



**One Company, One Contact,  
Your Single Source for  
Water Management Solutions**



# The more you work with water...

Water plays an important role in the Oil & Gas industry. In conventional production, water is used to remove sulphur and other water-soluble contaminants. Water is also a key factor in unconventional gas production. Finds in exceptional natural gas fields in the US have led to a viable market for development of unconventional gas supplies from oil shale plays, where flowback water serves as a transport medium during fracturing operations. The volumes of water required in deep shale fracturing is estimated at one to four million gallons for each frac well, and the resulting produced water is often subject to some of the strictest environmental and regulatory controls.



Many companies trust all of their water management needs to the experts at Layne Christensen Company. Layne provides water management services that help ensure uninterrupted supplies, avoiding competition with neighboring municipal and industrial consumers for available resources.

Layne provides systems for recycling and reuse of flowback water, a routine conservation practice in the gas industry. For operations with surplus flowback water, Layne can provide zero-liquid discharge systems that help to provide compliance with environmental regulations.

Relying on a collection of individual suppliers, each providing a piece of the water management puzzle is no longer an adequate response to today's complex water challenges. Layne is the industry leader, and is capable of offering integrated water management solutions for your entire operation. Our experienced team is capable of locating reliable water sources, drilling, transmitting, treating, blending water for reuse, and ZLD wastewater disposal. Layne is truly your single source solution for all your water management needs.

## Hydrology and Geosciences

Layne examines groundwater flow in aquifers to evaluate the occurrence, distribution, movement, and quality of water in subsurface systems. Knowledge of groundwater is required to manage and maintain regional and local water supplies. Our investigations help optimize the quantity and quality of your supply while meeting all of the regulatory requirements for withdrawals.

- Water Supply Planning and Optimization
- Non-Potable & Brackish Water Sourcing
- Groundwater Flow Modeling
- Water Quality Analysis
- Well Logging Services



# ...the more you need Layne



## Well and Pump Services

Layne has the expertise, resources, equipment, and project management skills to handle the most demanding drilling projects. Turnkey Drilling Services, include:

- Conductor Pipe (Spud) Surface Drilling & Set Case Cementing
- Site Pad Construction
- Disposal Well Drilling & Construction Services
- Ranney Collector Wells

## Water Management Solutions

Layne is currently operating in multiple shale plays providing services focused entirely on best management practices and cost effective solutions based on each client's unique water management needs.

- Water Transfer Solutions
- Frac Water Treatment & Blending for Reuse
- Field and Lab Testing Services
- Pit Dewatering
- Proprietary Filtration
- Produced Water Disposal Solutions
- Production Testing & Flowback Services



## Construction Services

Layne has built a proven track record of providing clients with turnkey construction services.

- Pad Site Construction & Preparation
- Field Office Construction
- Tank Batteries
- Contaminant System
- Frac & Impoundment Construction
- Wastewater Treatment Facility
- Pipeline Construction, Maintenance & Rehabilitation



## INTEGRA Automated Disk Filtration

- Frac Flowback Filtration
- Disposal Well Applications
- Pit Dewatering
- Impoundment Maintenance

## EVRAS Evaporative Reduction and Solidification

Where discharge is not an option, the EVRAS provides a zero-liquid discharge solution.

- Concentrators and Crystalizers
- Uses Waste Heat
- Not Sensitive to TDS
- No Fouling or Scaling
- Increased Efficiency to Compression Operations

