

SECTION 6

EXISTING SYSTEM

6-1 General

The City's existing domestic water system consists of the following:

- 5 primary pressure zones (Zone 925, 1010, 1074, 1212, and 1348)
- Over 2.8 million feet (546 miles) of transmission and distribution pipe, 2-inches through 42-inches in diameter
- 6,811 fire hydrants
- 36,658 water meters
- 23 active wells and 5 inactive wells
- 12 reservoirs with a total volume of 75 MG
- 4 active booster pump stations, 1 inactive booster pump station
- 16 pressure reducing stations
- 5 inter-agency connections
- 2 Connections to Water Facilities Authority
- 2 Connections to Chino Desalter Authority
- 1 Ion Exchange Treatment Facility
- 2 altitude valves
- 36,658 domestic water services

Meter Type	Number of Meters
Single Family Residential	29,473
Multiple Family Residential	2,069
Commercial	3,285
Industrial	278
Landscape Irrigation	1245
Other	308
Total	36,658

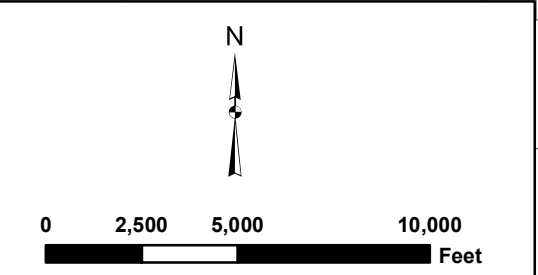
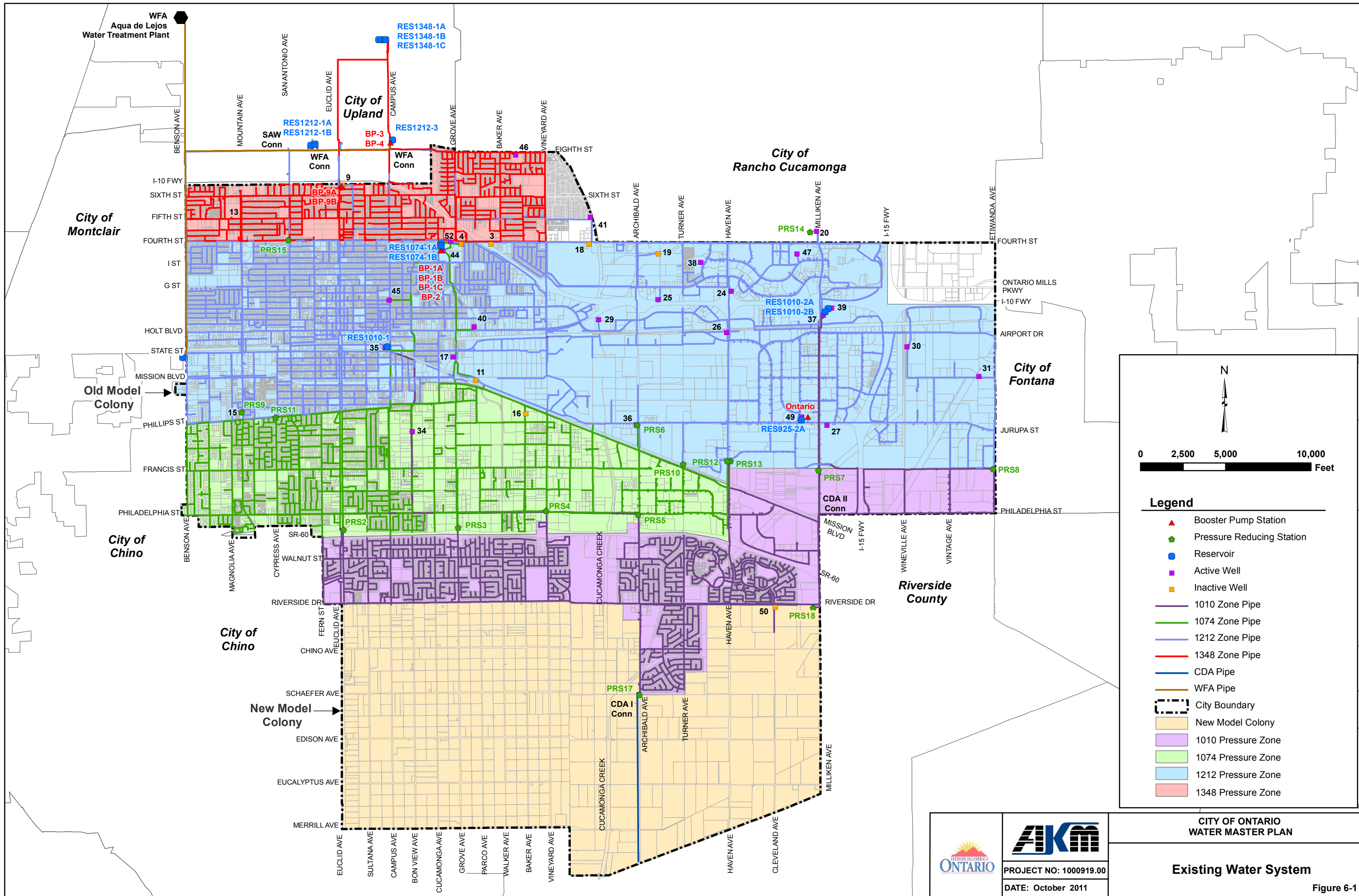
A breakdown of the water meters by customer classes are shown in Table 6-1.

The existing water service area includes only a very small portion of New Model Colony- Edenglen by Brookfield Homes (located south of Riverside Drive, east of Mill Creek Avenue), and Colony High School (located south of Riverside Drive and west of Mill Creek Avenue). The majority of the existing residents and businesses of NMC use private groundwater wells for their water supply.

The existing domestic water system is shown on Figure 6-1. The hydraulic schematic of the existing water system is shown on Figure 6-2.

6-2 Pressure Zones

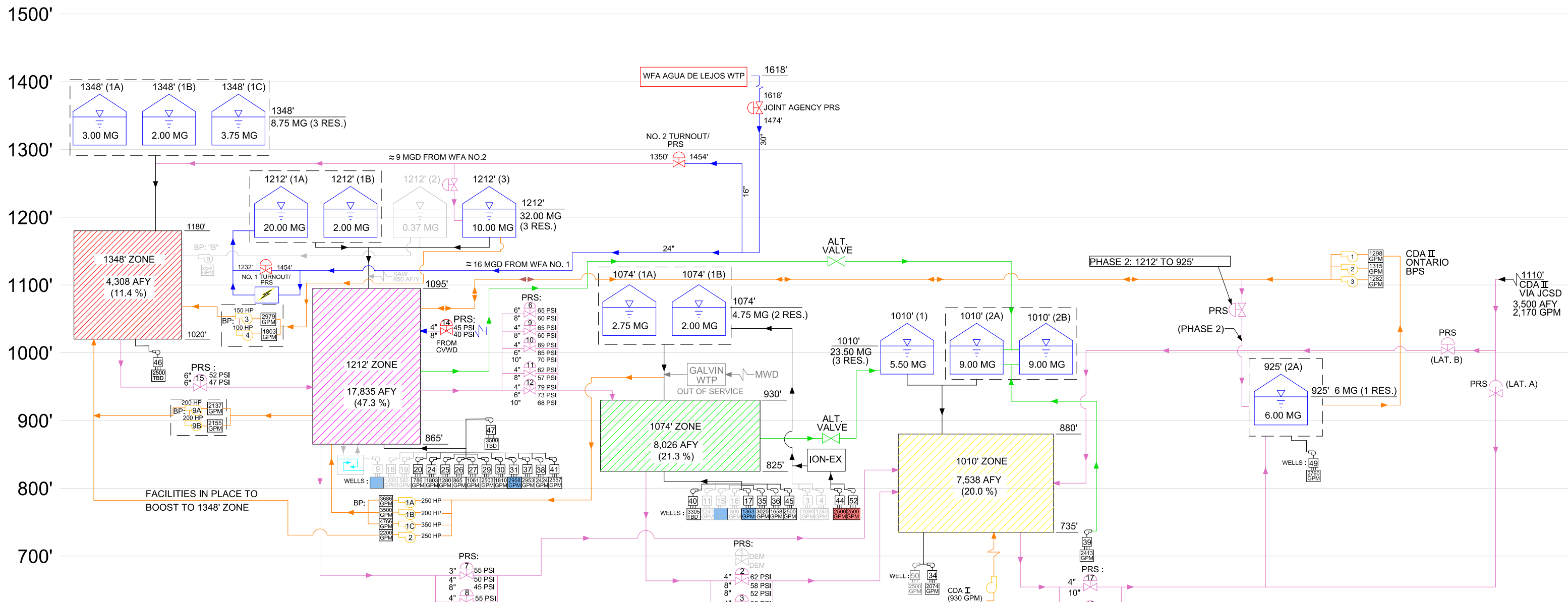
The existing system is divided into the 5 pressure zones entitled: 925 Zone, 1010 Zone, 1074 Zone, 1212 Zone, 1348 Zone. It should be noted that the 925 Zone does not currently have any existing demands. The 925 Zone will serve the future New Model Colony developments. The largest pressure zone in the system is the 1212 Zone, which covers about 38 percent of the existing water service area. Details of each pressure zone are shown in Table 6-2.



Legend

- ▲ Booster Pump Station
- ◆ Pressure Reducing Station
- Reservoir
- Active Well
- Inactive Well
- 1010 Zone Pipe
- 1074 Zone Pipe
- 1212 Zone Pipe
- 1348 Zone Pipe
- CDA Pipe
- WFA Pipe
- - - City Boundary
- New Model Colony
- 1010 Pressure Zone
- 1074 Pressure Zone
- 1212 Pressure Zone
- 1348 Pressure Zone

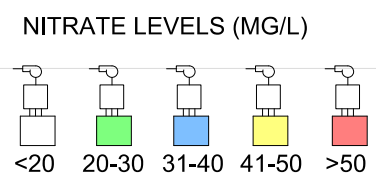
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DATE: October 2011



LEGEND :

- WELLS : INACTIVE ACTIVE
- RES. = RESERVOIR INACTIVE ACTIVE
- SAME SITE =
- BP = BOOSTER PUMP INACTIVE ACTIVE
- CDA = CHINO BASIN DESALTING AUTHORITY
- PRS. = PRESSURE REDUCING STATION INACTIVE ACTIVE
- SAW = SAN ANTONIO WATER CO. ABANDONED
- WFA = WATER FACILITIES AUTHORITY
- AFY = ANNUAL CONSUMPTION FOR 08'
- (%) = PERCENT OF TOTAL CONSUMPTION
- HYDROELECTRIC FACILITY =
- ALTITUDE VALVE =
- BLENDING STATION =
- TURNOUT / PRS
- ION EXCHANGE PLANT

- BOOSTER LINE
- PRV LINE
- RES. DEDICATED FILL LINE
- WFA FACILITY



		<p>CITY OF ONTARIO WATER MASTER PLAN</p>
<p>PROJECT NO. 1000919.00 DATE: March 2011</p>		<p>Existing Water System Hydraulic Schematic</p>
		<p>Figure 6-2</p>

**Table 6-2
City of Ontario Pressure Zones**

Pressure Zone Name ¹	Pressure Zone Name ²	Area (sq. mi.)	Area (Ac)	Pipe Length (ft)	Hydraulic Grade Line (ft)	Ground Elevation Range (ft)	Static Pressure Range ³ (psi)
1348	13th Street	3.1	1,954	370,591	1,348	1,020 - 1,180	73 - 142
1212	8th Street	18.7	11,957	1,285,311	1,212	865 - 1,095	51 - 150
1074	4th Street	7.5	4,780	596,218	1,074	825 - 930	62 - 108
1010	Phillips Street	9.0	5,783	615,906	1,010	735 - 880	56 - 119
925 ⁴	Francis Street	10.5	6,733	15,341	925	635 - 800	54 - 126
Total		48.8	31,206	2,883,366			

¹ Nomenclature used in this report.

² Nomenclature used in previous Water Master Plan.

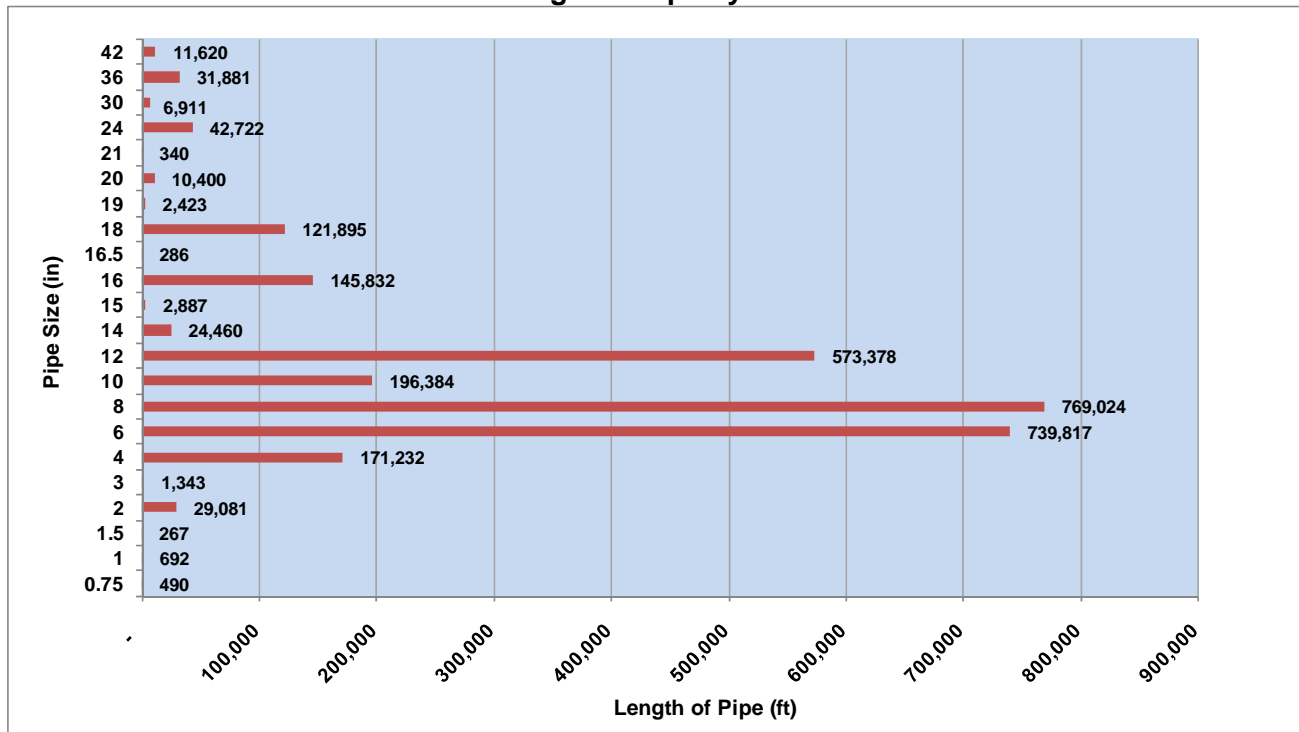
³ Calculated based on HGL and ground elevation range.

⁴ There is no existing demands in the 925 Zone. The water entering Reservoir 925-2A is pumped out to the 1212 Zone. Brookfield Homes and Colony High School are currently connected to the 1010 Zone.

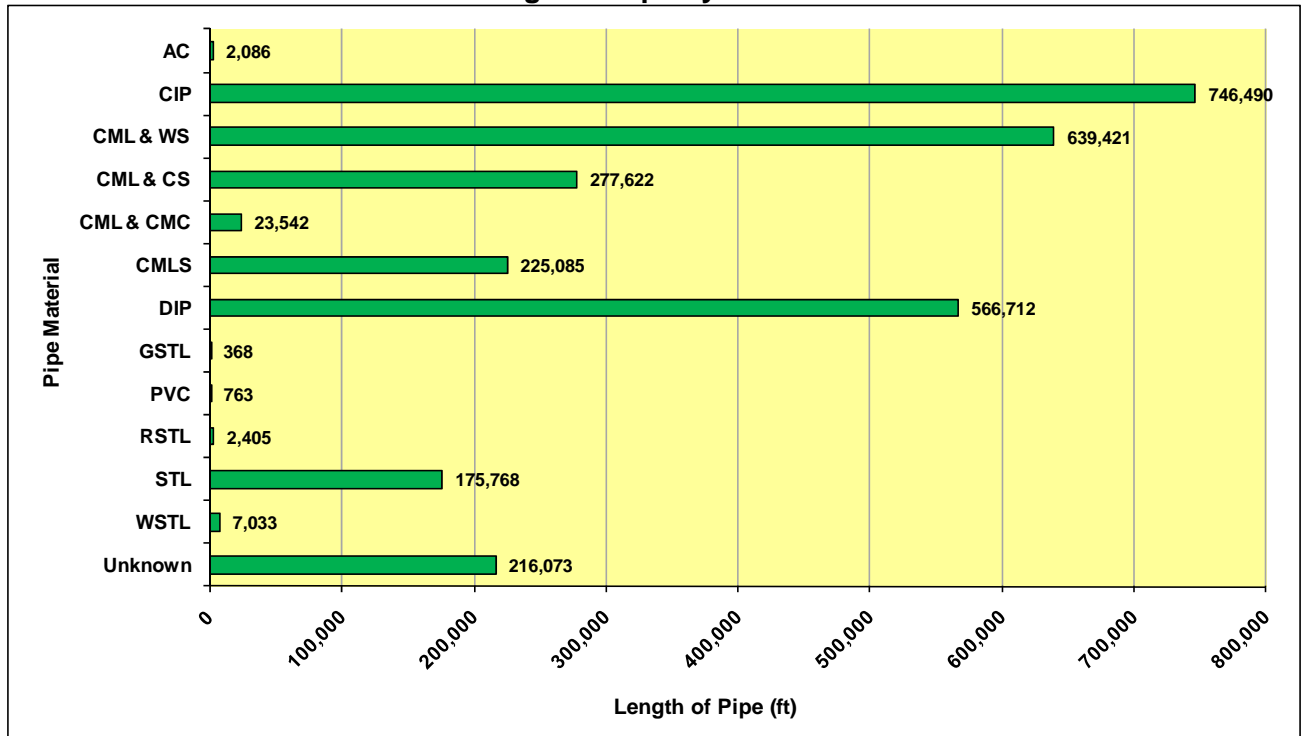
6-3 Transmission and Distribution System

The potable water system includes 546 miles of transmission and distribution pipe, ranging in size from 2-inches through 42-inches. A summary of the system pipes by diameter, material, and date of construction is shown on Figure 6-3, Figure 6-4 and Figure 6-5, respectively.

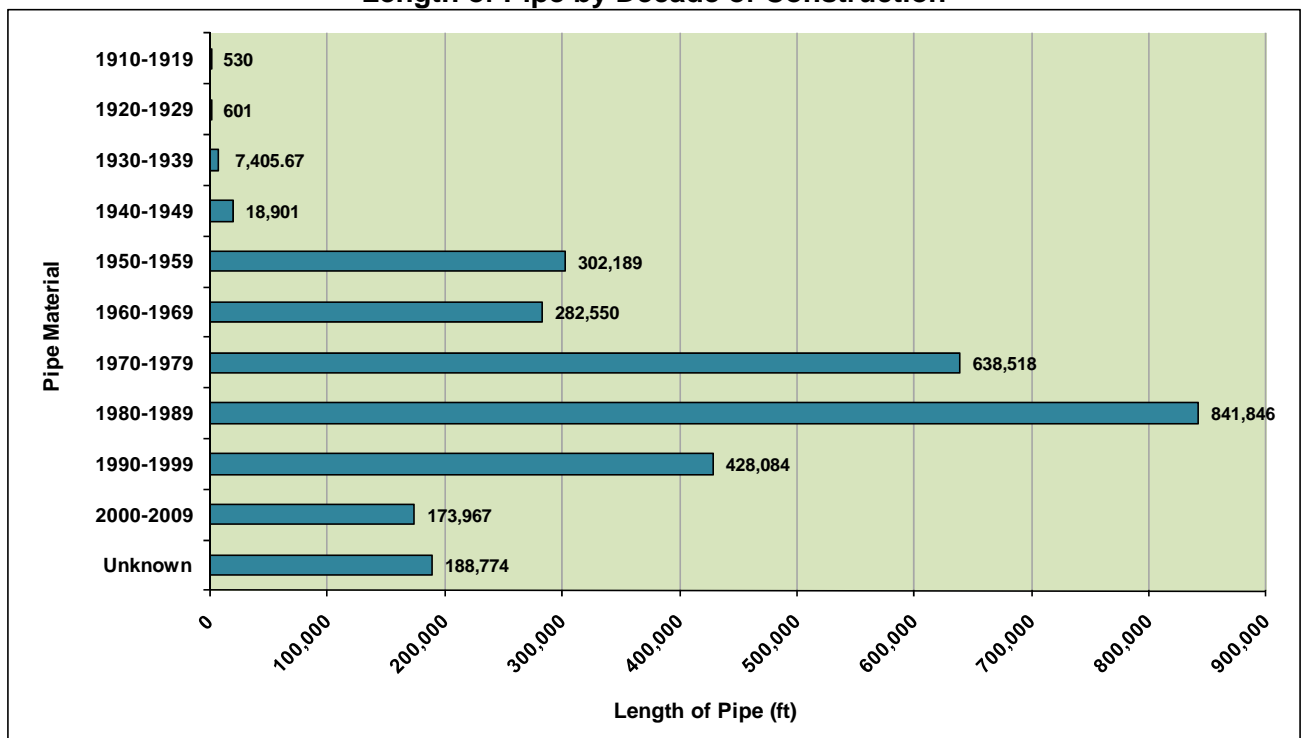
**Figure 6-3
Length of Pipe by Size**



**Figure 6-4
Length of Pipe by Material**



**Figure 6-5
Length of Pipe by Decade of Construction**



6-4 Wells

The total well capacity is about 51,100 gpm or 73.6 mgd. Well information and characteristics are provided in Table 6-3. There are 32 wells within the City's water system: twenty three (23) are currently active, five (5) are inactive, and four (4) are abandoned/destroyed.

The status of the inactive wells is summarized below:

- Well 9 is inactive due to high nitrates and perchlorates and will be abandoned. The Well 9 property is large enough for the construction of a new well and a treatment facility.
- Well 11 was constructed in 1958. It is located at the Ontario International Airport property. While the water quality meets the primary and secondary standards, it produces sand even after a new sand separator was installed in 2003. It is inactive and will be abandoned.
- Well 15 is inactive due to high nitrates and perchlorates and will be abandoned.
- Well 16, constructed in 1960, is inactive due to the production of sand and traces of oil from the oil-lubricated pump. It should be abandoned.
- Well 50 is inactive due to color and increasing perchlorate levels. It is recommended that a feasibility study be done to determine potential solutions to this problem.

Additional information regarding the wells is as follows:

- Wells 3, 4, and 19 have been abandoned and Well 18 was destroyed due to high nitrates and perchlorates, and facility condition.
- Wells 3 (1962) and Well 4 (1919) were abandoned due to high levels of nitrate and perchlorate. These wells had also exceeded their useful lives. The production of Wells 3 and 4 has been replaced by Well 44 and 52, which are treated for nitrate and perchlorate removal by the Dry Year Yield Ion Exchange Plant.
- Wells 29 and 31 production need to be treated for nitrates, and Well 40 production needs to be treated for perchlorate.

6-5 Reservoirs

The City's water system includes twelve (12) reservoirs ranging in capacity from 2 million gallons to 20 million gallons. The City's total reservoir capacity is currently 75 MG of which approximately 32 MG is within the 1212 Zone. The hydraulic gradient in each pressure zone is controlled by the high water elevation of the reservoirs that feed the zones by gravity.

All the existing reservoirs in the City are less than 60 years old with the exception of Reservoir 1212-3, which was constructed in 1926. The average life expectancy of concrete reservoirs and steel tanks is about 100 years, provided that reservoirs are properly maintained and repainted or recoated every 15-20 years. Thus, most of the City reservoirs are expected to be in fairly good condition and no improvements based on age are recommended except for Reservoir 1212-3, due to its age and condition. The characteristics of each existing storage reservoir are shown in Table 6-4.

**Table 6-3
Wells Characteristics**

Well Data																			Motor Specifications			
Well Number	Location	Status	Year Drilled	Pressure Zone	Capacity (gpm)	Static GWL (ft)	Draw-down (ft)	Ground Elevation (ft)	Hydraulic Grade (ft)	Discharge Pressure (psi)	Backup Power (Y/N)	Pump Model	Pump Mfg	No of Stages	Pump RPM	Edison Test Date	Capacity (gpm)	TDH	Motor Mfrgr	HP	Motor RPM	
49	1495 S. Dupont Ave.	Active	Unknown	925	2,760	299	23	901	924	10	Y	14MD	Peerless	5	1780	7/25/08	2,760	345	US	350	Unknown	
					Zone 925 Capacity	2,760																
34	1425 S. Bon View Ave.	Active	1983	1010	2,074	332	101	906	1,003	42	N	15H277	Ingersoll Dresser	12	1175	7/17/08	2,074	530	GE	500	1180	
39	4397 Guasti Ave.	Active	2002	1010	2,413	350	24	984	1,006	9.5	N	15EMM	Ingersoll Dresser	4	1775	7/17/08	2,413	396	US	350	Unknown	
50	3900 W. Riverside Dr.	Inactive	-	1010	-	-	-	-	-	-	N	14MD	Peerless	6	1,780	-	-	-	-	-	-	
					Zone 1010 Capacity	4,487																
3	1530 E. 4th St.	Abandoned	1962	1074	-	-	-	-	-	-	N	-	-	-	-	-	-	-	-	-	-	
4	1326 E. 4th St.	Abandoned	1919	1074	-	-	-	-	-	-	N	-	-	-	-	-	-	-	-	-	-	
11	600 S. Grove Ave.	Inactive	1958	1074	-	-	-	-	-	-	N	-	-	-	-	-	-	-	-	-	-	
15	1200 S. Mountain Ave.	Inactive	1960	1074	-	-	-	-	-	-	N	-	-	-	-	-	-	-	-	-	-	
16	1300 S. Baker Ave.	Inactive	1960	1074	-	-	-	-	-	-	N	-	-	-	-	-	-	-	-	-	-	
17	500 S. Grove Ave.	Active	1963	1074	1,363	356	57	959	1,093	58	N	Unknown			-	-	10/3/08	1,363	547	USEM	300	1780
35	652 E. Main St.	Active	1983	1074	3,020	401	72	978	1,059	35	N	17 MQH	Byron Jackson	11	1170	7/25/08	3,020	554	US	500	1180	
36	1400 S. Archibald Ave.	Active	1986	1074	1,658	296	47	891	1,078	81	N	Unknown			-	-	7/17/08	1,658	530	US	350	1770
40	1335 East Holt Bl.	Active	2003	1074	3,305	388	39	981	1,087	46	Y	17MQ-H	Byron Jackson	5	1770	7/25/08	3,305	532	US	600	1785	
44	964 Cucamonga Ave.	Active	2003	1074	2,500			1,059			N	15ETMH	Flowserve	7	1770	Not Available	2,500	635	USEM	600	1800	
45	665 N .Campus Ave.	Active	2006	1074	2,500			1,022			N	17MQL	Flowserve	5	1775	Not Available	2,500	560	Unknown	500	Unknown	
52	1230 E. 4th St,	Active	Unknown	1074	2,500			1,053			N	15ETMH	Flowserve	7	1770	Not Available	2,500	665	USEM	600	1800	
					Zone 1074 Capacity	16,846																
9	1555 N. Columbia Ave.	Inactive	1958	1212	-	-	-	-	-	-	N	-	-	-	-	-	-	-	-	-	-	
18	2232 E. 4th St	Destroyed	1963	1212	-	-	-	-	-	-	N	-	-	-	-	-	-	-	-	-	-	
19	800 N. Archibald Ave.	Abandoned	1965	1212	-	-	-	-	-	-	N	-	-	-	-	-	-	-	-	-	-	
20	9600 S. Milliken Ave.	Active	1977	1212	786	401	86	-	-	78	N	11CLC	Goulds	13	2860	Nov 09	786	667	GE	300	1770	
24	700 N. Haven Ave.	Active	1969	1212	1,803	373	21	990	1,226	102	N	14KHM	Aurora	11	1770	7/17/08	1,803	629	US	450	1780	
25	2930 E. Inland Empire Bl.	Active	1971	1212	1,280	373	17	980	1,239	112	N	12EHM	Flowserve	12	1770	7/11/08	1,280	649	USEM	300	1780	
26	3400 E. Airport Dr.	Active	1971	1212	865	334	38	958	1,224	115	N	11M 7000	Fairbanks Morse	13	1770	7/25/08	865	638	US	300	1770	
27	4300 E. Jurupa St.	Active	1971	1212	1,061	298	24	906	1,239	144	N	12CHC	Goulds	9	1770	10/3/08	1,061	653	Newman	250	1775	
29	2400 E. Airport Dr.	Active	1979	1212	2,503	359	36	961	1,229	116	N	Unknown			-	-	7/11/08	2,503	662	GE	500	Unknown
30	220 S. Wineville Ave.	Active	1978	1212	1,810	321	4	967	1,244	120	N	14M160	Ingersoll Dresser	7	1775	10/3/08	1,810	602	Westing-house	600	1800	
31	5719 E. Santa Ana St,	Active	1979	1212	2,958	259	22	938	1,248	134	N	16KHL	Verti-Line	8	1770	7/17/08	2,958	617	US	600	Unknown	
37	4327 E. Guasti	Active	1994	1212	2,953	346	30	977	1,222	106	N	15EHM	Ingersoll Dresser	6	1775	7/17/08	2,953	620	USEM	600	1780	
38	837 N. Center	Active	1997	1212	2,424	408	35	1,013	1,228	93	N	15MQH	Byron Jackson	7	1770	7/25/08	2,424	658	US	500	1775	
41	1252 North Hellman Ave.	Active	2003	1212	2,557	444	46	1,032	1,219	81	Y	Unknown			-	-	7/11/08	2,557	677	US	600	Unknown
47	4255 E. Concours St.	Active	Unknown	1212	3,500			1,016			Y	17MQH	Flowserve	5	1775	Not Available	3,500	655	Unknown	800	Unknown	
					Zone 1212 Capacity	24,500																
46	1670 W. 8th St.	Active	2006	1348	2,500			1,135			Y	17MQL	Flowserve	8	1775	Not Available	2,500	900	Unknown	800	Unknown	
					Zone 1348 Capacity	2,500																
					Total Capacity	51,093																

**Table 6-4
Existing Storage Reservoir Characteristics**

Pressure Zone	Reservoir ID	Reservoir Name	Location	Shape ⁽¹⁾	Volume (MG)	Bottom Elevation (ft)	High Water Elevation (ft)	Height (ft)	Width x Length (ft)	Dia (ft)	Material	Year of Const.
925	2A		Northeast corner of Dupont Ave and Jurupa St	Cylindrical	6	893	925	32.0	-	188	Concrete	2003
Total Zone 925 Volume					6							
1010	1	Reservoir 10	Southwest corner of Campus Ave and Main St	Cylindrical	5.50	979.3	1,009.3	30.0	-	178	Steel	1982
1010	2A	Reservoir 11	Southeast corner of Miliken Ave	Cylindrical	9	980	1,010	30.0	-	226	Concrete	2001
1010	2B	Reservoir 12	and San Bernardino Freeway	Cylindrical	9	980	1,010	30.0	-	226	Concrete	2007
Total Zone 1010 Volume					23.50							
1074	1A	Reservoir 8	Southeast corner of Cucamonga Ave and Fourth St	Rectangular	2.75	1,054.4	1,074	19.6	140 x 140	-	Concrete	1978
1074	1B	Reservoir 9	Southeast corner of Cucamonga Ave and Fourth St	Rectangular	2	1,058.8	1,074	15.2	118 x 158	-	Concrete	1957
Total Zone 1074 Volume					4.75							
1212	1A	Reservoir 4	Southwest corner of Fern Ave and Euclid Pl	Rectangular	20	1,186	1,212	26.0	278 x 458	-	Concrete	1959
1212	1B	Reservoir 5	Southwest corner of Fern Ave and Euclid Pl	Rectangular	2	1,193	1,208	15.0	166 x 180	-	Concrete	1958
1212	3	Reservoir 7	East side of Campus Ave, north of 8th Street	Irregular	10	1,180	1,205	25.0	218 x 398	-	Concrete	1926
Total Zone 1212 Volume					32							
1348	1A	Reservoir 1	Southwest corner of Campus Ave and 13th St	Rectangular	3	1,328.4	1,347.7	19.3	125.5 x 162.5	-	Concrete	1972
1348	1B	Reservoir 2		Rectangular	2	1,327.6	1,348.0	20.5	107 x 125.5	-	Concrete	1955
1348	1C	Reservoir 3		Rectangular	3.75	1,328.9	1,349.5	20.6	125.5 x 199.5	-	Concrete	1958
Total Zone 1348 Volume					8.75							
Total System Volume					75							

(1) Reservoirs with hopper bottoms and sloped walls are considered regular shapes (rectangular/cylindrical) as these irregularities in the shape account for insignificant impact on volume.

6-6 Booster Pump Stations

The City's system includes five booster pump stations. One station, housing Booster B (BP-B), is inactive. Details of each booster station are summarized in Table 6-5.

The booster pump station housing booster pumps 1A, 1B, 1C, and 2 is located adjacent the 1074 Zone reservoirs, east of Cucamonga Avenue and south of Fourth Street. It was constructed in 1960. It takes suction from the 1074 Zone. Booster Pump 1A, 1B, and 1C are vertical turbine pumps that pump into the 1212 Zone. Booster Pump 2 is a vertical turbine pump that pumps into the 1348 Zone. Currently, these pumps are rarely used.

The booster pump station housing booster pumps 3B and 4B is located adjacent Reservoir 1212-3, on Campus Avenue, north of Eighth Street. It was constructed in 1959 and rehabilitated in 2004. It takes suction from Reservoir 1212-3. There are two horizontal split case pumps that pump into the 1348 Zone.

The booster pump station housing booster pumps 9A and 9B is located east of Euclid Avenue just south of the I-10 Freeway. It was constructed in 1960. It takes suction from the 1212 Zone. There are two horizontal split case pumps that pump into the 1348 Zone.

The booster pump station housing booster pump B is located east of Euclid Avenue, north of Eighth Street. This is where the old Reservoir 1212-2 was located. The pump station is inactive and is planned to be abandoned.

The Ontario Booster Pump Station was constructed in 2008 and is located at 4251 East Jurupa Avenue, east of Dupont Avenue. It currently takes suction from Reservoir 925-2A, which was constructed to ultimately serve the new 925 Zone (New Model Colony). Currently, there is no demand in New Model Colony. Therefore, the water is moved from Reservoir 925-2A to the 1212 Zone via three pumps at the Ontario Booster Pump Station.

6-7 Pressure Reducing Stations

The City's system includes sixteen (16) pressure reducing stations (PRS). The details of each PRS are shown in Table 6-6. Most of the stations have two or more pressure reducing valves (PRVs), a main valve and one or more bypass valves. The main valve, the smallest in diameter, typically has the highest pressure setting. Bypass valves are larger in diameter and have slightly lower pressure settings than the main valve. The bypass valve will open when the system pressure drops below the main valve's pressure setting and the main valve cannot supply enough water. If the downstream pressure continues to fall below the bypass valve pressure setting, the second bypass valve will open to provide additional water. In addition, pressure relief valves are generally present at each PRS. These valves protect the water system from abnormally high pressures should the regulating valves fail to work properly.

**Table 6-5
City Booster Pump Stations Characteristics**

No.	Location of Booster Pump Station	Date of Construction	Name	Suction Zone	Discharge Zone	RPM	Horse Power	Pump Type	Pump Model	Pump Mfg	Stages	Edison Test Date	TDH	Capacity (gpm)	Comment
1	East of Cucamonga Ave, south of 4th St	1960	Galvin Booster 1A	1074	1212	1800	250	VT	14FHC	Goulds	3	7/20/07	149	3,686	
			Galvin Booster 1B	1074	1212	1780	200	VT	16ENL	Flowserve	2	-	150	3,500	Design Point
			Galvin Booster 1C	1074	1212	1770	350	VT	Unknown		2	7/20/07	162	4,766	
			Booster 2	1074	1348	1800	250	VT	14HMC	Goulds	4	-	300	2,200	Design Point
2	Campus Ave, north of Eighth St	1959	Booster 3	1212	1348	1770	150	HSC	8A-16	Peerless	-	7/25/08	153	2,979	
			Booster 4	1212	1348	1760	100	HSC	6AE16	Peerless	-	7/25/08	159	1,803	
3	East of Euclid Ave, south of I-10 Freeway	1960	Booster 9A	1212	1348	1775	200	HSC	411-BF	Aurora	-	7/25/08	224	2,137	
			Booster 9B	1212	1348	1778	200	HSC	411-BF	Aurora	-	7/25/08	230	2,155	
4	East of Euclid Ave, north of Eighth St	Unknown	Booster B	1212	1348	1760	60	HSC	5823	Fairbanks Morse	-	-	Unknown	2,155	Inactive
5	4251 East Jurupa Ave, east of Dupont Ave	2008	Ontario Booster Pump 1	925	1212	Unknown	150	Unknown	Unknown			7/18/08	305	1,298	
			Ontario Booster Pump 2	925	1212	Unknown	150	Unknown	Unknown			7/18/08	309	1,315	
			Ontario Booster Pump 3	925	1212	Unknown	150	Unknown	Unknown			7/18/08	314	1,282	

**Table 6-6
Pressure Regulating Stations**

Station No.	From Zone	To Zone	Diameter (inch)	Pressure Setting (psi)	Ground Elevation (feet)
2	1074'	1010'	4	62	840
			8	58	
			8	52	
3	1074'	1010'	4	65	834
			8	60	
			8	55	
4	1074'	1010'	4	90	838
			8	64	
			12	57	
5	1074'	1010'	4	65	830
			6	60	
			8	50	
6	1212'	1074'	6	65	893
			8	60	
7	1212'	1010'	3	55	876
			4	50	
			8	45	
8	1212'	1010'	4	55	878
			8	50	
			12	40	
9	1212'	1074'	4	65	920
			8	60	
10	1212'	1074'	4	89	856
			8	85	
			10	70	
11	1212'	1074'	4	62	918
			8	57	
12	1212'	1074'	4	79	866
			6	73	
			10	68	
13	1212'	1010'	4	60	866
			6	55	
			10	50	
14	CVWD	1212'	4	45	1,040
			8	40	
15	1348'	1212'	6	52	1,094
			6	47	
17	1010'	925'	4		728
			10		
18	1010'	925'	4		788
			10		
			14		

PRS 17 and PRS 18 are the two newest stations, intended to ultimately provide water from the 1010 Zone to the 925 Zone. PRS 17 is complete but not in use due to lack of 925 Zone water mains and power to the site. PRS 18 is in limited use, just enough to move water in the large diameter water mains of the 925 Zone.

6-8 Altitude Valves

The existing system has two altitude valves that regulate reservoir operations. The altitude valves are operated based on levels in Reservoirs 1010-2 and 1010-1. Details are shown in Table 6-7.

From Zone	To Zone	Location	Level Setting (ft)	Diameter
1074	1010	Reservoir 1010-2A	Open < 25.5 ft Closed > 29 ft	12
1212	1010	Reservoir 1010-1	Open < 24 ft Closed > 28 ft	12
<i>* Level Settings from 2005 WMP</i>				

6-9 Imported Water Connections

The City has two Water Facilities Authority (WFA) turnouts, two points of connection with the Chino Basin Desalter Authority (CDA), and one point of connection to the San Antonio Water Company (SAWC). The locations and details are listed in Table 6-8.

**Table 6-8
Imported Water Connections**

ID	Source	To Zone	Location	Comment
WFA Turnout 1	WFA	1212	Northwest corner of Eighth St and Fern Ave (adjacent Reservoir 1212-1A and 1212-1B)	16 mgd Capacity
WFA Turnout 2	WFA	1348	Southeast corner of Campus Ave and A St (adjacent Reservoir 1212-3)	9 mgd Capacity
CDA I	*CDA I	1010	Intersection of Archibald Ave and extension of Schaefer St	Total supply from CDA 1 averages 1,500 AFY
CDA II - Lat A	**CDA II	925	Intersection of Philadelphia St and Milliken Ave	Total supply from CDA2 averages 3,500 AFY
CDA II - Lat B	**CDA II	1010	Intersection of Philadelphia St and Milliken Ave	3,500 AFY
SAW	SAW	1212	Intersection of Eighth St and San Antonio Ave	Inactive
<i>*CDA I is the Chino Basin Desalter Facility No. 1</i>				
<i>**CDA II is the Chino Basin Desalter Facility No. 2</i>				

6-10 Inter-Agency Connections

The City's water system has five inter-agency connections with neighboring cities or water utilities. These inter-agency connections allow the City to obtain water from or provide water to adjacent water systems. The inter-agency connections and their locations are listed in Table 6-9.

**Table 6-9
Inter-Agency Connections**

No.	Location	From	To	Connection Size (in)	Comments
1	Milliken Ave & 6th St.	CVWD	City of Ontario 1212 Zone	12	PRS 14
2	Sixth St & Corona Ave	City of Ontario 1348 Zone	CVWD	6	
3	Sixth St & Vineyard Ave	City of Ontario 1348 Zone	CVWD	6	
4	Campus Ave & Richland St	City of Ontario 1348 Zone	City of Upland	8	Connected to City of Upland Reservoir
5	Benson Ave & State St	City of Ontario 1212 Zone	City of Chino	10	Connected to City of Chino Reservoir

6-11 Water Treatment

Operated by the City for over thirty years to treat raw Colorado River water from the MWD Upper Feeder, the John Galvin Water Treatment Plant was deactivated in 1993 because the treatment process did not meet the requirements of the Surface Water Treatment Rule.

As a part of participating in the DYY program, the John Galvin Water Treatment Plant site (southeast corner of Cucamonga Avenue and Fourth Street) was chosen for the location of a new ion-exchange facility. The ion-exchange plant was completed in 2008 and treats water extracted from Well 44 and Well 52. The groundwater is treated for nitrates and perchlorates and is then fed into Reservoirs 1074-1A and 1074-1B. The facility includes a bypass blending system where groundwater can be blended with Zone 1212 water prior to entering Reservoir 1074-1A and 1074-1B. The treated and bypass blending capacities depend on the groundwater quality being treated at the time. The maximum well water concentrations are 70 mg/L nitrate and 8 micrograms/L perchlorate. The treated well water has concentrations of less than 35 mg/L nitrate and less than 4.6 micrograms/L perchlorate.