CHAPTER 2.0: SERVICE AREA PROFILE

2.1 HISTORY OF WATER DEVELOPMENT WITHIN THE CITY OF LA HABRA

The history of the water service area provides a basis for understanding present conditions, limitations on the water supply sources, and a background of present policies and practices. Data and conditions that exist throughout much of the Lower Santa Ana Basin are not applicable to La Habra, which overlays a separate small non–adjudicated water basin. It is for this reason that a brief history of water development within the La Habra service area is included in this plan.

Within the current City of La Habra boundaries, Coyote Creek and the La Mirada Channel were the only surface water sources that were available to the early settlers. The fact that the surface water was not a reliable supply and only provided small quantities of water were probably the primary reasons that no record has been found of any permanent Native American settlement within the area that is now the City of La Habra. Since these small streams were not large enough or dependable enough to provide irrigation water through dry periods or on a year round basis, the early settlers attempted to save run–off water. However, due to limited rainfall this effort resulted in water used primarily for domestic and livestock use, rather than agriculture irrigation.

The first water wells within La Habra were hand dug, shallow, generally near the creek beds, and insufficient in quantities of water produced to provide for agricultural irrigation. One settler constructed a 100,000 gallon reservoir, supplied by several small wells. Additionally, attempts to transport water from a spring in a neighboring area to supply water to the reservoir were unsuccessful. The largest early source of water supplied was a pit located on the Little Coyote Creek which supplied sufficient water for pumping water through a mile–long four inch line to the above mentioned reservoir. This system, the first in La Habra, was sufficient to supply the owner's ranch and provide a small amount of water for sale to a few neighbors. Only a few wells of sufficient production quantity for irrigation purposes were developed within the La Habra area.

In 1889, the East Whittier Land and Water Company was formed and financed the purchase of water bearing lands in the Basset area on the west side of the San Gabriel River and the construction of water transportation facilities from the well field to the East Whittier area (the westerly boundary of the historic La Habra Valley and water basin). Construction was completed in 1891 with a flow of 400 miner's inches (approximately 5,730 acre feet annually or

1.86 billion gallons). In 1898 the well was deepened. The Basset area is within the Upper San Gabriel Water Basin, in what is now the easterly portion of the City of El Monte and the extreme westerly portion of the City of Industry.

The La Habra Water Company was incorporated in October 1902 for the purpose of constructing facilities for farmers living in the area now within the boundaries of the City of La Habra. At the same time, the California Domestic Water Company was incorporated and simultaneously purchased the facilities of the East Whittier Land and Water Company. The La Habra Water Company originally owned fifty percent of the California Domestic Water company stock. Ultimately, the surviving company was California Domestic Water Company. The facilities to supply the La Habra Water Company were completed and water flowed to the service area in August 1903. With the California Domestic/La Habra Water Company facilities, La Habra became the first community in Orange County to import water from sources outside the County, a practice that continues to this date.

In 1913 the La Habra Domestic Water Company was formed, with the basic distribution lines constructed soon thereafter. Meters were installed in 1916. The company was sold by the original founders in 1928 to other investors and then sold to the City of La Habra in 1933.

2.2 SERVICE AREA PROFILE

The City of La Habra manages and operates the domestic water system. La Habra's water system serves a population of 62,496 through approximately 136 miles of pipelines within City boundaries. La Habra serves potable water to a 7.3 square mile area within the City limits. La Habra has three existing storage reservoirs within City limits as well as one groundwater well, five booster pumping stations, and 57 pressure regulating stations. The pressure regulating stations divide the distribution system into 19 different pressure zones. La Habra also has interconnections with the Metropolitan Water District of Southern California (Metropolitan), California Domestic Water Company (CDWC), and emergency interconnections with Suburban Water Systems (SWS), City of Fullerton, and City of Brea. In addition, La Habra has rights to a portion of the emergency supply in the Orange County reservoir.

La Habra obtains domestic water from groundwater and from imported water supplies. Groundwater is supplied from a City owned well. This well pumps water from the La Habra Groundwater Basin into the City's Zone 1 pressure zone. Currently, approximately 10 – 12 percent of the La Habra's water production comes from this well.

Imported water accounts for the remaining 88 to 90 percent of La Habra's total production. Water imported into La Habra comes from two sources, the CDWC and Metropolitan.

2.3 POPULATION

At the present time, La Habra is for the most part built–out, with over 99.9 percent of the City's land area either developed or under development. As the City is currently developed there is a broad range of housing types and styles; a range of shopping, professional and commercial services; and light industrial areas. La Habra can best be described as a "bedroom community" meaning that the labor force is larger that the job market and most residents are employed elsewhere within the region. Table 2.3 – 1: Population–Current and Projected, details modest population growth for La Habra's service area in 5–year increments, starting from 2005 and projecting to 2030.

Table 2.3 – 1: Population–Current and Projected

Year	2005	2010	2015	2020	2025	2030
Service Area Population[1]	62,496	65,773	67,256	68,055	68,481	68,576

Source: (1) Center for Demographic Research, California State University, Fullerton

In addition, using a bar graph, Figure 2.3 – 1 illustrates the projected population growth relative to the previous years.

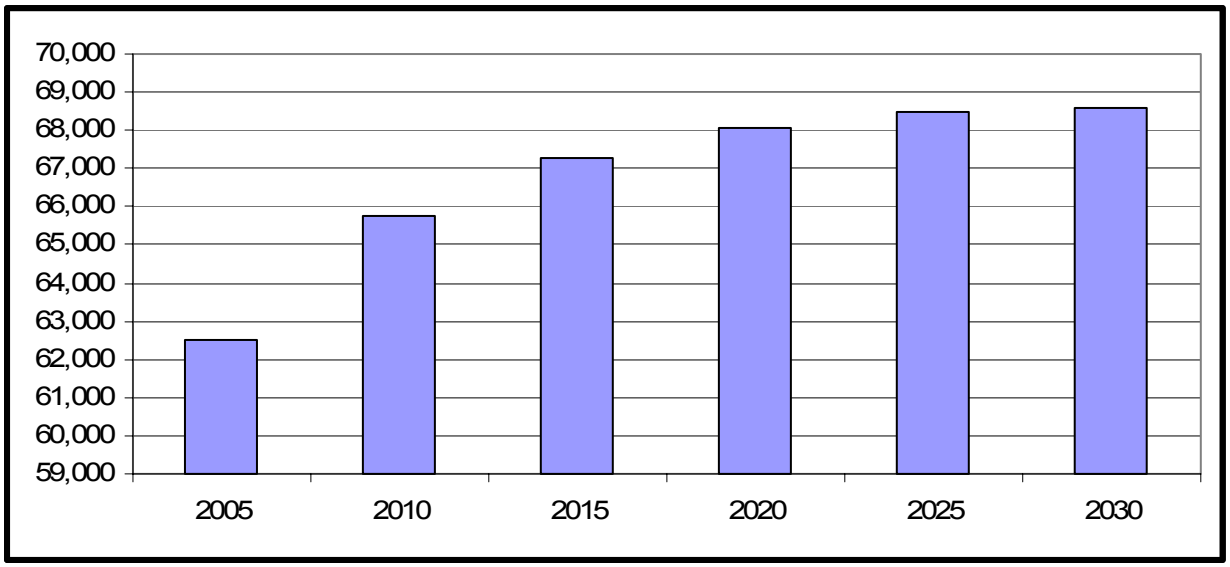

Figure 2.3 – 1: Projected Population Growth

2.4 CLIMATE

The corporate boundary of the City of La Habra encompasses an area of 7.3 square miles and has elevations that range from 350 to 520 feet above sea level. Average temperatures range from 48 to 74 degrees, while average annual rainfall is 12.6 inches. La Habra is located in a valley between the Puente Hills and the West Coyote Hills, and is located approximately 20 miles southeast of metropolitan Los Angeles. Table 2.4 – 1: Climate details the monthly average evapotranspiration rate, rainfall, and temperature.

Table 2.4 – 1: Climate

	Jan.	Feb.	Mar.	Apr.	May	Jun.
Standard Average ETo[2]	2.18	2.49	3.67	4.71	5.18	5.87
Average Rainfall[3]	2.5	2.3	2.3	0.8	0.3	0.1
Average Temperature[4]	57.7	58.8	60.1	63.3	66.4	70.4

Table 2.4 – 1: Climate (Continued)

	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Standard Average ETo[2]	6.29	6.17	4.57	3.66	2.59	2.25	**49.63**
Average Rainfall[3]	0	0.1	0.4	0.3	1.7	1.8	**12.60**
Average Temperature[4]	74.2	75.4	74	69.1	62.7	58.2	**65.86**

Sources: (2) http://wwwcimis.water.ca.gov/cimis/welcome.jsp

(3) http://www.wrcc.dri.edu/CLIMATEDATA.html

(4) http://www.elook.org/city/cities/LaHabra_California.html

Additionally, Figure 2.4 – 1: City of La Habra Climate concurrently illustrates the average rainfall and temperature on a monthly timeframe.

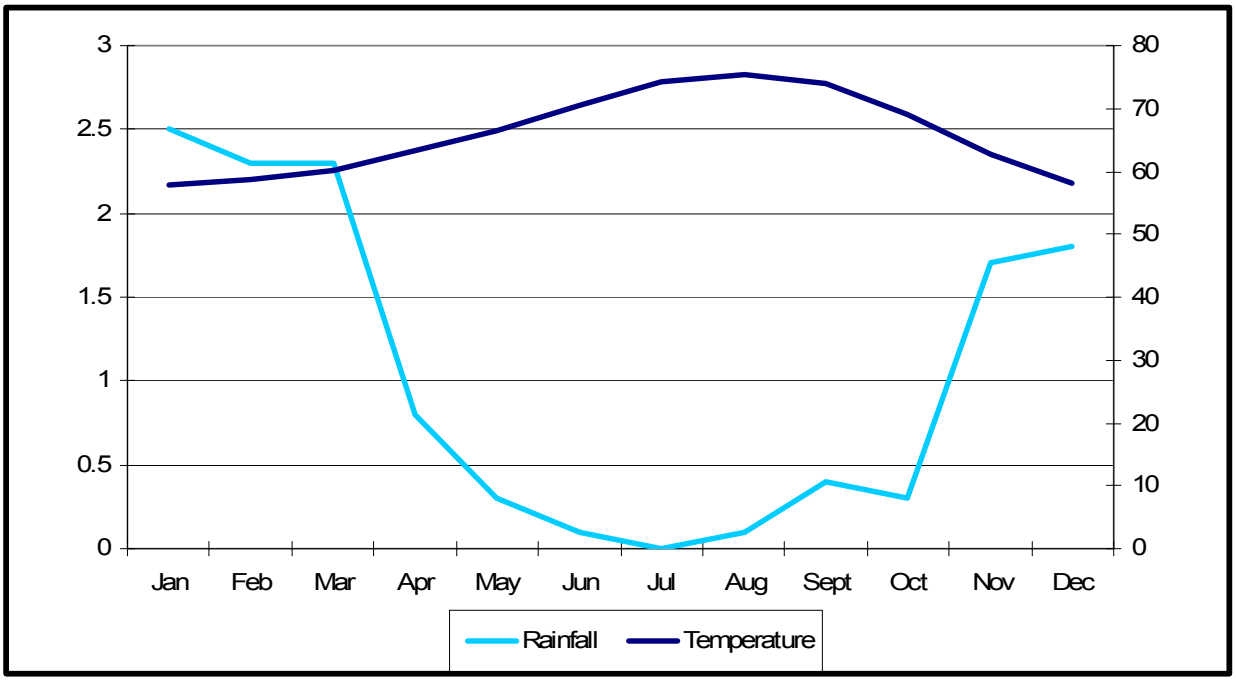

Figure 2.4 – 1: City of La Habra Climate

2.5 LAND USE

The following map depicts the land use areas within the City of La Habra. Since demands vary depending upon the type and density of users, this information provides insight into the water management needs of La Habra.

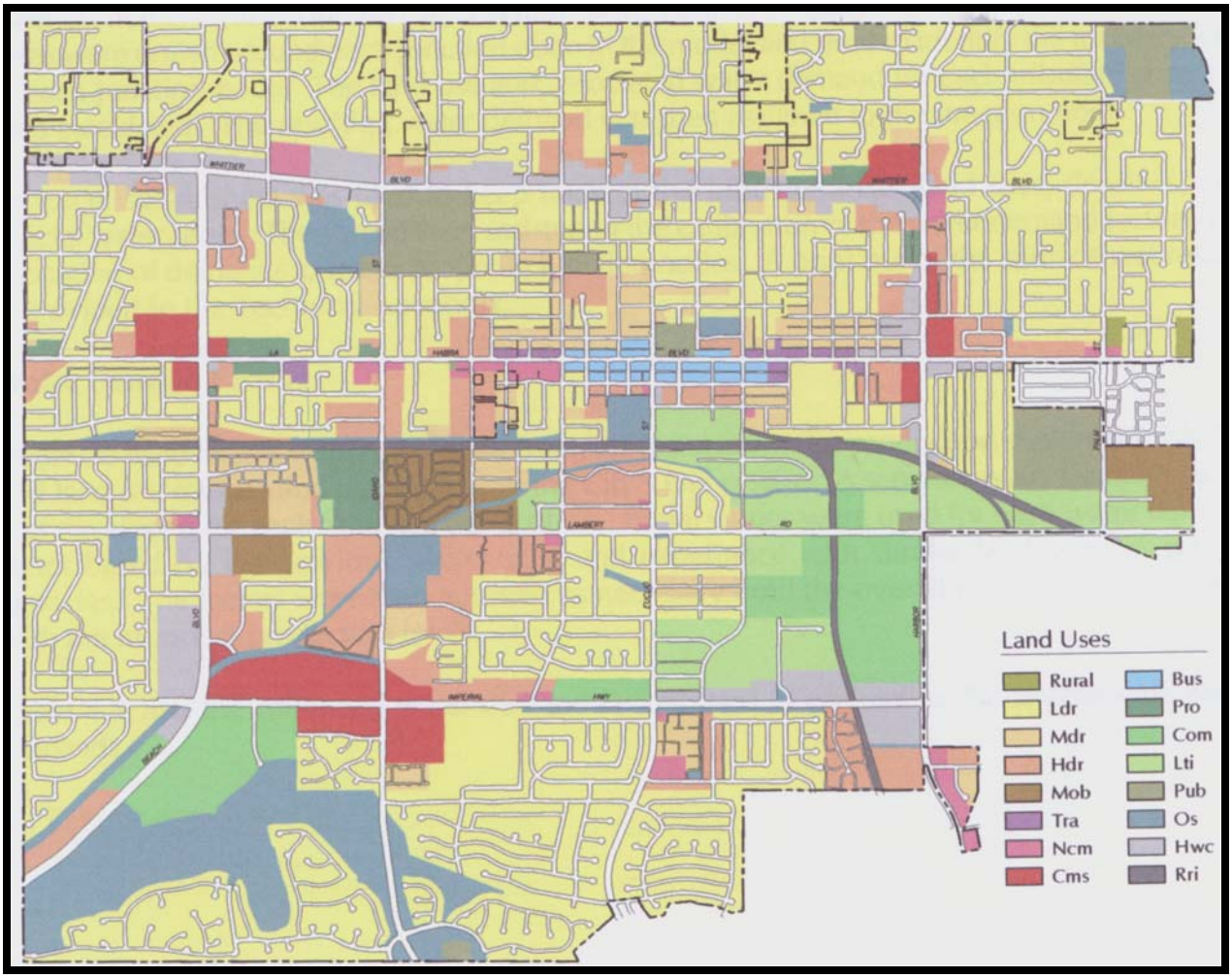

Figure 2.5 – 1: City of La Habra Land Uses

Land Use Description	Abbreviation	Land Use Description	Abbreviation
Rural Density Residential	Rural	Central Business District	Bus
Low Density Residential	Ldr	Highway Commercial	Hwc
Medium Density Residential	Mdr	Professional Office	Pro
Mobile Home Park	Mob	Commercial Industry	Com
Transitional Residential	Tra	Light Industrial	Lti
Neighborhood Commercial	Ncm	Public Facility	Pub
Community Shopping Center	Cms	Open Space (Parks, etc.)	Os
Railroad R – O – W	Rri		

2.6 LA HABRA WATER SYSTEM SUMMARY

La Habra's existing water distribution system consists of approximately 136 miles of pipelines, three storage reservoirs, one groundwater well, five booster pumping stations, and 57 pressure regulating stations. In addition, La Habra has rights to a portion of the emergency supply in the Orange County reservoir. The pressure regulating stations divide the distribution system into 19 different pressure zones. The following tables summarize the specifications of the aforementioned facilities, as well as import capacity, distribution facilities, service connections, and fire hydrants.

Table 2.5 – 1: System Facility Summary

RESERVOIRS	
Puente Hills	5.0 MG
Severum Byerrum	9.3 MG
Orange County (Emergency Storage)	16.3 MG
Westridge	2.5 MG
BOOSTER PUMP STATIONS	
Russell Street	2 Twenty Horsepower (HP)
Walnut Street	1 Twenty HP
Hansel Drive	3 Forty HP
East Country Hills Drive	2 Twenty HP
Risner Way	2 Seventy Five HP
Osornio Park	
Total Booster Pump Production	5,000 GPM
GROUNDWATER PRODUCTION	
Idaho Street Well	800 GPM

Table 2.5 – 2: Import Capacity		
CALIFORNIA DOMESTIC WATER COMPANY		
Russell Street	6 inch meter	2000 GPM
Euclid Way	8 inch meter	250 GPM
Hensel Drive	8 inch meter	1,400 GPM
La Serna Avenue	6 inch meter	2,500 GPM
East Whittier Boulevard	6 inch meter	600 GPM
Entrada Drive	4 inch meter	1,250 GPM
Loma Norte	6 inch meter	2,000 GPM
El Camino	8 inch meter	500 GPM
Flamingo Way	6 inch meter	500 GPM
Oakdyke Avenue	6 inch meter	600 GPM
Sunbird Avenue	2 inch meter	200 GPM
METROPOLITAN WATER DISTRICT (VIA MWDOC)		
OC – 4 Balsa Avenue & Brookwood Street, Brea	24 inch meter	11,200 GPM
OC – 45 Lambert Road at Harbor Boulevard	16 inch meter	6,750 GPM
EMERGENCY CONNECTIONS		
City of Brea, Puente Street	Export	1,200 GPM
City of Brea, Buttonwood Street	Export	1,200 GPM
Southwest Suburban System, Summer Shade Drive	Import/Export	750 GPM
Southwest Suburban System, Sunnybrook Drive	Import/Export	1,200 GPM
California Domestic Water, Fallen Leaf Street	Export	750 GPM
Fullerton, Euclid Street	Import	500 GPM

Table 2.5 – 3: Distribution Facilities	
4 inch	31.4 miles
6 inch	50.2 miles
8 inch	20.9 miles
10 inch	16.6 miles
12 inch	7.3 miles
14 inch	2.8 miles
16 inch	2.4 miles
20 inch	4.2 miles
Total	**136 miles**

Table 2.5 – 4: Service Connections					
Account Type	**Cycle 1**	**Cycle 2**	**Cycle 3**	**Cycle 4**	**Totals**
Single–Family (Residential)	2,225	2,740	2,615	3,329	10,909
Multi–Family (Apts)	182	192	110	77	561
Commercial/Industrial	205	244	133	250	832
Irrigation	17	46	10	67	140
Municipal (Buildings, Irrigation, Etc.)	42	14	14	36	106
Total Active Accounts	**2,671**	**3,236**	**2,882**	**3,759**	**12,548**

Table 2.5 – 5: Fire Hydrants	
Total	**1,368**