Water is vital to the efficient operation of a mine. However, water usage and discharge quality can have major implications for neighbouring communities. Untreated effluent, as well as contaminated surface water runoff and groundwater, can impact the environment and drinking water supplies. To mitigate the risk of unexpected interruptions and operational inefficiencies, mines require a comprehensive water management plan that covers the entire mine life cycle in a watershed context. This provides a level of reliability unachievable with traditional approaches that only focus on how water is used and moved around the mine.

Would you like to take a more comprehensive, data enriched approach to mine dewatering? Could you benefit from online access to real-time mine water data? Do you want to more confidently evaluate slope stability to prevent seepage?

Opportunities and challenges

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How DHI can help

To support the creation of such water management plans, DHI relies on physics-based modeling to evaluate the interactions between runoff, evapotranspiration and infiltration. DHI can also centralize your water forecasts, monitoring and models into an integrated mine water platform. Site data can be processed in real-time for powerful insight into the mine water balance to reduce your costs while maintaining efficient operations.

Integrated solutions

- Plan groundwater extraction for open-pit dewatering
- Boost decision making with an operational mine water management system
- Effectively determine site-wide and watershed scale water balances
- Better evaluate slope stability with pore pressure analyses

Core technology

- **FEFLOW**
  Accurately model the complex geology and geometry of a mine site taking geochemical and hydrologic conditions into consideration
- **MIKE SHE**
  Develop deterministic and probabilistic mine water balances that account for surface water, groundwater and watershed hydrology interactions
- **MIKE Mine**
  Synchronise your dewatering program and mine water management planning through centralised data, automated forecasting and analyses

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