

CHAPTER 5.0

5.2 WATER RESOURCES

CONSERVATION

Underground Water Supply

5.1 INTRODUCTION

Four major groundwater basins are located in Orange County: The Lower Santa Ana, La Habra, Aliso, and San Juan units. Of these, the Lower Santa Ana Basin, which underlies the City of Fountain Valley, is by far the most important as a source of water supply. Under full storage, the basin is estimated to contain 15.8 million acre-feet (AF) of fresh water, with about 1.5 million AF believed to be usable for water supply purposes.

The State of California Government Code requires the incorporation of a conservation element in all jurisdictional general plans. The requirement for inclusion of a conservation element within a general plan is addressed in Section 65302(d) as follows:

Fountain Valley derives 70% of its water from local groundwater sources. The City has seven wells with one more proposed to be built.

"The general plan shall include a conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic forces, forest, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. That portion of the conservation element including waters shall be developed in coordination with any countywide water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the county or city for which the plan is prepared."

None of the City's wells have been affected by earthquakes, pollution, chemicals, lack of proper technology, industrial or commercial use or agriculture. There is ongoing replacement and maintenance of pipes to prevent age deterioration. The City adds chlorine, which kills iron bacteria that might accumulate in the wells and water lines. The City also has a routine program which utilizes sterilizing chemicals to kill bacteria.

Goal

Water Conservation

5.1 Conserve, protect and enhance the natural resources in Fountain Valley to ensure their optimal use and support to the benefit of all present and future citizens of the City.

In the late 1980's, California experienced an extended drought period. In response to this event, the Fountain Valley City council adopted a Water Conservation Ordinance in August, 1990. The Council adoption of this ordinance provides methods of reducing the demand for water when a drought occurs.

Policy

This Water Conservation Ordinance prompts water conservation in three increasingly aggressive stages as declared by City Council. Only the City Council may declare any of the stages to be in effect. Some of the water conservation methods specified in the ordinance include: 1) voluntary cutback by 10%; 2) no day watering; and 3) specifically forbidden tasks.

5.1.1 Develop an environmental mitigation monitoring program to address the natural resources found in Fountain Valley.

The City has an agreement with the Orange County Municipal Water District which will provide reclaimed water for irrigating large turf areas. Reclaimed water will conserve about 800 AF of potable water per year. In addition, the City's use of Green Acres Project reclaimed water, once it becomes available, will ease the demand for potable water. Green Acres Project reclaimed water will be used to irrigate large landscaped areas, such as parks, golf courses, and freeway landscaping.

Water Quality

The quality and safety of drinking water in the United States is regulated by the federal government through the Environmental Protection Agency (USEPA). In California, those standards are enforced by the California Department of Health and Services (DHS). The City of Fountain Valley takes many precautions to ensure high quality water to all of its consumers, including conducting several thousand tests on City water every year. Fountain Valley water continues to pass these strict water quality requirements with ease and meets or exceeds all State and Federal standards for drinking water quality.

The Metropolitan Water District of Southern California operates several filtration plants to treat both the Colorado River and the State Water Project water supplies. The two Metropolitan treatment plants that serve Orange County are the Weymouth and Diemer Plants. They are financed by consumers. Both plants sustain constant ongoing maintenance to assure adequate operation.

Groundwater is known as the better source for water with better quality. As mentioned previously, Fountain Valley derives 70% of its water from local groundwater sources. Imported water, such as water from Northern California, typically has higher total dissolved solids and higher organics. However, this would not effect Fountain Valley's water because all of the imported water arrives to the

city already blended and treated by either the Weymouth or Diemer Treatment Plants (this imported water is also tested regularly). All test results indicate that the water supplied to the Fountain Valley consumer is of excellent quality.

Drainage Patterns and Flood Hazard

The Santa Ana River, which carries runoff from large portions of Orange, Riverside, and San Bernardino Counties, provides storm water for recharging the Santa Ana Basin by percolation ponds. Areas directly adjacent to the Santa Ana River may be expected to be flooded by water ranging from 1 to 3 feet in depth in the event of a 100-year storm, as discussed in Chapter 8, Safety.

Recently the U.S. Army Corps of Engineers appropriated \$80 million for the first phase of flood control improvements to the Santa Ana River. These improvements would include widening a portion of the Santa Ana River near its mouth, creating a water storage area below Irvine Lake, and building a new dam on the upper reaches of the river in the vicinity of Mentone.

Goal

- 5.2 Protect Fountain Valley's existing and future water resources.

Policies

- 5.2.1 Conserve scarce water resources.
- 5.2.2 Work with federal, State and County governments and agencies to maintain and improve the quality and quantity of local and regional groundwater resources available to the City.

5.3 GEOLOGICAL RESOURCES

Prior to the City's incorporation and the channelization of the Santa Ana River, the river meandered freely through this valley area, forming swampland throughout most of the planning area. Therefore, most of the City is comprised primarily of alluvial sediments with interbedded silts and sands. Areas of the City also contain irregular lenses of peat varying in thickness from a few inches to a few feet.

Soils

Almost all of Fountain Valley is located on a gently sloping flood zone. The soils found within the City are those typically found on slopes which are less than 5%, and are usually moderately alkaline and to varying degrees, calcareous. Vegetation found on these soils are typically grasses and forbs. Soil types range from those with poor drainage to those that are excessively drained. All of the soils within the City are good for crops and are also recommended for urban development.

Goal

5.3 Minimal soil erosion.

Policy

5.3.1 Reduce soil erosion from wind and water.

5.4 BIOLOGICAL RESOURCES

Fountain Valley is almost fully developed as are all of the surrounding cities. The presence of significant biological resources seems to be virtually non-existent. All areas of Fountain Valley have been built upon or farmed, eliminating virtually all forms of natural vegetation or wild life habitat.

Flora

The little natural vegetation which does exist within the City consists primarily of a variety of grasses with small sage scrub communities. Immediately outside the City limits, within the Santa Ana River channel, small wetlands habitats are known to periodically occur, due to sand and silt build-up in the channel bottom.

Fauna

Fossil evidence indicates that the planning area was once inhabited by a variety of wildlife, ranging from shrews and rats to larger mammals. Today, the range of wildlife has been significantly reduced to those species which have adapted to close human contact. What remains is an abbreviated predator-prey food chain consisting of ground squirrels, foxes, gophers, opossums, White-tail Kites, and Redtail Hawks. Mile Square Park also supports a variety of birds and ducks on the ponds on site.

Plant communities along the Santa Ana River, and adjacent to the Fairview Park site, in Costa Mesa immediately east of Fountain Valley, support a diversity of wildlife including two rare species: the Coast Horned Lizard and the Trap Door Spider. Also in Costa Mesa, the pond adjacent to the Santa Ana River, south of Victoria Street, has been proposed by the U.S. Department of the Interior as an "essential habitat" for the California Least Tern, which is on both the State and Federal lists of endangered species. Although these areas are not within the City of Fountain Valley itself, due to their close proximity to Fountain Valley there may be some migration of these species. Therefore, there may be some occurrence of the Least Tern, Coast Horned Lizard and the Trap Door Spider in Fountain Valley.

The burrowing owl is on the Audobon Society list of rare birds and is likely to inhabit certain areas of the city, such as Mile Square Park.

Goal

5.4 Conservation of Fountain Valley's biological resources.

5.5.2 The City will encourage the use of alternate energy sources, including passive solar, in industrial, commercial and residential development.

Policy

5.4.1 Conserve and enhance biological resources by facilitating development in a manner which reflects the characteristics, sensitivities and constraints of these resources.

5.4.2 The City shall coordinate with community groups and neighborhoods in developing a tree replacement program for those existing trees which must be removed along public and private streets.

5.6 SOLID WASTE

In accordance with the California Integrated Waste Management Act, the City of Fountain Valley has prepared, adopted, and submitted to the County of Orange, a Source Reduction and Recycling Element which complies with all requirements of State law.

Goal

5.6 Fulfill the requirements of the Integrated Waste Management Act of California.

Policy

5.6.1 While maintaining its current recycling policies, the City shall adopt additional incentives, regulations and procedures to further specify local recycling requirements and evaluate the potential for developing a recycling and/or composting center.

5.5 ENERGY

Energy sources play an important role in the continued urbanization of a community. Most traditional energy sources are imported: natural gas is imported by the Southern California Gas Company, while electricity is furnished by Southern California Edison. Distribution systems for both natural gas and electricity are presently in place or planned for reasonable future development within Fountain Valley.

Although Fountain Valley has an adequate supply of energy resources at this time, for the long term, the community will need to work with local utility companies to examine supplementing local demands with alternative energy sources, such as wind and solar energy, just as every Southern California community will have to do.

Goal

5.5 Energy conservation.

Policies

5.5.1 Facilitate the conservation of scarce energy resources.