

# Deep Well Dewatering Systems Keep Construction Project On Track



## PROJECT SCOPE

Deep well dewatering for construction of a high rise in downtown Denver, CO.

## CLIENT

Construction Contractor

## INDUSTRY SEGMENT

Construction

## EQUIPMENT

- 21,000 gallon Environmental Settling Tanks
- Poly Tanks
- Electric Dewatering Pumps
- Electric submersibles
- Sand media filters
- Bag filtration down to .05 Micron
- Resin and Carbon vessels

## BACKGROUND

Denver, Colorado is experiencing tremendous construction growth with more than \$4.4 billion in development investment completed, or under construction within the past five years. Because the City of Denver is at the base of the Rocky Mountains and on the banks of Cherry Creek and the South Platte River, most construction sites require dewatering and some form of water filtration or treatment prior to discharge.

A high rise was being constructed in downtown Denver and required a 20-foot deep excavation to accommodate the foundation and basement of the building. Dewatered effluent from the excavation site would be discharged into the storm sewer with flow to the South Platte River.

## OUTCOME

Rain for Rent provided an engineered dewatering and filtration system with flow rates of 500 GPM, which removed water from the excavation area prior to construction starting. The treated and filtered water met permit requirements for Total Suspended Solids, Cadmium, Iron, Lead, Manganese and Selenium.

## HIGHLIGHTS

- Engineering calculations for the project were based on site investigations, project specifications and knowledge of previous subsoil conditions in the area.
- Equipment on site had to be placed within a tight jobsite footprint in the excavation.
- Noise concerns were minimized by utilizing electric pumps on the site.
- Rain for Rent maintained the filtration system to ensure that water discharged from the site would meet Colorado discharge permit requirements.
- Daily jobsite safety analyses were conducted to ensure a safe setup and operation.

## CUSTOMER FEEDBACK

The customer was very happy that the excavation was dry enough to dig continuously, allowing them to finish digging ahead of schedule. Rain for Rent worked together with licensed water operators or ORC (Operator in Responsible Charge) to fine-tune the system, meeting discharge permit requirements the first week it was online.



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