Service Reservoirs or Distribution Reservoirs:

These are the storage reservoirs, which store the treated water for supplying water. Distribution reservoirs, also called service reservoirs, are the storage reservoirs, which store the treated water for supplying water during emergencies (such as during fires, repairs, etc.) and also to help in absorbing the hourly fluctuations in the normal water demand.

Functions of Distribution Reservoirs:

To absorb hourly variation demand.

To maintain constant pressure in the distribution mains

Location and Height of Distribution Reservoirs:

Distribution reservoir must be at a sufficient elevation to permit gravity flow at an adequate pressure.

Functions of Distribution Reservoirs

To equalize the variation in hourly demand of water by the consumers to a uniform rate of supply from the source either by gravity or pumping.

To maintain the desired minimum residual pressure in the distribution system.

To provide the required time for the disinfectant added in order to achieve effective disinfection and

To facilitate carrying out repairs either to the pumping or to pump-set without interruption to the supply of water. Ladders to reach the top of the reservoir and then up to the bottom of the reservoir for inspection.

• Manholes for providing entry into the tank for inspection purpose. • Ventilator for fresh air circulation.

Types of Distribution Reservoir

1. Surface reservoir
2. Elevated reservoir
3. Stand pipe

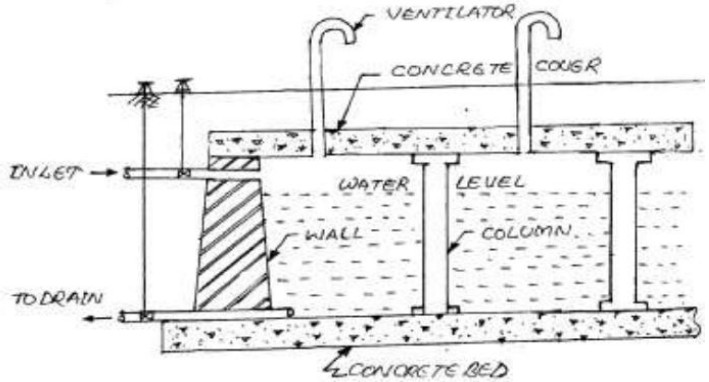
1. Surface Reservoirs

• Surface reservoirs are circular or rectangular tanks constructed at ground level or below ground level.

• Therefore they also called as ground reservoirs.

• They are generally constructed at high points in the city.

• In a gravitational type of distributional system. And pumping system used for treated water is filled the reservoirs.



2. Elevated Reservoirs

These are the elliptical overhead tanks erected at a certain suitable elevation above the G.L and supported on towers.

They are constructed in the areas combined gravity and pumping system for water distribution is adopted.

Water pumped into these elevated tanks from the filter units or from the service reservoirs and then supplied to consumers.

These tanks may be made of RCC,Steel or prestressed concrete.

TYPES OF TANKS

R.C.C TANKS: R.C.C tanks are very popular because

1) They have long life

2) Very little maintenance

3) Decent appearance

G.I. TANKS: G.I. tanks are generally in rectangular or square in shape. Now a days G.I. tanks are not preferring because

1) Life of the tank is short

2) Corrosion of metal

3) Maintenance cost may be more

TYPES OF TANKS

R.C.C TANKS: R.C.C tanks are very popular because

HDPE TANKS: Now a days HDPE tanks are very popular for storing less quantity of water and hence useful for residential purpose. The following are the advantages of HDPE tanks

1) Handling is easy because of light weight

2) Cheap in cost

3) Maintenance cost is low

4) Cleaning of tanks are easy

ESR...

ESR(Elevated Storage Reservoir) also referred to as Overhead Tanks are required at distribution areas which are not governed and controlled by the gravity system of distribution. These are rectangular, circular or elliptical in shape. If the topography of the town not suitable for under gravity, the elevated tank or reservoir are used.

Functions of Service Reservoirs:

Distribution reservoirs, also called service reservoirs, are the storage reservoirs, which store the treated water for supplying water during emergencies (such as during fires, repairs, etc.) and also to help in absorbing the hourly fluctuations in the normal water demand. Functions of Distribution Reservoirs

1. To absorb the hourly variations in demand.
2. To maintain constant pressure in the distribution mains.
3. Water stored can be supplied during emergencies.

4. Location and Height of Distribution Reservoirs
5. Should be located as close as possible to the centre of demand.
6. Water level in the reservoir must be at a sufficient elevation to permit gravity flow at an adequate pressure.

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