

AES offers a total water management approach to handling oil field frac water concerns. We have over 50 years of combined experience in providing the very best service to our clients, and we are uniquely positioned to address your day-to-day challenges in the field.

We have built a solid reputation by developing relationships with our customers that allow us to pinpoint their needs and provide customized solutions. We strive to earn your trust by delivering on promises and maintaining our record of superior performance.

Our hard-working service personnel believe that service does not stop at sun-down, and we are dedicated to setting the gold standard for complete water handling for the oil and gas industry.



**AES Water Solutions**

## FRAC WATER RECYCLING SYSTEMS



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## Frac Water Treatment

Mobile  
On-Site  
High Volume



# YOUR COMPLETE FRAC WATER RECYCLING SYSTEM

## THE PROCESS

The Chemical Coagulant/Dissolved Air Flotation (CC/DAF) water recycling system employs a three step process to convert non-usable frac and produced water into water with very low concentrations of suspended solids, metals, and bacteria.

### STEP 1

Contaminated flow back water is filtered into the blending unit, then analyzed in order to determine the optimal mix of treatment chemicals. When added, the chemicals bind the contaminate particles to create larger particles and coagulate the suspended solids.

### STEP 2

The water is transferred from the blending unit to the DAF unit. Here, millions of nanobubbles are injected into the water, floating the suspended solids to the surface where they can be removed. The remaining brine then flows through a 5 micron filter system.

### STEP 3

The water leaves the Dissolved Air Flotation unit and enters the disinfecting unit, which removes 99% of the remaining bacteria. The treated water is now able to be stored and reused as frac water.



## WHY RECYCLE

Each AES system can recycle upward of

# 20,000

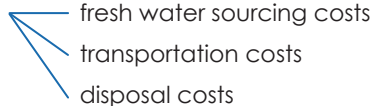
barrels of frac water per day, producing savings of roughly

# \$1-2

 per barrel

for the operator

## PROCESS ADVANTAGES

- › Modular on-site system
- › Quick deployment and set up
- › Process up to 20,000 barrels of frac water per day
- › Removes 99% of suspended solids above 5 microns
- › Kills ~99% bacteria
- › Produces reusable frac water on-site
- › Reduces  fresh water sourcing costs  
transportation costs  
disposal costs

## ENVIRONMENTAL ADVANTAGES

- › Reduces fresh water consumption in drought areas
- › Minimizes community concern regarding drinking and agriculture water supply
- › Less impact on sources of fresh water and their ecosystems
- › Reduces truck traffic of moving water over local roadways
- › Reduces damage and repair to local roadways