

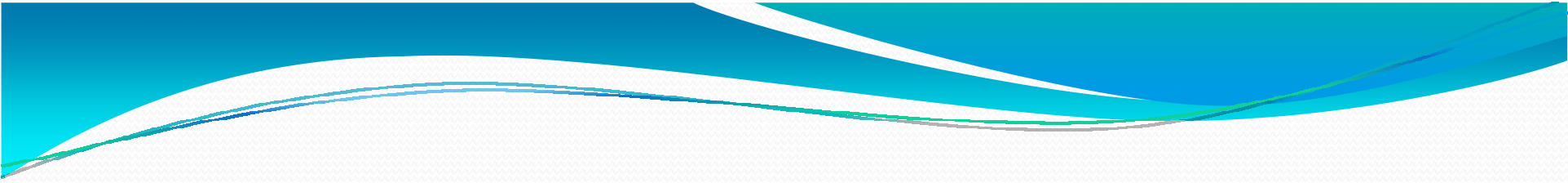
PRESENTATION ON DEWATERING SYSTEMS



DEWATERING
SYSTEMS

WELL-POINT
DEWATERING

OPEN-
DEWATERING



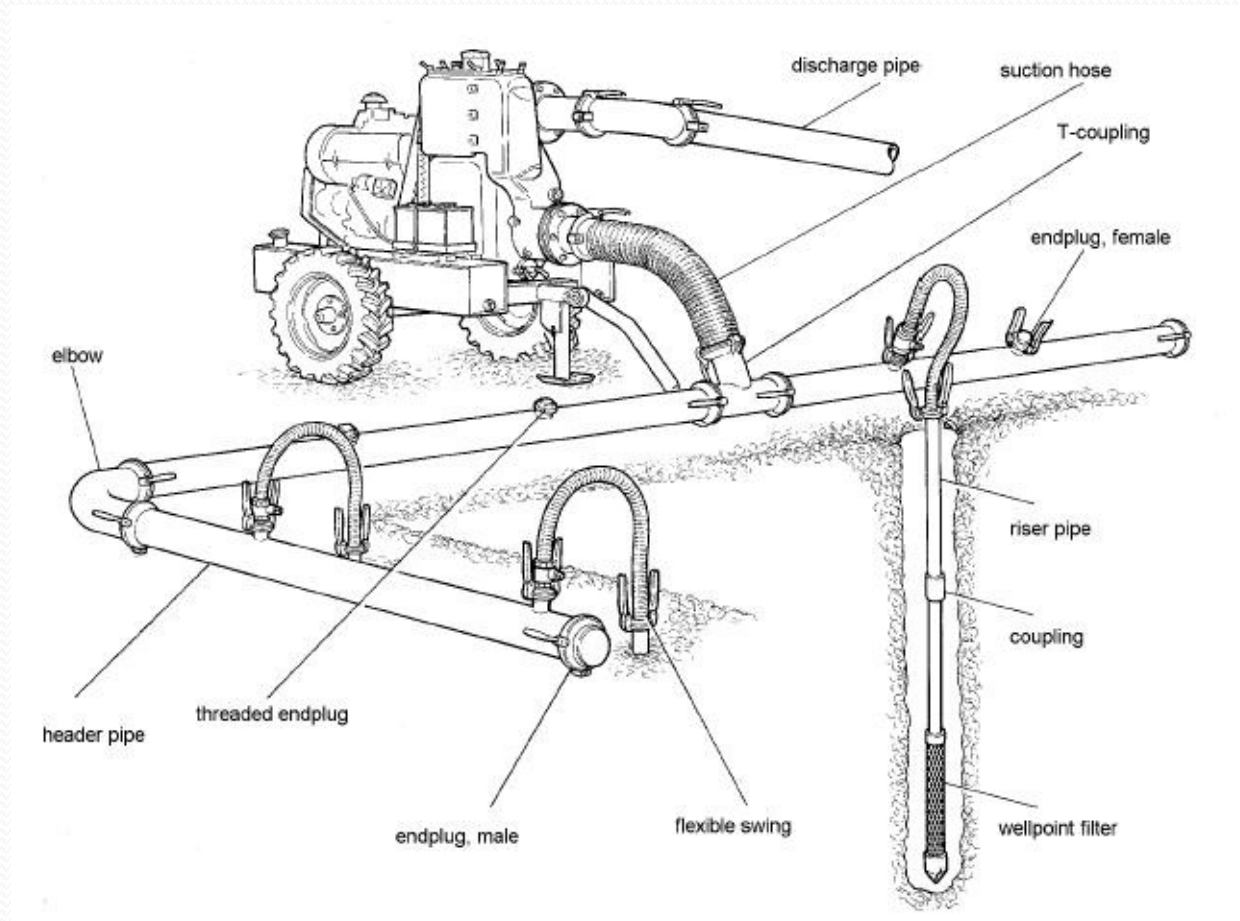
INTRODUCTION

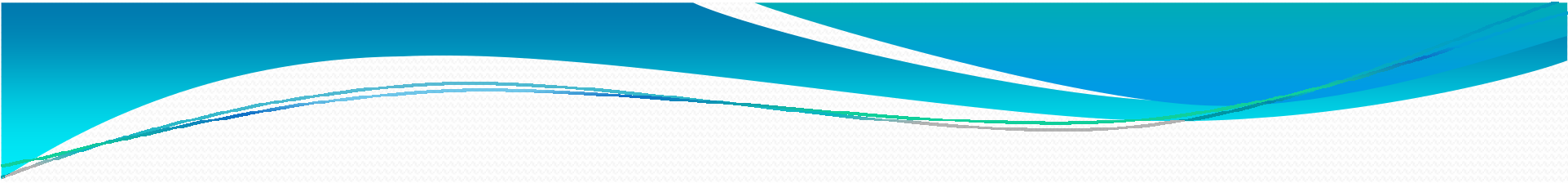
Dewatering is removal of water from solid material or soil by wet classification, filtration or similar solid-liquid separation process.

Therefore a better definition of dewatering is the process of natural, chemical & mechanical removal of water from sludge, thereby reducing it to damp solid with the lowest level of moisture attainable.

In short dewatering means separation of water from the soil.

DIAGRAM OF DEWATERING ACCESSORIES





WELL-POINT DEWATERING

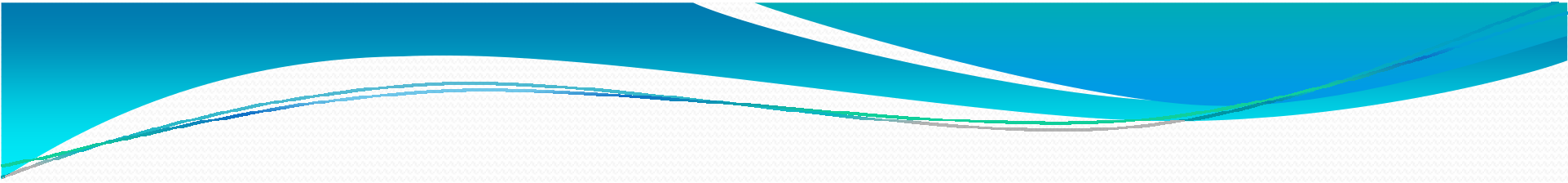
- Well-point dewatering systems enable to lower the ground water table adequately for deep & large construction sites. It has proven to be a flexible system.
- This dewatering system is used in all types of ground which are permeable because of porosity such as sand, silt and clay.
- Some images of well-point dewatering in next slide.

WELL-POINT DEWATERING SYSTEMS



WELL-POINT DEWATERING





MERITS & DEMERITS

MERITS

- The well-point system has the advantage of getting installed along any flexible line or shape.
- When a large area is to be dewatered, well-points can be installed around the area.
- For long excavations for pipelines, well-points can be installed along a line and prove quite effective.

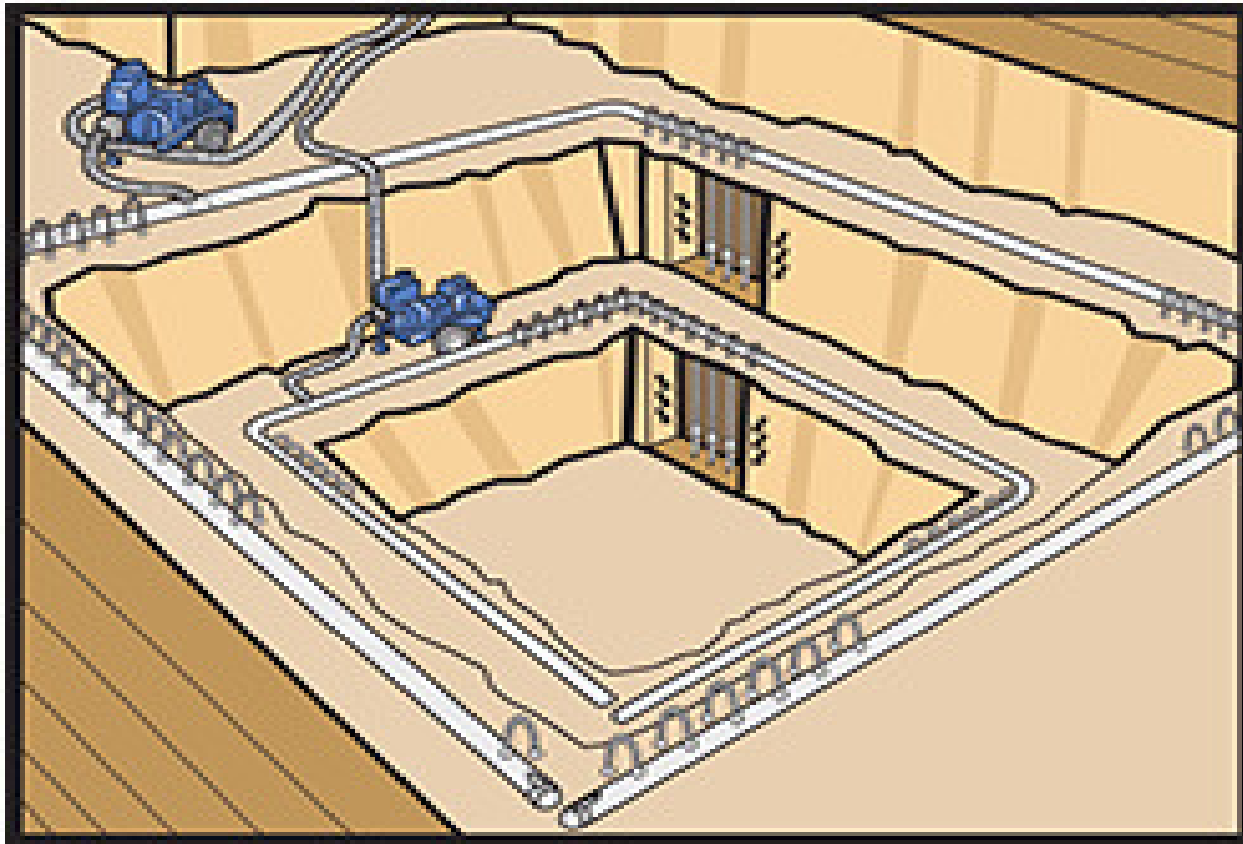
DEMERIT

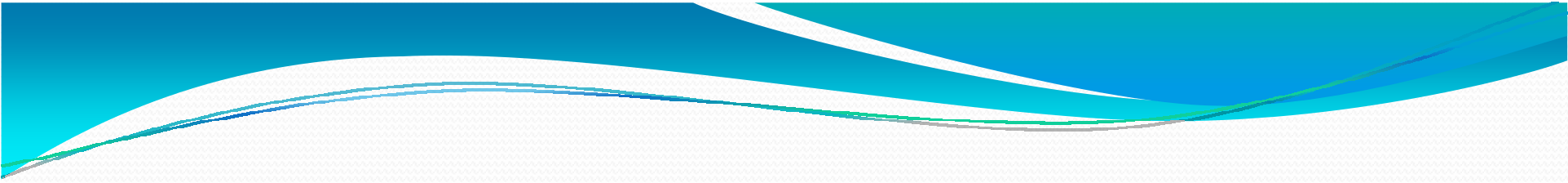
- In such a case, a continuous exercise of installing new well-points in the area ahead& taking out well-points from the area completed is on. Just 1 header pipe laid along the length of excavation connects the well-points. However, the well-point systems is not suitable for very deep areas.

MULTI STAGES OF WELL-POINT DEWATERING SYSTEMS

- For Excavations deeper than 6 mt. multi- staged dewatering equipment can be used. In this case each stage has its own pump. no. of stages can vary but more than 3 stages of well-points don't seem practical. More the no. of stages more is the excavations width required.
- In case of multi stage well-point, care should be taken that the header of the lowermost stage is not more than 4 m above the excavation bed so that vacuum in the lines is not affected.

MULTI STAGES OF WELL-POINT DEWATERING SYSTEMS





OPEN DEWATERING

- Open dewatering systems enable one to lower the ground water table adequately in cohesive low permeable soils. Water is pumped off directly from sumps along the toes of the slopes of the excavation works.

IMAGE OF OPEN DEWATERING

