

CHAPTER 7.0: WATER PROJECTS AND PROGRAMS

7.1 PLANNED WATER SUPPLY PROJECTS

This chapter discusses planned water supply projects that will increase the water supply available to the City of La Habra, including upgrades, expansions, and retrofits. Table 7.1 – 1: Projected Dates for Future Water Supply Projects provides a list of current planned water supply projects and the projected dates of commencement and completion.

Table 7.1 – 1: Projected Dates for Future Water Supply Projects		
Project Name	Projected Start Date	Projected Completion Date
Idaho Street Well Capacity Improvement Project	2006	2007
CDWC Improvement Project	2006	2009

The current planned water supply projects are intended to increase the available water supply during the future. Both projects will result in an increased capacity for water storage. As demonstrated in Tables 7.1 – 2 through 7.1 – 6 below, the available capacity will be constant after implementation of planned improvements and will enable a larger supply than is currently available. For the purpose of planning, this document has included these planned improvements in the development of the supply projections.

Table 7.1 – 2: Projected Water Supply Due To Future Water Supply Projects					
Project Name	2010				
	Normal Year Yield (AFY)	Singly–Dry Year Yield (AFY)	Multiple–Dry Year 1 (AFY)	Multiple–Dry Year 2 (AFY)	Multiple–Dry Year 3 (AFY)
Idaho Street Well Capacity Improvement Project	2,400	2,400	2,400	2,400	2,400
CDWC Improvement Project	7,200	7,200	7,200	7,200	7,200

Table 7.1 – 3: Projected Water Supply Due To Future Water Supply Projects					
2015					
Project Name	Normal Year Yield (AFY)	Singly–Dry Year Yield (AFY)	Multiple–Dry Year 1 (AFY)	Multiple–Dry Year 2 (AFY)	Multiple–Dry Year 3 (AFY)
Idaho Street Well Capacity Improvement Project	2,400	2,400	2,400	2,400	2,400
CDWC Improvement Project	7,200	7,200	7,200	7,200	7,200

Table 7.1 – 4: Projected Water Supply Due To Future Water Supply Projects					
2020					
Project Name	Normal Year Yield (AFY)	Singly–Dry Year Yield (AFY)	Multiple–Dry Year 1 (AFY)	Multiple–Dry Year 2 (AFY)	Multiple–Dry Year 3 (AFY)
Idaho Street Well Capacity Improvement Project	2,400	2,400	2,400	2,400	2,400
CDWC Improvement Project	7,200	7,200	7,200	7,200	7,200

Table 7.1 – 5: Projected Water Supply Due To Future Water Supply Projects					
2025					
Project Name	Normal Year Yield (AFY)	Singly–Dry Year Yield (AFY)	Multiple–Dry Year 1 (AFY)	Multiple–Dry Year 2 (AFY)	Multiple–Dry Year 3 (AFY)
Idaho Street Well Capacity Improvement Project	2,400	2,400	2,400	2,400	2,400
CDWC Improvement Project	7,200	7,200	7,200	7,200	7,200

Table 7.1 – 6: Projected Water Supply Due To Future Water Supply Projects					
2030					
Project Name	Normal Year Yield (AFY)	Singly–Dry Year Yield (AFY)	Multiple–Dry Year 1 (AFY)	Multiple–Dry Year 2 (AFY)	Multiple–Dry Year 3 (AFY)
Idaho Street Well Capacity Improvement Project	2,400	2,400	2,400	2,400	2,400
CDWC Improvement Project	7,200	7,200	7,200	7,200	7,200

7.1.1 Idaho Street Well Capacity Improvement Project

La Habra operates one groundwater production well (Idaho Street Well), which produces approximately 10 to 12 percent of the total demand. Water is drawn from the deep well through a vertical turbine pump and electric motor and directed to an air stripper. The design capacity of this well is approximately 2,000 GPM; however, it is currently regulated to produce approximately 850 to 900 GPM.

Sodium hexametaphosphate is injected into the deep well to retard the precipitation of iron and calcium in the air stripper, and within La Habra’s distribution system. The air stripper is used for the removal of ammonia and hydrogen sulfide. Water flows down through the air stripper and into an underground concrete retention reservoir.

Sodium hypochlorite is injected at the inlet to the retention reservoir. A vertical turbine pump and electric motor (together referred to as a booster pump) are used to boost the water from the retention reservoir into the distribution system. The capacity of this pump is approximately 1,500 GPM. However, the booster pump is cycled on and off to avoid emptying the reservoir. The booster pump turns on when the reservoir is full and the water has had the appropriate contact time. There is no back-up power installed at this site. In the event of a power outage, local water production is interrupted, requiring La Habra to rely on Metropolitan and CDWC supplies to meet demands.

The planned well improvements will increase La Habra’s local production from approximately 1,200 AFY to 2,400 AFY. The planned capacity improvements will require increasing the size of the underground concrete retention reservoir to utilize the full capacity of the deep well. The

increased water flow and retention reservoir size will allow the booster pump to remain on rather than cycling on and off until the retention reservoir refills. Additional improvements include covering, repacking, and miscellaneous repairs and/or upgrades to the air stripper. Stabilization of the air stripper's blower fan-housing pad will also be completed. The well upgrade also includes a diesel powered back-up generation system that will increase the La Habra's ability to provide uninterrupted local water deliveries.

The well capacity improvements have been identified in the recently completed Water Master Plan and are currently in the "Request for Proposal" stage.

7.1.2 California Domestic Water Company Improvement Project

The California Domestic Water Company (CDWC) is a wholesale water supplier to the City of La Habra (and additional neighboring cities and agencies). The CDWC produces groundwater from the Main San Gabriel Basin and currently has the ability to produce and deliver approximately 32,000 AFY. System improvements will increase the ability to extract, transfer, store, and deliver approximately another 16,000 AF annually. The improvements to the CDWC System will lessen the demand on Metropolitan by shifting the primary water source for the La Habra distribution system to CDWC imported water.

The project will require two 5,000 GPM wells to be drilled in the CDWC well field, upsizing of approximately 20,000 linear-feet (LF) of existing transmission pipeline, construction of a new operational storage reservoir, and construction of new larger capacity pumps in the system to deliver the increased flow. La Habra has turnouts on the existing CDWC transmission system and can take the additional water with little improvement to the system. The project will commence with construction of the new operational reservoir and higher capacity pumps in 2005 (already designed), followed by drilling of two new wells in 2006, and completed with the construction of transmission pipeline improvements in 2007 and 2008.

7.2 DEVELOPMENT OF DESALINATED WATER

In December 1994, La Habra contracted to have two production wells and one test well drilled with the intent of obtaining an additional source of domestic water for La Habra. Shortly after drilling, however, water quality tests indicated that the water obtained from the wells had excessive values of salinity and Total Dissolved Solids (TDS) to be considered suitable for direct potable use without either treatment or blending. La Habra was presented with four options:

- 1) Treatment to potable standards,
- 2) Blending with higher quality water to potable standards,
- 3) Blending with higher quality water for irrigation use, and
- 4) No usage at this time.

Due to the high production costs, La Habra decided to pursue the “No usage at this time” alternative. However, La Habra is committed to developing local groundwater supplies and if desalination treatment alternatives for brackish water become cost-effective (as evidenced by a benefit-cost analysis), the aforementioned alternatives will be considered for implementation.

7.3 RECYCLED WATER

Wastewater is collected and treated by the Orange County Sanitation District and made available to agencies that are capable of utilizing recycled water for beneficial uses. In conjunction with neighboring cities, La Habra is actively investigating the possibility of importing reclaimed water from the County of Los Angeles.