Case Study

# From Overflow Risk to Steady Flow: How a Remote Mine Beat the Runoff

## Mobile Solutions Enable Northwestern Mine to Manage 3,000 gpm Snowmelt Surges

**Location**
Northwestern United States

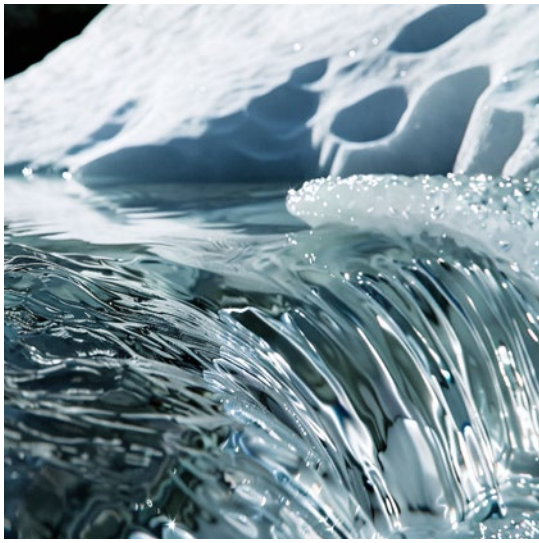
**Owner**
Mining Company

## Problem

Every year, a mining company in the Northwestern U.S. contends with heavy mountain runoff from melting snow and ice. The on-site permanent water treatment plant struggled to scale-up to meet a peak runoff of 3,000 gpm and stay within discharge limits.

The company needed an immediate, cost-effective, flexible solution that could manage peak, periodic runoffs. If they failed to do so, too much water would accumulate in its reservoirs and potentially expose the company to potential fines and permit revocation. The company was further challenged because its mining operations were extremely remote and only accessible by barges running on a two-to four-week schedule.

The mine needed a solution to avoid interruptions to operations. They sought a provider that could handle the project's challenging logistics and deploy equipment quickly to keep operations running. They turned to WesTech.



Snowmelt presents challenges associated with flow rates.

## Solution

WesTech proposed Rental Water Treatment Equipment from its mobile fleet. The mine accepted the proposal and WesTech got to work preparing the equipment. This included shipping a mobile RapiSand rental from Alabama to Utah for necessary maintenance and repairs. In addition, a mobile horizontal pressure filter was needed. In order to reduce weight and shipping costs, the WesTech team vacuumed all media out of the filter.

Even though the WesTech team was to provide startup services, the mining company still needed to address long-term equipment maintenance and operation which was particularly challenging given the mine's remote location. To streamline ongoing equipment operation between the existing plant and the mobile rental solution WesTech modified the rental system's electrical panels and programmable logic controller (PLC) code.


Our rapidly deployed solution kept operations running smoothly.

The equipment was successfully delivered to the customer's port in 2 weeks. This included everything from contract signing and equipment upgrades to delivery. The project was further complicated upon the start of the COVID-19 pandemic. When on-site support was no longer possible, WesTech quickly adapted by offering remote assistance to ensure the project stayed on track.

The RapiSand and horizontal pressure filter rentals have remained at the mine as long-term rentals for more than five years. Together, these rentals treat 750 gpm, augmenting the full-scale system's capacity.

## Results

After meeting the delivery and startup deadlines, the RapiSand and horizontal pressure filter rentals have supported the mine's operations in avoiding setbacks and shortfalls in water treatment. The extra capacity from WesTech's rentals is used seasonally and taken off-line during low runoff months.

The project was such a success that the mine has continued to rent the equipment for five years and can go much longer. WesTech has also been able to demonstrate its flexibility in how it supports this project: Although the site is not easy to access for regular on-site visits, the rental team provides remote support so the client can properly maintain the rentals.

Successful collaboration has strengthened our relationship with the customer, positioning WesTech to be a top contender for future projects.

## Highlights

- Delivered RapiSand rental and horizontal pressure filter rental to meet schedule
- Completed delivery to customer's port in 2 weeks
- Modified electrical panels and PLCs for easier long-term operation
- Augmented customer's treatment plant to meet permit requirements

## Solutions Summary

- Mobile RapiSand Rental
- Mobile HPF Rental


Horizontal pressure filter shown. Thanks to their effectiveness, our rental systems have been in use for more than 5 years.

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