

# REFRESH

RESOURCES



# Produced Water



## Flowback Problems

- H<sub>2</sub>S content
  - Atmospheric storage facilities
  - Plant issues
  - Disposal acceptance
- PH control
- NTU
- Safety

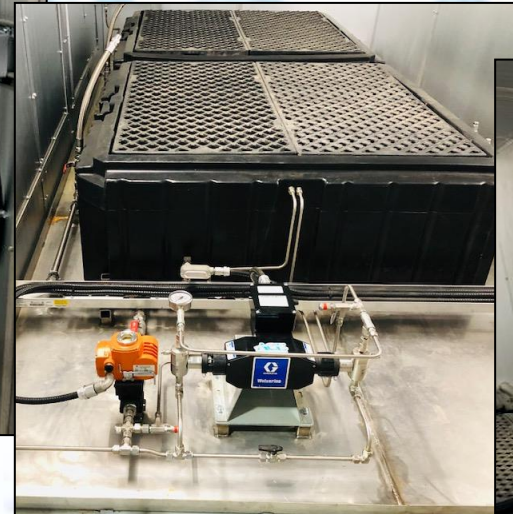
## Flowback Injection Solutions

- H<sub>2</sub>S control
- PH stabilization
- Emulsion breakers
- Scale control
- Iron control
- Anti-foam
- Corrosion inhibitors
- Paraffin control

# Equipment

## Specialized Flowback Skid

- H<sub>2</sub>S control
- 24' x 8' footprint
- Ties into low stage water leg
- 3" – 150 ansi – 316 SS piping
- Graco pump
- Cellular alarm system
- 2,200L chemical storage capacity





# Equipment

## Specialized Flowback Trailer

- 40' x 9' Footprint
- 3" – 150 ansi – 316 SS piping
- H<sub>2</sub>S control
- Injection for PH adjustment
- Cellular alarm system
- Fully automated
- 2,200L H<sub>2</sub>S / 1,100L PH storage capacity



# Equipment

## Pump Skid

- 10' x 4' footprint
- Variable flow rate
- Multi volume storage capacity
- Adjustable to all applications
- 110V connection
- Fork pockets





# Frac on the Fly

- Reduction of chemical costs
- Ability to manage chemical volumes
- Ability to pump precise dosage
- Scalable to frac specifics
- Pumpable chemicals
  - Surfactant
  - Biocide
  - Stimulation aids
  - Scale inhibitors

# Benefits



## Fundamental

- PW reuse
- Flow directly to storage facility
- Asset integrity
- Overall water quality
- Efficiency
- Proactive approach

## ESG

- Safety
- Disposal reduction
- Water preservation
- Transport trucking reduction

# Full Cycle Solution



## Flowback

- Remove problematic components prior to storage

## Maintenance

- Ensure a reliable source of frac water

## Frac on the Fly

- Save money by managing frac suite

