CITY OF MANOR WATER MASTER PLAN UPDATE

PAULINE GRAY

AGENDA

INTRODUCTION

PRIMARY GOALS

EXISTING SYSTEM & FACILITIES

WATER DEMAND & AREAS OF GROWTH

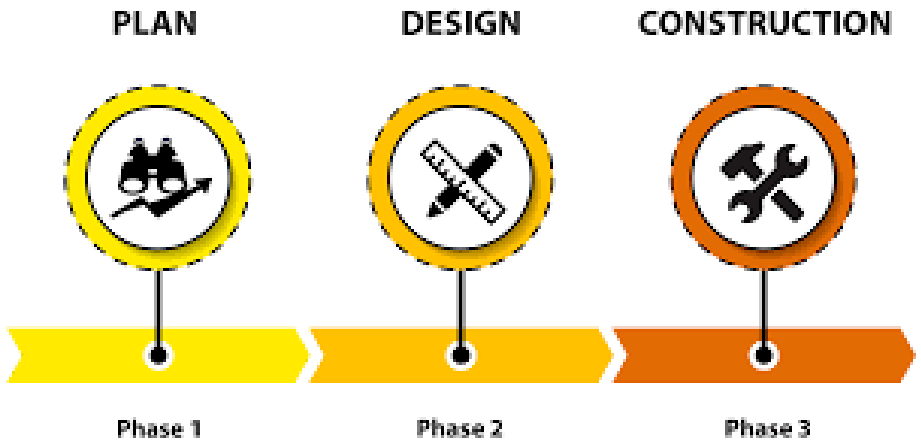
WATER SYSTEM EVALUATION

- WATER SUPPLY & TRANSMISSION
- DISTRIBUTION SYSTEM

IMPROVEMENTS & RECOMMENDATIONS

PRIMARY GOAL

- Identify Existing Deficiencies
- Develop Water Demand Projections
- Determine Needs of the System
- Develop a Capital Improvement Plan



EXISTING SYSTEM & FACILITIES

- 3 Water wells that provide approximately 1 MGD of water to the West side of the City
- 165,000 gallon Clearwell Tank and booster pump station – tank replaced in 2024
- 125,000 gallon Intermediate Tank –replaced in 2024
- 500,000 gallon elevated storage tank off Joyce Turner
- West EPCOR intake point off Gregg Manor
- Downtown Pump Station and 150,000 gallon storage tank – by Police Station
- East EPCOR intake point off Gregg Lane
- East 500,000 gallon elevated storage tank in Presidential Heights

FUTURE IMPROVEMENTS

- Currently Under Construction
  - Gregg Manor Road Project
    - Two 250,000 gallon ground water storage tanks
    - 10,000 gallon hydropneumatic tank
    - 2 MGD Booster pump station

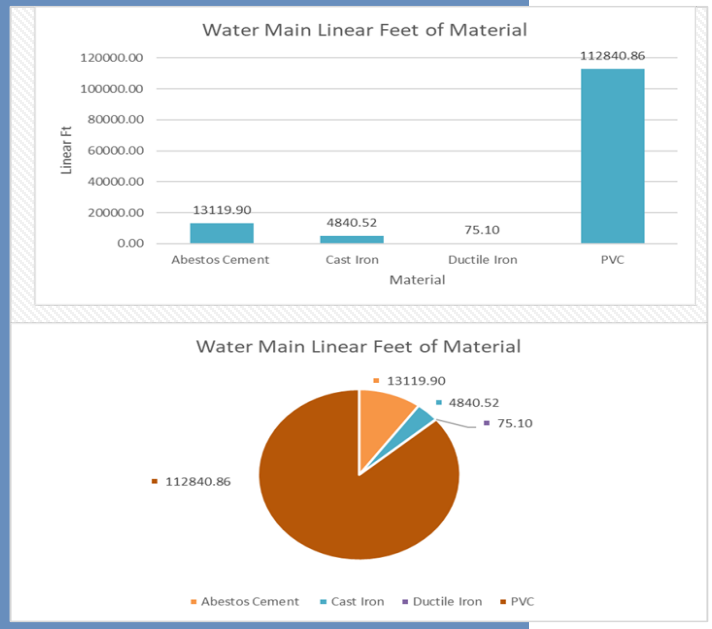
- Currently Under Design
  - Gregg Lane Project
    - Two 250,000 gallon ground water storage tanks
    - 10,000 gallon hydropneumatic tank
    - 2 MGD Booster pump station

WATER SUPPLY

- 3 Raw Water Wells
  - Colorado Alluvium – located off Gilbert
- 2 EPCOR Intake Locations
  - Gregg Lane
  - Gregg Manor

  - Manville Wholesale
    - Stonewater, Bell Farms, Village at Manor Commons, Carriage Hills

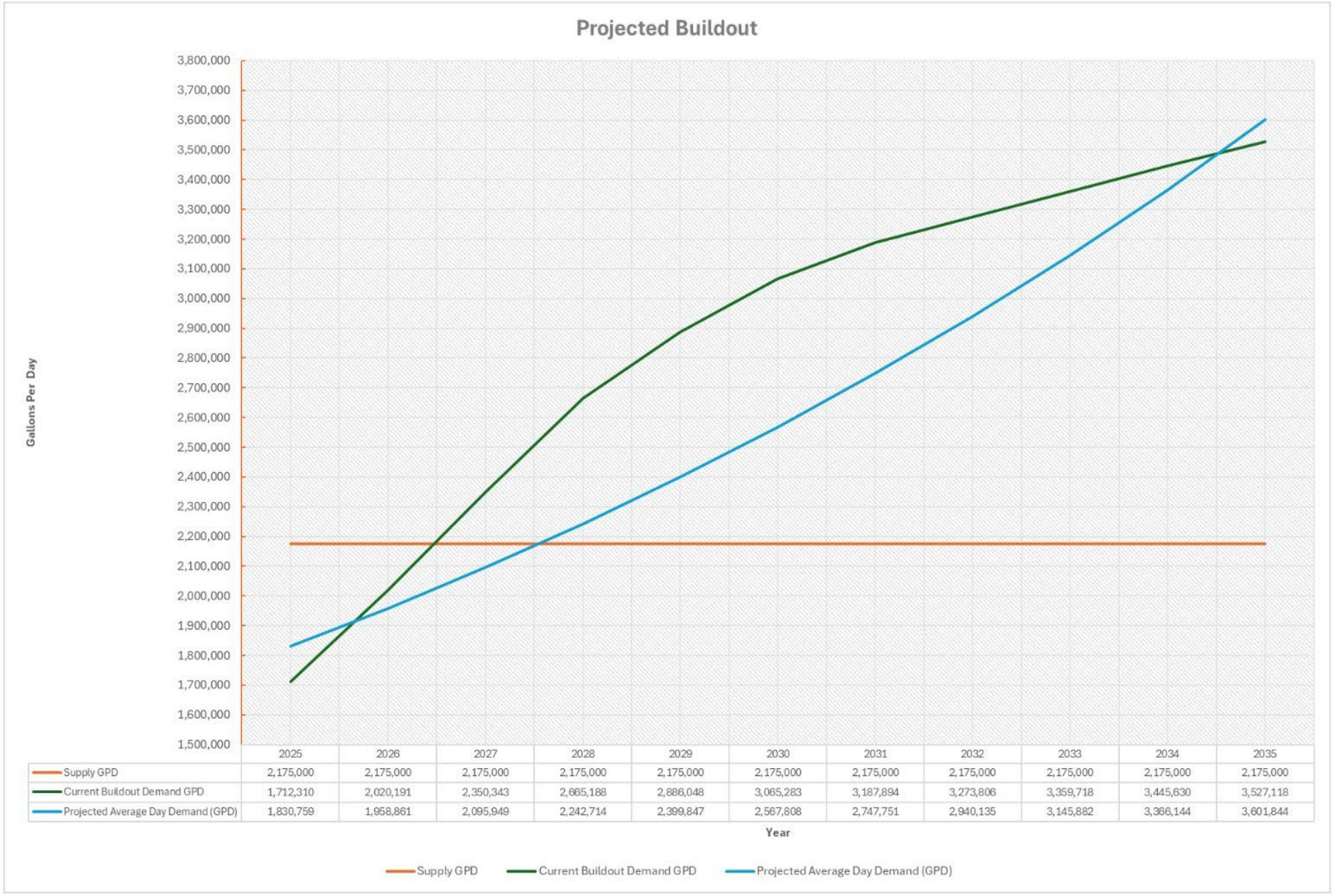
DISTRIBUTION SYSTEM



- Approximately 25 Miles of Water Mains
  - 2 to 16-inch Water Mains
  - 85.6% PVC
- Water Main Materials
  - Ductile Iron
  - Cast Iron
  - Asbestos Concrete
  - PVC

WATER DEMANDS

Below is a graph showing the current buildout (Green) and projected buildout (Blue) against the current supply (Orange) projects compared to the current supply.



	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Supply GPD	2,175,000	2,175,000	2,175,000	2,175,000	2,175,000	2,175,000	2,175,000	2,175,000	2,175,000	2,175,000	2,175,000
Current Buildout Demand GPD	1,712,310	2,020,191	2,350,343	2,665,188	2,886,048	3,065,283	3,187,894	3,273,806	3,359,718	3,445,630	3,527,118
Projected Average Day Demand (GPD)	1,830,759	1,958,861	2,095,949	2,242,714	2,399,847	2,567,808	2,747,751	2,940,135	3,145,882	3,366,144	3,601,844

WATER DEMANDS

This table follows the built-out dates of what is currently being installed, as well as possible build-out areas provided by the city. Including both proposed and possible build-out, the demand will outweigh the supply in **June 2027**

	Name	Location/Land Use ID Map	Type	Projected Start/timeout	Proposed LUEs	LUEs Growth/yr
Confirmed Buildout	Ginsel Tract/Town Hall Location	146	Residential	7 years, start 2026	1115.00	159.29
	Manor Springs	132, 195, 173, 188	Residential	30 year, start 2026	3182.44	106.08
	Okra Subdivision	26	Residential/Commercial	4 years, start 2025	339	84.75
	New Haven Subdivision	West of 973 and North of Gregg Lane	Residential/Commercial	4 years, start 2026	321	80.25
	Monarch Ranch Subdivision	23	Residential/Commercial	4 years, start 2025	457	114.25
	Holley Smith/Mustang Valley Subdivision	21, 192	Residential	2 years, start 2025	380	190.00
	Manor Commons NE	49, 50	Commercial	3 years, 2026	66	22.00
	SouthHill Lane	130	Residential	Half now, 5 year build out for rest	440	44.00
	South of 290, West of Gregg Manor Tracts	136	Residential	Turn on 108 LUEs 2026, 10 year	300	19.20
	East of Bois D Arc and North of 290 Tracts	142	Commercial	25% at 2026, 3 year build out for the rest	177.77	44.44
	Manor Heights	129	Residential	60% complete, 5 year for the rest 2026	514.52	41.16
	Manor Heights/Nagel Tract	170	Residential	5 years, 2026	136	27.20
	Manor Heights/Nagel Tract	171	Residential	5 years, 2026	137	27.40

	Name	Location/Land Use ID Map	Type	Projected Start/timeout	Proposed LUEs	LUEs Growth/yr
Possible Buildout	Manor Commercial Park	152	Commercial	15 year build out, start 2027	3714	247.60
	Lanzola	West of 178	Residential	4-year build out 2027	500-600	150.00
	Voelker	144	Residential	3 years, start 2026	386	128.67
	Manor ISD	West of 178	Institutional	4-year build out 2027	100	25.00
	HLA	137, 148	Commercial	3 year, 2026	335	111.67

All of these are accounted for in the graph above for the current and possible buildout rates.

WATER DEMANDS

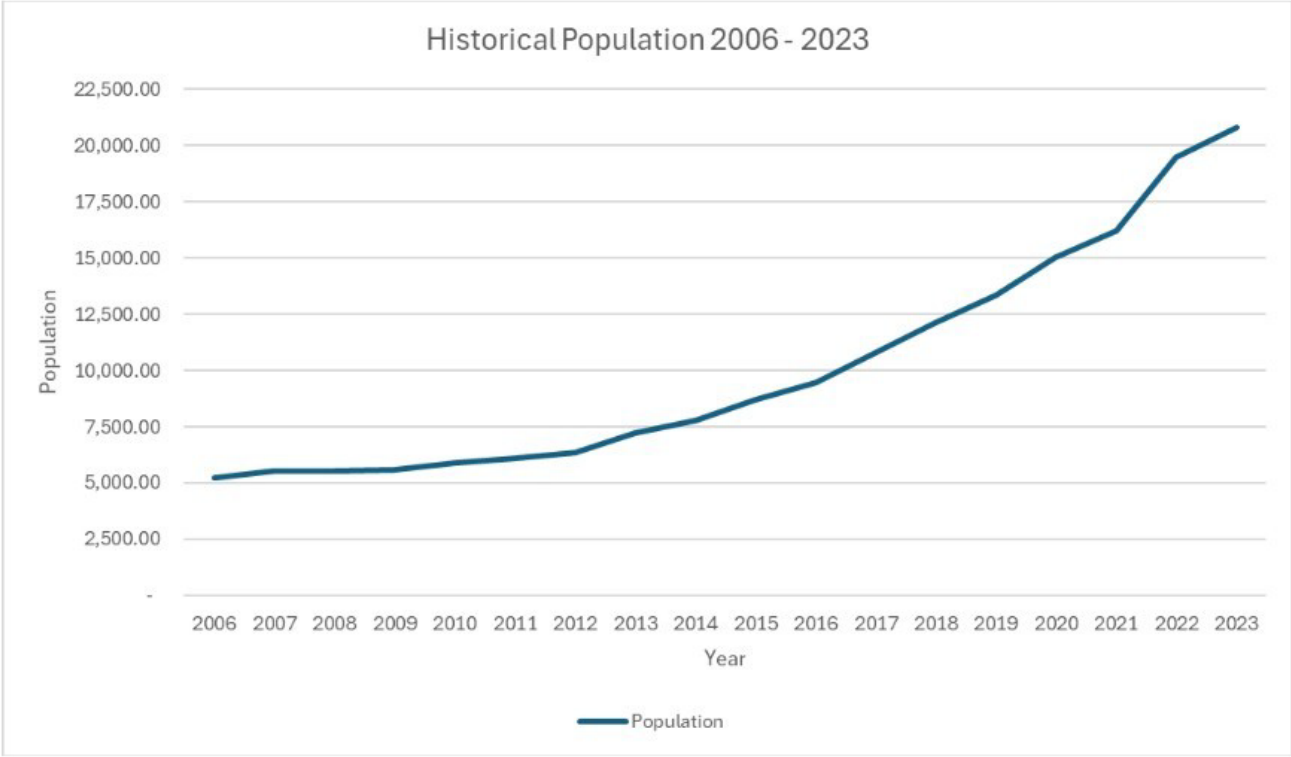
Tabular Data based on the current and projected buildout.

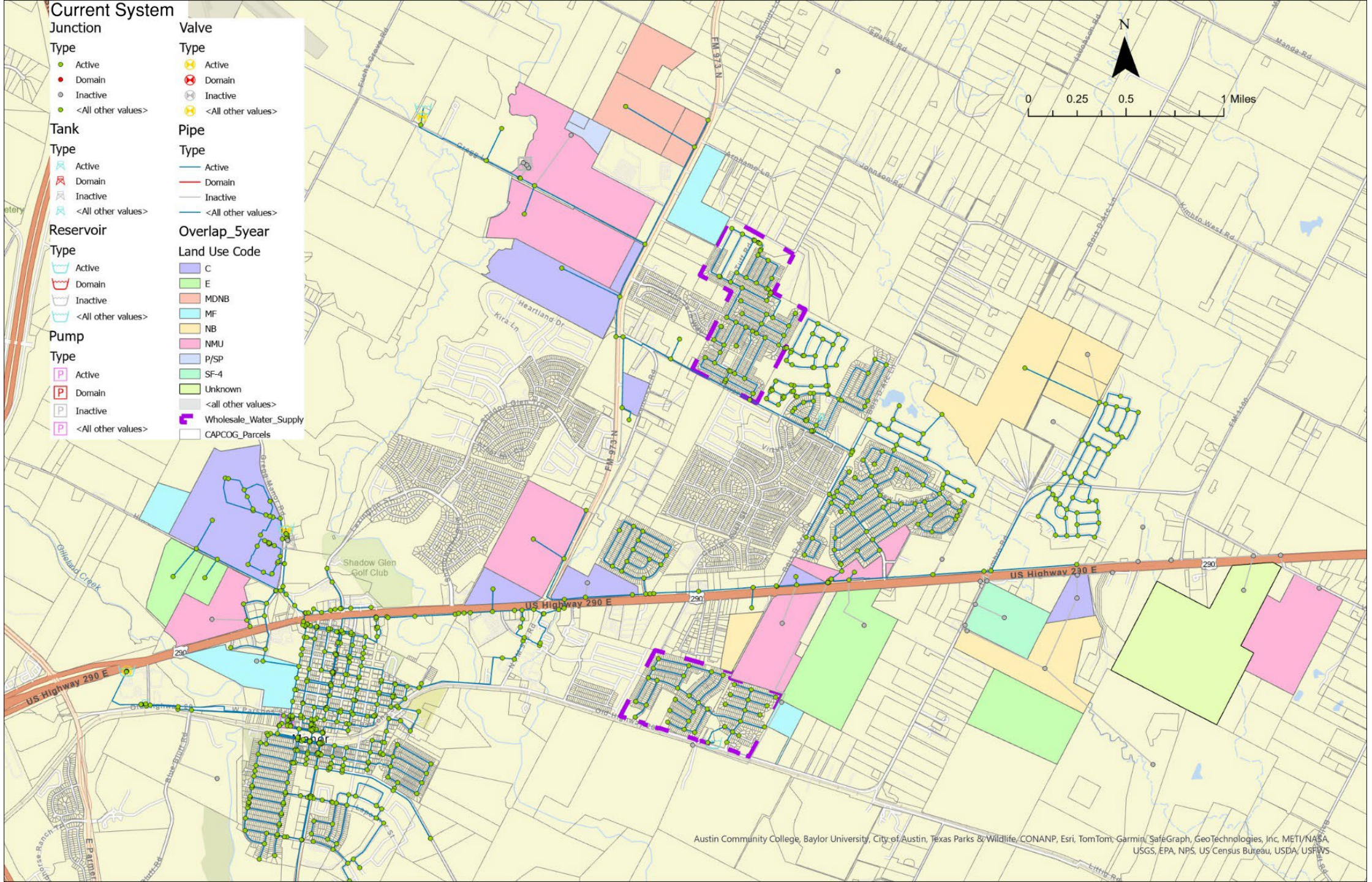
		Current Buildout						Projected Buildout				
Supply GPD	Year	Demand (LUEs)	GPM	Average Day Demand (GPD)	Remaing GPD	Remaining LUEs		Population	No. of LUEs	Projected Average Day Demand (GPD)	Max Day Demand (GPD)	Remaining LUEs from Average Day
2,175,000	2025	7,431.90	1,189.10	1,712,310.01	462,689.99	2,008.20	Projected 7% Growth Rate	23,836	7,946	1,830,759	3,207,490	1,494.10
2,175,000	2026	8,768.19	1,402.91	2,020,190.70	154,809.30	671.92		25,505	8,502	1,958,861	3,431,925	938.10
2,175,000	2027	10,201.14	1,632.18	2,350,343.39	(175,343.39)	(761.04)		27,291	9,097	2,095,949	3,672,103	343.10
2,175,000	**2028**	11,567.66	1,850.82	2,665,187.73	(490,187.73)	(2,127.55)		29,202	9,734	2,242,714	3,929,235	(293.90)
2,175,000	2029	12,526.25	2,004.20	2,886,048.07	(711,048.07)	(3,086.15)		31,247	10,416	2,399,847	4,204,532	(975.90)
2,175,000	2030	13,304.18	2,128.67	3,065,282.82	(890,282.82)	(3,864.07)		33,435	11,145	2,567,808	4,498,800	(1,704.90)
2,175,000	2031	13,836.35	2,213.82	3,187,894.08	(1,012,894.08)	(4,396.24)		35,776	11,926	2,747,751	4,814,060	(2,485.90)
2,175,000	2032	14,209.23	2,273.48	3,273,805.92	(1,098,805.92)	(4,769.12)		38,281	12,761	2,940,135	5,151,117	(3,320.90)
2,175,000	2033	14,582.11	2,333.14	3,359,717.76	(1,184,717.76)	(5,142.00)		40,961	13,654	3,145,882	5,511,586	(4,213.90)
2,175,000	2034	14,954.99	2,392.80	3,445,629.60	(1,270,629.60)	(5,514.89)		43,829	14,610	3,366,144	5,897,485	(5,169.90)
2,175,000	2035	15,308.67	2,449.39	3,527,117.76	(1,352,117.76)	(5,868.57)		46,898	15,633	3,601,844	6,310,431	(6,192.90)
2,175,000	2036	15,662.35	2,505.98	3,608,605.92	(1,433,605.92)	(6,222.25)		50,181	16,727	3,853,901	6,752,035	(7,286.90)
2,175,000	2037	16,016.03	2,562.57	3,690,094.08	(1,515,094.08)	(6,575.93)		53,694	17,898	4,123,700	7,224,723	(8,457.90)
2,175,000	**2038**	16,369.71	2,619.15	3,771,582.24	(1,596,582.24)	(6,929.61)		57,453	19,151	4,412,391	7,730,510	(9,710.90)

WATER DEMANDS

Historical Data

Year	Population	Annual growth rate
2006	5,250.00	
2007	5,509.00	4.9%
2008	5,526.00	0.3%
2009	5,597.00	1.3%
2010	5,880.00	5.1%
2011	6,109.00	3.9%
2012	6,362.00	4.1%
2013	7,235.00	13.7%
2014	7,804.00	7.9%
2015	8,701.00	11.5%
2016	9,449.00	8.6%
2017	10,797.00	14.3%
2018	12,108.00	12.1%
2019	13,338.00	10.2%
2020	15,006.00	12.5%
2021	16,179.00	7.8%
2022	19,490.00	20.5%
2023	20,818.00	6.8%
Average Annual Growth Rate =		8.6%

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1 Miles
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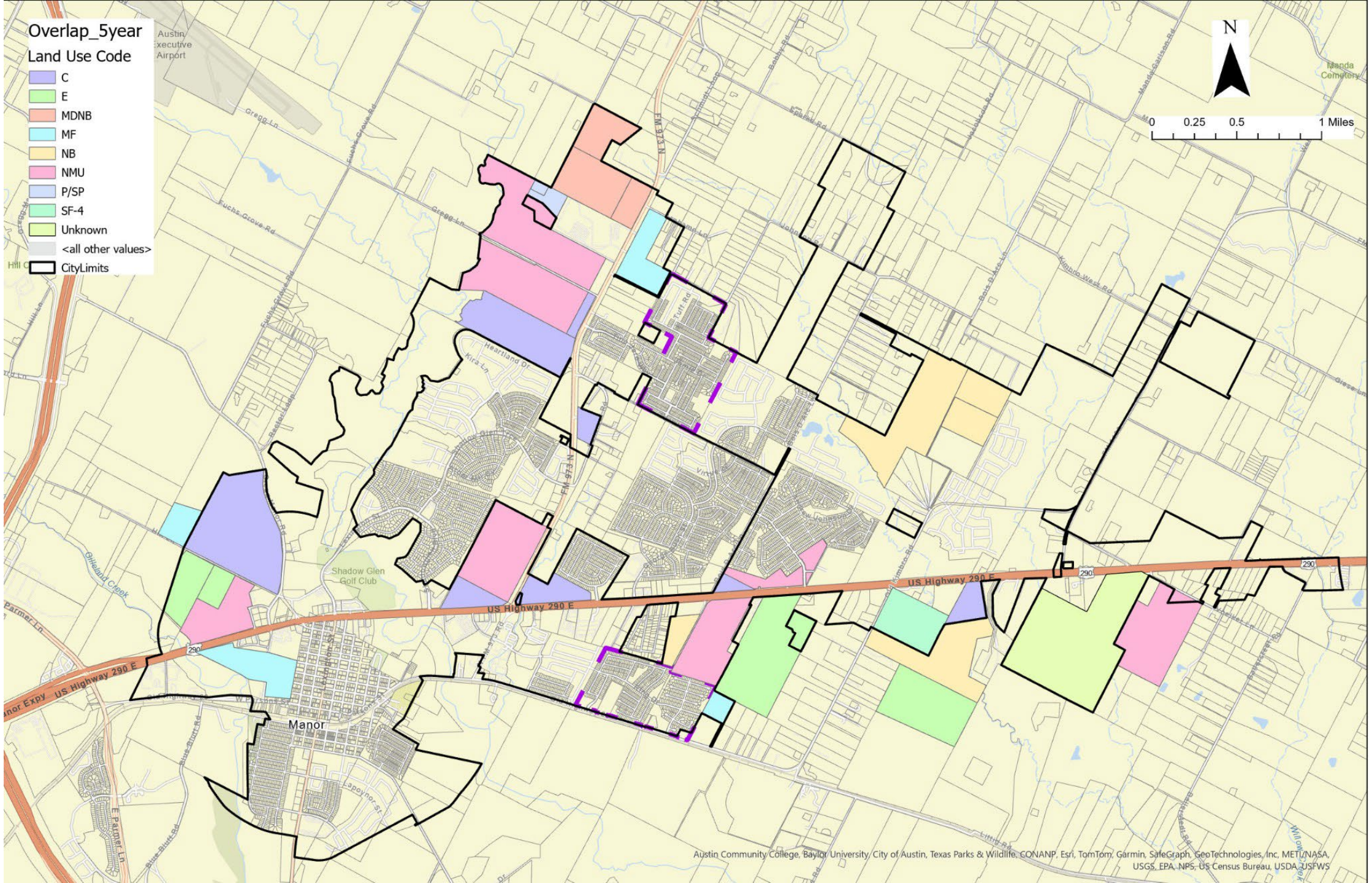
Heartland Dr
Kira Ln
Shadow Glen Golf Club
Gilleland Creek
Austin Community College, Baylor University, City of Austin, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS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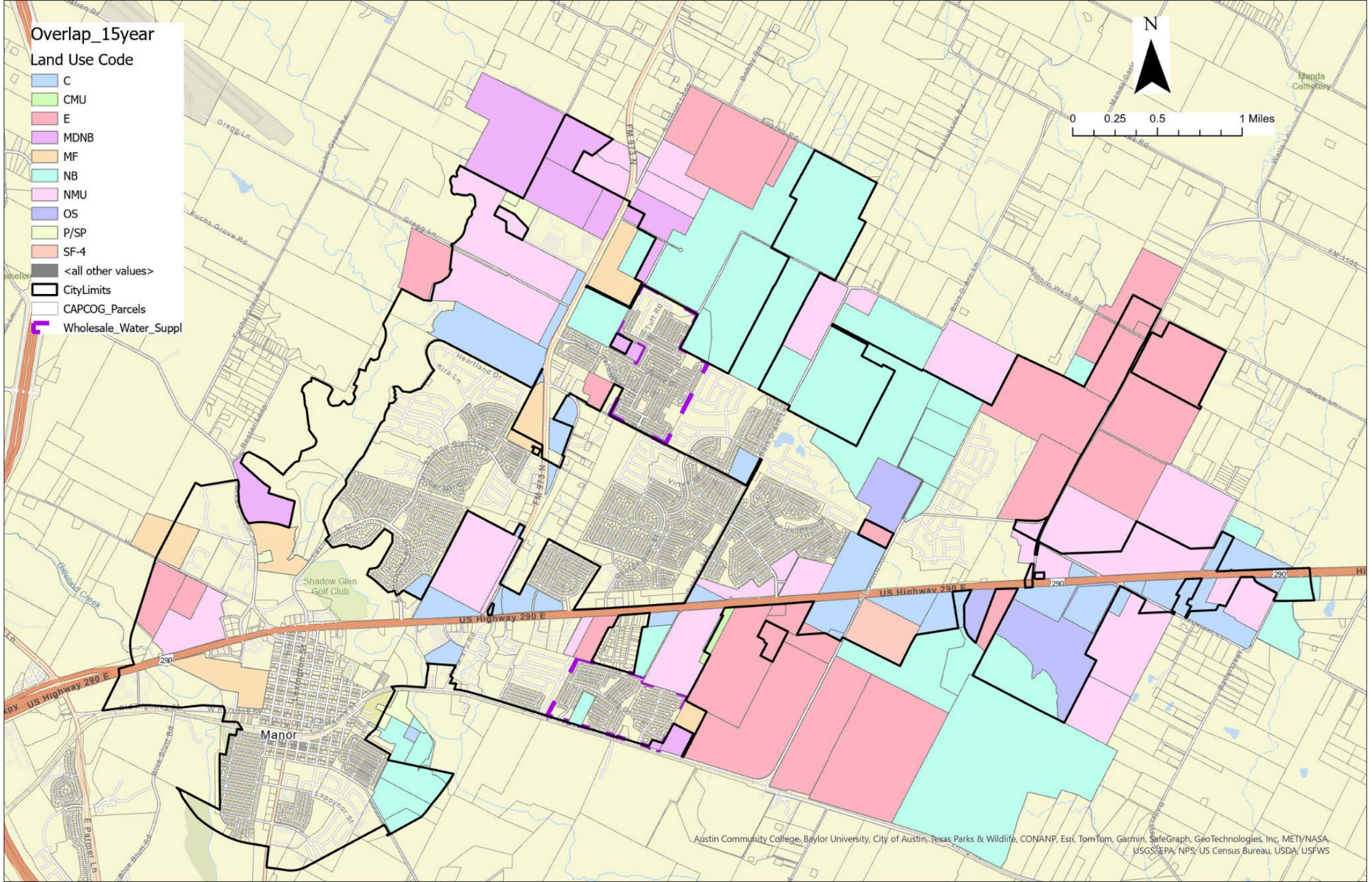
US Highway 290 E
Manor
Shadow Glen Golf Club
Austin Community College, Baylor University, City of Austin, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS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SF-4
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CityLimits
CAPCOG_Parcels
Wholesale_Water_Suppl
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DISTRIBUTION SYSTEM IMPROVEMENTS

- Minimum Pressure Improvements
  - Waterline looping, extending waterlines to the Eastern portion of the City, installing additional elevated storage tanks in the Eastern portion of the City.
- Existing Pump Station and Well Improvements
  - Backup Power, addition and replacement of pumps
- Additional Water Supply Options
- Replace Downtown booster pump station and storage tank
- Replace non-PVC waterlines with PVC waterlines
- Add fire hydrants at ends of lines in Old Towne Manor
- Begin water valve maintenance and replacement

RECOMMENDED IMPROVEMENTS

Description	Estimated Cost
Distribution - waterline extensions	$14,000,000
Transmission –waterline upsizing/replacement	$10,000,000
Supply – new wells and plant, other sources	$83,000,000
Storage- new elevated storage	$7,000,000
Total Recommended Improvements	**$114,000,000**

QUESTIONS?