

Designing Water Supply Plan to Address Water Quality and Quality

Bloomington, Illinois



Layne's Sonic Rig was used for exploratory drilling and drilling monitoring wells.

The water supply challenges facing the City of Bloomington, Illinois, are typical of many communities. The Water Department is addressing issues related to surface water quality deterioration and the need for additional sources of supply.

The Water Department hired Layne to design an interim water-supply plan that considered available supplies, water quality, conservation, and management options. To identify the different options, we

- drilled deep and shallow exploratory wells in the local aquifer
- collected data on water use and current demands
- conducted aquifer tests to determine groundwater yield modeled current yield for the two water supply reservoirs
- analyzed nitrate concentrations in the reservoirs for different pumping scenarios
- developed a p drought/conservation ordinance
- initiated the first steps of a water conservation plan

The data were used to determine the best options for optimizing water quality and increasing water supplies. We recommended an infrastructure and management program that included water conservation/drought planning, raw water pumping improvements, developing a groundwater supply, and treating nitrates.

Key Project Areas

Groundwater Modeling

Drought Planning

Surface Water Safe Yield Modeling

Well Installation

Water Supply Planning

