

6. OTHER CIRCULATION FACILITIES

6.1 AIRPORT

The City of Pasadena is served by the nearby Burbank-Glendale-Pasadena Airport. The airport, which was built in 1930, is served by most of the major commercial passenger carriers. During 1999, approximately 4.8 million passengers arrived or departed at the airport for an average of 13,000 passengers per day.

Although the airport is in operation 24 hours a day, there is a voluntary curfew on all commercial passenger flights between the hours of 10:00 p.m. and 7:00 a.m. each day. Most of the commercial carriers that operate out of the airport generally comply with this restriction.

Previous plans of providing expanded and updated facilities at a new site located farther from the runways are currently on hold due to numerous issues raised by the community. A Part 161 Study, as required by the FAA, is currently underway to make the voluntary curfew mandatory. Phase I of the Part 161 Study was completed in the early summer of 2002, and the Phase II of the study is expected to be completed in two years.



However, as part of the Aviation and Transportation Security Act (ATSA), plans for expanding the current Terminal A wing by adding approximately 40,000 square feet to implement new security measures at the airport have recently been approved. The TSA Security Improvement Project at the Airport consists of providing additional space for ticket lobby and baggage screening/handling, relocating and enlarging security checkpoints, creating space for screening in holdrooms and relocating holdroom space into the hallway, installing complete fire/life safety systems, relocating and widening the existing hallway, creating additional space for TSA personnel, creating additional space for the relocation of airline personnel, providing blast-resistant walls, relocating restrooms, relocating concessions, and creating new space to accommodate additional airport police.

Pasadena is also served by Los Angeles International Airport, 30 miles to the southwest, and Ontario International Airport, approximately 25 miles east of the City. With these facilities, Pasadena enjoys convenient and abundant air transport service.

6.2 SEWER

Although an older system than most due to the City's age, Pasadena's sewer system is in general good condition. Ongoing reviews of the sewer system are conducted. Problems disclosed by maintenance reviews or complaints are systematically corrected. Waste water considerations of new development are addressed based on site-specific information. However, as City policy is to require that localized system impacts caused by major developments be corrected at the sole expense of said development. No significant impact on the current system is expected. A new Master Sewer Plan (MSP) Update will be prepared.

6.3 WASTEWATER TREATMENT

Pasadena, along with Alhambra, San Marino, and South Pasadena, is part of County Sanitation District No. 16 and, thereby, part of the waste water collection, treatment, and disposal system operated by the County Sanitation Districts of Los Angeles County. The Sanitation Districts, in conformance with Federal and State standards, must plan and construct waste water treatment facilities which are consistent with regional land use and population goals and forecasts. The Sanitation Districts' facilities are currently planned and constructed in conformance with the 1989 Growth Management Plan adopted by the Southern California Association of Governments (SCAG) and the South Coast Air Quality Management District (AQMD) or with regional or subregional population projects approved by SCAG from time to time. The Sanitation Districts presently have sufficient existing and planned waste water treatment capacity to accommodate the year 2010 population forecasts for the Glendale/Pasadena subregional encompassing Sanitation District No. 16.



Whittier Narrows Water Reclamation Plant. Image source: Sanitation Districts of Los Angeles County

In addition, a small portion of the southwest hillside area of Pasadena comprised exclusively of single-family homes is tributary to the waste water collection, treatment, and disposal system owned and operated by the City of Los Angeles. This service is provided under a contractual arrangement under the auspices of County Sanitation District No. 16. As this small area is virtually fully built-out, potential incremental additions to the sewer system are insignificant.

6.4 DRAINAGE

The City's drainage system, which consists of open channels, underground conduits, and streets, in general provides a reasonable degree of protection against flooding. Localized problems that may occur from time to time, especially in hillside areas subject to periodic fire and flood cycles, are treated on a case-by-case basis.

The standard for the level of protection to be provided against flooding in Los Angeles County requires that during the "urban design storm" - one with a probability of occurring once in 25 years, based on rainfall records - the surface capacity of a street may be used up to a water surface level not extending above or beyond the street's right-of-way lines.

As the City is almost fully built out and proposed land use changes will primarily involve the re-use of developed areas, no significant impact is anticipated on the drainage system. However, drainage system elements, particularly older facilities, are subject to ongoing repair, replacement, or modification efforts based on maintenance records, complaints, and field observations. Major developments that impact the capacities of downstream lines are required to upgrade adjacent system components to mitigate these impacts at their sole expense.

6.5 WATERWAY

The nearest port facilities are located at the Ports of Los Angeles and Long Beach, approximately 35 miles south of downtown Pasadena. There are no inland waterways which directly link the City to these ports.

6.6 WATER SYSTEM

An adequate supply of water for Pasadena is dependent on weather, statewide growth, development of new sources and other factors. Since it is not possible to predict climatic changes and other outside influences, it is difficult to give an accurate picture of water supply ten to twenty years from now. However if current water usage and growth patterns continue, forecasts indicate that by the year 2010 annual water demand in Southern California will exceed available supply by approximately two million acre-feet. One acre-foot of water supplies a family of four for one year. Aggressive conservation measures as outlined in the State Urban Water Conservation Best Management Practices can decrease this shortfall by 35 percent.



Since 60 percent of Pasadena's water is dependent on outside purchases through Metropolitan Water District, reasonable steps must be taken to avoid water shortfalls. Some of the steps Pasadena is taking to secure future water supplies are the following: Reclamation—using effluent from the existing Los Angeles/Glendale water treatment plant; Conjunctive Use Program—stores additional water supplies in the local groundwater basin for use during peak water demands and times of shortage; and Conservation Programs—designed for all customer classes to reduce water usage. The main components of the water system infrastructure consist of storage, pumping, and pipe network facilities. Currently, the City has 16 reservoirs, ranging in size from a 76,000-gallon to a 50,000,000-gallon capacity. The total system storage of a 106,598,700-gallon capacity is equivalent to a three-day supply at average consumption rates. An additional 3.0-million-gallon capacity is nearing completion at the Gould Reservoir site in northwest Pasadena. Plans are also underway to add at least a 2.0-million-gallon capacity at the Sheldon East site in northeast Pasadena.

The City currently has 22 booster pumping plants with a combined total capacity of 56,000 gallons per minute. Theoretically, all storage facilities in the elevated zones can be refilled in less than a day, assuming all plants are operative.

The network of pipes and other appurtenances that comprise the existing water distribution network is such that no major transmission pipeline changes are anticipated to meet growth projections. Specific development projects generally do not have a major impact on overall water supply or storage, but rather have an effect on the water mains in the immediate area surrounding the development. Fiscal responsibility for any water distribution requirements in the immediate vicinity of the development are the sole responsibility of the developer.



An ambitious program of upgrading local distribution mains in order to comply with upgraded fire flow requirements is presently underway. Although this is a citywide process, its need is also evident in the hillside areas because of their susceptibility to fire. This activity is addressed in the Water Fund Capital Improvement Program (CIP) where approximately \$700,000 a year is being marked for this project for the next several years.

Growth in water usage is modest—about 0.5 percent per year. Although weather conditions always play a part in water sales, the effect of the City's aggressive water and energy efficiency (conservation) programs during this period cannot be denied. Furthermore, the community's response to the recent drought was evident in the water usage figures.

6.7 POWER SYSTEM

6.7.1 Distribution Facilities

The Power Division of the Water and Power Department provides electrical energy to meet the needs of the consumers of the City. The City is served by an electrical distribution system operating at two voltage levels, 17Kv and 4Kv. The 17Kv system serves the industrial and commercial loads including multi-unit housing. A ten-year Master Plan will be developed during FY 2003 and 2004 which will identify the need and cost effectiveness of converting the 4Kv distribution system.

Present facilities are adequate to serve the current electrical requirements of the City. To the extent that the City grows, new substations and circuits will be needed to serve new load. Load projections through 2015 indicate that three or four new stations will be needed. Consistent with the Land Use portion of the General Plan, these units will primarily serve those areas that are designated for the bulk of commercial growth and multi-unit housing. Substations shall be allowed in all General Plan Land Use Categories under provisions of the Zoning Code, to serve the electrical needs of each area.



New substations or additions to existing substations will be needed in the following Specific Plan Areas: Central District and South Fair Oaks Biomedical, and the East Pasadena Specific Zone. In addition, substations may be required in other areas and in Redevelopment Areas to supply increased load or to improve quality of service.

6.7.2 Transmission Facilities

Energy is moved from sources to substations over the City's transmission system. At present, that system operates at 34 Kilovolts and is approximately 95% underground. Future transmission facilities, which may be of a higher voltage, will all be underground.

As such, with the exception of construction periods, the facilities will have no impact on the General Plan.

6.7.3 Resource Facilities

Energy is delivered to the City at two locations: the Water and Power Department generating plants at the end of the Pasadena Freeway in the South-Central portion of the City, and at the T. M. Goodrich Receiving Station in the eastern side of the City, where energy is imported from sources outside the City.

The T. M. Goodrich Receiving Station presently has 300 Mva transformer capacity of import power into the City. This facility may be enlarged in the future to provide additional economical and reliable importation of electrical energy from sources outside the City. Alternatively, a planning study is presently underway to evaluate the cost and feasibility of building a new receiving station on the west side of Pasadena to increase reliability and import capacity.

Facilities at the generating plants will be maintained and upgraded to ensure sufficient capacity for reliable electric service, improve operating efficiency, and meet the requirements of air quality standards as they evolve. A repowering project was initiated in November 2000 to replace and upgrade aging generating plants. This plan contemplates maintaining local generation capacity at or near the current level of approximately 200 MW.