

WSB Water Treatment



BENCH-SCALE AND PILOT TESTING SERVICES



A water treatment pilot study allows you to gain understanding of the treatment requirements for a specific source water and contaminant(s). Bench-scale testing is commonly performed prior to and during the pilot phase to analyze on-site water quality and to determine the design parameters and unit processes needed for the pilot study. During pilot testing, various treatment technologies and filter medias are evaluated and compared to determine the optimal treatment configuration for a full-scale water treatment system.

A pilot study that produces useful data depends upon equipment that is properly configured and optimized to treat the source water in the most efficient way. Steps must be taken to ensure that the most suitable treatment technologies are used for a specific contaminant; the water temperature, pH and solids loading are controlled, and proper dosages of chemicals are added when chemicals are needed. If any of these measures are deficient, the pilot study will not be representative of a full-scale water treatment facility, thus making it difficult to project future costs and effluent water quality. A successful pilot test provides real world data to better estimate system sizing and long-term operation costs. This can reduce the risk of purchasing and installing a full-scale treatment system before it is verified in pilot-scale.



WSB provides bench-scale and pilot testing services that include conventional oxidation/filtration, biological filtration, adsorption, and other processes that simulate the larger scale applications being considered for a new water treatment facility or an upgrade to an existing facility. Groundwater and surface water contaminants that can be piloted include, but are not limited to, iron, manganese, ammonia, nitrates, per-fluorochemicals (PFCs), arsenic, radium, total organic carbon, turbidity, suspended solids, viruses, and bacteria.

WSB's water treatment engineers can manage and operate the bench-scale and pilot testing equipment or supervise water operations staff to monitor and operate WSB's pilot testing equipment for extended pilot studies such as biological filtration. Prior to the start of the pilot study, a comprehensive pilot protocol is developed by WSB, shared with the customer, and submitted to the appropriate state agencies for review and approval. A complete report with the test results, observations, and recommendations is provided to the customer at the end of the study.

