

3.8 The Future of Flood Hazard Mitigation

This topic is discussed in more detail within the Policy chapter (Chapter 5) prepared for this Safety Element. Substantial changes in flood hazard mitigation methods are in progress. These changes are a result of environmental legislation such as the Endangered Species Act, and improvements in the understanding and analysis of flood hazards in arid environments. Nationwide, there is a move to leave nature in charge of flood control. The advantages include lower cost, preservation of wildlife habitat and improved recreation potential. However, this type of flood mitigation is difficult to implement in areas where development has already occurred, as well as regions susceptible to sheet flow. Where water spreads across broad areas, mitigation without channels or culverts is problematic.

Flood control structures have often been built piecemeal over the years, and new development may funnel water into older systems without enough capacity. Building a new major channel now costs about \$2 million per mile, while maintenance of an existing major project averages about \$12,000 per mile (Ingley, 2000). These issues have been mitigated in recent years by the preparation of Master Plans by local storm control agencies.

Environmental legislation that protects rare and endangered species will continue to make construction of flood control structures difficult. In arid environments, twice as many species and about 250 percent more plant cover are associated with natural wash areas, compared with surrounding land (Ingley, 2000). The County should consider a "Flood-prone Land Acquisition Program" that will reduce the costs associated with flooding and mitigation. Developers will still be able to profit from if wash corridors are left intact, as home buyers will pay premiums to live near these open spaces.

3.8.1 Wetlands

As part of its Eastside Reservoir project, the Metropolitan Water District purchased 9,000 acres for the Southwestern Riverside County Multi-Species Reserve, including lands around the reservoir, Lake Skinner, and the 2,500-acre Dr. Roy E. Shipley Reserve.

Behind Prado Dam in Riverside County, Orange County Water District operates 465 acres of constructed freshwater wetlands to reduce the nitrogen levels in the Santa Ana River. The river provides much of the county's coastal plain groundwater recharge. The Prado wetlands are home to several rare and endangered bird and waterfowl species. More than 226 acres are set aside as habitat for the endangered least Bell's vireo and southwestern willow flycatcher.

3.8.2 Conflicts with Environmental Legislation