

Section – 3 – Water Supply Models for the next 100 Years

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- a. 2007 Water Supply Model
- b. 2005 Base Population Projections
- c. 2005 Per Capita Water Use Analysis
- d. 2005 Base for Peak Day Use

Summary

The water supply model projects when additional water supplies might be necessary. Three models are developed to present a range of years when additional supplies might be necessary. Population growth is the primary factor between the three models. The three models include the following:

1. High Range – 1.63% population growth for 5 years, 1.2% thereafter.
2. Medium Range – City Planning Department projections for growth
3. Low Range – Region O and State of Texas projections for growth.

Based upon the results of all three models, the city staff project a need for water supplies by 2012. For this reason, the time frame for completion of the Lake Alan Henry project is proposed to be completed by 2012. Lake Alan Henry will need to be supplemented by one of the options proposed between the years of 2028-2043. A CRMWA II project could be necessary by 2046 or some later date. By establishing a range, Lubbock can better plan by being ready should population growth continue at a fast pace.

Projections in the model consider both the need to plan for total annual supply and peak day supply. Not only must the city have enough water to maintain a supply throughout the year, the City must also be able to deliver enough water each day to meet peak demand. Annually the City uses about 42,000 acre-feet or 14 billion gallons annually. Peak day use averages about 38 million gallons a day. Winter use might be as low as 22 million gallons per day. Summer use has been as high as 84 million gallons.

The models are presented in charts and graphs in order to present the information in the best manner possible. Along with the 2007 models, there are also some sections from the 2005 Water Plan and Report. The 2005 reports show historical and recent growth patterns in population, variations in annual per capita water use, and peak day use information.

The models use a Total GPCD standard for water supply planning purposes as defined in the TWDB 2004 Water Conservation Implementation Task Force recommendations. A base of 200 gpcd is used in the models for projecting future water demand. This figure is high when compared to the goal set by the Task Force recommendations of 140 gpcd or less. An analysis of Lubbock's total gpcd since 1985 shows that water use by the City does not have a steady or predictable trend. Instead, water use increases and decreases significantly from year to year. Further analysis indicated that Lubbock's high and low patterns of water use closely follow high and low accumulations of annual precipitation.

In cool, wet years, the annual water use has been as low as 160 gpcd. In dry, hot years, annual water use has been as high as 224 gpcd. This swing of 64 gpcd corresponds directly with annual rainfall. On one hot summer day, usage reached 428 gpcd, while on one cold



winter day, usage dropped to 115 gpcd. This variation makes it difficult to plan for annual water supply needs because each year can vary significantly in terms of precipitation. The 200 gpcd base is therefore used to assure enough water to cover most hot, dry years while recognizing that use can and will be lower than that amount in most years.

This variation also makes it difficult to measure the results of conservation efforts. As the City further develops its ability to analyze annual water use, efforts will be made to adjust for the impact of weather to determine actual trends in water use as a result of water conservation efforts and programs, as opposed to trends that may follow precipitation patterns. This will enable the City to fine tune its base per capita use figure and future reductions in per capita water use to meet conservation goals.

In Section 5 of this report the City's water conservation plan is presented. The plan proposes a 1% decrease in water use each year, again, in concert with the recommendations of the Water Conservation Implementation Task Force recommendations. The potential impact of conservation will be added to the model once a method to adjust gpcd for weather variations is developed.

If the City of Lubbock conserves water in the Bailey County Well Field and limits use to 10,000 acre feet annually, then the City is near capacity for annual supply. The City exceeded peak day capacity in 1998, but due to conservation efforts, the City now may have a buffer of about 10 to 15 percent. As the City plans for its future water supply, it is important to note that the City is near peak capacity as presented if the Bailey County Well Field is conserved.

The model can be updated as necessary with changes to model assumptions. Bruce Blalack, the Water Superintendent for the City of Lubbock, has played a major role in developing and preparing the water models.

Section 3 – Water Supply Models for the next 100 Years

a. 2007 Water Supply Model

100-YEAR WATER MODEL SUMMARY SCENARIO 2007

VARIABLES/ASSUMPTIONS		SCENARIO 2007
HIGH RANGE WATER DEMAND PROJECTIONS		
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:		200
ANNUAL POPULATION PROJECTIONS - HIGH RANGE - 1.63% FOR 5 YEARS, 1.20% THEREAFTER	POPULATION OPTION:	3
MEDIUM RANGE WATER DEMAND PROJECTIONS		
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:		200
ANNUAL POPULATION PROJECTIONS - MEDIUM RANGE - CITY PLANNING ESTIMATES	POPULATION OPTION:	2
LOW RANGE WATER DEMAND PROJECTIONS		
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:		200
ANNUAL POPULATION PROJECTIONS - LOW RANGE - REGION O WATER PLAN/TWDB ESTIMATES	POPULATION OPTION:	1
AVERAGE ANNUAL PERCENT REDUCTION DUE TO WATER SAVING FIXTURES OF:		0.00%

HIGH RANGE WATER DEMAND PROJECTIONS	YEAR
YEAR CITY IRRIGATION SUPPLY NEEDED	2006
YEAR LAKE ALAN HENRY SUPPLY NEEDED	2012
YEAR REUSE WATER SUPPLY NEEDED	2028
YEAR POST RESERVOIR SUPPLY NEEDED	2037
YEAR CRMWA II WATER SUPPLY NEEDED	2046
YEAR MAXIMUM DAY REACHES 82 MGD	2009

MEDIUM RANGE WATER DEMAND PROJECTIONS	YEAR
YEAR CITY IRRIGATION SUPPLY NEEDED	2006
YEAR LAKE ALAN HENRY SUPPLY NEEDED	2012
YEAR REUSE WATER SUPPLY NEEDED	2043
YEAR POST RESERVOIR SUPPLY NEEDED	>2105
YEAR CRMWA II WATER SUPPLY NEEDED	>2105
YEAR MAXIMUM DAY REACHES 82 MGD	2013

LOW RANGE WATER DEMAND PROJECTIONS	YEAR
YEAR CITY IRRIGATION SUPPLY NEEDED	2006
YEAR LAKE ALAN HENRY SUPPLY NEEDED	2012
YEAR REUSE WATER SUPPLY NEEDED	2054
YEAR POST RESERVOIR SUPPLY NEEDED	>2105
YEAR CRMWA II WATER SUPPLY NEEDED	>2105
YEAR MAXIMUM DAY REACHES 82 MGD	2014

100-YEAR WATER DEMAND AND SUPPLY MODEL

HIGH RANGE WATER DEMAND PROJECTIONS											SCENARIO 2007
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:											200
ANNUAL POPULATION PROJECTIONS - HIGH RANGE - 1.63% FOR 5 YEARS, 1.20% THEREAFTER							POPULATION OPTION:				3
MEDIUM RANGE WATER DEMAND PROJECTIONS											
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:											200
ANNUAL POPULATION PROJECTIONS - MEDIUM RANGE - CITY PLANNING ESTIMATES							POPULATION OPTION:				2
LOW RANGE WATER DEMAND PROJECTIONS											
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:											200
ANNUAL POPULATION PROJECTIONS - LOW RANGE - REGION O WATER PLAN/TWDB ESTIMATES							POPULATION OPTION:				1
AVERAGE ANNUAL PERCENT REDUCTION DUE WATER SAVING FIXTURES OF:											0.00%

YEAR	POPULATION LUBBOCK PLUS WHOLESALE CUSTOMERS	HIGH RANGE WATER DEMAND (ACRE FEET)	MEDIUM RANGE WATER DEMAND (ACRE FEET)	LOW RANGE WATER DEMAND (ACRE FEET)	CRMWA SUPPLY (ACRE FEET)	BAILEY COUNTY SUPPLY (ACRE FEET)	BASED ON HIGH RANGE PROJECTIONS					THE CRMWA II SUPPLY (ACRE FEET)
							CITY IRRIGATION WELL SUPPLY (ACRE FEET)	LAKE ALAN HENRY SUPPLY (ACRE FEET)	REUSE WATER SUPPLY (ACRE FEET)	POST RESERVOIR SUPPLY (ACRE FEET)		
2000	203,454	44,950	44,950	44,950	37,511	7,439						
2001	205,402	44,398	44,398	44,398	37,516	6,882						
2002	207,369	42,561	42,561	42,561	34,380	8,181						
2003	209,357	44,515	44,515	44,515	36,566	7,948						
2004	211,348	37,949	37,949	37,949	27,546	10,403						
2005	213,390	39,988	39,988	39,988	33,187	6,801						
2006	215,533	48,286	48,286	48,286	33,352	14,734	200	0	0	0	0	0
2007	219,041	49,072	48,582	48,630	31,499	17,173	400	0	0	0	0	0
2008	222,607	49,870	48,880	48,976	25,000	24,270	600	0	0	0	0	0
2009	226,230	50,682	49,180	49,326	36,000	13,882	800	0	0	0	0	0
2010	229,913	51,507	49,469	49,662	36,000	14,507	1,000	0	0	0	0	0
2011	233,656	52,346	49,826	49,923	36,000	15,146	1,200	0	0	0	0	0
2012	236,456	52,973	50,186	50,187	36,000	10,000	1,400	5,573	0	0	0	0
2013	239,290	53,608	50,548	50,452	36,000	10,000	1,600	6,008	0	0	0	0
2014	242,158	54,250	50,913	50,719	36,000	10,000	1,800	6,450	0	0	0	0
2015	245,060	54,901	51,280	50,987	36,000	10,000	1,800	7,101	0	0	0	0
2016	247,997	55,559	51,650	51,257	36,000	10,000	1,800	7,759	0	0	0	0
2017	250,970	56,224	52,023	51,528	36,000	10,000	1,800	8,424	0	0	0	0
2018	253,978	56,898	52,398	51,801	36,000	10,000	1,800	9,098	0	0	0	0
2019	257,022	57,580	52,776	52,076	36,000	10,000	1,800	9,780	0	0	0	0
2020	260,102	58,270	53,039	52,290	36,000	10,000	1,800	10,470	0	0	0	0
2021	263,220	58,969	53,365	52,463	36,000	10,000	1,800	11,169	0	0	0	0
2022	266,375	59,676	53,694	52,637	36,000	10,000	1,800	11,876	0	0	0	0
2023	269,568	60,391	54,024	52,812	36,000	10,000	1,800	12,591	0	0	0	0
2024	272,799	61,115	54,357	52,988	36,000	10,000	1,800	13,315	0	0	0	0
2025	276,069	61,847	54,692	53,164	36,000	10,000	1,800	14,047	0	0	0	0
2026	279,378	62,589	55,028	53,342	36,000	10,000	1,800	14,789	0	0	0	0
2027	282,727	63,339	55,367	53,520	36,000	10,000	1,800	15,539	0	0	0	0
2028	286,116	64,098	55,708	53,699	36,000	10,000	1,800	16,000	298	0	0	0
2029	289,546	64,867	56,051	53,878	36,000	10,000	1,800	16,000	1,067	0	0	0
2030	293,017	65,644	56,304	54,024	36,000	8,000	1,800	16,000	3,844	0	0	0
2031	296,530	66,431	56,592	54,133	36,000	8,000	1,800	16,000	4,631	0	0	0
2032	300,085	67,228	56,881	54,242	36,000	8,000	1,800	16,000	5,428	0	0	0
2033	303,682	68,033	57,171	54,352	36,000	8,000	1,800	16,000	6,233	0	0	0
2034	307,323	68,849	57,463	54,462	36,000	8,000	1,800	16,000	7,049	0	0	0

100-YEAR WATER DEMAND AND SUPPLY MODEL

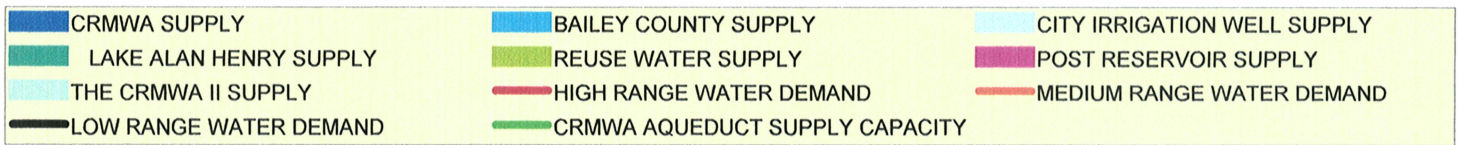
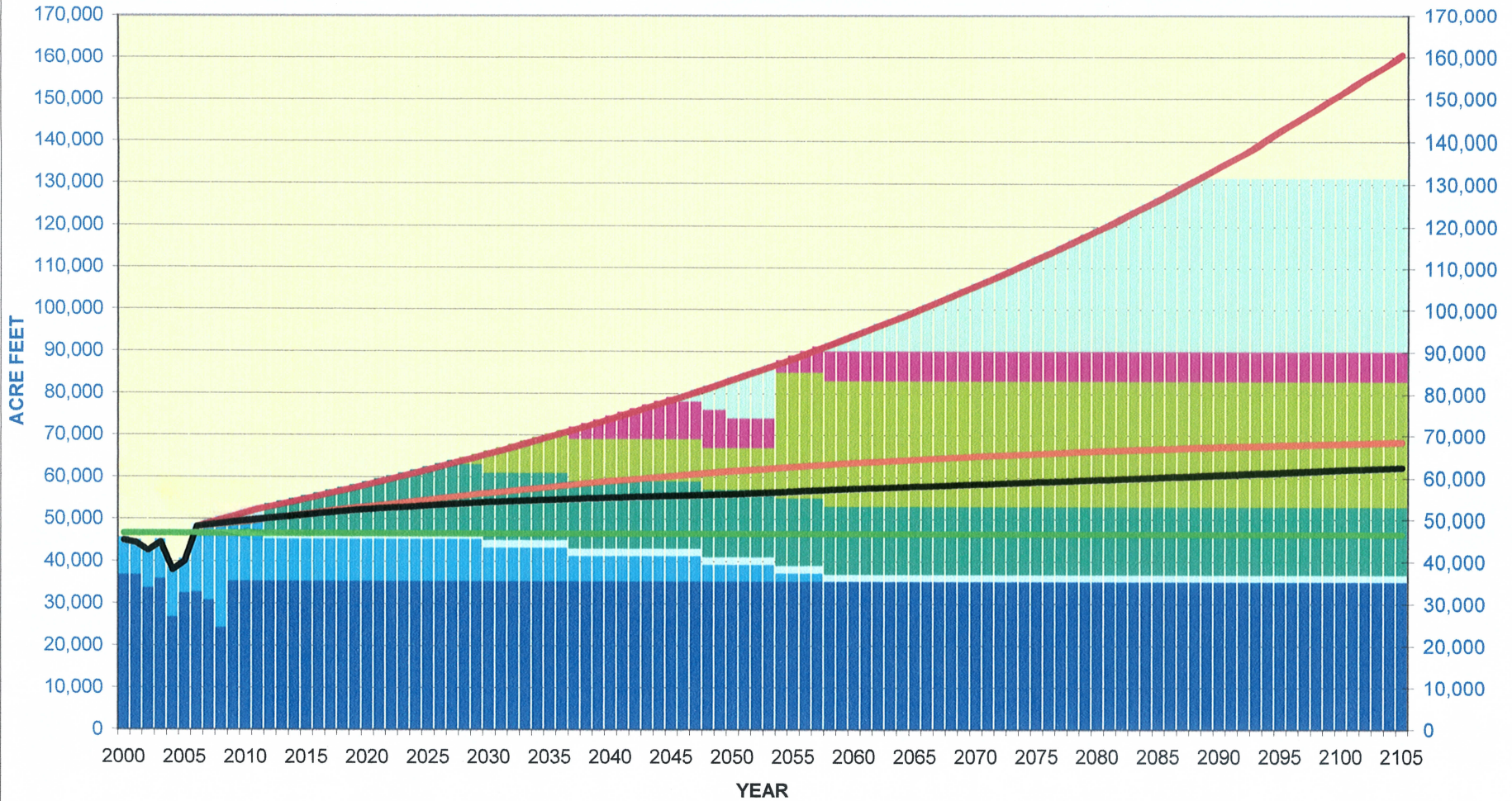
HIGH RANGE WATER DEMAND PROJECTIONS											SCENARIO 2007
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200	
ANNUAL POPULATION PROJECTIONS - HIGH RANGE - 1.63% FOR 5 YEARS, 1.20% THEREAFTER								POPULATION OPTION:		3	
MEDIUM RANGE WATER DEMAND PROJECTIONS											
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200	
ANNUAL POPULATION PROJECTIONS - MEDIUM RANGE - CITY PLANNING ESTIMATES								POPULATION OPTION:		2	
LOW RANGE WATER DEMAND PROJECTIONS											
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200	
ANNUAL POPULATION PROJECTIONS - LOW RANGE - REGION O WATER PLAN/TWDB ESTIMATES								POPULATION OPTION:		1	
AVERAGE ANNUAL PERCENT REDUCTION DUE WATER SAVING FIXTURES OF:										0.00%	
2035	311,007	69,674	57,757	54,572	36,000	8,000	1,800	16,000	7,874	0	0
2036	314,735	70,510	58,052	54,683	36,000	8,000	1,800	16,000	8,710	0	0
2037	318,509	71,355	58,348	54,794	36,000	6,000	1,800	16,000	10,000	1,555	0
2038	322,327	72,211	58,647	54,906	36,000	6,000	1,800	16,000	10,000	2,411	0
2039	326,191	73,076	58,946	55,018	36,000	6,000	1,800	16,000	10,000	3,276	0
2040	330,102	73,952	59,180	55,113	36,000	6,000	1,800	16,000	10,000	4,152	0
2041	334,060	74,839	59,421	55,200	36,000	6,000	1,800	16,000	10,000	5,039	0
2042	338,065	75,736	59,663	55,288	36,000	6,000	1,800	16,000	10,000	5,936	0
2043	342,118	76,644	59,905	55,376	36,000	6,000	1,800	16,000	10,000	6,844	0
2044	346,220	77,563	60,149	55,464	36,000	6,000	1,800	16,000	10,000	7,763	0
2045	350,371	78,493	60,394	55,553	36,000	6,000	1,800	16,000	10,000	8,693	0
2046	354,572	79,434	60,639	55,642	36,000	6,000	1,800	16,000	10,000	9,000	634
2047	358,823	80,387	60,886	55,731	36,000	6,000	1,800	16,000	10,000	9,000	1,587
2048	363,125	81,350	61,134	55,820	36,000	4,000	1,800	16,000	10,000	9,000	4,550
2049	367,479	82,326	61,382	55,910	36,000	4,000	1,800	16,000	10,000	9,000	5,526
2050	371,885	83,313	61,588	55,987	36,000	4,000	1,800	16,000	10,000	7,000	8,513
2051	376,344	84,312	61,784	56,120	36,000	4,000	1,800	16,000	10,000	7,000	9,512
2052	380,857	85,323	61,982	56,253	36,000	4,000	1,800	16,000	10,000	7,000	10,523
2053	385,423	86,346	62,180	56,386	36,000	4,000	1,800	16,000	10,000	7,000	11,546
2054	390,045	87,381	62,379	56,519	36,000	2,000	1,800	16,000	30,000	1,581	0
2055	394,722	88,429	62,578	56,653	36,000	2,000	1,800	16,000	30,000	2,629	0
2056	399,455	89,489	62,778	56,788	36,000	2,000	1,800	16,000	30,000	3,689	0
2057	404,245	90,562	62,979	56,922	36,000	2,000	1,800	16,000	30,000	4,762	0
2058	409,092	91,648	63,180	57,057	36,000		1,800	16,000	30,000	7,000	848
2059	413,998	92,747	63,382	57,193	36,000		1,800	16,000	30,000	7,000	1,947
2060	418,962	93,860	63,556	57,313	36,000		1,800	16,000	30,000	7,000	3,060
2061	423,986	94,985	63,716	57,423	36,000		1,800	16,000	30,000	7,000	4,185
2062	429,070	96,124	63,876	57,533	36,000		1,800	16,000	30,000	7,000	5,324
2063	434,215	97,277	64,036	57,643	36,000		1,800	16,000	30,000	7,000	6,477
2064	439,422	98,443	64,197	57,753	36,000		1,800	16,000	30,000	7,000	7,643
2065	444,692	99,624	64,358	57,864	36,000		1,800	16,000	30,000	7,000	8,824
2066	450,025	100,818	64,520	57,974	36,000		1,800	16,000	30,000	7,000	10,018
2067	455,421	102,027	64,682	58,085	36,000		1,800	16,000	30,000	7,000	11,227
2068	460,883	103,251	64,845	58,197	36,000		1,800	16,000	30,000	7,000	12,451
2069	466,410	104,489	65,007	58,308	36,000		1,800	16,000	30,000	7,000	13,689
2070	472,003	105,742	65,153	58,420	36,000		1,800	16,000	30,000	7,000	14,942
2071	477,664	107,010	65,285	58,532	36,000		1,800	16,000	30,000	7,000	16,210
2072	483,392	108,294	65,417	58,644	36,000		1,800	16,000	30,000	7,000	17,494
2073	489,189	109,592	65,549	58,757	36,000		1,800	16,000	30,000	7,000	18,792
2074	495,056	110,907	65,682	58,869	36,000		1,800	16,000	30,000	7,000	20,107
2075	500,993	112,237	65,814	58,982	36,000		1,800	16,000	30,000	7,000	21,437

100-YEAR WATER DEMAND AND SUPPLY MODEL

HIGH RANGE WATER DEMAND PROJECTIONS											SCENARIO 2007
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200	
ANNUAL POPULATION PROJECTIONS - HIGH RANGE - 1.63% FOR 5 YEARS, 1.20% THEREAFTER						POPULATION OPTION:				3	
MEDIUM RANGE WATER DEMAND PROJECTIONS											
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200	
ANNUAL POPULATION PROJECTIONS - MEDIUM RANGE - CITY PLANNING ESTIMATES						POPULATION OPTION:				2	
LOW RANGE WATER DEMAND PROJECTIONS											
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200	
ANNUAL POPULATION PROJECTIONS - LOW RANGE - REGION O WATER PLAN/TWDB ESTIMATES						POPULATION OPTION:				1	
AVERAGE ANNUAL PERCENT REDUCTION DUE WATER SAVING FIXTURES OF:										0.00%	
2076	507,001	113,583	65,948	59,095	36,000		1,800	16,000	30,000	7,000	22,783
2077	513,081	114,945	66,081	59,209	36,000		1,800	16,000	30,000	7,000	24,145
2078	519,235	116,324	66,215	59,322	36,000		1,800	16,000	30,000	7,000	25,524
2079	525,462	117,719	66,349	59,436	36,000		1,800	16,000	30,000	7,000	26,919
2080	531,764	119,130	66,471	59,550	36,000		1,800	16,000	30,000	7,000	28,330
2081	538,142	120,559	66,573	59,665	36,000		1,800	16,000	30,000	7,000	29,759
2082	544,596	122,005	66,675	59,779	36,000		1,800	16,000	30,000	7,000	31,205
2083	551,127	123,468	66,778	59,894	36,000		1,800	16,000	30,000	7,000	32,668
2084	557,737	124,949	66,880	60,009	36,000		1,800	16,000	30,000	7,000	34,149
2085	564,426	126,448	66,982	60,124	36,000		1,800	16,000	30,000	7,000	35,648
2086	571,196	127,964	67,085	60,240	36,000		1,800	16,000	30,000	7,000	37,164
2087	578,047	129,499	67,188	60,356	36,000		1,800	16,000	30,000	7,000	38,699
2088	584,980	131,052	67,291	60,472	36,000		1,800	16,000	30,000	7,000	40,000
2089	591,996	132,624	67,394	60,588	36,000		1,800	16,000	30,000	7,000	40,000
2090	599,096	134,215	67,491	60,705	36,000		1,800	16,000	30,000	7,000	40,000
2091	606,282	135,825	67,562	60,821	36,000		1,800	16,000	30,000	7,000	40,000
2092	613,553	137,454	67,632	60,938	36,000		1,800	16,000	30,000	7,000	40,000
2093	620,912	139,102	67,703	61,056	36,000		1,800	16,000	30,000	7,000	40,000
2094	628,360	140,771	67,774	61,173	36,000		1,800	16,000	30,000	7,000	40,000
2095	635,897	142,459	67,845	61,291	36,000		1,800	16,000	30,000	7,000	40,000
2096	643,524	144,168	67,915	61,409	36,000		1,800	16,000	30,000	7,000	40,000
2097	651,242	145,897	67,986	61,527	36,000		1,800	16,000	30,000	7,000	40,000
2098	659,054	147,647	68,057	61,646	36,000		1,800	16,000	30,000	7,000	40,000
2099	666,959	149,418	68,129	61,765	36,000		1,800	16,000	30,000	7,000	40,000
2100	674,959	151,210	68,197	61,884	36,000		1,800	16,000	30,000	7,000	40,000
2101	683,055	153,024	68,268	62,003	36,000		1,800	16,000	30,000	7,000	40,000
2102	691,248	154,859	68,340	62,122	36,000		1,800	16,000	30,000	7,000	40,000
2103	699,539	156,717	68,411	62,242	36,000		1,800	16,000	30,000	7,000	40,000
2104	707,930	158,597	68,483	62,362	36,000		1,800	16,000	30,000	7,000	40,000
2105	716,421	160,499	68,554	62,482	36,000		1,800	16,000	30,000	7,000	40,000

YEARS 2000-2005 CONTAIN ACTUAL CONSUMPTION FIGURES

COMPARISON OF 100-YEAR WATER SUPPLY SCENARIOS



100-YEAR AVERAGE DAY AND MAXIMUM DAY MODEL

MAXIMUM DAY FACTOR								1.82		SCENARIO 2007		
HIGH RANGE WATER DEMAND PROJECTIONS												
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200		
ANNUAL POPULATION PROJECTIONS - HIGH RANGE - 1.63% FOR 5 YEARS, 1.20% THEREAFTER					POPULATION OPTION:					3		
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WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200		
ANNUAL POPULATION PROJECTIONS - MEDIUM RANGE - CITY PLANNING ESTIMATES					POPULATION OPTION:					2		
LOW RANGE WATER DEMAND PROJECTIONS												
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200		
ANNUAL POPULATION PROJECTIONS - LOW RANGE - REGION O WATER PLAN/TWDB ESTIMATES					POPULATION OPTION:					1		
AVERAGE ANNUAL PERCENT REDUCTION DUE WATER SAVING FIXTURES OF:										0.00%		
YEAR	POPULATION LUBBOCK PLUS WHOLESALE CUSTOMERS	HIGH RANGE		MEDIUM RANGE		LOW RANGE		CURRENT MAXIMUM CRMWA SUPPLY (MGD)	CURRENT MAXIMUM BAILEY COUNTY SUPPLY (MGD)	CURRENT MAXIMUM TERMINAL STORAGE SUPPLY (MGD FOR 15 DAYS)	PROPOSED MAXIMUM OTHER SUPPLIES (MGD)	
		ANNUAL AVERAGE DAY (MGD)	MAXIMUM DAY (MGD)	ANNUAL AVERAGE DAY (MGD)	MAXIMUM DAY (MGD)	ANNUAL AVERAGE DAY (MGD)	MAXIMUM DAY (MGD)					
1995	196,329	40.61	79.54	40.61	79.54	40.61	79.54	41.69	40.00	25.00		
1996	197,745	39.44	66.71	39.44	66.71	39.44	66.71	41.69	40.00	25.00		
1997	199,163	36.07	63.37	36.07	63.37	36.07	63.37	41.69	40.00	25.00		
1998	200,504	44.01	84.17	44.01	84.17	44.01	84.17	41.69	40.00	25.00		
1999	201,965	36.99	68.93	36.99	68.93	36.99	68.93	41.69	40.00	25.00		
2000	203,454	39.51	67.82	39.51	67.82	39.51	67.82	41.69	40.00	25.00		
2001	205,402	38.35	73.09	38.35	73.09	38.35	73.09	41.69	40.00	25.00		
2002	207,369	36.57	63.91	36.57	63.91	36.57	63.91	41.69	40.00	25.00		
2003	209,357	38.84	73.61	38.84	73.61	38.84	73.61	41.69	40.00	25.00		
2004	211,348	33.57	59.94	33.57	59.94	33.57	59.94	41.69	40.00	25.00		
2005	213,390	35.58	62.54	35.58	62.54	35.58	62.54	41.69	40.00	25.00		
2006	215,533	43.11	78.45	43.11	78.45	43.11	78.45	41.69	40.00	25.00		
2007	219,041	43.81	79.73	43.37	78.93	43.41	79.01	41.69	40.00	25.00		
2008	222,607	44.52	81.03	43.64	79.42	43.72	79.58	41.69	40.00	25.00		
2009	226,230	45.25	82.35	43.91	79.91	44.04	80.14	41.69	40.00	25.00		
2010	229,913	45.98	83.69	44.16	80.38	44.34	80.69	41.69	40.00	25.00		
2011	233,656	46.73	85.05	44.48	80.96	44.57	81.12	41.69	40.00	25.00		
2012	236,456	47.29	86.07	44.80	81.54	44.80	81.54	41.69	40.00	25.00	25.00	
2013	239,290	47.86	87.10	45.13	82.13	45.04	81.97	41.69	40.00	25.00	25.00	
2014	242,158	48.43	88.15	45.45	82.72	45.28	82.41	41.69	40.00	25.00	25.00	
2015	245,060	49.01	89.20	45.78	83.32	45.52	82.84	41.69	40.00	25.00	25.00	
2016	247,997	49.60	90.27	46.11	83.92	45.76	83.28	41.69	40.00	25.00	25.00	
2017	250,970	50.19	91.35	46.44	84.53	46.00	83.72	41.69	40.00	25.00	25.00	
2018	253,978	50.80	92.45	46.78	85.14	46.25	84.17	41.69	40.00	25.00	25.00	
2019	257,022	51.40	93.56	47.12	85.75	46.49	84.61	41.69	40.00	25.00	25.00	
2020	260,102	52.02	94.68	47.35	86.18	46.68	84.96	41.69	40.00	25.00	25.00	
2021	263,220	52.64	95.81	47.64	86.71	46.84	85.24	41.69	40.00	25.00	25.00	
2022	266,375	53.28	96.96	47.93	87.24	46.99	85.52	41.69	40.00	25.00	25.00	
2023	269,568	53.91	98.12	48.23	87.78	47.15	85.81	41.69	40.00	25.00	25.00	
2024	272,799	54.56	99.30	48.53	88.32	47.30	86.09	41.69	40.00	25.00	25.00	
2025	276,069	55.21	100.49	48.83	88.86	47.46	86.38	41.69	40.00	25.00	25.00	
2026	279,378	55.88	101.69	49.13	89.41	47.62	86.67	41.69	40.00	25.00	25.00	
2027	282,727	56.55	102.91	49.43	89.96	47.78	86.96	41.69	40.00	25.00	25.00	
2028	286,116	57.22	104.15	49.73	90.51	47.94	87.25	41.69	40.00	25.00	42.00	

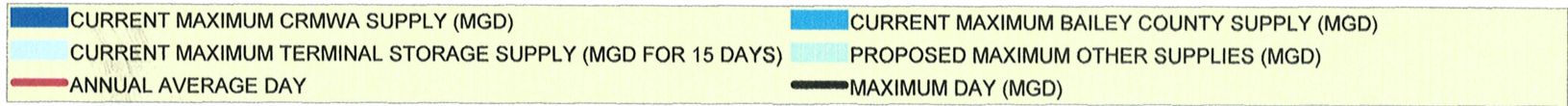
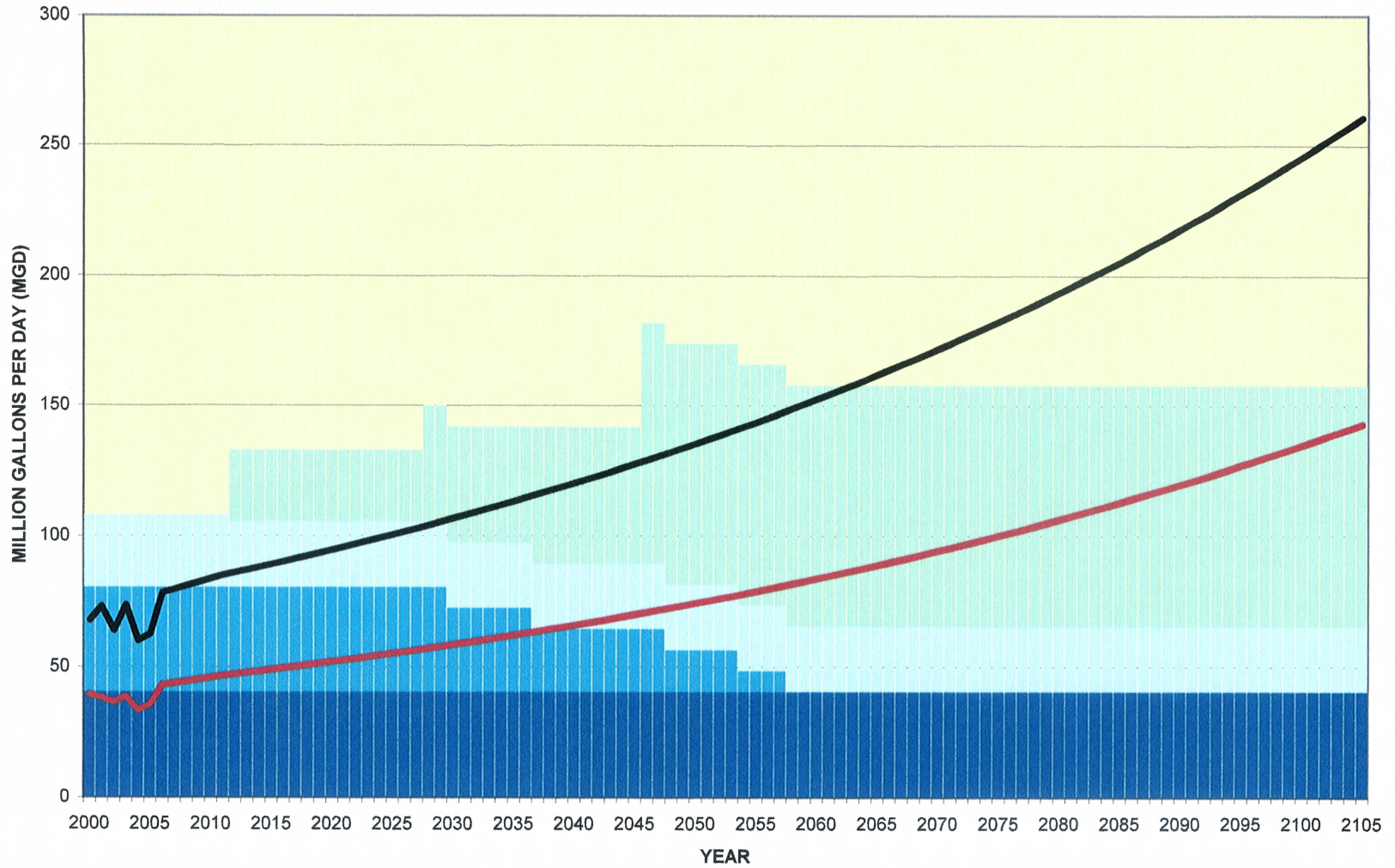
100-YEAR AVERAGE DAY AND MAXIMUM DAY MODEL

MAXIMUM DAY FACTOR										1.82		SCENARIO 2007	
HIGH RANGE WATER DEMAND PROJECTIONS													
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200			
ANNUAL POPULATION PROJECTIONS - HIGH RANGE - 1.63% FOR 5 YEARS, 1.20% THEREAFTER					POPULATION OPTION:					3			
MEDIUM RANGE WATER DEMAND PROJECTIONS													
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200			
ANNUAL POPULATION PROJECTIONS - MEDIUM RANGE - CITY PLANNING ESTIMATES					POPULATION OPTION:					2			
LOW RANGE WATER DEMAND PROJECTIONS													
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200			
ANNUAL POPULATION PROJECTIONS - LOW RANGE - REGION O WATER PLAN/TWDB ESTIMATES					POPULATION OPTION:					1			
AVERAGE ANNUAL PERCENT REDUCTION DUE WATER SAVING FIXTURES OF:										0.00%			
2029	289,546	57.91	105.39	50.04	91.07	48.10	87.54	41.69	40.00	25.00	42.00		
2030	293,017	58.60	106.66	50.27	91.48	48.23	87.78	41.69	32.00	25.00	42.00		
2031	296,530	59.31	107.94	50.52	91.95	48.33	87.95	41.69	32.00	25.00	42.00		
2032	300,085	60.02	109.23	50.78	92.42	48.42	88.13	41.69	32.00	25.00	42.00		
2033	303,682	60.74	110.54	51.04	92.89	48.52	88.31	41.69	32.00	25.00	42.00		
2034	307,323	61.46	111.87	51.30	93.37	48.62	88.49	41.69	32.00	25.00	42.00		
2035	311,007	62.20	113.21	51.56	93.84	48.72	88.67	41.69	32.00	25.00	42.00		
2036	314,735	62.95	114.56	51.83	94.32	48.82	88.85	41.69	32.00	25.00	42.00		
2037	318,509	63.70	115.94	52.09	94.80	48.92	89.03	41.69	24.00	25.00	50.00		
2038	322,327	64.47	117.33	52.36	95.29	49.02	89.21	41.69	24.00	25.00	50.00		
2039	326,191	65.24	118.73	52.62	95.78	49.12	89.39	41.69	24.00	25.00	50.00		
2040	330,102	66.02	120.16	52.83	96.16	49.20	89.55	41.69	24.00	25.00	50.00		
2041	334,060	66.81	121.60	53.05	96.55	49.28	89.69	41.69	24.00	25.00	50.00		
2042	338,065	67.61	123.06	53.26	96.94	49.36	89.83	41.69	24.00	25.00	50.00		
2043	342,118	68.42	124.53	53.48	97.33	49.44	89.97	41.69	24.00	25.00	50.00		
2044	346,220	69.24	126.02	53.70	97.73	49.52	90.12	41.69	24.00	25.00	50.00		
2045	350,371	70.07	127.53	53.92	98.13	49.59	90.26	41.69	24.00	25.00	50.00		
2046	354,572	70.91	129.06	54.14	98.53	49.67	90.41	41.69	24.00	25.00	90.00		
2047	358,823	71.76	130.61	54.36	98.93	49.75	90.55	41.69	24.00	25.00	90.00		
2048	363,125	72.63	132.18	54.58	99.33	49.83	90.70	41.69	16.00	25.00	90.00		
2049	367,479	73.50	133.76	54.80	99.73	49.91	90.84	41.69	16.00	25.00	90.00		
2050	371,885	74.38	135.37	54.98	100.07	49.98	90.97	41.69	16.00	25.00	90.00		
2051	376,344	75.27	136.99	55.16	100.39	50.10	91.18	41.69	16.00	25.00	90.00		
2052	380,857	76.17	138.63	55.33	100.71	50.22	91.40	41.69	16.00	25.00	90.00		
2053	385,423	77.08	140.29	55.51	101.03	50.34	91.62	41.69	16.00	25.00	90.00		
2054	390,045	78.01	141.98	55.69	101.35	50.46	91.83	41.69	8.00	25.00	90.00		
2055	394,722	78.94	143.68	55.87	101.68	50.58	92.05	41.69	8.00	25.00	90.00		
2056	399,455	79.89	145.40	56.04	102.00	50.70	92.27	41.69	8.00	25.00	90.00		
2057	404,245	80.85	147.15	56.22	102.33	50.82	92.49	41.69	8.00	25.00	90.00		
2058	409,092	81.82	148.91	56.40	102.65	50.94	92.71	41.69		25.00	90.00		
2059	413,998	82.80	150.70	56.58	102.98	51.06	92.93	41.69		25.00	90.00		
2060	418,962	83.79	152.50	56.74	103.27	51.17	93.12	41.69		25.00	90.00		
2061	423,986	84.80	154.33	56.88	103.53	51.26	93.30	41.69		25.00	90.00		
2062	429,070	85.81	156.18	57.02	103.79	51.36	93.48	41.69		25.00	90.00		
2063	434,215	86.84	158.05	57.17	104.05	51.46	93.66	41.69		25.00	90.00		
2064	439,422	87.88	159.95	57.31	104.31	51.56	93.84	41.69		25.00	90.00		
2065	444,692	88.94	161.87	57.46	104.57	51.66	94.02	41.69		25.00	90.00		
2066	450,025	90.00	163.81	57.60	104.83	51.76	94.20	41.69		25.00	90.00		
2067	455,421	91.08	165.77	57.74	105.09	51.86	94.38	41.69		25.00	90.00		

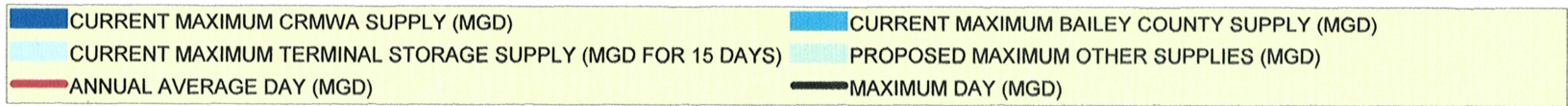
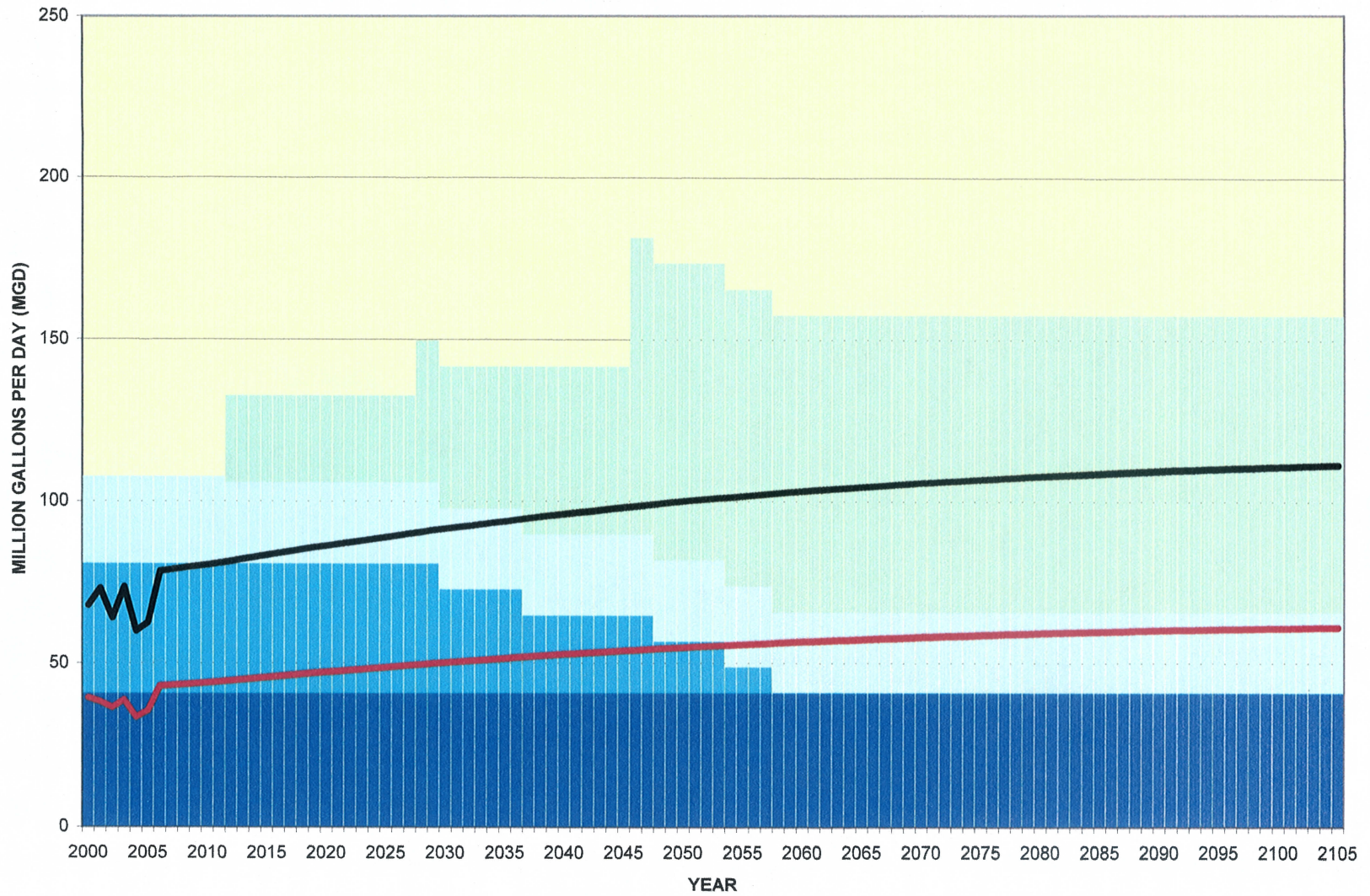
100-YEAR AVERAGE DAY AND MAXIMUM DAY MODEL

MAXIMUM DAY FACTOR									1.82			SCENARIO 2007	
HIGH RANGE WATER DEMAND PROJECTIONS													
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200			
ANNUAL POPULATION PROJECTIONS - HIGH RANGE - 1.63% FOR 5 YEARS, 1.20% THEREAFTER					POPULATION OPTION:				3				
MEDIUM RANGE WATER DEMAND PROJECTIONS													
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200			
ANNUAL POPULATION PROJECTIONS - MEDIUM RANGE - CITY PLANNING ESTIMATES					POPULATION OPTION:				2				
LOW RANGE WATER DEMAND PROJECTIONS													
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:										200			
ANNUAL POPULATION PROJECTIONS - LOW RANGE - REGION O WATER PLAN/TWDB ESTIMATES					POPULATION OPTION:				1				
AVERAGE ANNUAL PERCENT REDUCTION DUE WATER SAVING FIXTURES OF:										0.00%			
2068	460,883	92.18	167.76	57.89	105.36	51.95	94.56	41.69		25.00	90.00		
2069	466,410	93.28	169.77	58.03	105.62	52.05	94.74	41.69		25.00	90.00		
2070	472,003	94.40	171.81	58.16	105.86	52.15	94.92	41.69		25.00	90.00		
2071	477,664	95.53	173.87	58.28	106.07	52.25	95.10	41.69		25.00	90.00		
2072	483,392	96.68	175.95	58.40	106.29	52.35	95.28	41.69		25.00	90.00		
2073	489,189	97.84	178.06	58.52	106.50	52.45	95.47	41.69		25.00	90.00		
2074	495,056	99.01	180.20	58.64	106.72	52.56	95.65	41.69		25.00	90.00		
2075	500,993	100.20	182.36	58.76	106.93	52.66	95.83	41.69		25.00	90.00		
2076	507,001	101.40	184.55	58.87	107.15	52.76	96.02	41.69		25.00	90.00		
2077	513,081	102.62	186.76	58.99	107.37	52.86	96.20	41.69		25.00	90.00		
2078	519,235	103.85	189.00	59.11	107.58	52.96	96.39	41.69		25.00	90.00		
2079	525,462	105.09	191.27	59.23	107.80	53.06	96.57	41.69		25.00	90.00		
2080	531,764	106.35	193.56	59.34	108.00	53.16	96.76	41.69		25.00	90.00		
2081	538,142	107.63	195.88	59.43	108.17	53.27	96.94	41.69		25.00	90.00		
2082	544,596	108.92	198.23	59.52	108.33	53.37	97.13	41.69		25.00	90.00		
2083	551,127	110.23	200.61	59.62	108.50	53.47	97.32	41.69		25.00	90.00		
2084	557,737	111.55	203.02	59.71	108.67	53.57	97.50	41.69		25.00	90.00		
2085	564,426	112.89	205.45	59.80	108.83	53.68	97.69	41.69		25.00	90.00		
2086	571,196	114.24	207.92	59.89	109.00	53.78	97.88	41.69		25.00	90.00		
2087	578,047	115.61	210.41	59.98	109.17	53.88	98.07	41.69		25.00	90.00		
2088	584,980	117.00	212.93	60.07	109.33	53.99	98.25	41.69		25.00	90.00		
2089	591,996	118.40	215.49	60.17	109.50	54.09	98.44	41.69		25.00	90.00		
2090	599,096	119.82	218.07	60.25	109.66	54.19	98.63	41.69		25.00	90.00		
2091	606,282	121.26	220.69	60.32	109.77	54.30	98.82	41.69		25.00	90.00		
2092	613,553	122.71	223.33	60.38	109.89	54.40	99.01	41.69		25.00	90.00		
2093	620,912	124.18	226.01	60.44	110.00	54.51	99.20	41.69		25.00	90.00		
2094	628,360	125.67	228.72	60.50	110.12	54.61	99.39	41.69		25.00	90.00		
2095	635,897	127.18	231.47	60.57	110.23	54.72	99.59	41.69		25.00	90.00		
2096	643,524	128.70	234.24	60.63	110.35	54.82	99.78	41.69		25.00	90.00		
2097	651,242	130.25	237.05	60.69	110.46	54.93	99.97	41.69		25.00	90.00		
2098	659,054	131.81	239.90	60.76	110.58	55.03	100.16	41.69		25.00	90.00		
2099	666,959	133.39	242.77	60.82	110.69	55.14	100.35	41.69		25.00	90.00		
2100	674,959	134.99	245.68	60.88	110.81	55.25	100.55	41.69		25.00	90.00		
2101	683,055	136.61	248.63	60.95	110.92	55.35	100.74	41.69		25.00	90.00		
2102	691,248	138.25	251.61	61.01	111.04	55.46	100.94	41.69		25.00	90.00		
2103	699,539	139.91	254.63	61.07	111.15	55.57	101.13	41.69		25.00	90.00		
2104	707,930	141.59	257.69	61.14	111.27	55.67	101.33	41.69		25.00	90.00		
2105	716,421	143.28	260.78	61.20	111.39	55.78	101.52	41.69		25.00	90.00		

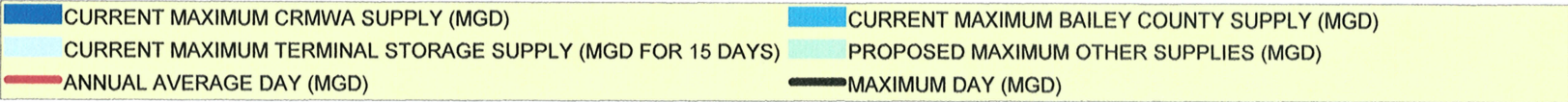
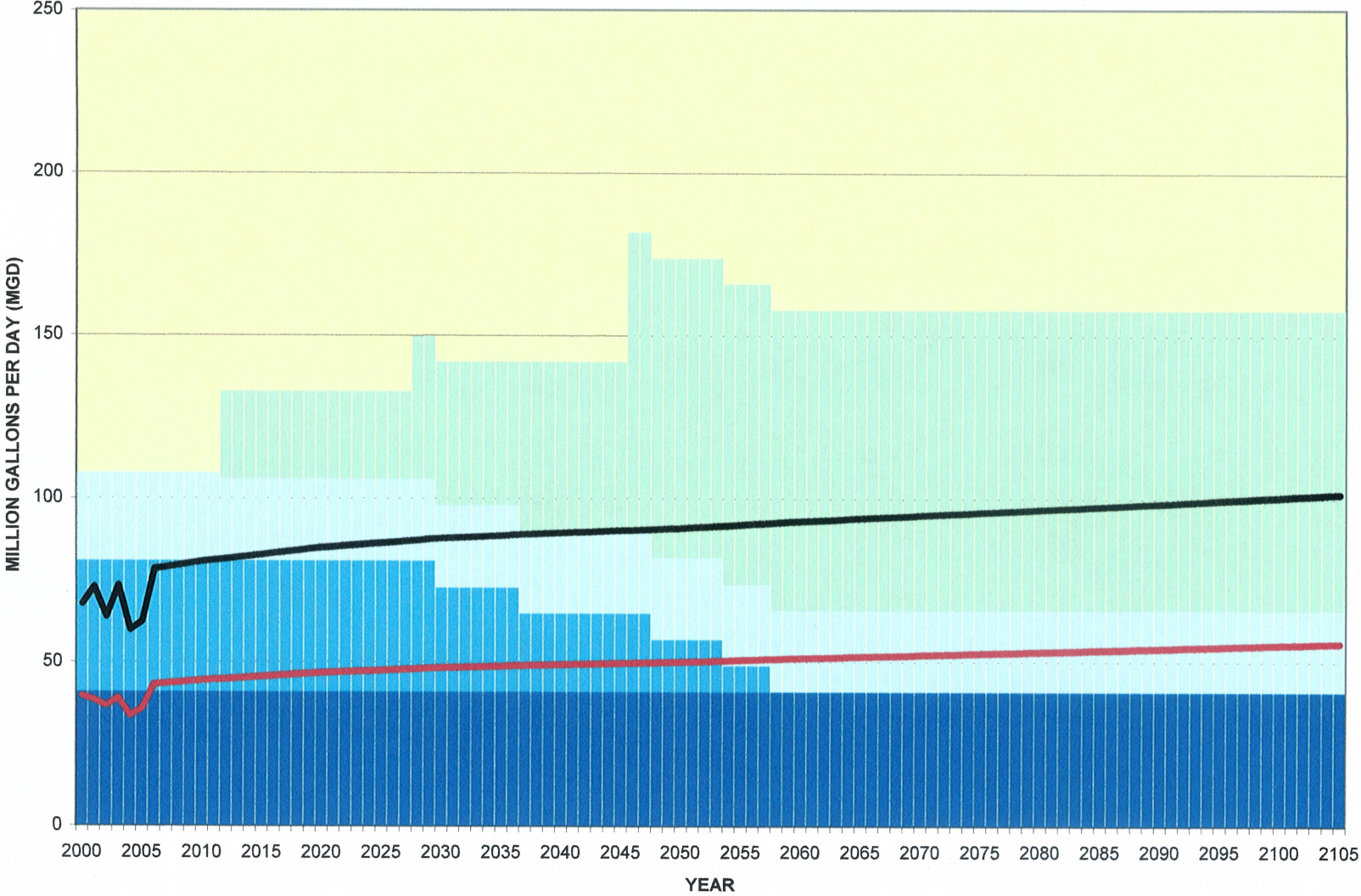
HIGH RANGE MAXIMUM AND AVERAGE DAY WATER DEMAND



MEDIUM RANGE MAXIMUM AND AVERAGE DAY WATER DEMAND



LOW RANGE MAXIMUM AND AVERAGE DAY WATER DEMAND



100-YEAR HIGH RANGE WATER DEMAND AND SUPPLY MODEL

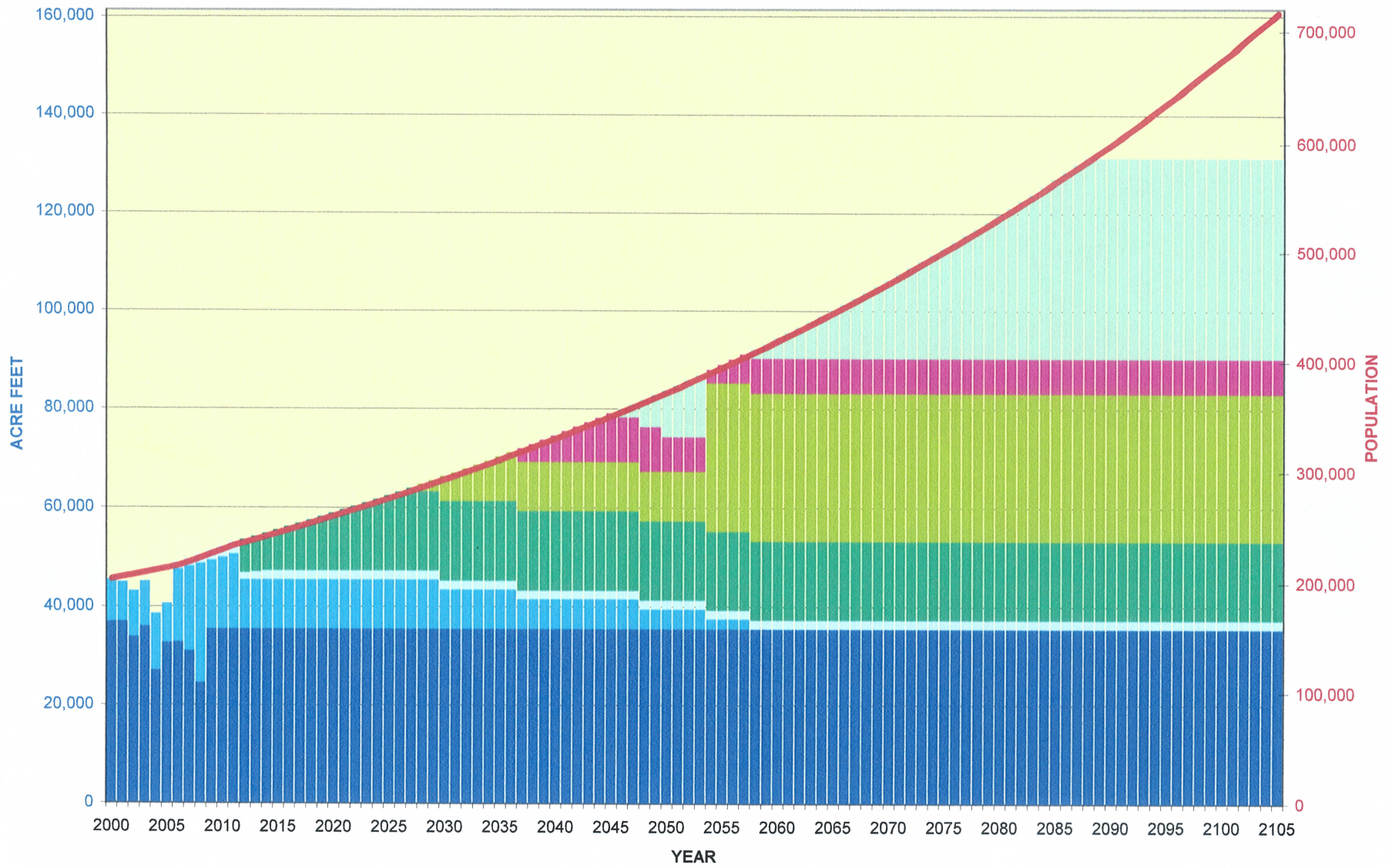
MAXIMUM DAY FACTOR	1.82												SCENARIO 2017	MANUAL	LEFT GRAPH PRIMARY Y-AXIS SCALE FACTOR	161301	RIGHT GRAPH PRIMARY Y-AXIS SCALE FACTOR	262							
ANNUAL POPULATION PROJECTIONS - HIGH RANGE - 1.83% FOR 5 YEARS, 1.20% THEREAFTER															POPULATION OPTION:	3	0								0
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:															200	0								0	
AVERAGE ANNUAL PERCENT REDUCTION DUE WATER SAVING FIXTURES OF:															0.00%	0.00%								0.00%	
YEAR	POPULATION LUBBOCK PLUS WHOLESALE CUSTOMERS	HIGH RANGE WATER DEMAND (ACRE FEET)	CRMWA SUPPLY (ACRE FEET)	BAILEY COUNTY SUPPLY (ACRE FEET)	CITY IRRIGATION WELL SUPPLY (ACRE FEET)	LAKE ALAN HENRY SUPPLY (ACRE FEET)	REUSE WATER SUPPLY (ACRE FEET)	POST RESERVOIR SUPPLY (ACRE FEET)	THE CRMWA II SUPPLY (ACRE FEET)	CRMWA AQUEDUCT SUPPLY CAPACITY (ACRE FEET)	HIGH RANGE		CURRENT MAXIMUM CRMWA SUPPLY (41.69 MGD)	CURRENT MAXIMUM BAILEY CO. SUPPLY (40 MGD)	PROPOSED IRRIGATION WELL SUPPLY (1.6 MGD)	PROPOSED LAKE ALAN HENRY SUPPLY (25 MGD)	PROPOSED REUSE WATER SUPPLY (17 MGD)	PROPOSED POST RESERVOIR SUPPLY (8 MGD)	PROPOSED CRMWA II SUPPLY (40 MGD)	CURRENT MAXIMUM TERMINAL STORAGE SUPPLY (25 MGD FOR 15 DAYS)					
											ANNUAL AVERAGE DAY (MGD)	MAXIMUM DAY (MGD)													
2000	203,454	44,950	37,511	7,439						46,693	39.51	67.82	41.69	26.13	0.00	0.00	0.00	0.00	0.00	0.00					
2001	205,402	44,398	37,516	6,882						46,693	38.35	73.09	41.69	31.40	0.00	0.00	0.00	0.00	0.00	0.00					
2002	207,369	42,561	34,380	8,181						46,693	36.57	63.91	41.69	22.22	0.00	0.00	0.00	0.00	0.00	0.00					
2003	209,357	44,515	36,566	7,948						46,693	38.84	73.61	41.69	31.92	0.00	0.00	0.00	0.00	0.00	0.00					
2004	211,346	37,949	27,546	10,403						46,693	36.41	59.94	41.69	18.25	0.00	0.00	0.00	0.00	0.00	0.00					
2005	213,390	39,988	33,187	6,801						46,693	35.70	64.97	41.69	23.28	0.00	0.00	0.00	0.00	0.00	0.00					
2006	215,533	48,266	33,352	14,734	200	0	0	0	0	46,693	43.11	78.45	41.69	36.76	0.00	0.00	0.00	0.00	0.00	0.00					
2007	219,041	49,072	31,499	17,173	400	0	0	0	0	46,693	43.81	79.73	41.69	38.04	0.00	0.00	0.00	0.00	0.00	0.00					
2008	222,607	49,870	25,000	24,270	600	0	0	0	0	46,693	44.52	81.03	41.69	39.34	0.00	0.00	0.00	0.00	0.00	0.00					
2009	226,230	50,682	36,000	13,882	800	0	0	0	0	46,693	45.25	82.35	41.69	40.00	0.66	0.00	0.00	0.00	0.00	0.00					
2010	229,913	51,507	36,000	14,507	1,000	0	0	0	0	46,693	45.98	83.69	41.69	40.00	1.60	0.00	0.00	0.40	0.00	0.00					
2011	233,656	52,346	36,000	15,146	1,200	0	0	0	0	46,693	46.73	85.05	41.69	40.00	1.60	0.00	0.00	1.76	0.00	0.00					
2012	236,456	52,973	36,000	10,000	1,400	5,573	0	0	0	46,693	47.29	86.07	41.69	40.00	1.60	2.78	0.00	0.00	0.00	0.00					
2013	239,290	53,608	36,000	10,000	1,600	6,008	0	0	0	46,693	47.66	87.10	41.69	40.00	1.60	3.81	0.00	0.00	0.00	0.00					
2014	242,158	54,250	36,000	10,000	1,800	6,450	0	0	0	46,693	48.43	88.15	41.69	40.00	1.60	4.66	0.00	0.00	0.00	0.00					
2015	245,060	54,901	36,000	10,000	1,800	7,101	0	0	0	46,693	49.01	89.20	41.69	40.00	1.60	5.91	0.00	0.00	0.00	0.00					
2016	247,997	55,559	36,000	10,000	1,800	7,759	0	0	0	46,693	49.60	90.27	41.69	40.00	1.60	6.98	0.00	0.00	0.00	0.00					
2017	250,970	56,224	36,000	10,000	1,800	8,424	0	0	0	46,693	50.19	91.35	41.69	40.00	1.60	8.06	0.00	0.00	0.00	0.00					
2018	253,978	56,898	36,000	10,000	1,800	9,098	0	0	0	46,693	50.80	92.45	41.69	40.00	1.60	9.16	0.00	0.00	0.00	0.00					
2019	257,022	57,580	36,000	10,000	1,800	9,780	0	0	0	46,693	51.40	93.56	41.69	40.00	1.60	10.27	0.00	0.00	0.00	0.00					
2020	260,102	58,270	36,000	10,000	1,800	10,470	0	0	0	46,693	52.02	94.68	41.69	40.00	1.60	11.39	0.00	0.00	0.00	0.00					
2021	263,220	58,969	36,000	10,000	1,800	11,169	0	0	0	46,693	52.64	95.81	41.69	40.00	1.60	12.52	0.00	0.00	0.00	0.00					
2022	266,375	59,676	36,000	10,000	1,800	11,876	0	0	0	46,693	53.28	96.96	41.69	40.00	1.60	13.67	0.00	0.00	0.00	0.00					
2023	269,568	60,391	36,000	10,000	1,800	12,591	0	0	0	46,693	53.91	98.12	41.69	40.00	1.60	14.83	0.00	0.00	0.00	0.00					
2024	272,799	61,115	36,000	10,000	1,800	13,315	0	0	0	46,693	54.58	99.30	41.69	40.00	1.60	16.01	0.00	0.00	0.00	0.00					
2025	276,069	61,847	36,000	10,000	1,800	14,047	0	0	0	46,693	55.21	100.49	41.69	40.00	1.60	17.20	0.00	0.00	0.00	0.00					
2026	279,378	62,589	36,000	10,000	1,800	14,789	0	0	0	46,693	55.88	101.69	41.69	40.00	1.60	18.40	0.00	0.00	0.00	0.00					
2027	282,727	63,339	36,000	10,000	1,800	15,539	0	0	0	46,693	56.55	102.91	41.69	40.00	1.60	19.62	0.00	0.00	0.00	0.00					
2028	286,116	64,098	36,000	10,000	1,800	16,000	298	0	0	46,693	57.22	104.15	41.69	40.00	1.60	20.86	0.00	0.00	0.00	0.00					
2029	289,546	64,867	36,000	10,000	1,800	16,000	1,087	0	0	46,693	57.91	105.39	41.69	40.00	1.60	22.10	0.00	0.00	0.00	0.00					
2030	293,017	65,644	36,000	8,000	1,800	16,000	3,844	0	0	46,693	58.60	106.66	41.69	32.00	1.60	25.00	6.37	0.00	0.00	0.00					
2031	296,530	66,431	36,000	8,000	1,800	16,000	4,631	0	0	46,693	59.31	107.94	41.69	32.00	1.60	25.00	7.65	0.00	0.00	0.00					
2032	300,085	67,228	36,000	8,000	1,800	16,000	5,428	0	0	46,693	60.02	109.23	41.69	32.00	1.60	25.00	8.94	0.00	0.00	0.00					
2033	303,682	68,033	36,000	8,000	1,800	16,000	6,233	0	0	46,693	60.74	110.54	41.69	32.00	1.60	25.00	10.25	0.00	0.00	0.00					
2034	307,323	68,849	36,000	8,000	1,800	16,000	7,049	0	0	46,693	61.46	111.87	41.69	32.00	1.60	25.00	11.58	0.00	0.00	0.00					
2035	311,007	69,674	36,000	8,000	1,800	16,000	7,874	0	0	46,693	62.20	113.21	41.69	32.00	1.60	25.00	12.92	0.00	0.00	0.00					
2036	314,735	70,510	36,000	8,000	1,800	16,000	8,710	0	0	46,693	62.95	114.56	41.69	32.00	1.60	25.00	14.27	0.00	0.00	0.00					
2037	318,509	71,355	36,000	8,000	1,800	16,000	10,000	1,555	0	46,693	63.70	115.94	41.69	24.00	1.60	25.00	17.00	6.65	0.00	0.00					
2038	322,327	72,211	36,000	8,000	1,800	16,000	10,000	2,411	0	46,693	64.47	117.33	41.69	24.00	1.60	25.00	17.00	8.00	0.04	0.00					
2039	326,191	73,076	36,000	8,000	1,800	16,000	10,000	3,276	0	46,693	65.24	118.73	41.69	24.00	1.60	25.00	17.00	8.00	1.44	0.00					
2040	330,102	73,952	36,000	8,000	1,800	16,000	10,000	4,152	0	46,693	66.02	120.16	41.69	24.00	1.60	25.00	17.00	8.00	2.87	0.00					
2041	334,060	74,839	36,000	8,000	1,800	16,000	10,000	5,039	0	46,693	66.81	121.60	41.69	24.00	1.60	25.00	17.00	8.00	4.31	0.00					
2042	338,065	75,736	36,000	8,000	1,800	16,000	10,000	5,936	0	46,693	67.61	123.06	41.69	24.00	1.60	25.00	17.00	8.00	5.77	0.00					
2043	342,118	76,644	36,000	8,000	1,800	16,000	10,000	6,844	0	46,693	68.42	124.53	41.69	24.00	1.60	25.00	17.00	8.00	7.24	0.00					
2044	346,220	77,563	36,000	8,000	1,800	16,000	10,000	7,763	0	46,693	69.24	126.02	41.69	24.00	1.60	25.00	17.00	8.00	8.73	0.00					
2045	350,371	78,493	36,000	8,000	1,800	16,000	10,000	8,693	0	46,693	70.07	127.53	41.69	24.00	1.60	25.00	17.00	8.00	10.24	0.00					
2046	354,572	79,434	36,000	8,000	1,800	16,000	10,000	9,000	634	46,693	70.91	129.06	41.69	24.00	1.60	25.00	17.00	8.00	11.77	0.00					
2047	358,823	80,387	36,000	8,000	1,800	16,000	10,000	9,000	1,587	46,693	71.76	130.61	41.69	24.00	1.60	25.00	17.00	8.00	13.32	0.00					
2048	363,125	81,350	36,000	4,000	1,800	16,000	10,000	9,000	4,550	46,693	72.63	132.18	41.69	16.00	1.60	25.00	17.00	8.00	22.89	0.00					
2049	367,479	82,326	36,000	4,000	1,800	16,000	10,000	9,000	5,526	46,693	73.50	133.76	41.69	16.00	1.60	25.00	17.00	8.00	24.47	0.00					
2050	371,885	83,313	36,000	4,000	1,800	16,000	10,000	7,000	8,513	46,693	74.38	135.37	41.69	16.00	1.60	25.00	17.00	8.00	26.08	0.00					
2051	376,344	84,312	36,000	4,000	1,800	16,000	10,000	7,000	9,512	46,693	75.27	136.99	41.69	16.00	1.60	25.00	17.00	8.00	27.70	0.00					
2052	380,857	85,323	36,000	4,000	1,800	16,000	10,000	7,000	10,523	46,693	76.17	138.63	41.69	16.00	1.60	25.00	17.00	8.00	29.34	0.00					
2053	385,423	86,346	36,000	4,000	1,800	16,000	10,000	7,000	11,546	46,693	77.08	140.29	41.69	16.00	1.60	25.00	17.00	8.00	31.00	0.00					
2054	390,045	87,381	36,000	2,000	1,800	16,000	30,000	1,581	0	46,693	78.01	141.98	41.69	8.00	1.60	25.00	17.00	8.00	40.00	0.69					
2055	394,722	88,429	36,000	2,000	1,800	16,000	30,000	2,629	0	46,693	78.94	143.68	41.69	8.00	1.60	25.00	17								

100-YEAR HIGH RANGE WATER DEMAND AND SUPPLY MODEL

MAXIMUM DAY FACTOR		1.82				SCENARIO 2007		MANUAL		LEFT GRAPH PRIMARY Y-AXIS SCALE FACTOR		161301								
ANNUAL POPULATION PROJECTIONS - HIGH RANGE - 1.63% FOR 5 YEARS, 1.20% THEREAFTER				POPULATION OPTION:				3		0										
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:								200		0		262								
AVERAGE ANNUAL PERCENT REDUCTION DUE WATER SAVING FIXTURES OF:								0.00%		0.00%										
2077	513,081	114,945	36,000	0	1,800	16,000	30,000	7,000	24,145	46,693	102.62	186.76	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2078	519,235	116,324	36,000	0	1,800	16,000	30,000	7,000	25,524	46,693	103.85	189.00	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2079	525,462	117,719	36,000	0	1,800	16,000	30,000	7,000	26,919	46,693	105.09	191.27	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2080	531,764	119,130	36,000	0	1,800	16,000	30,000	7,000	28,330	46,693	106.35	193.56	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2081	538,142	120,559	36,000	0	1,800	16,000	30,000	7,000	29,759	46,693	107.63	195.88	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2082	544,596	122,005	36,000	0	1,800	16,000	30,000	7,000	31,205	46,693	108.92	198.23	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2083	551,127	123,468	36,000	0	1,800	16,000	30,000	7,000	32,668	46,693	110.23	200.61	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2084	557,737	124,949	36,000	0	1,800	16,000	30,000	7,000	34,149	46,693	111.55	203.02	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2085	564,426	126,448	36,000	0	1,800	16,000	30,000	7,000	35,648	46,693	112.89	205.45	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2086	571,196	127,964	36,000	0	1,800	16,000	30,000	7,000	37,164	46,693	114.24	207.92	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2087	578,047	129,499	36,000	0	1,800	16,000	30,000	7,000	38,699	46,693	115.61	210.41	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2088	584,980	131,052	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	117.00	212.93	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2089	591,996	132,624	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	118.40	215.49	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2090	599,096	134,215	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	119.82	218.07	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2091	606,282	135,825	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	121.26	220.69	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2092	613,553	137,454	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	122.71	223.33	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2093	620,912	139,102	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	124.18	226.01	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2094	628,360	140,771	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	125.67	228.72	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2095	635,897	142,459	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	127.18	231.47	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2096	643,524	144,168	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	128.70	234.24	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2097	651,242	145,897	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	130.25	237.05	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2098	659,054	147,647	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	131.81	239.90	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2099	666,959	149,418	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	133.39	242.77	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2100	674,959	151,210	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	134.99	245.68	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2101	683,055	153,024	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	136.61	248.63	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2102	691,248	154,859	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	138.25	251.61	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2103	699,539	156,717	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	139.91	254.63	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2104	707,930	158,597	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	141.59	257.69	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00
2105	716,421	160,499	36,000	0	1,800	16,000	30,000	7,000	40,000	46,693	143.28	260.78	41.69	0.00	1.60	25.00	17.00	8.00	40.00	25.00

YEARS 2000-2005 CONTAIN ACTUAL CONSUMPTION FIGURES

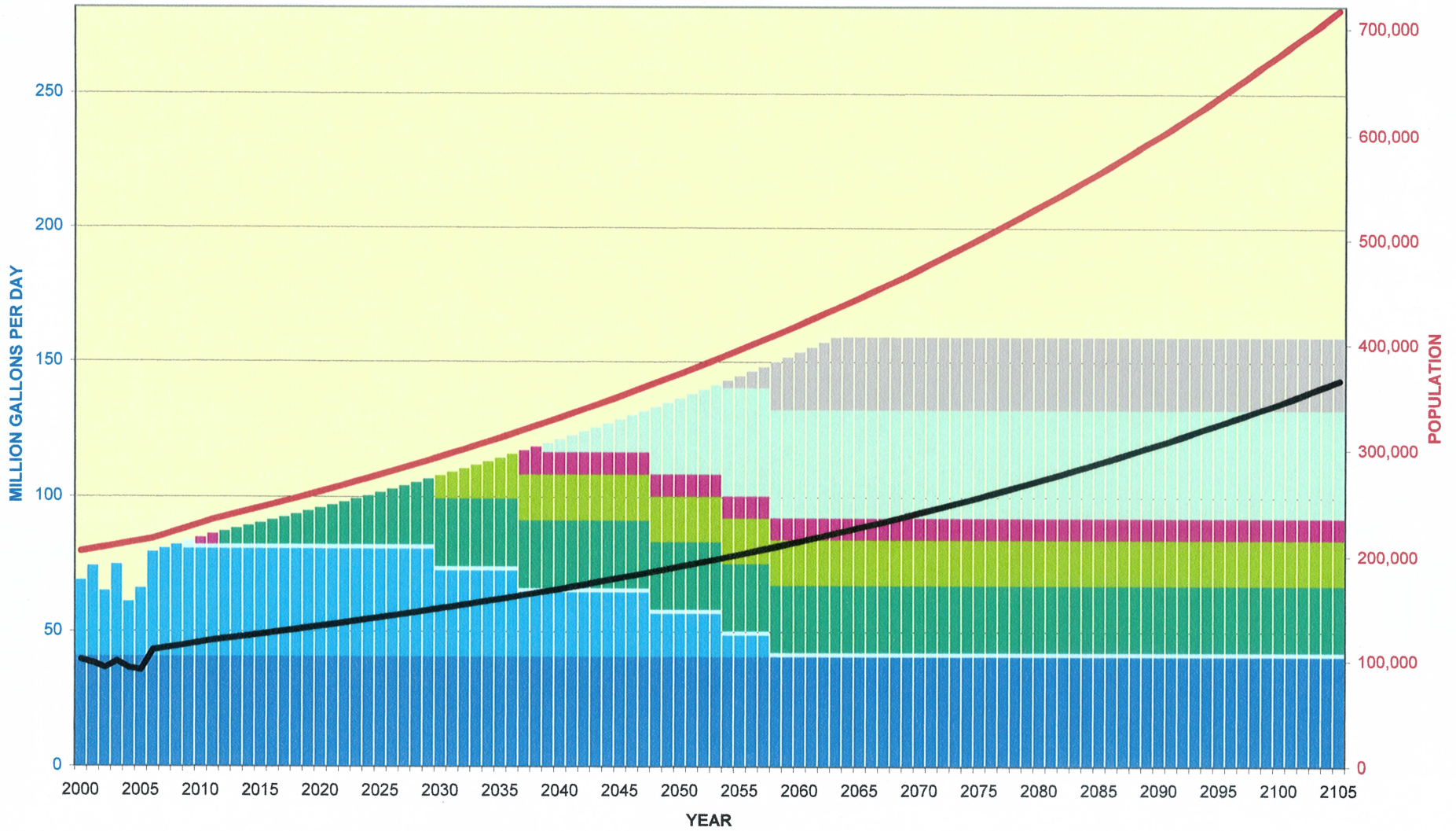
100-YEAR HIGH RANGE WATER SUPPLY MODEL
 BASED ON HIGH RANGE POPULATION PROJECTIONS AND ANNUAL AVERAGE 200 GALLONS PER CAPITA PER DAY



- CRMWA SUPPLY
- CITY IRRIGATION WELL SUPPLY
- REUSE WATER SUPPLY
- THE CRMWA II SUPPLY
- BAILEY COUNTY SUPPLY
- LAKE ALAN HENRY SUPPLY
- POST RESERVOIR SUPPLY
- POPULATION LUBBOCK PLUS WHOLESALE CUSTOMERS

HIGH RANGE MAXIMUM DAY WATER DEMAND

BASED ON HIGH RANGE POPULATION PROJECTIONS AND ANNUAL AVERAGE 200 GALLONS PER CAPITA PER DAY



- | | |
|--|---|
| <ul style="list-style-type: none"> CURRENT MAXIMUM CRMWA SUPPLY PROPOSED IRRIGATION WELL SUPPLY (1.6 MGD) PROPOSED REUSE WATER SUPPLY (17 MGD) PROPOSED CRMWA II SUPPLY (40 MGD) POPULATION LUBBOCK PLUS WHOLESALE CUSTOMERS | <ul style="list-style-type: none"> CURRENT MAXIMUM BAILEY CO. SUPPLY (40 MGD) PROPOSED LAKE ALAN HENRY SUPPLY (25 MGD) PROPOSED POST RESERVOIR SUPPLY (8 MGD) CURRENT MAXIMUM TERMINAL STORAGE SUPPLY (25 MGD FOR 15 DAYS) ANNUAL AVERAGE DAY |
|--|---|

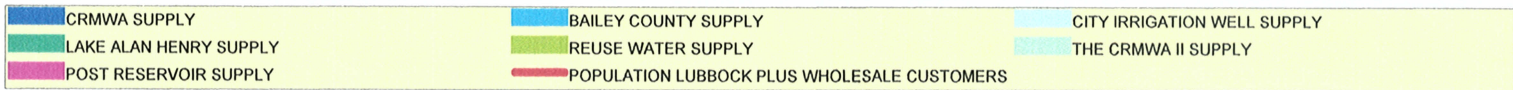
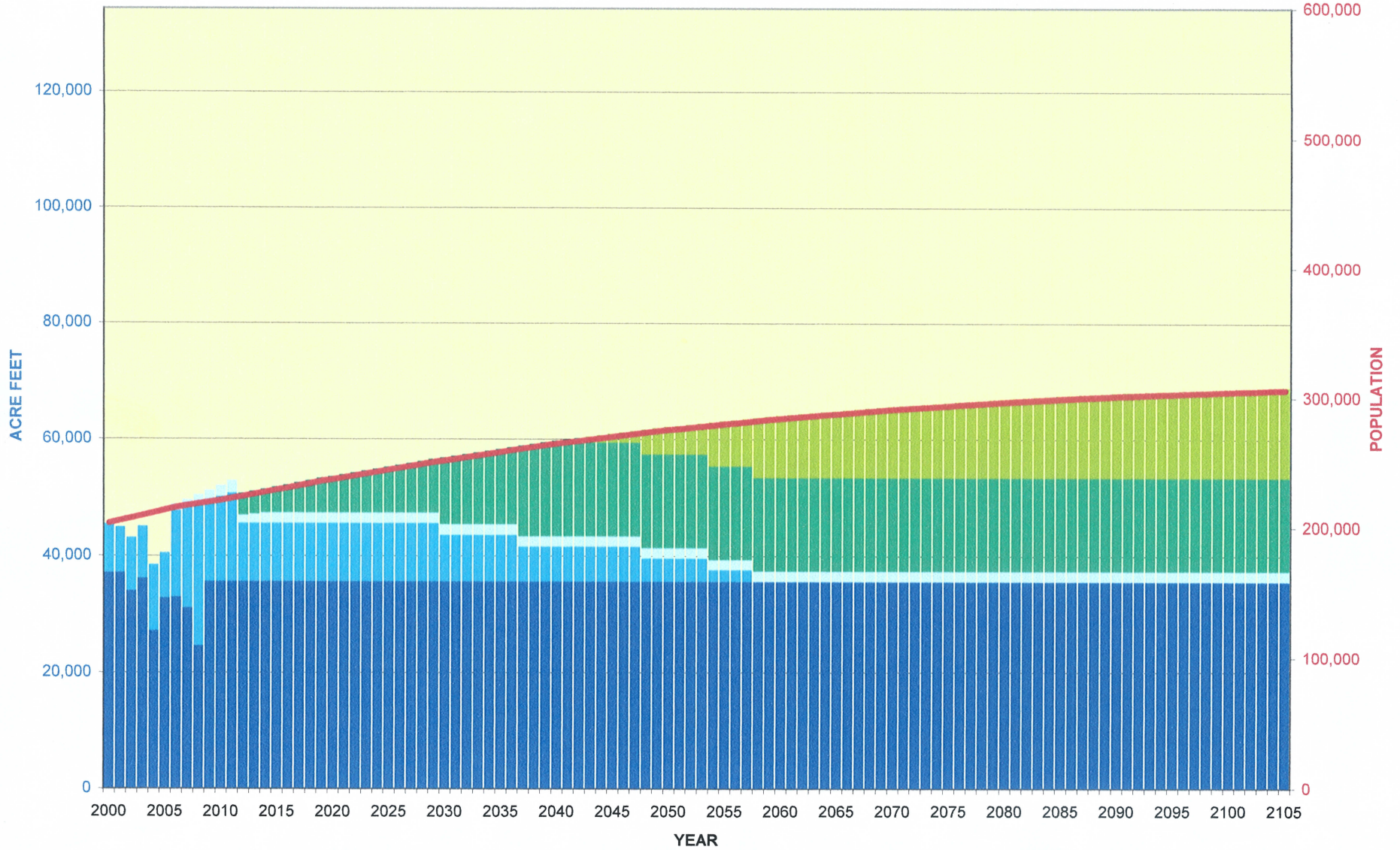
100-YEAR MEDIUM RANGE CASE WATER DEMAND AND SUPPLY MODEL

MAXIMUM DAY FACTOR		1.82												SCENARIO 2007		MANUAL		LEFT GRAPH PRIMARY Y-AXIS SCALE FACTOR		134417	
ANNUAL POPULATION PROJECTIONS - MEDIUM RANGE - CITY PLANNING ESTIMATES				POPULATION OPTION:										2		0					
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:														200		0					
AVERAGE ANNUAL PERCENT REDUCTION DUE WATER SAVING FIXTURES OF:														0.00%		0.00%					
2077	294,966	66,081	36,000	0	1,800	16,000	12,281	0	0	46,693	58.99	107.37	41.69	0.00	1.60	25.00	17.00	8.00	14.08	0.00	
2078	295,563	66,215	36,000	0	1,800	16,000	12,415	0	0	46,693	59.11	107.58	41.69	0.00	1.60	25.00	17.00	8.00	14.29	0.00	
2079	296,161	66,349	36,000	0	1,800	16,000	12,549	0	0	46,693	59.23	107.80	41.69	0.00	1.60	25.00	17.00	8.00	14.51	0.00	
2080	296,709	66,471	36,000	0	1,800	16,000	12,671	0	0	46,693	59.34	108.00	41.69	0.00	1.60	25.00	17.00	8.00	14.71	0.00	
2081	297,164	66,573	36,000	0	1,800	16,000	12,773	0	0	46,693	59.43	108.17	41.69	0.00	1.60	25.00	17.00	8.00	14.88	0.00	
2082	297,619	66,675	36,000	0	1,800	16,000	12,875	0	0	46,693	59.52	108.33	41.69	0.00	1.60	25.00	17.00	8.00	15.04	0.00	
2083	298,076	66,778	36,000	0	1,800	16,000	12,978	0	0	46,693	59.62	108.50	41.69	0.00	1.60	25.00	17.00	8.00	15.21	0.00	
2084	298,533	66,880	36,000	0	1,800	16,000	13,080	0	0	46,693	59.71	108.67	41.69	0.00	1.60	25.00	17.00	8.00	15.38	0.00	
2085	298,990	66,982	36,000	0	1,800	16,000	13,182	0	0	46,693	59.80	108.83	41.69	0.00	1.60	25.00	17.00	8.00	15.54	0.00	
2086	299,449	67,085	36,000	0	1,800	16,000	13,285	0	0	46,693	59.89	109.00	41.69	0.00	1.60	25.00	17.00	8.00	15.71	0.00	
2087	299,908	67,188	36,000	0	1,800	16,000	13,388	0	0	46,693	59.98	109.17	41.69	0.00	1.60	25.00	17.00	8.00	15.88	0.00	
2088	300,368	67,291	36,000	0	1,800	16,000	13,491	0	0	46,693	60.07	109.33	41.69	0.00	1.60	25.00	17.00	8.00	16.04	0.00	
2089	300,829	67,394	36,000	0	1,800	16,000	13,594	0	0	46,693	60.17	109.50	41.69	0.00	1.60	25.00	17.00	8.00	16.21	0.00	
2090	301,281	67,491	36,000	0	1,800	16,000	13,691	0	0	46,693	60.25	109.66	41.69	0.00	1.60	25.00	17.00	8.00	16.37	0.00	
2091	301,576	67,562	36,000	0	1,800	16,000	13,762	0	0	46,693	60.32	109.77	41.69	0.00	1.60	25.00	17.00	8.00	16.48	0.00	
2092	301,891	67,632	36,000	0	1,800	16,000	13,832	0	0	46,693	60.38	109.89	41.69	0.00	1.60	25.00	17.00	8.00	16.60	0.00	
2093	302,206	67,703	36,000	0	1,800	16,000	13,903	0	0	46,693	60.44	110.00	41.69	0.00	1.60	25.00	17.00	8.00	16.71	0.00	
2094	302,522	67,774	36,000	0	1,800	16,000	13,974	0	0	46,693	60.50	110.12	41.69	0.00	1.60	25.00	17.00	8.00	16.83	0.00	
2095	302,838	67,845	36,000	0	1,800	16,000	14,045	0	0	46,693	60.57	110.23	41.69	0.00	1.60	25.00	17.00	8.00	16.94	0.00	
2096	303,155	67,915	36,000	0	1,800	16,000	14,115	0	0	46,693	60.63	110.35	41.69	0.00	1.60	25.00	17.00	8.00	17.06	0.00	
2097	303,472	67,986	36,000	0	1,800	16,000	14,186	0	0	46,693	60.69	110.46	41.69	0.00	1.60	25.00	17.00	8.00	17.17	0.00	
2098	303,789	68,057	36,000	0	1,800	16,000	14,257	0	0	46,693	60.76	110.58	41.69	0.00	1.60	25.00	17.00	8.00	17.29	0.00	
2099	304,107	68,129	36,000	0	1,800	16,000	14,329	0	0	46,693	60.82	110.69	41.69	0.00	1.60	25.00	17.00	8.00	17.40	0.00	
2100	304,411	68,197	36,000	0	1,800	16,000	14,397	0	0	46,693	60.88	110.81	41.69	0.00	1.60	25.00	17.00	8.00	17.52	0.00	
2101	304,729	68,268	36,000	0	1,800	16,000	14,468	0	0	46,693	60.95	110.92	41.69	0.00	1.60	25.00	17.00	8.00	17.63	0.00	
2102	305,048	68,340	36,000	0	1,800	16,000	14,540	0	0	46,693	61.01	111.04	41.69	0.00	1.60	25.00	17.00	8.00	17.75	0.00	
2103	305,367	68,411	36,000	0	1,800	16,000	14,611	0	0	46,693	61.07	111.15	41.69	0.00	1.60	25.00	17.00	8.00	17.86	0.00	
2104	305,687	68,483	36,000	0	1,800	16,000	14,683	0	0	46,693	61.14	111.27	41.69	0.00	1.60	25.00	17.00	8.00	17.98	0.00	
2105	306,006	68,554	36,000	0	1,800	16,000	14,754	0	0	46,693	61.20	111.39	41.69	0.00	1.60	25.00	17.00	8.00	18.10	0.00	

YEARS 2000-2005 CONTAIN ACTUAL CONSUMPTION FIGURES

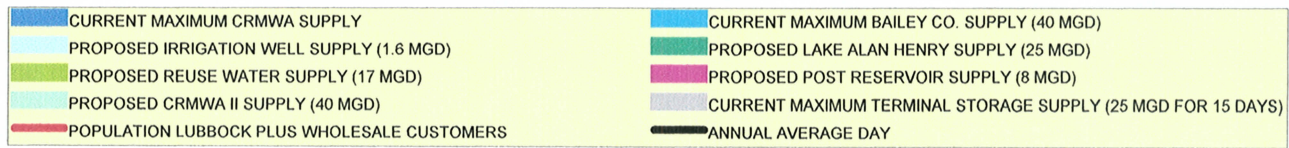
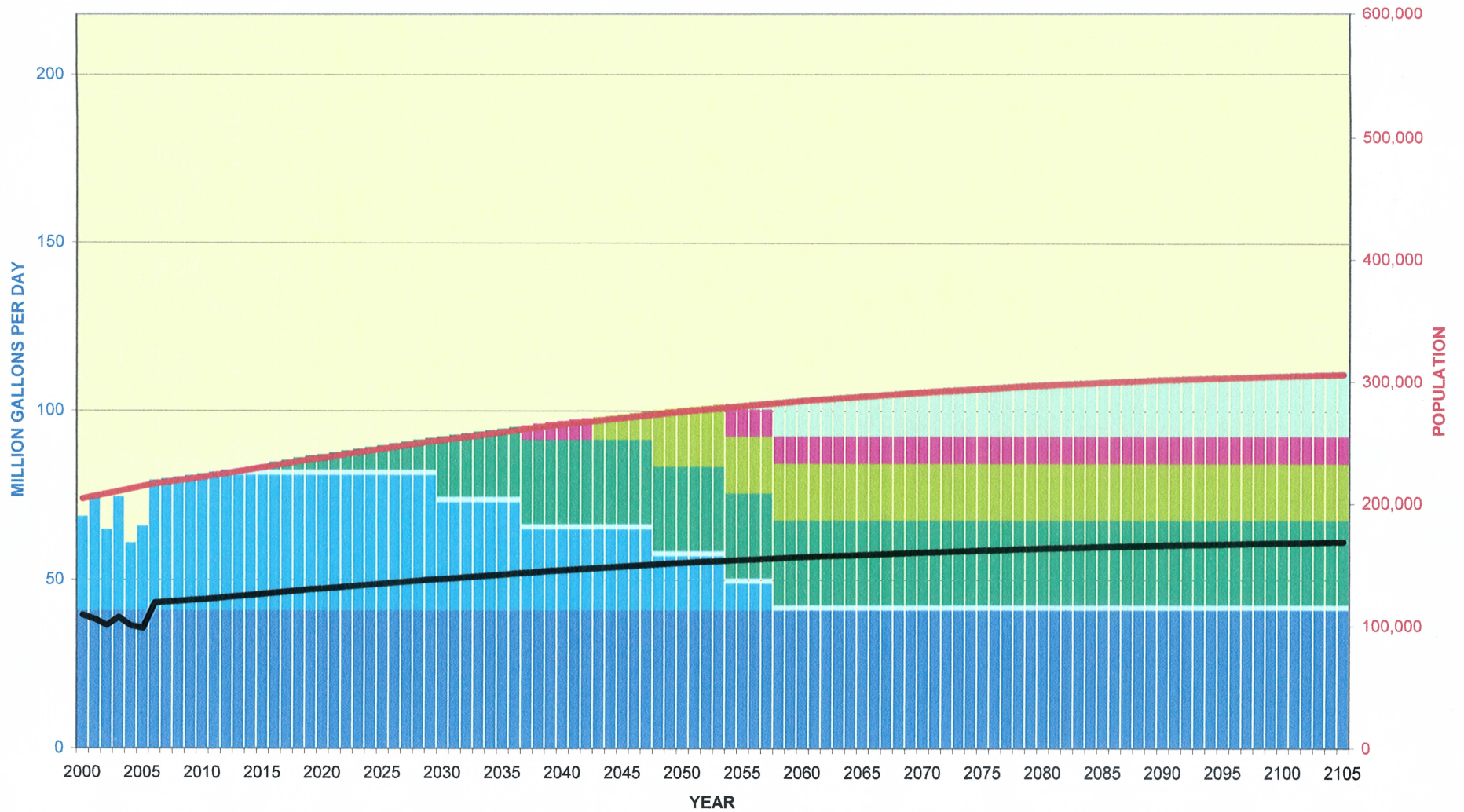
100-YEAR MEDIUM RANGE WATER SUPPLY MODEL

BASED ON MOST LIKELY RANGE POPULATION PROJECTIONS AND ANNUAL AVERAGE 200 GALLONS PER CAPITA PER DAY



MEDIUM RANGE MAXIMUM DAY WATER DEMAND

BASED ON MOST LIKELY RANGE POPULATION PROJECTIONS AND ANNUAL AVERAGE 200 GALLONS PER CAPITA PER DAY

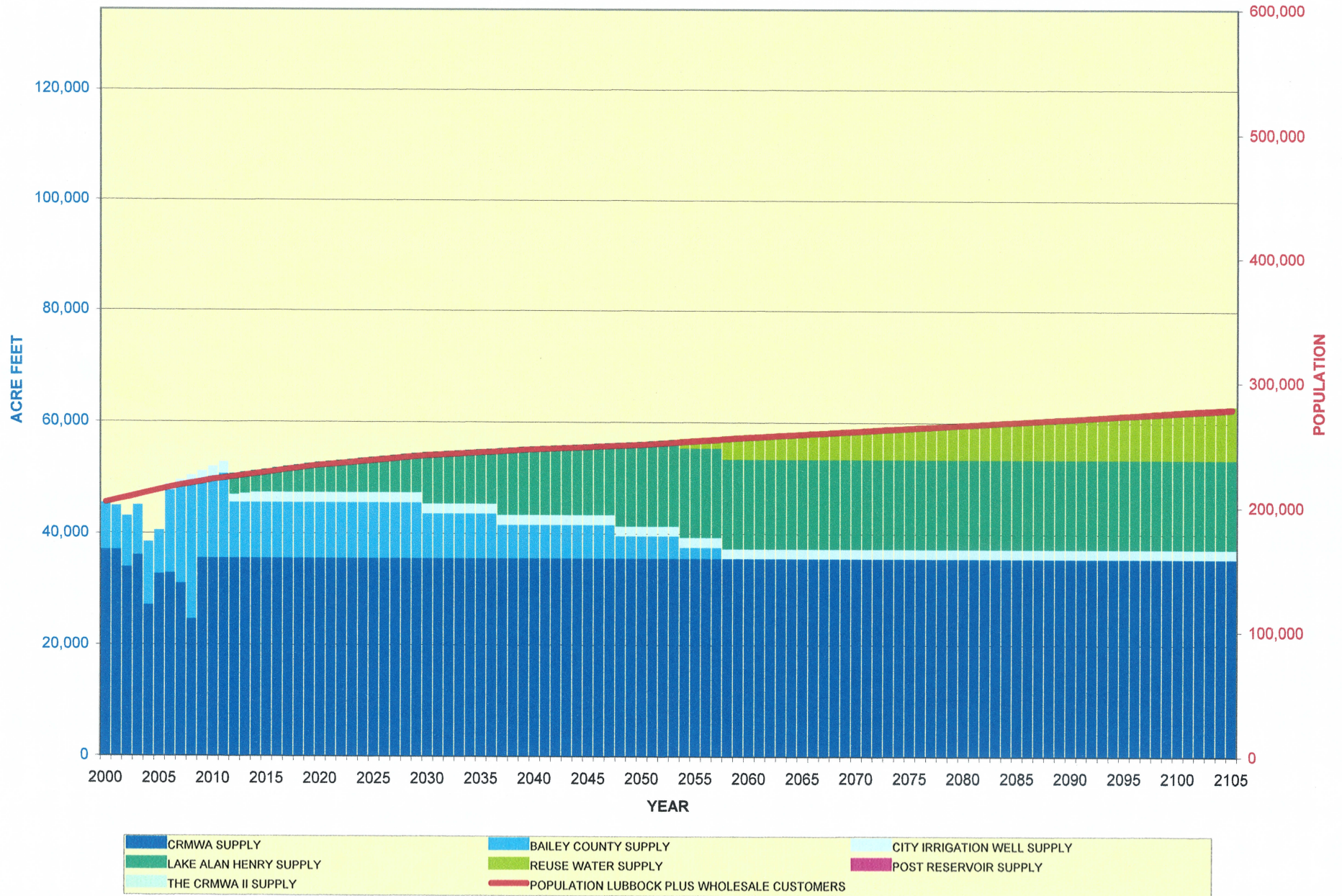


100-YEAR LOW RANGE WATER DEMAND AND SUPPLY MODEL

MAXIMUM DAY FACTOR		1.82												SCENARIO 2017	MANUAL		LEFT GRAPH PRIMARY Y-AXIS SCALE FACTOR		134417	
ANNUAL POPULATION PROJECTIONS -				LOW RANGE - REGION O WATER PLANT/WDB ESTIMATES						POPULATION OPTION:				1	0					
WATER DEMAND PROJECTIONS BASED ON AVERAGE ANNUAL GALLONS PER CAPITA PER DAY (GPCPD) OF:														200	0					
AVERAGE ANNUAL PERCENT REDUCTION DUE WATER SAVING FIXTURES OF:														0.00%	0.00%					
2077	264,291	59,209	36,000	0	1,800	16,000	5,409	0	0	46,693	52.86	96.20	41.69	0.00	1.60	25.00	17.00	8.00	2.91	0.00
2078	264,798	59,322	36,000	0	1,800	16,000	5,522	0	0	46,693	52.96	96.39	41.69	0.00	1.60	25.00	17.00	8.00	3.10	0.00
2079	265,306	59,436	36,000	0	1,800	16,000	5,636	0	0	46,693	53.06	96.57	41.69	0.00	1.60	25.00	17.00	8.00	3.28	0.00
2080	265,815	59,550	36,000	0	1,800	16,000	5,750	0	0	46,693	53.16	96.76	41.69	0.00	1.60	25.00	17.00	8.00	3.47	0.00
2081	266,326	59,665	36,000	0	1,800	16,000	5,865	0	0	46,693	53.27	96.94	41.69	0.00	1.60	25.00	17.00	8.00	3.65	0.00
2082	266,837	59,779	36,000	0	1,800	16,000	5,979	0	0	46,693	53.37	97.13	41.69	0.00	1.60	25.00	17.00	8.00	3.84	0.00
2083	267,350	59,894	36,000	0	1,800	16,000	6,094	0	0	46,693	53.47	97.32	41.69	0.00	1.60	25.00	17.00	8.00	4.03	0.00
2084	267,864	60,009	36,000	0	1,800	16,000	6,209	0	0	46,693	53.57	97.50	41.69	0.00	1.60	25.00	17.00	8.00	4.21	0.00
2085	268,378	60,124	36,000	0	1,800	16,000	6,324	0	0	46,693	53.68	97.69	41.69	0.00	1.60	25.00	17.00	8.00	4.40	0.00
2086	268,894	60,240	36,000	0	1,800	16,000	6,440	0	0	46,693	53.78	97.88	41.69	0.00	1.60	25.00	17.00	8.00	4.59	0.00
2087	269,411	60,356	36,000	0	1,800	16,000	6,556	0	0	46,693	53.88	98.07	41.69	0.00	1.60	25.00	17.00	8.00	4.78	0.00
2088	269,929	60,472	36,000	0	1,800	16,000	6,672	0	0	46,693	53.99	98.25	41.69	0.00	1.60	25.00	17.00	8.00	4.96	0.00
2089	270,448	60,588	36,000	0	1,800	16,000	6,788	0	0	46,693	54.09	98.44	41.69	0.00	1.60	25.00	17.00	8.00	5.15	0.00
2090	270,968	60,705	36,000	0	1,800	16,000	6,905	0	0	46,693	54.19	98.63	41.69	0.00	1.60	25.00	17.00	8.00	5.34	0.00
2091	271,489	60,821	36,000	0	1,800	16,000	7,021	0	0	46,693	54.30	98.82	41.69	0.00	1.60	25.00	17.00	8.00	5.53	0.00
2092	272,012	60,938	36,000	0	1,800	16,000	7,138	0	0	46,693	54.40	99.01	41.69	0.00	1.60	25.00	17.00	8.00	5.72	0.00
2093	272,535	61,056	36,000	0	1,800	16,000	7,256	0	0	46,693	54.51	99.20	41.69	0.00	1.60	25.00	17.00	8.00	5.91	0.00
2094	273,060	61,173	36,000	0	1,800	16,000	7,373	0	0	46,693	54.61	99.39	41.69	0.00	1.60	25.00	17.00	8.00	6.10	0.00
2095	273,585	61,291	36,000	0	1,800	16,000	7,491	0	0	46,693	54.72	99.59	41.69	0.00	1.60	25.00	17.00	8.00	6.30	0.00
2096	274,112	61,409	36,000	0	1,800	16,000	7,609	0	0	46,693	54.82	99.78	41.69	0.00	1.60	25.00	17.00	8.00	6.49	0.00
2097	274,640	61,527	36,000	0	1,800	16,000	7,727	0	0	46,693	54.93	99.97	41.69	0.00	1.60	25.00	17.00	8.00	6.68	0.00
2098	275,169	61,646	36,000	0	1,800	16,000	7,846	0	0	46,693	55.03	100.16	41.69	0.00	1.60	25.00	17.00	8.00	6.87	0.00
2099	275,699	61,765	36,000	0	1,800	16,000	7,965	0	0	46,693	55.14	100.35	41.69	0.00	1.60	25.00	17.00	8.00	7.06	0.00
2100	276,230	61,884	36,000	0	1,800	16,000	8,084	0	0	46,693	55.25	100.55	41.69	0.00	1.60	25.00	17.00	8.00	7.26	0.00
2101	276,763	62,003	36,000	0	1,800	16,000	8,203	0	0	46,693	55.35	100.74	41.69	0.00	1.60	25.00	17.00	8.00	7.45	0.00
2102	277,296	62,122	36,000	0	1,800	16,000	8,322	0	0	46,693	55.46	100.94	41.69	0.00	1.60	25.00	17.00	8.00	7.65	0.00
2103	277,831	62,242	36,000	0	1,800	16,000	8,442	0	0	46,693	55.57	101.13	41.69	0.00	1.60	25.00	17.00	8.00	7.84	0.00
2104	278,366	62,362	36,000	0	1,800	16,000	8,562	0	0	46,693	55.67	101.33	41.69	0.00	1.60	25.00	17.00	8.00	8.04	0.00
2105	278,903	62,482	36,000	0	1,800	16,000	8,682	0	0	46,693	55.78	101.52	41.69	0.00	1.60	25.00	17.00	8.00	8.23	0.00

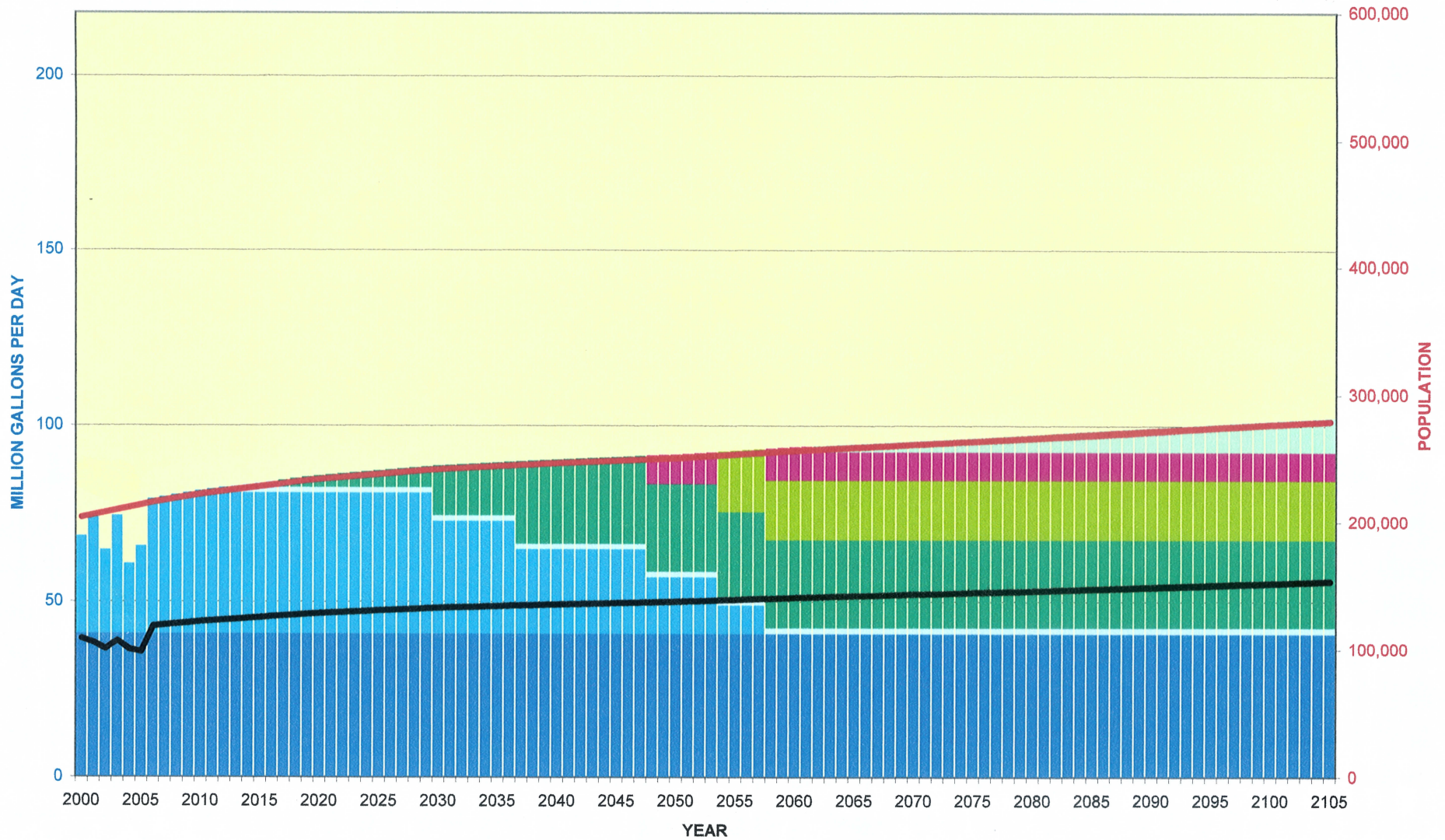
100-YEAR LOW RANGE WATER SUPPLY MODEL

BASED ON LOW RANGE POPULATION PROJECTIONS AND ANNUAL AVERAGE 200 GALLONS PER CAPITA PER DAY



LOW RANGE MAXIMUM DAY WATER DEMAND

BASED ON LOW RANGE POPULATION PROJECTIONS AND ANNUAL AVERAGE 200 GALLONS PER CAPITA PER DAY



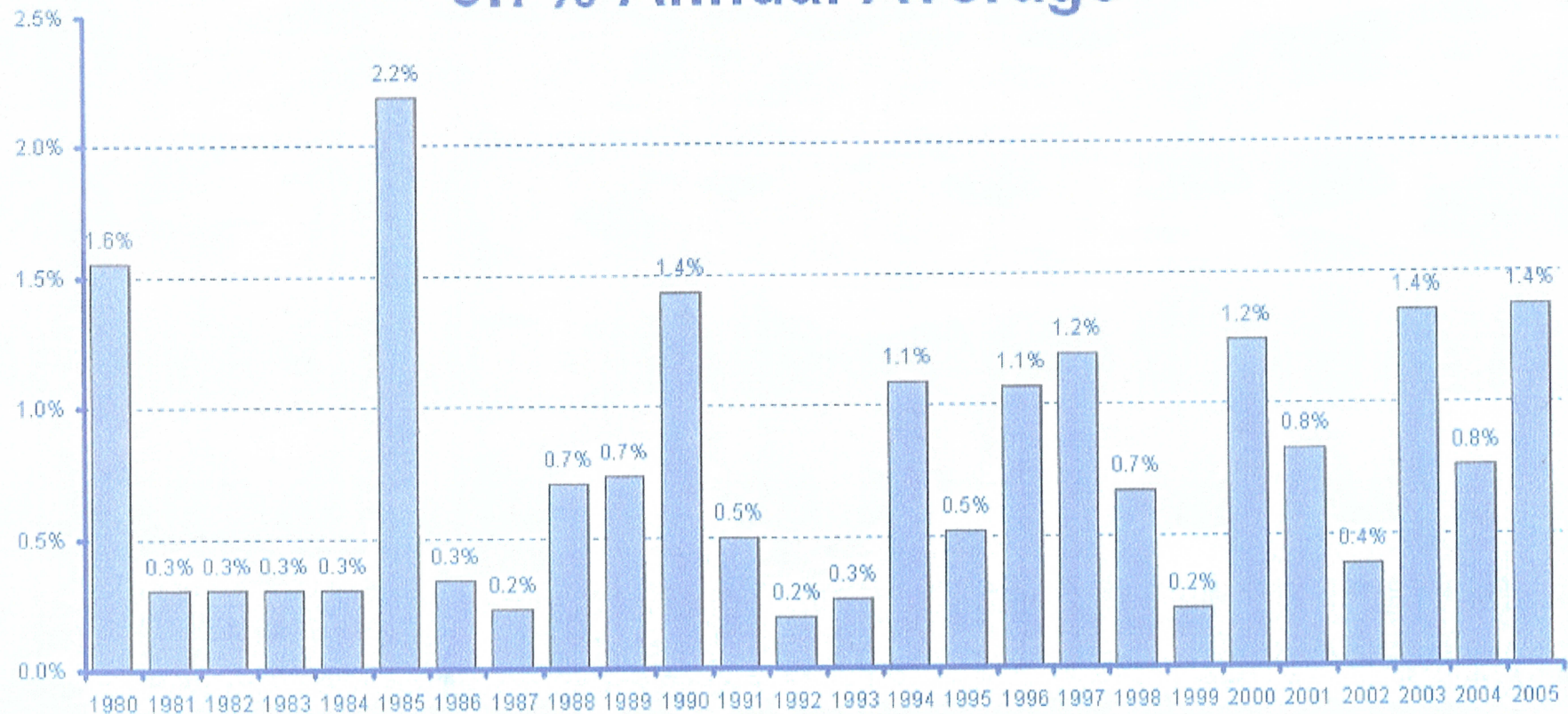
- | | |
|---|--|
| <ul style="list-style-type: none"> CURRENT MAXIMUM CRMWA SUPPLY PROPOSED IRRIGATION WELL SUPPLY (1.6 MGD) PROPOSED REUSE WATER SUPPLY (17 MGD) PROPOSED CRMWA II SUPPLY (40 MGD) POPULATION LUBBOCK PLUS WHOLESALE CUSTOMERS | <ul style="list-style-type: none"> CURRENT MAXIMUM BAILEY CO. SUPPLY (40 MGD) PROPOSED LAKE ALAN HENRY SUPPLY (25 MGD) PROPOSED POST RESERVOIR SUPPLY (8 MGD) CURRENT MAXIMUM TERMINAL STORAGE SUPPLY (25 MGD FOR 15 DAYS) ANNUAL AVERAGE DAY |
|---|--|

Section 3 – Water Supply Models for the next 100 Years

b. 2005 Base Population Projections

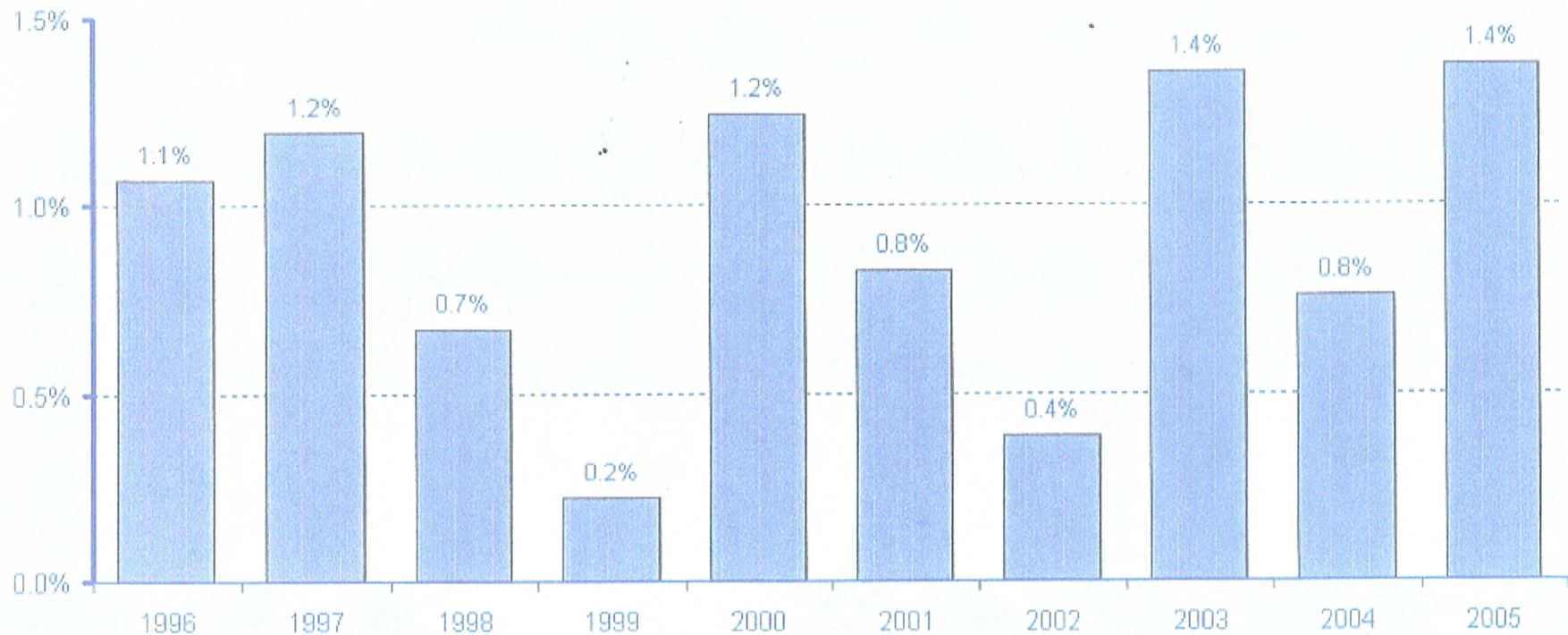
Percent Population Change City of Lubbock 1980 - 2005

0.7% Annual Average



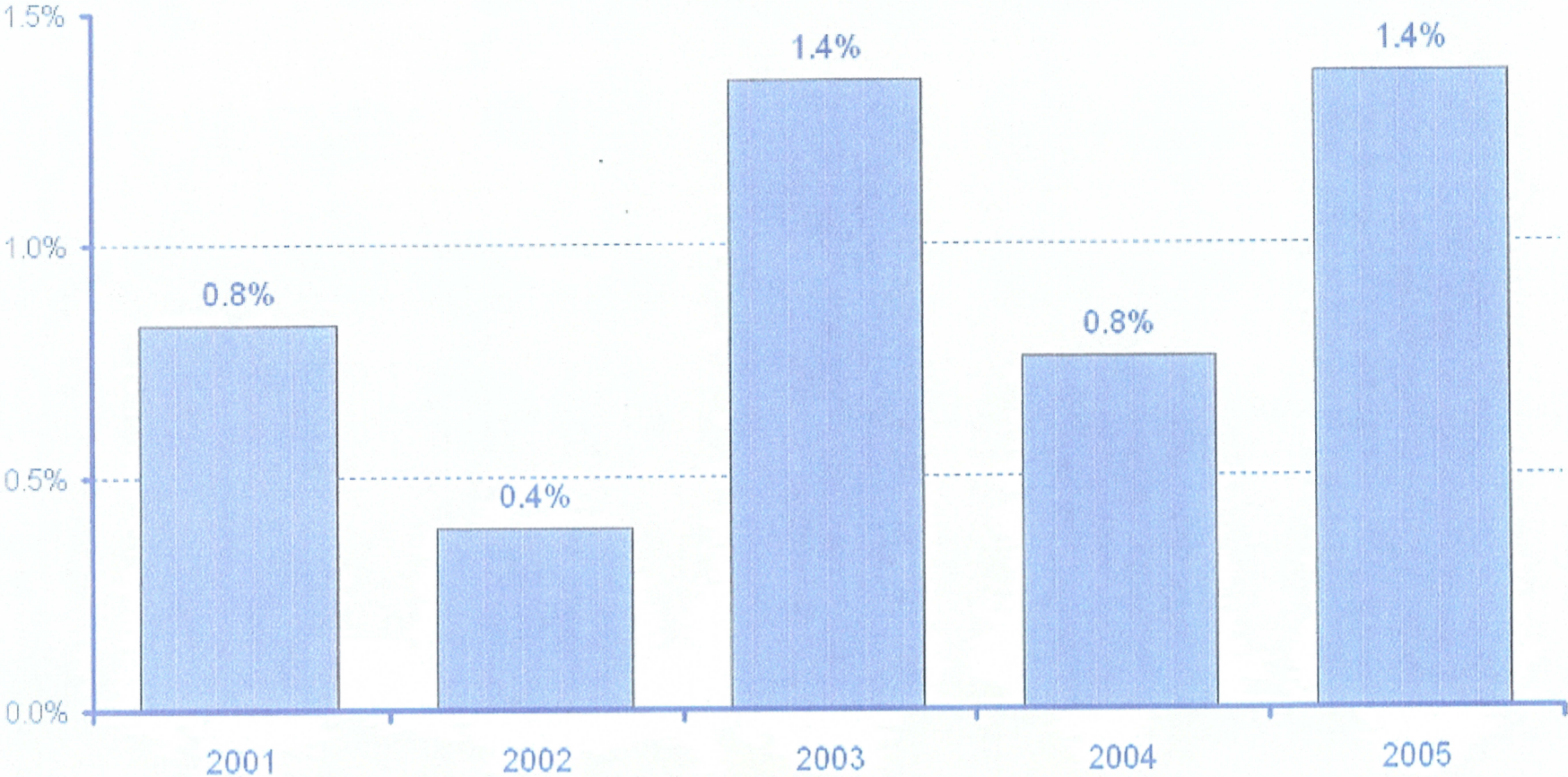
Please note that years 1985 and 2000 include 10 square mile area annexations

Percent Population Change City of Lubbock 1996 - 2005 0.9% Annual Average

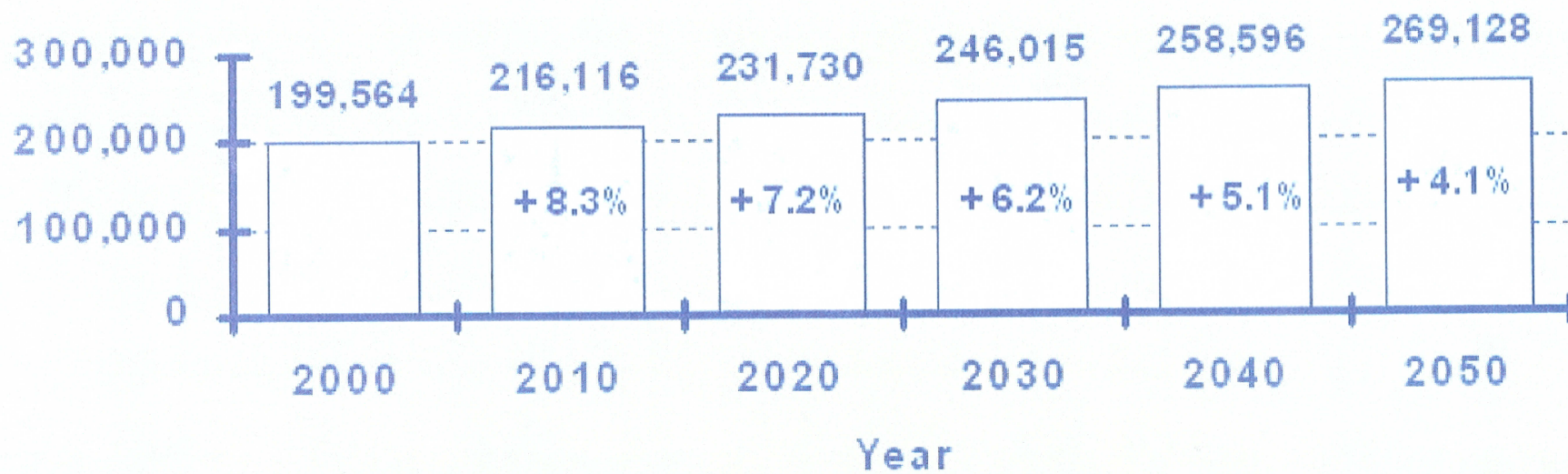


Please note that the year 2000 includes a 10 square mile area annexation

Percent Population Change City of Lubbock 2001 - 2005 0.9% Annual Average



City of Lubbock
Projected Population
2000 - 2050



Section 3 – Water Supply Models for the next 100 Years

c. 2005 Base for Per Capita Water Use Analysis

**LUBBOCK PER CAPITA USE
STATISTICAL ANALYSIS**

YEAR	ANNUAL AVG. GPCD
1985	185
1986	175
1987	167
1988	182
1989	194
1990	192
1991	176
1992	165
1993	179
1994	195
1995	211
1996	203
1997	184
1998	224
1999	187
2000	198
2001	191
2002	180
2003	190
2004	160
AVG.	186.90
MAX.	224.00
MIN.	160.00
STD.DEV.	15.41
SLOPE	0.46
Y-INTER	-727.87

68% of values	171.49	202.31
95% of values	156.07	217.73
2050	212.35	

Gallons Per Day Per Capita Analysis

City of Lubbock

March 2005

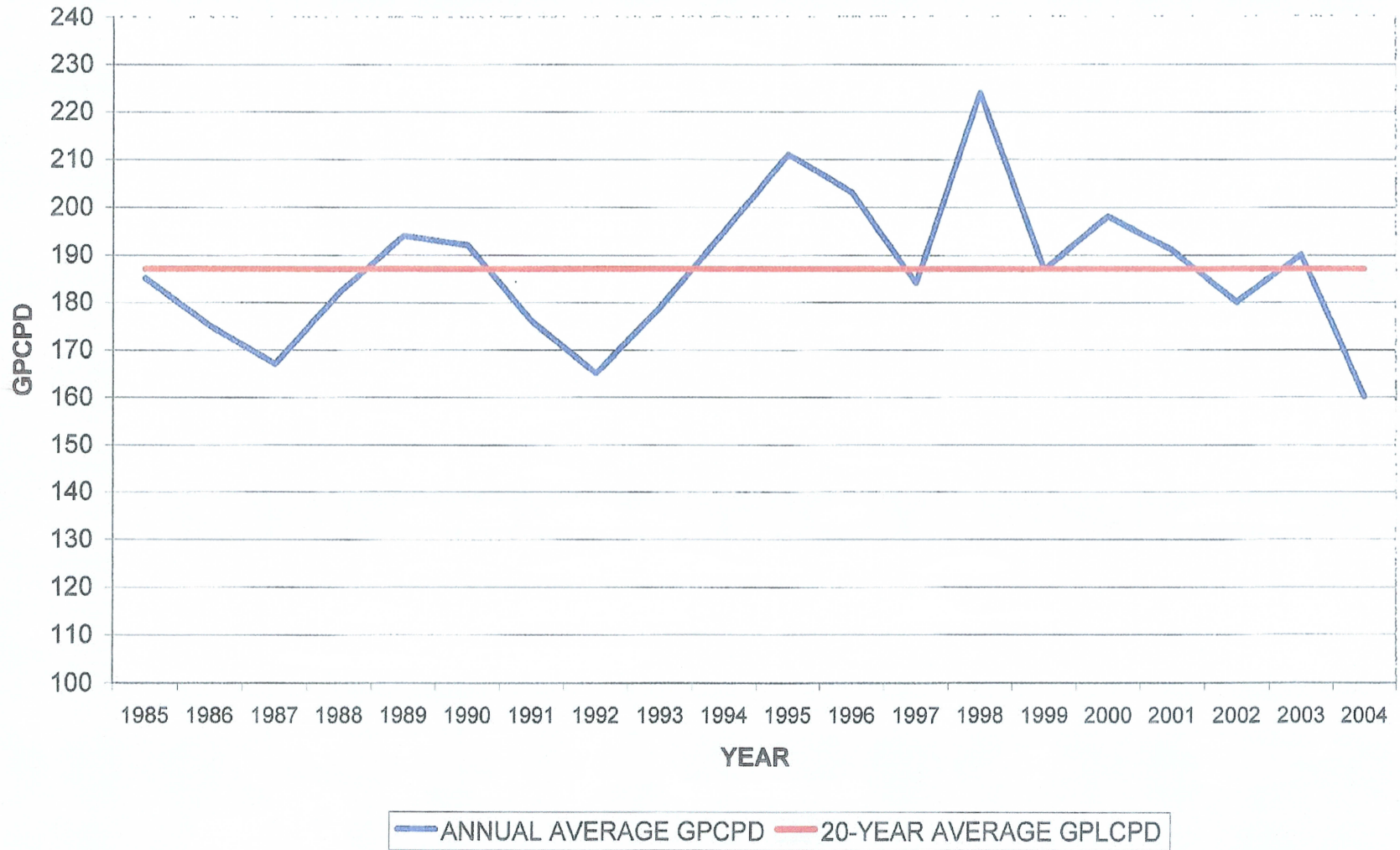
<u>Year</u>	<u>Annual Average GPCPD</u>		
1985	185	160's	160
1986	175		165
1987	167		167
1988	182	170's	175
1989	194		176
1990	192		179
1991	176	180's	180
1992	165		182
1993	179		184
1994	195		185
1995	211		187
1996	203	190's	190
1997	184		191
1998	224		192
1999	187		194
2000	198		195
2001	191		198
2002	180	200's	203
2003	190		211
2004	160		224
Average	187		

Target for Scenario #6, Most Likely

**GALLONS PER CAPITA PER DAY
(GPCPD)**

YEAR	ANNUAL AVERAGE	MONTHLY											
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	185	132	139	148	210	216	203	262	282	210	143	139	134
1986	175	143	143	177	204	234	164	255	210	161	140	133	126
1987	167	122	124	132	176	186	194	220	255	158	160	139	134
1988	182	131	136	155	180	201	242	230	255	178	181	157	133
1989	194	148	146	161	218	259	210	315	227	175	172	153	141
1990	192	143	139	140	166	216	343	288	215	218	158	138	139
1991	176	133	140	165	219	223	202	231	206	159	169	133	125
1992	165	122	130	143	152	178	164	230	215	195	178	143	125
1993	179	127	121	143	172	209	253	222	241	209	174	136	134
1994	195	135	149	168	190	166	295	305	262	202	178	148	143
1995	211	139	152	168	210	219	257	342	290	220	192	175	158
1996	203	146	171	189	236	275	237	239	255	207	183	151	139
1997	184	137	131	169	154	178	198	264	270	230	184	152	140
1998	224	141	136	145	215	304	349	374	265	274	201	147	132
1999	187	132	145	146	194	189	197	259	276	220	177	162	138
2000	198	137	153	159	179	269	181	252	305	288	178	134	137
2001	191	127	129	130	180	183	272	327	271	211	190	142	125
2002	180	126	127	144	160	220	228	240	284	220	161	131	119
2003	190	125	129	158	200	225	192	278	295	214	182	144	129
2004	160	122	118	125	147	204	220	228	192	186	136	117	118
AVERAGE	187	133	138	153	188	218	230	268	254	207	172	144	133

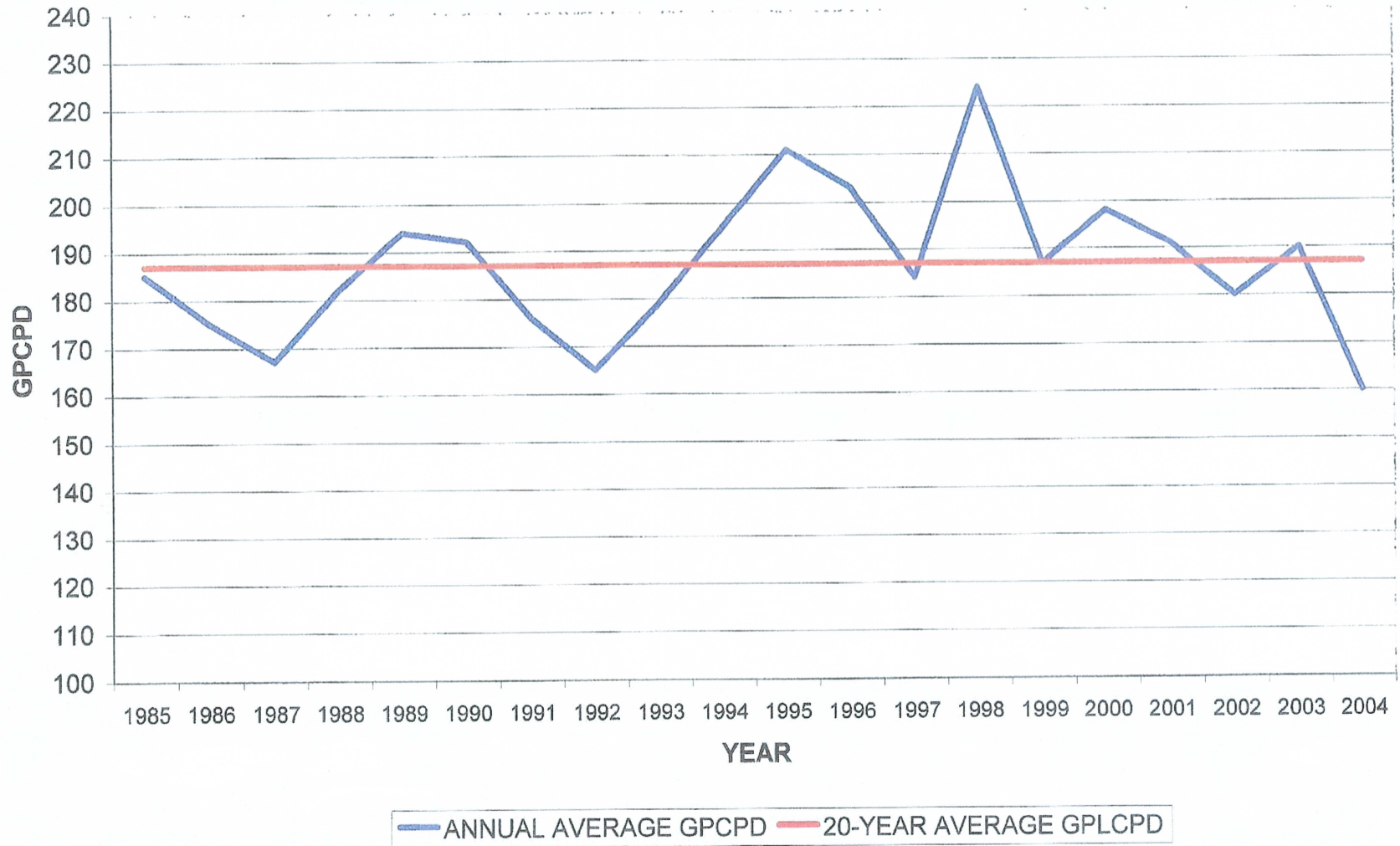
LUBBOCK GALLONS PER CAPITA PER DAY



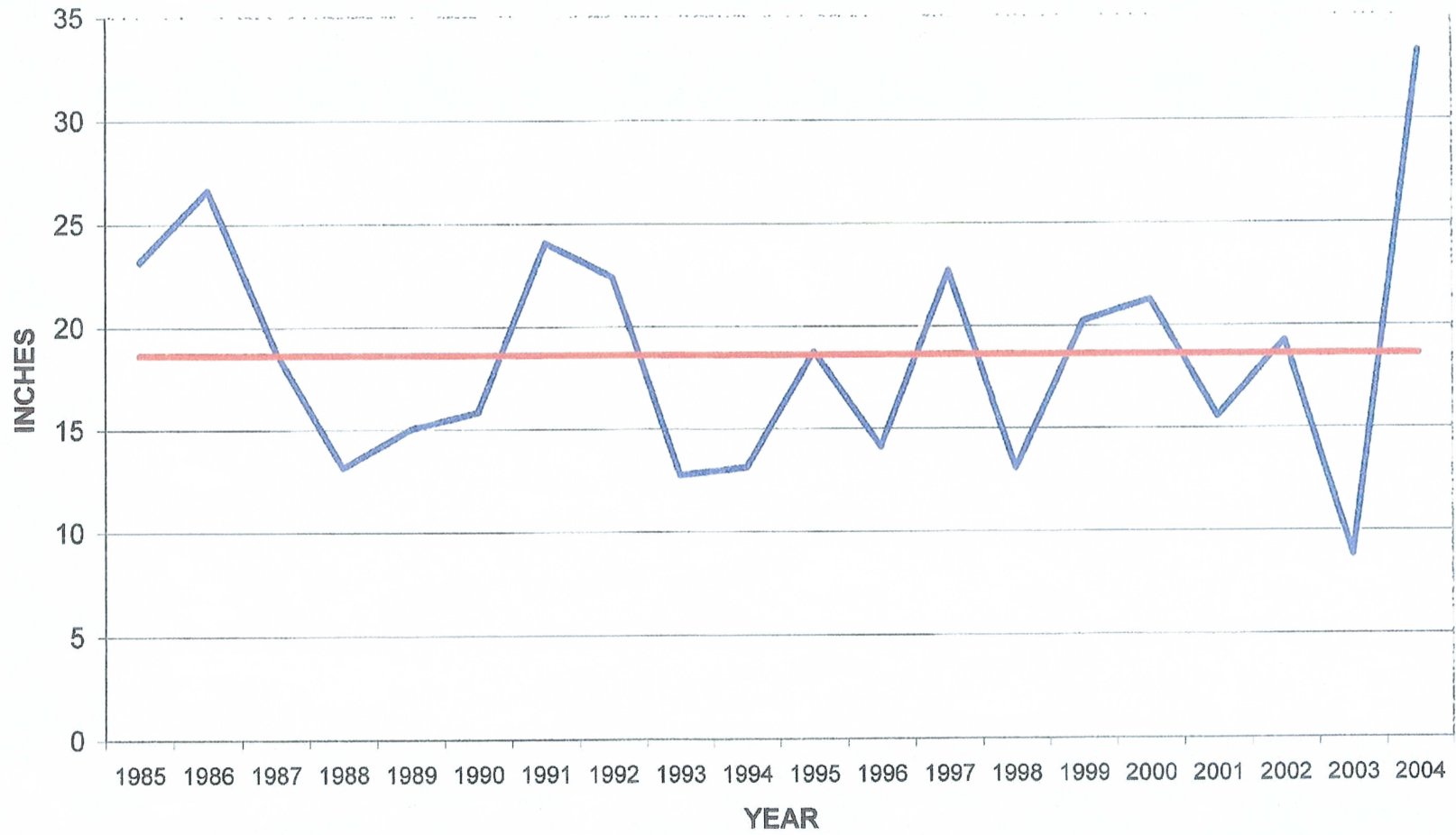
**LUBBOCK
GALLONS PER CAPITA PER DAY
AND RAINFALL**

YEAR	ANNUAL AVERAGE GPCPD	ANNUAL RAINFALL INCHES
1985	185	23.15
1986	175	26.61
1987	167	18.82
1988	182	13.12
1989	194	15.01
1990	192	15.83
1991	176	24.04
1992	165	22.39
1993	179	12.75
1994	195	13.12
1995	211	18.75
1996	203	14.12
1997	184	22.67
1998	224	13.05
1999	187	20.19
2000	198	21.27
2001	191	15.55
2002	180	19.27
2003	190	8.81
2004	160	33.25
AVERAGE	187	18.59

LUBBOCK GALLONS PER CAPITA PER DAY

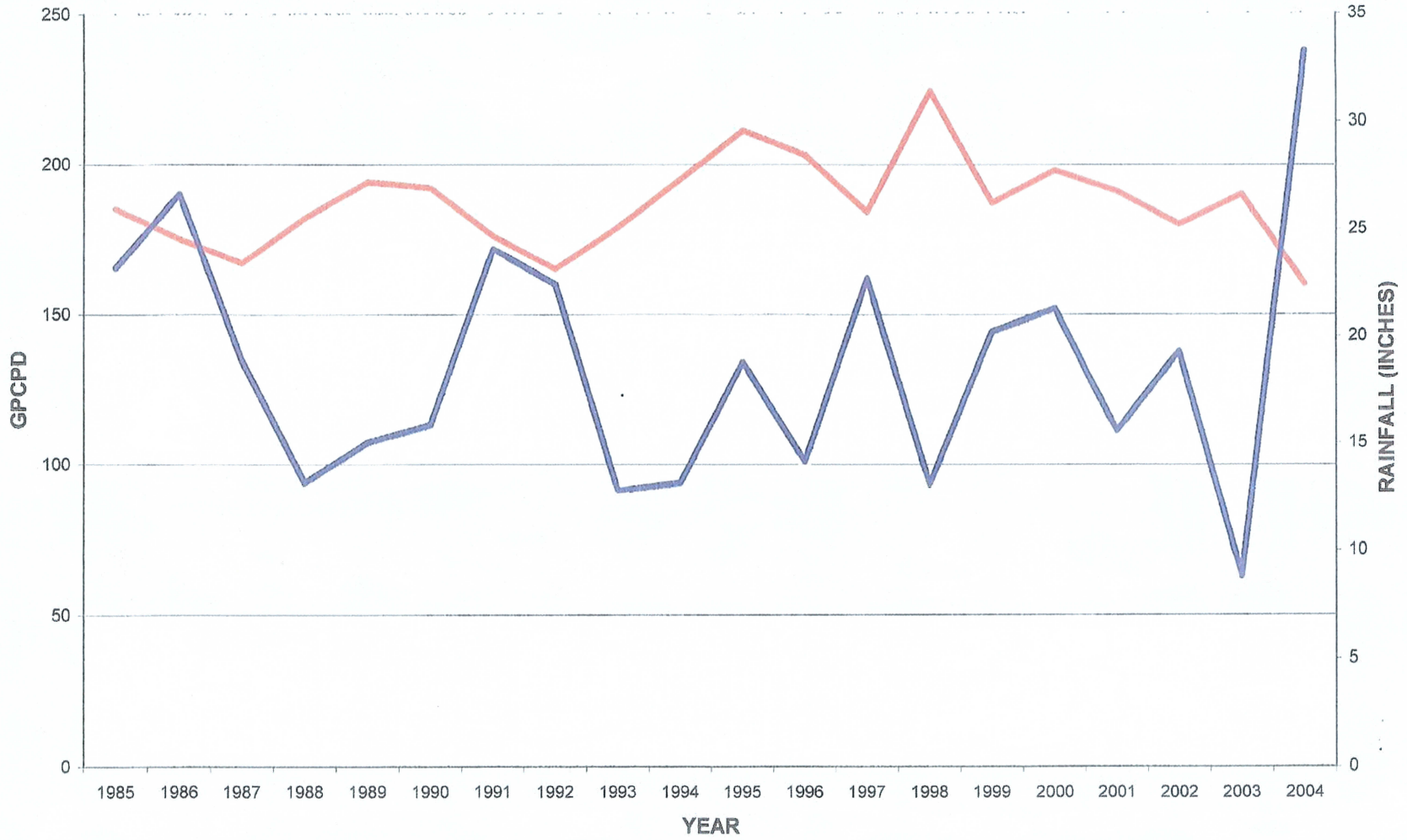


ANNUAL RAINFALL



— ANNUAL RAINFALL INCHES — 20-YEAR AVERAGE ANNUAL RAINFALL

GPCPD VS. RAINFALL



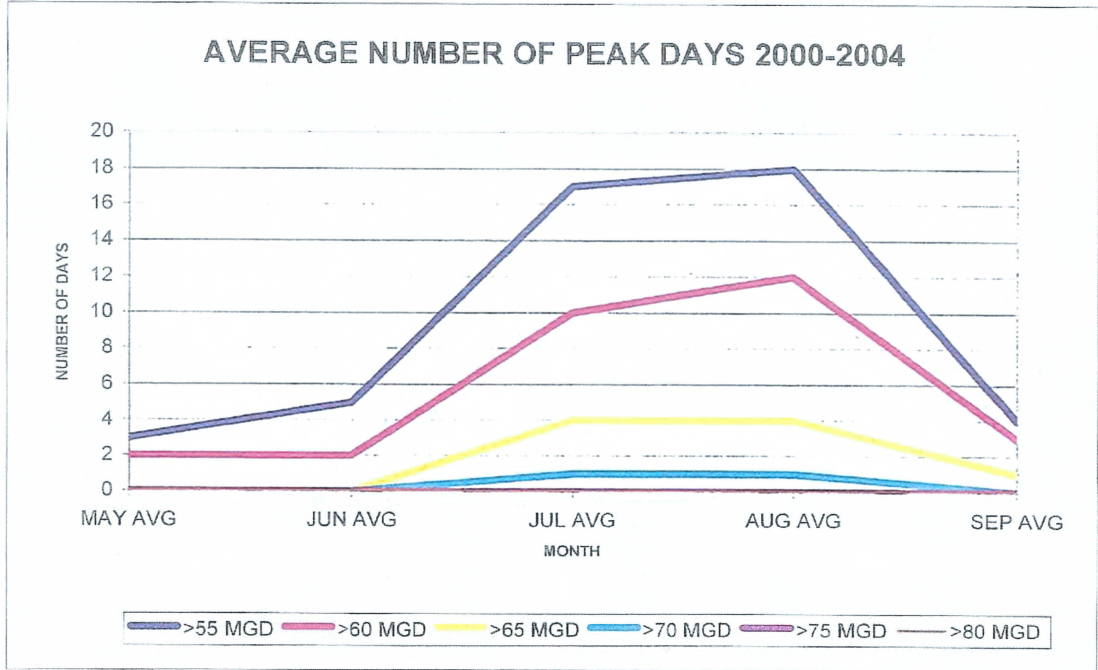
— ANNUAL AVERAGE GPCPD — ANNUAL RAINFALL INCHES

Section 3 – Water Supply Models for the next 100 Years

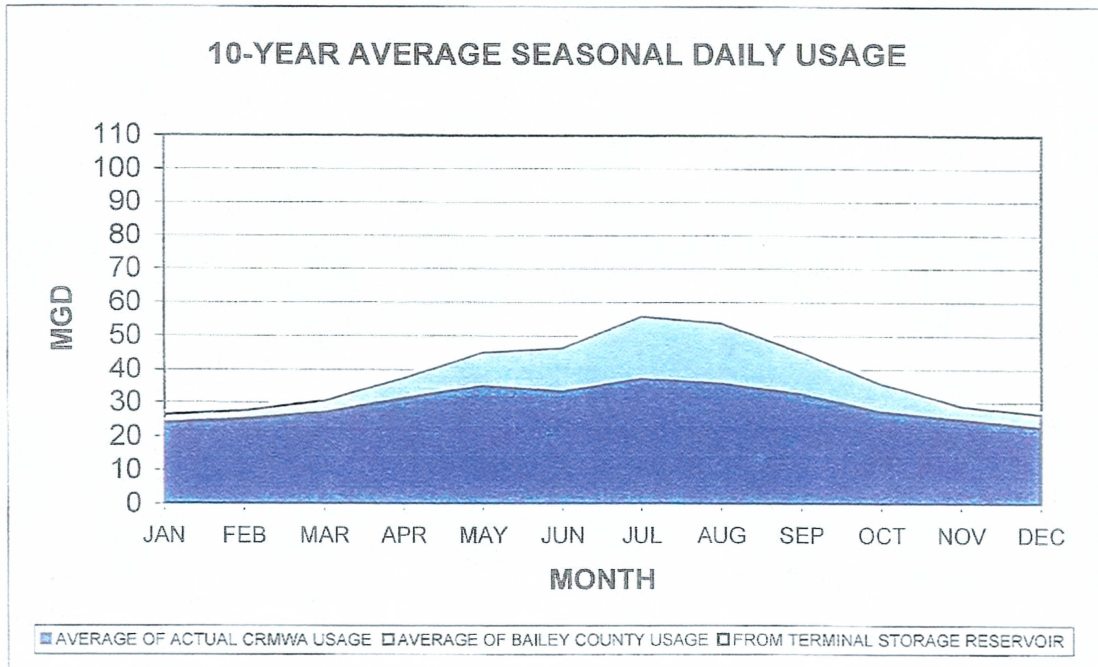
d. 2005 Base for Peak Day Use

WATER PLANNING GRAPHICS

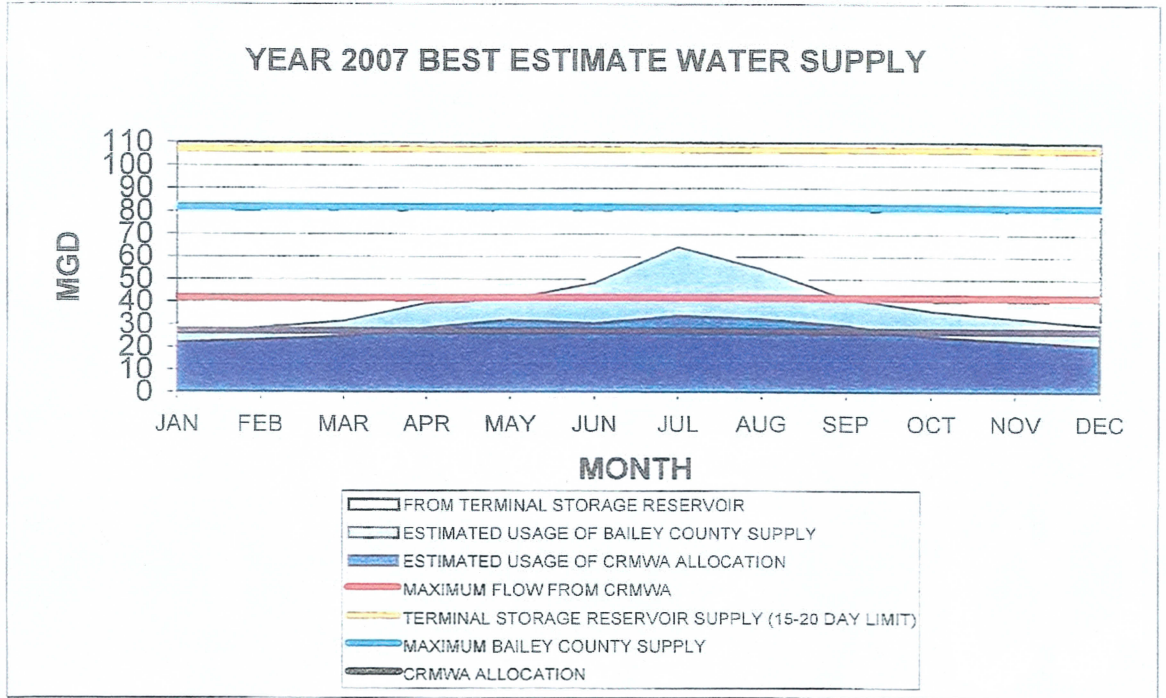
GRAPH NO. 1



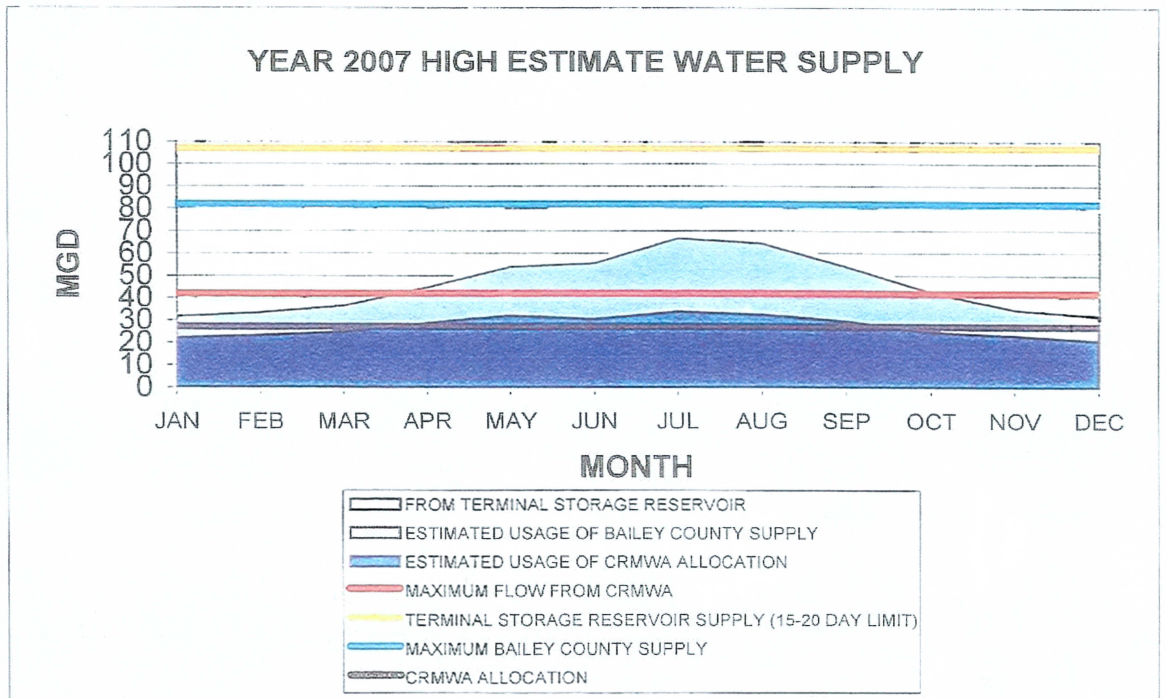
GRAPH NO. 2



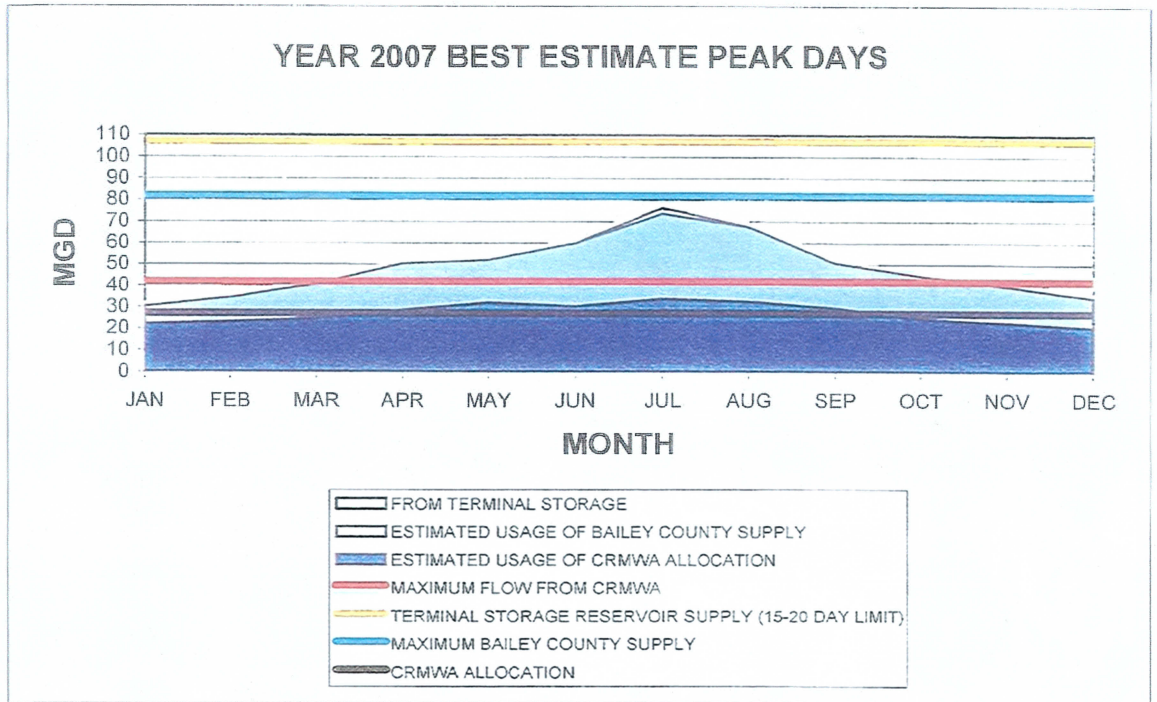
GRAPH NO. 19



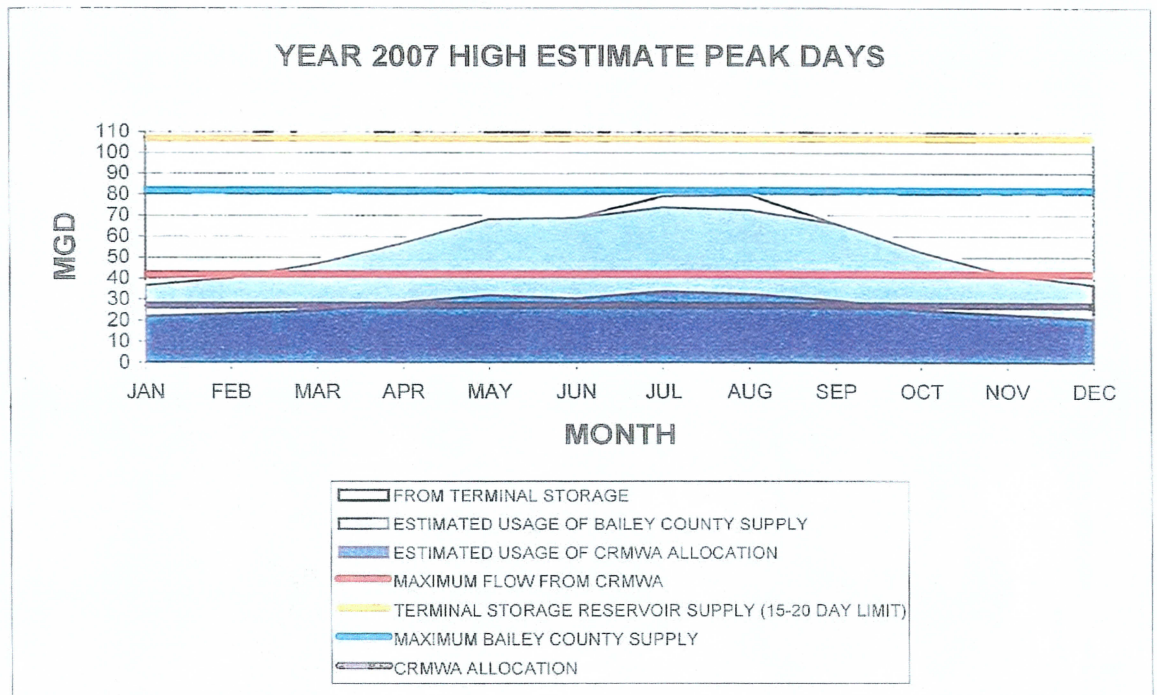
GRAPH NO. 20



GRAPH NO. 21



GRAPH NO. 22



**PEAK MILLION GALLONS PER DAY
(MGD)**

YEAR	ANNUAL PEAK	MONTHLY											
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	65.18	27.71	27.03	31.33	49.84	52.09	51.64	58.50	65.18	55.59	34.29	30.05	30.50
1986	65.71	31.69	31.07	41.50	46.01	55.76	42.11	65.03	65.71	33.33	30.66	27.79	24.75
1987	57.01	25.98	26.69	29.23	40.19	46.22	52.27	52.97	57.01	34.24	33.41	27.93	28.21
1988	60.40	26.63	30.75	35.95	43.77	52.08	58.59	58.09	60.40	40.81	37.38	36.29	28.73
1989	69.13	32.18	33.09	40.90	49.17	64.25	56.06	68.37	69.13	42.85	37.08	32.93	30.89
1990	79.00	33.64	32.72	34.38	40.49	53.04	74.59	79.00	54.80	53.94	36.39	31.62	29.09
1991	67.38	30.51	30.79	44.40	49.81	53.99	53.27	67.38	60.07	42.80	36.91	27.83	28.01
1992	55.50	26.06	30.07	36.04	42.63	42.81	42.57	55.50	51.46	42.88	40.07	31.78	33.53
1993	58.35	30.27	32.53	36.21	41.79	52.15	56.87	56.24	58.35	46.28	41.40	33.67	38.59
1994	74.98	31.34	33.38	39.80	47.40	44.35	74.98	67.05	63.34	45.90	44.39	34.32	31.05
1995	79.54	29.24	37.95	49.08	52.67	55.45	65.89	79.54	71.91	66.94	40.38	39.07	34.67
1996	66.71	31.09	38.81	46.25	57.80	66.71	44.37	41.66	65.77	30.42	45.30	33.90	30.93
1997	63.37	35.56	33.44	42.43	40.95	42.47	52.35	62.29	63.04	63.37	43.07	35.66	31.96
1998	84.17	32.02	30.11	36.12	52.93	76.51	82.43	84.17	76.39	61.17	51.41	33.56	28.41
1999	68.93	31.08	34.34	35.11	49.94	52.92	48.81	68.93	64.61	59.14	43.91	38.92	31.69
2000	67.82	32.75	36.99	37.33	45.51	64.85	46.24	61.82	67.44	67.82	52.78	29.77	36.35
2001	73.09	28.15	29.61	35.60	45.31	47.06	67.42	73.09	70.32	51.31	42.12	41.27	28.66
2002	63.91	28.79	30.25	34.77	41.60	52.43	59.66	63.17	63.91	54.05	42.26	31.16	27.90
2003	73.61	29.46	33.59	40.56	49.26	58.64	52.34	66.96	73.61	49.87	44.93	36.80	30.48
2004	59.94	28.36	27.92	36.21	39.64	53.89	56.16	59.94	49.23	48.85	33.22	29.39	27.58
AVERAGE	67.69	30.12	32.06	38.16	46.34	54.38	56.93	64.48	63.58	49.58	40.57	33.19	30.60

**AVERAGE MILLION GALLONS PER DAY
(MGD)**

YEAR	ANNUAL AVERAGE	MONTHLY											
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1985	33.26	23.39	24.60	26.16	36.54	37.52	35.60	45.37	49.10	36.68	25.31	24.47	23.55
1986	31.57	25.32	25.03	30.74	35.57	40.78	29.19	44.46	36.95	28.81	25.18	23.62	22.11
1987	30.40	22.27	22.56	24.07	32.03	33.79	35.30	39.97	46.38	28.79	29.20	25.37	24.37
1988	33.31	23.93	24.97	28.39	32.99	36.89	44.32	42.19	46.81	32.70	33.08	28.69	24.60
1989	35.92	27.38	26.93	29.74	40.28	47.97	38.80	58.28	42.04	32.43	31.89	28.27	26.00
1990	36.79	26.73	25.97	26.20	31.04	40.43	64.22	53.64	40.09	40.62	29.43	25.78	25.80
1991	32.97	24.98	26.31	30.92	41.15	41.89	37.95	43.29	38.58	29.88	31.69	25.01	23.40
1992	31.14	23.03	24.61	27.09	28.69	33.60	31.05	43.49	40.65	36.79	33.53	26.97	23.67
1993	34.01	24.18	23.03	27.18	32.71	39.67	48.20	42.25	45.82	39.82	33.20	25.87	25.47
1994	37.43	25.92	28.63	32.20	36.40	31.84	56.53	58.39	50.22	38.77	34.03	28.38	27.37
1995	40.61	26.83	29.34	32.33	40.50	42.21	49.56	65.98	55.99	42.49	36.99	33.74	30.42
1996	39.28	28.37	33.13	36.64	45.80	53.41	45.93	46.38	49.44	40.14	35.53	29.25	27.04
1997	36.07	26.70	25.64	33.11	30.21	34.79	38.76	51.62	52.84	44.96	36.07	29.77	27.37
1998	44.09	27.68	26.77	28.46	42.31	59.91	68.66	73.59	52.19	53.95	39.62	28.90	25.95
1999	36.99	26.23	28.80	28.92	38.49	37.37	38.99	51.42	54.74	43.66	35.13	32.03	27.44
2000	39.51	27.36	30.51	31.73	35.65	53.64	36.07	50.31	60.91	57.57	35.58	26.73	27.36
2001	38.46	25.65	25.92	26.09	36.34	36.93	54.79	65.79	54.49	42.44	38.36	28.67	25.09
2002	36.67	25.55	25.92	29.20	32.58	44.79	46.34	48.76	57.82	44.70	32.68	26.59	24.22
2003	38.95	25.64	26.43	32.44	40.99	46.12	39.48	57.11	60.59	43.96	37.38	29.47	26.49
2004	33.05	25.18	24.38	25.96	30.49	42.21	45.62	47.27	39.68	38.49	28.24	24.30	24.43
AVERAGE	36.02	25.62	26.47	29.38	36.04	41.79	44.27	51.48	48.77	39.88	33.11	27.59	25.61