

Performance-Based Optimization of Pump and Treat Systems

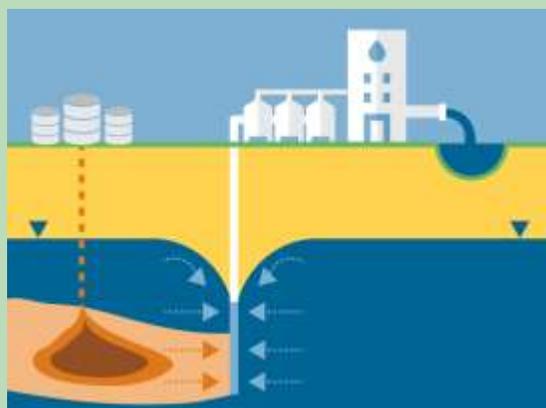
Fact Sheet



ITRC is starting a new team to tackle Pump and Treat Optimization. ITRC teams bring together experts from across the country to develop innovative solutions to the most pressing environmental challenges. This team will work on creating resources for regulators and water treatment staff from state and federal agencies, local and municipal governments, and other interested parties. All environmental and public health professionals are encouraged to join!

Why Optimize Pump and Treat?

Pump-and-treat (P&T) systems have been one of the most commonly used methods for hydraulic containment and treatment of contaminated groundwater at sites with large groundwater plumes. This method cleans up groundwater contaminated with dissolved chemicals by pumping groundwater from wells to an above-ground treatment system that removes the contaminants. Optimization of P&T remedies is important for maintaining contaminant removal effectiveness throughout the operation lifetime and managing the system toward an exit strategy.



ITRC's Pump and Treat Team

A strategy for routine optimization of P&T remedies is key for maintaining the contaminant removal efficiency of these systems. The most critical element of P&T performance optimization in relation to plume remediation efficiency and effectiveness is developing a well-network design and dynamic management approach for effective pumping strategies that adapt to evolving plume and subsurface conditions as the remedy progresses. The team aims to develop technical guidance that summarizes existing information and best practices and develops a systematic and adaptive optimization framework specifically for P&T well-network design and management. This guidance will complement existing and well-established broader remedy optimization programs with regard to the technical aspects of optimizing P&T systems as the remedy progresses. Project Timeframe: July 2021 – July 2023.

The Guidance/Training Will Include:

An inventory and description of existing optimization programs

A performance-based and adaptive P&T well-network optimization framework

Case studies on the range of well-network optimization approaches within the proposed framework

Why Join?

- ⇒ Joining the team allows you to participate in the creation of an innovative guidance document that will be used throughout the nation and worldwide!
- ⇒ You will be able to share your expertise and stay up-to-date on the latest technical and regulatory developments.
- ⇒ ITRC membership gives you access to internal documents and allows you to participate in team meetings and become a future ITRC trainer.
- ⇒ Our community of over 1,300 members and 30,000 contacts allows you to network with your peers and gain exposure in your field.

For more information, please contact the ITRC Team Leaders:

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About ITRC

ITRC is a state-led coalition dedicated to reducing barriers to the use of innovative environmental technologies. ITRC represents over 1,200 individuals, across 50 states, working to produce guidance and training on innovative environmental solutions. Bringing together teams of state, federal, tribal, industry, academic, and stakeholder experts, ITRC broadens and deepens technical knowledge and reduces barriers to expedient regulatory approval. Since 1995, the collective success of this coalition has generated huge benefits to the environment, inspired new technical innovations, and saved hundreds of millions of dollars.

ITRC is a program of the Environmental Research Institute of the States, managed by the Environmental Council of the States. This partnership is based on a commitment to protect and improve human health and the environment across the country.



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