673,531,000	677,065,000	734,263,000
April	658,516,000	716,708,000	625,108,000	705,933,000	712,484,000	655,328,000	784,806,000
May	880,541,000	751,325,000	911,949,000	875,984,000	853,927,000	640,971,000	833,836,000
June	1,087,214,000	1,131,063,000	1,006,754,000	918,529,000	887,500,000	863,783,000	1,039,672,000
July	1,049,018,000	1,336,134,000	1,254,251,000	1,077,443,000	845,048,000	1,164,746,000	1,335,850,000
August	1,230,186,000	1,451,327,000	1,286,062,000	1,226,990,000	873,723,000	1,520,886,000	1,303,202,000
September	892,178,000	1,209,994,000	1,133,852,000	1,118,878,000	988,006,000	1,333,528,000	1,170,431,000
October	876,167,000	893,189,000	938,296,000	825,921,000	882,554,000	1,120,652,000	1,070,668,000
November	627,417,000	652,955,000	799,681,000	629,831,000	690,702,000	679,937,000	838,070,000
December	615,532,000	593,088,000	659,622,000	611,217,000	669,200,000	662,191,000	728,850,000

Total	9,197,986,000	10,460,716,000	10,231,278,000	9,750,339,000	9,273,916,000	10,582,240,000	11,147,485,000
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Month, Average	766,498,833	871,726,333	852,606,500	812,528,250	772,826,333	881,853,333	928,957,083
Month, Minimum	384,342,000	500,544,000	461,742,000	514,633,000	571,571,000	594,062,000	647,246,000
Month, Maximum	1,230,186,000	1,451,327,000	1,286,062,000	1,226,990,000	988,006,000	1,520,886,000	1,335,850,000
Day, Average	25,199,962	28,659,496	28,030,899	26,713,258	25,407,989	28,992,438	30,541,055
Day, Maximim (*)	54,280,000	66,775,000	65,007,000	65,576,000	55,294,000	66,668,000	61,972,000





Water Quality – Agencies

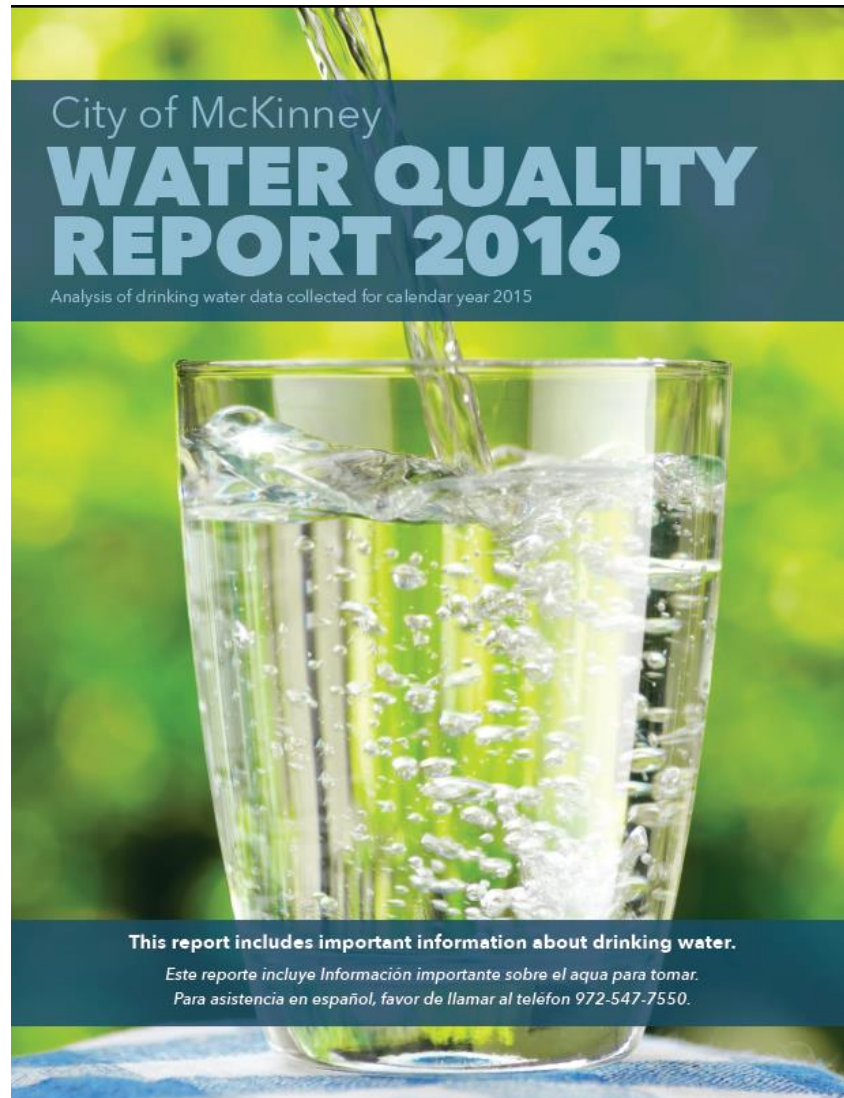
- Federal Environmental Protection Agency (EPA)
- Texas Commission on Environmental Quality (TCEQ)
- Texas Water Development Board (TWDB)



Water Quality - Testing

- Daily chlorine residual sampling in each pumping zone
- pH levels monitor in water storage system
- 60 bacteriological (BACT) samples (twice/month)
- Lead and Copper - 100 sample sites (every 3 years)
- BACT samples for new construction lines
- Trihalomethanes/Haloacetic Acids (THM/HAA5) (quarterly) 8 Sites quarterly, 3 Entry Points annually

Water Quality - Reporting



www.McKinneyTexas.org/WaterReport



Water Division Daily Operations

- Daily monitoring/sampling
- Monitoring/adjusting flows in the system
- Nitrification Action Plan to monitor residuals
- System Flushing
- Valve Exercising and Replacement
- Fire Hydrant Testing, Exercising, and Replacement
- Leak Detection Program
- Irrigation and Backflow Preventer Inspections

Projects

- Water Master Plan
- Water Main Projects
 - Condition Assessments
 - Replacement
 - Improvement
 - Expansion
- Pump Station Projects
 - Maintenance
 - Rehabilitation
 - New Construction
- Storage Tank Projects
 - Inspections
 - Maintenance
 - New Construction

Thank You

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