

Suffolk County is not flat. In fact, the ground surface elevation across the county varies from sea level to over 300 feet above sea level. Elevation is the key factor in determining water pressure, the lower the ground elevation, the higher the pressure. A single water system could not provide reasonable water pressure to every home. Some homes would have too much pressure and some would have no pressure at all. Therefore, the Water Authority has divided the system into 45 pressure zones. Distribution areas may encompass more than one pressure zone. There are 27 distribution areas.

Each pressure zone is made up of pump stations, storage tanks, and/or booster stations which are designed to provide adequate water pressure to the elevations they serve. These facilities are connected by underground water pipes of various sizes. This piping network is called a distribution system. A pump station consists of at least one well and associated treatment facilities. The well provides access to the underground aquifer. We use a submersible pump powered by an electric motor to bring the water out of the ground, through the treatment facility and into the distribution system. The water can then be delivered to homes, fire hydrants, schools and wherever else it is needed. Any excess water goes into the storage tank where it is stored for later use. The water storage tank provides a stable operating pressure and can supply a lot of water in a short time in the event of an emergency. The wells are turned on and off as required to satisfy the water demand in the distribution system.

If you look at the distribution area map shown below, you will see the size of the areas range from very small, serving a few homes, to very large, serving tens of thousands of homes. The distribution areas are interconnected with booster pumps and/or automatic control valves. In the event of very high demands for water during peak summer usage or an emergency, such as a fire or main break, the booster pump or automatic valve will operate and supply additional water to the impacted area. This operation helps ensure that adequate water is available at all times. It also means that if your home is near the boundary of a distribution area, it may receive water from the adjacent distribution area on occasion. In a few areas, booster pumps routinely pump water from one zone to another. Please see the notes on the map for more information.

