

6.33 Water Reservoir

6.33.1 Design of Water Reservoirs

Most of the required storage capacity is provided upstream AADC system such as at Transco system. This arrangement in combination with the RSB requirements of customers tanks of 1 to 2 day demand capacity at each premises reduce considerably the need for new water reservoirs in AADC system, but not eliminate the need for such facility.

As new storage facilities may be rarely required in AADC system, therefore, the water reservoir is not covered in details in this design guideline.

Most of the design works at AADC storage facilities is limited to rehabilitation works, etc.

The design of storage facilities system shall be carried out according to ADWEA standard specifications.

6.33.2 Sizing of Water Reservoirs

Service reservoirs shall be designed to serve mainly water storage for operational purposes and to balance downstream diurnal variations in demand with relatively constant rates of inflow mainly during high demand.

- In addition to provide contingency storage in the event of a failure in transmission system or during maintenance outages. It also provides damping effect so that small fluctuations are not reflected in the Water Distribution System.
- In considering the provision of Water Distribution System storage the following shall be taken into consideration :
 - (a) Volume should be calculated based on Average Daily Demand (ADD) including fire reserve and the volume of storage so calculated shall be usable and exclusive of any unusable top or bottom water storage.
 - (b) All water storage facilities should have a minimum of two tanks, or one storage tank with minimum of two section or more that can be isolated, at each location;