5.0 WATER USE

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

10631 (b) (3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic records.

10631 (e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:

A) Single-family residential; (B) Multifamily; (C) Commercial; (D) Industrial; (E) Institutional and government; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; and (I) Agricultural.

(2) The water use projections shall be in the same 5-year increments to 20 years or as far as data is available.

5.1 Past, Current, and Projected Water Use

The City of Corcoran requires metering of all public, domestic, commercial and industrial water connections. The following Table 5.1-1 summarizes the City's water service connections as of June 2006.

Table 5.1-1
Water Service Connections

Customer	Service Connections
Public & Residential	2,871
Commercial	170
Industrial	14
Total Active Connections	3,055

* City of Corcoran

The City has not assembled data regarding the distribution of water use among domestic, commercial and small industrial water connections.

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5.1.1 HISTORICAL WATER USE

The City provides potable water service to its residential, commercial, industrial, and institutional customers within the City limits. At the end of the 2005 – 2006 fiscal year, the City produced 2.16 billion gallons or 6,636 acre-feet (af) which is equivalent to 5.92 million gallons per day (mgd) of water servicing a population of approximately 22,500. Table 5.1-2 lists historical monthly and annual water production from 1993 to 2003.

5.1.2 MAXIMUM DAY DEMAND

One of the water demand conditions that are of particular significance is the MDD. This is the highest water demand during a 24-hour period of the year. Water system sources are typically sized to meet the anticipated MDD of a water system.

For the year 2005, the City had a peak day demand on April 19th of 9.47 MG which works out to be 6,573 GPM. By looking at table 3.1-2, the City's well capacity is well equipped to handle a maximum day demand.

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Table 5.1-2
Water Production
City of Corcoran

	Monthly Gallonage										
Month	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
January	68,090,000	73,850,000	67,600,000	71,810,000	58,780,000	67,830,000	65,870,000	73,090,000	71,000,000	84,097,000	90,109,000
February	61,770,000	65,320,000	60,080,000	65,340,000	61,063,000	58,650,000	59,260,000	66,950,000	62,230,000	81,800,000	85,369,000
March	74,290,000	84,320,000	67,230,000	80,890,000	106,920,000	75,510,000	81,980,000	91,210,000	88,200,000	110,310,000	135,919,200
April	91,830,000	105,980,000	91,630,000	112,980,000	134,650,000	91,530,000	104,600,000	127,460,000	104,810,000	147,485,000	153,480,000
May	124,280,000	120,990,000	111,820,000	159,310,000	177,050,000	118,790,000	166,813,000	168,250,000	178,630,000	182,606,000	210,121,200
June	128,900,000	146,870,000	141,970,000	183,310,000	181,610,000	154,380,000	196,130,000	199,730,000	215,581,000	227,544,000	290,745,600
July	149,040,000	164,960,000	158,050,000	195,630,000	194,930,000	193,610,000	219,320,000	217,240,000	229,403,000	253,296,600	317,364,000
August	144,870,000	162,160,000	162,780,000	193,030,000	180,630,000	198,930,000	197,370,000	231,300,000	217,623,000	237,580,200	313,241,000
September	131,260,000	138,050,000	143,850,000	156,980,000	153,650,000	161,690,000	168,320,000	172,730,000	177,968,000	201,476,400	266,911,000
October	105,490,000	103,060,000	125,250,000	154,900,000	128,270,000	120,330,000	140,830,000	123,100,000	144,445,000	168,600,000	187,470,000
November	82,120,000	82,190,000	94,170,000	92,330,000	90,860,000	79,350,000	91,570,000	85,120,000	96,069,000	121,829,400	133,051,000
December	73,960,000	73,600,000	77,730,000	64,950,000	67,410,000	68,860,000	79,700,000	74,460,000	82,521,000	101,346,000	
Total	1,235,900,000	1,321,350,000	1,302,260,000	1,528,460,000	1,535,823,000	1,389,460,000	1,571,763,000	1,612,640,000	1,668,480,000	1,917,970,600	2,183,781,000

Gallons: 7.48 = cubic feet
Note: Expanded Leprino Foods usage began in July 2002, reduced operating levels in April 2003.

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5.1.3 PAST, CURRENT, AND PROJECTED PER-CAPITA CONSUMPTION

The per capita consumption rate may be used for estimating the City's future water requirements, evaluating the adequacy of the supply source, and determining storage needs. The consumption rate, expressed in gallons per capita per day (gpcd), is applied to the projected population to yield future water requirements. Since 1993, the adjusted consumption rate in the City has ranged between a calculated low of 147 gpcd in 1993 and 1995 and a high 187 of gpcd in 2002 (Table 5.1-3). (Historic lows, however, in the 145 to 165 range may not be accurate; industrial usage in those years may have been less than at present.)

5.1.4 PROJECTED WATER USE

Based on future trends in population provided by the City's General Plan, an estimated per capita water consumption rate of 175 gpcd, and continuing current water demands by the City's two major industries, the City's future water requirements are estimated and summarized in Table 5.1-4. Figure 5-1 illustrates projected maximum day demand relationships to existing and required well production capacities. In addition to the projected average demands, Table 5.1-4 includes annual estimates for maximum day demand, through the planning horizon year of 2030. Based on these projections, it is anticipated that the City's average day and maximum day requirements for 2030 will approach 12,169,379 mgd or 8,451 gallons per minute (gpm) and 28,346,625 mgd (19,685 gpm), respectively.

5.1.5 EXPANSION PROJECTS

10910.(a) Any city or county that determines that a project, as defined in section 10912, is subject to the California Environmental Quality Act X shall comply with this part.

10912. For the purpose of this part, the following terms have the following meanings:

10912 (a) "Project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.
(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

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Table 5.1-3
Historic and Projected Per-Capita Water Consumption Rates
(Gallons per capita per day)

Years																
Historic												Projected [1]				
1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2010	2015	2020	2025	2030
147	154	147	185	172	144	164	164	165	187	177	175	180	186	191	197	203

Table 5.1-4
Projected Average Day Demands (ADD)
and Maximum Day Demand (MDD)
Through 2030 (Gallons per Day)

	Year						
	2003	2005	2010	2015	2020	2025	2030
ADD	5,982,960	6,230,000	7,139,325	8,245,500	9,591,425	10,803,781	12,169,379
MDD[1]	12,046,000	12,830,500	15,116,800	17,898,000	21,282,100	24,561,672	28,346,625

(1) 440 gallons per capita per day of non-major industry demands, based on 2003 maximum day demand.
(2) Probably higher than these figures; industrial flows may have been less than assumed.

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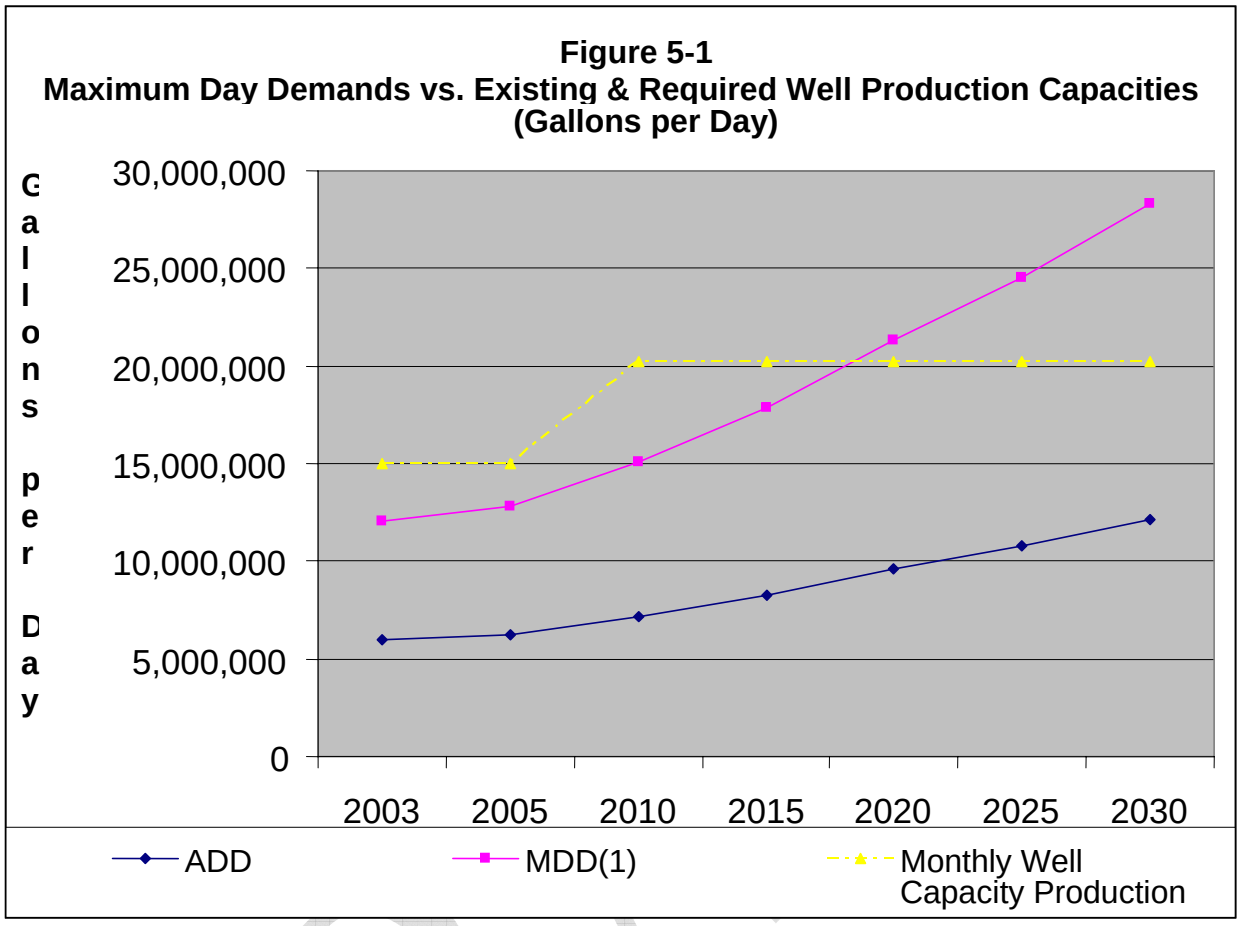

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) A proposed industrial, manufacturing or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,00 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

The City has no knowledge regarding any proposed projects of the sizes or water demands defined in the law given the City's size. It is unlikely that such projects will be proposed or built within the 2030 planning horizon. If so proposed, project compliance with Sections 10910 through 10914 will be required.

5.2 Water Shortage Expectations

In general, demands during droughts increase to compensate for the lack of rainfall that was benefiting landscape irrigation. The water use projections in Table 5.1-4 assume any potential increase will be offset by the increased and more stringent water conservation measures that will be activated by the City during such droughts.