Dewatering with Deep Well vs. Wellpoint

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Dewatering or removal of groundwater from the soil is the only solution for draining the excess water from excavation sites and areas that are frequently flooded after heavy rains. Deep well and wellpoint are the two methods of dewatering. However, to a layperson unaware of the differences between the two dewatering systems, selecting the best dewatering system can be quite difficult. Although, a dewatering expert can guide you through the process, knowledge of the pros and cons of each of these dewatering methods and the relative advantages of one over the other can help you to implement the appropriate dewatering system.

Deep well

Deep well comprises of a borehole, a slotted liner and a submersible pump. This versatile dewatering system can drain large volumes of water. A single deep well can speedily remove water from smaller areas. However, where the water table needs to be lowering significantly, several deep wells are needed to dry up the deluged surface.

Advantages

Although the performance of a deep well system depends upon the permeability of the soil, this dewatering system can work in a wide range of soil condition. They are especially recommended where the soil is highly permeable such as in sandy areas, where the groundwater recharges at a faster rate.

They are more suitable for excavation sites where the water table needs to be lowered by 100 or more feet in a single stage.

When the excavation job requires removal of large volumes of water at a fast speed, a powerful submersible pump of a deep well dewatering system can pump tens and thousands gallons of water per minute. An individual deep well can dewater 21 to 3000 gallons of water each minute, while the combined groundwater drainage capacity of a dewatering system can be up to 60,000 gallons per minute.

Disadvantages

The deep well dewatering system can be implemented only by an expert. The dewatering project is more expensive than the wellpoint system

Wellpoint

All the well points in a wellpoint dewatering system are joined to a common header, which is connected to one or multiple well point pumps. The vacuum generated by the pump helps to drain water from a particular area

Advantages

It is the most economical dewatering system for removing water where not more than 6m of groundwater needs to be dewatered.

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