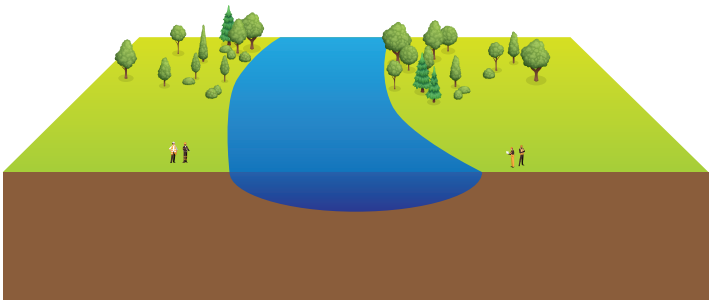
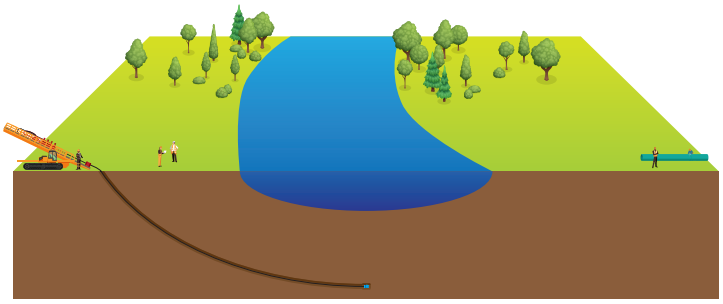
# Horizontal Directional Drilling

Horizontal directional drilling (HDD) is an advanced method used in limited situations for installing underground pipelines without digging a surface trench. Specialized equipment is used to drill a path for the pipe from a single surface location to a single exit point. This is to enable installation of a continuous segment of underground pipe. This pipe installation method limits disturbances to roads, buildings, waterways or sensitive areas.



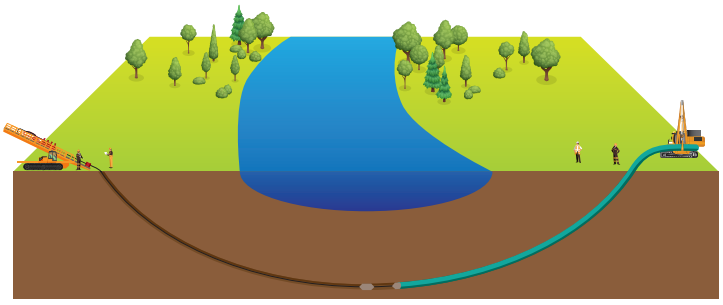
## 1 Consultation and Planning

Safety, cultural, environmental and infrastructure considerations are addressed in consultation with landowners and local communities before plans are finalized and drilling activity begins. Ground conditions are carefully evaluated before a precise path is determined. Utilities, cultural sites and natural features are located, surveyed and mapped before a precise path is surveyed and determined to avoid disturbing such locations.



## 2 Pilot Hole

A directional drilling machine bores a small-diameter hole along the predetermined path. Drilling fluid, sometimes also known as "drilling mud," is used to aid the drilling of pilot holes.



## 3 Pulling the Pipe

The hole is then enlarged and the pipe is pulled back through the bore hole.