

SECTION 6 - SHORTAGE CONTINGENCY ANALYSIS

The Act requires that urban water agencies conduct a water shortage contingency analysis as part of their 2000 plan. This section includes the Authority's analysis, which addresses a catastrophic shortage situation and drought management.

6.1 CATASTROPHIC WATER SHORTAGE

A catastrophic water shortage occurs when a disaster, such as an earthquake, results in insufficient water available to meet the region's needs or eliminates access to imported water supplies. The following is a description of the Authority's Emergency Response Plan (ERP) and Emergency Storage Project (ESP), both developed in order to protect public health and safety and to prevent or limit economic damage that could occur from a severe shortage of water supplies.

6.1.1 Emergency Response Plan

The purpose of the Authority's ERP is to provide staff with the information necessary to respond to an emergency situation that results in severe damage to the Authority's water distribution system or impedes the Authority's ability to provide reliable water service to its member agencies. The ERP describes the emergency situations and incidents that will trigger the activation of the Authority's ERP and Emergency Operations Center (EOC) in addition to providing direction and strategies for responding to a crisis situation. The Authority's ERP includes:

- Authorities, policies, and procedures associated with emergency response activities;
- EOC activities - including EOC activation and deactivation guidelines;
- Multi-agency and multi-jurisdictional coordination, particularly between the Authority, its member agencies, and Metropolitan in accordance with Standardized Emergency Management System (SEMS) guidelines;
- Emergency staffing, management, and organization required to assist in mitigating any significant emergency or disaster;
- Mutual Aid Agreements and Covenants which outline the terms and conditions under which mutual aid assistance will be provided;
- Pre-emergency planning as well as emergency operations procedures.

In addition, the Authority's ERP Manual uses a step-by-step approach to emergency response planning by providing such procedural tools as action checklists, resource and information lists, personnel rosters, and listings of established policies and procedures. The Authority's plan parallels many of the same plan components contained in the Unified San Diego County Emergency Services Organization's "Operational Area Emergency Plan" (OAEP). In turn, the OAEP serves to support and supplement the Authority's ERP.



6.1.2 Authority's Emergency Storage Project

In 1998 the Authority's Board approved implementation of the ESP, to reduce the risk of potentially catastrophic damages that could result from a prolonged interrup-



tion of imported water due to earthquake, drought or other disaster. As described in **Section 1.2.6**, the ESP is a system of reservoirs, pipelines and other facilities that will work together to store and move water around the county in the event of a natural disaster. The project will also provide an additional 90,100 AF of stored water. Combined with the storage space already dedicated to emergency use, the additional storage capacity is projected to meet the county's emergency needs through at least 2030.

In sizing the ESP, the Authority assumed a 75 percent level of service to all Authority member agencies during an outage and full implementation of the water conservation BMPs. The allocation of the ESP supplies to the Authority's member agencies in a prolonged outage situation without imported supplies is calculated as follows:

- 1 Estimate the duration of the emergency. (i.e., time to repair damaged pipeline(s)).
- 2 Calculate the total estimated annual M&I and agricultural water demand for each member agency for the duration of the emergency.
- 3 Determine demands at 75 percent level of service for M&I customers and 50 percent level of service for agricultural customers. (Agriculture has agreed to a reduction in deliveries at twice the rate of system-wide demands during an emergency in order to pay a reduced Special Agricultural Water Rate (SAWR) to the Authority.)
- 4 After determining the appropriate level of service demand for the agency, subtract the amount of water that the agency can self supply from local sources during the emergency up to a limit of four average months of demand. Local supplies include groundwater, recycled water and local surface water.
- 5 The remaining unmet demand is the agency's need for water from the ESP. This supply coupled with any local supplies, will maintain a 75 percent level of service to M&I customers in a catastrophic emergency.