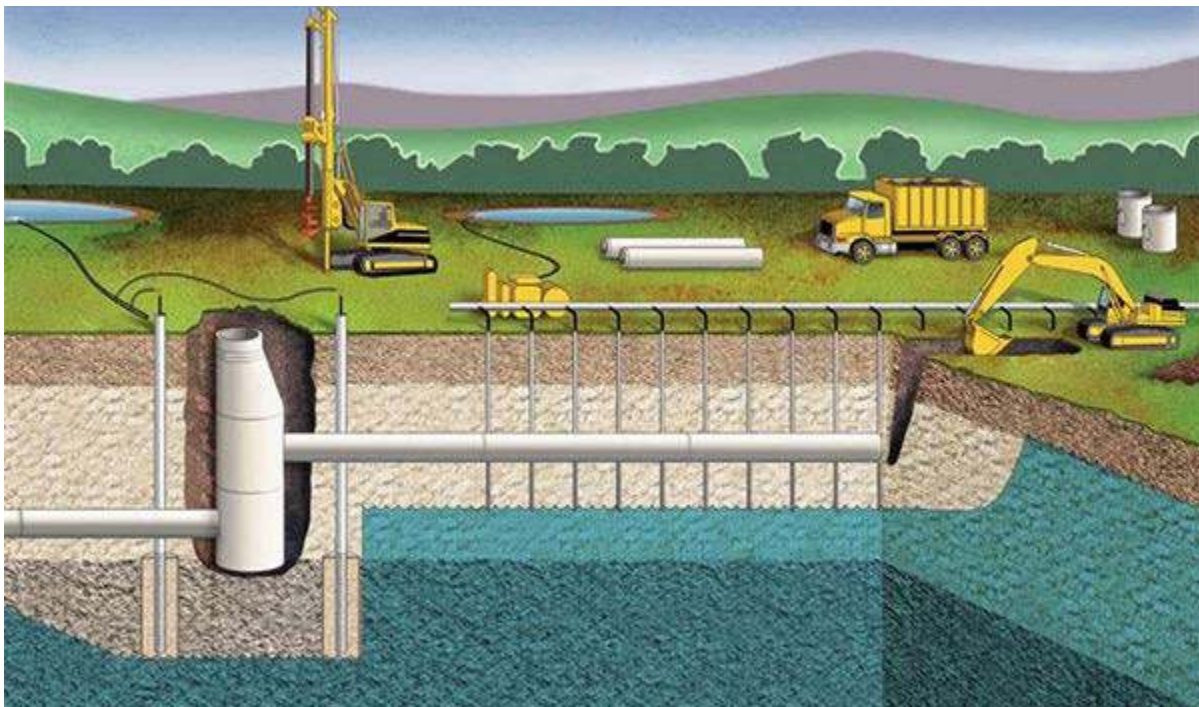


STARTER GUIDE TO DEWATERING

STEP 1 KNOW THE WATER TABLE

Do you know how deep you'll need to dig before hitting water?

If you hit water before your excavation gets to the desired depth, you'll need to use some type of dewatering method. Of the many dewatering types including exclusionary, cut-off, open sump, eductor, deep well and wellpoint, choosing the right one will help ensure your site is free of water in a timely, cost-effective way.



Do you know which dewatering method is right for you?

While open sump is the simplest method that contractors can install themselves, it often produces the dirtiest water. When onsite discharging is available (e.g. dust control), this method may be ideal. However, if higher levels of Total Suspended Solids (TSS) are produced and if pollutants are found, they will require more complex filtration systems to comply with permits when discharging offsite.

Exclusionary and cut-off dewatering includes cofferdams, slurry walls and ground freezing. These methods can be costly, and cofferdams may require additional dewatering much like deep well or wellpoint methods do. Eductors are best for stratified aquifers, typically with low permeability requiring close spacing.

Deep well, wellpoint and trench dewatering applications: [LEARN MORE](#)

Deep well and wellpoint dewatering are frequently used during foundation construction below groundwater level and for excavations around cofferdams, utilities, sewer lines and storm drain maintenance. These systems are efficient at keeping water out of the excavation areas while construction occurs during the project.

Wellpoint or deep well dewatering – which should you choose?

Choose:

- Wellpoint dewatering when lowering the water table is minimal.
- Deep Well (or combination of both) when lowering the water table more than 20 to 30 feet.

When specific dewatering requirements must be met, it is best to have an engineer analyze and design the dewatering system to ensure it meets the specifications of the project. Rain for Rent's engineering team can design a system that is sized to ensure the water is removed effectively for the duration of your project. By providing detailed dewatering plans including ones that have a PE stamp, you can ensure your project submittal meets all the necessary requirements.

STEP 2 KNOW THE SOIL AND TOPOGRAPHY



Understanding the topography of the site will help you determine where to place your wellpoint or deep well dewatering system. Runoff from mountains around the jobsite will continue to feed an underground river. It is important to effectively cut off the source during construction to allow for the project to move forward.

Not sure about what system you'll need? ASK AN EXPERT

STEP 3 KNOW THE WATER



Do you have recent water samples?

Underwater rivers flowing through your jobsite can carry potential contaminants. By having recent water samples, you'll be more aware of site conditions before you start the job. Understanding what types of activities take place "upstream" from your jobsite may also prevent potential contamination.

How can you minimize the need for remediation?

As a contractor, the moment you disturb the water you are responsible for proper disposal and cleanup efforts, should contaminants be found. By understanding what's in the water before you start your project, you'll be able to properly plan for any remediation that may be required. Or you may be able to work with the land owner on a plan.



Need help evaluating samples?
ASK AN EXPERT

STEP 4 KNOW THE HISTORY



Do you know what types of activities have taken place onsite in the past?

By understanding activities that have taken place at the site in the past, you will know if you need to be concerned about the possibility for remediation and additional costs. Old construction plans for the jobsite are a good indicator of past activities.

Curious how other companies have dewatered their sites? [SEE CASE STUDY](#)

STEP 5 TEST YOUR WATER

Will your filtration system allow you to meet discharge requirements?

Depending on the type of dewatering system you choose, you may be faced with discharging water offsite. Sometimes that water contains pollutants that exceed the water quality standards of the receiving water. If a prior test has been conducted, the groundwater contaminants can be found in analytical results. Often times these results will highlight certain contaminants that do not meet the discharge requirement, thus requiring a treatment system. Sizing a filtration system correctly to meet discharge requirements is important whether you're discharging into a stream, river or storm sewer.

Will your treatment system blind off too fast?

Understanding the turbidity and contaminants in your water will help you understand what type of filtration system is needed. Sizing a system correctly will help ensure your system doesn't blind off too quickly, costing you more in materials and time. Your system will work better and you'll have less downtime if you have the right filtration system in place. A filtration system will help you remove solids prior to discharging offsite. A properly designed system will help you know if you need pre-filtration, polymers, resins or carbon to properly filter and treat the water to meet NPDES requirements. Rain for Rent regularly designs and installs filtration systems for construction site dewatering needs.

Need technical advice on filtration?

[ASK AN EXPERT](#)

STEP 6 ARE YOU READY FOR RAIN EVENTS?



Do you know how deep you'll need to dig before hitting water?

Having additional equipment, media and filters on standby can help ensure your system will continue to meet discharge requirements after a rain event or during inclement weather. It is important to not mix surface water and groundwater into your discharge system unless you already have a combination system designed. Because water from deep well and wellpoint systems is naturally filtered, mixing surface water significantly increases the TSS; a combination system to filter water prior to discharge is important. Consult your site's Storm Water Pollution Prevention Plans (SWPPP) to understand what the regulations are when discharging allowable particulates.

**Have a Question...? Ask One of
Our [Experts](#)**



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Have a Rep Contact You

Looking for more help? [Contact us](#) to get information customized to your jobsite
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