

December 5-6, 2018

Norris Conference Centers -
City Centre, Houston, Texas
ShaleTechConference.com

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**“Technology that puts
water to work.”**

Michael Fontaine
Director of Business Solutions
Select Energy Services



Overview

- AquaView[®] Technology Group
- System Overview
- Automated Pumps & Monitoring
- Automated Proportioning System
- Automated Manifold
- Boat & Drone Surveys
- Conclusion / ChemFeed Treatment

AquaView[®] Technology Group

Dedicated team to developing and deploying Select's automation technology in the water space including water treatment and disinfection.

- Automated pumps to improve water transfer quality and safety.
- Remote Tank Monitoring
- Remotely view water quality data and volumes being treated and stored.
- 24/7 Command Center for job quality oversight.

What keeps you awake at night?



Automated Systems Overview

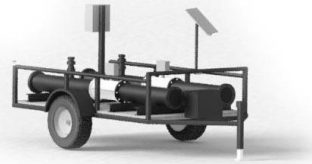
Water
Source



Frac
Location



Source Pumps



Mag Meter Trailer



Booster Pumps



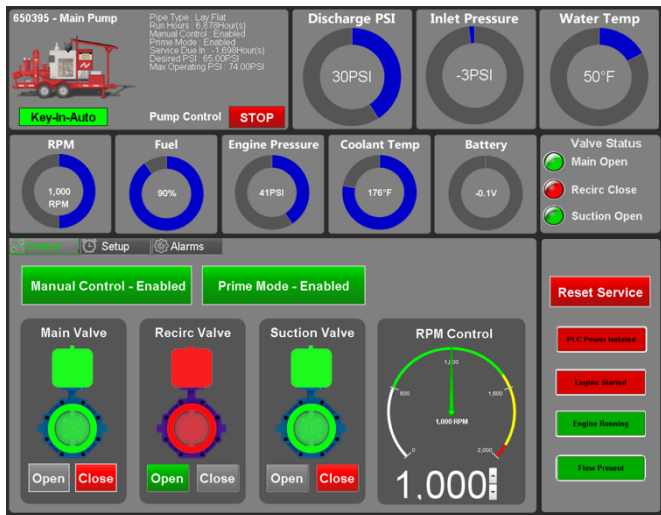
Automated Proportioning
System (APS)



Automated Manifold

Automated Transfer Pumps

- Remote Controlled and Automated
- Programmed Safety Features
- Self-priming Mode & Booster Mode
- Fuel and Maintenance Sensors



Monitoring & Alerts

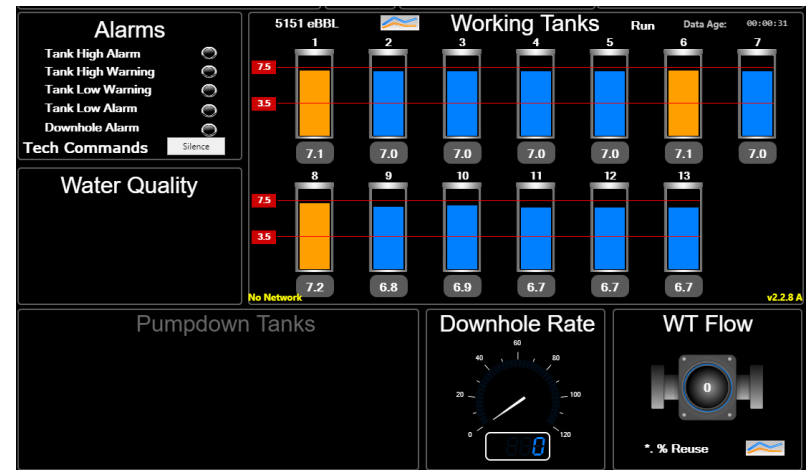
Automation + Communication

- Alarm levels set on the high and low side to alert our team to problems.
- Alarm warnings that require onsite acknowledgement or alarm notification starts.
- Downhole rate alarm that notifies our team of a stage starting.
- Alarm tree that sends text messages and phone calls to onsite and offsite personnel.
- Communicates with pumps and can tell pumps to shutdown to prevent overflows.

Real-Time Visibility

24/7 command center adding additional oversight for all jobs

Screen provided locally for the water transfer team to monitor tank levels

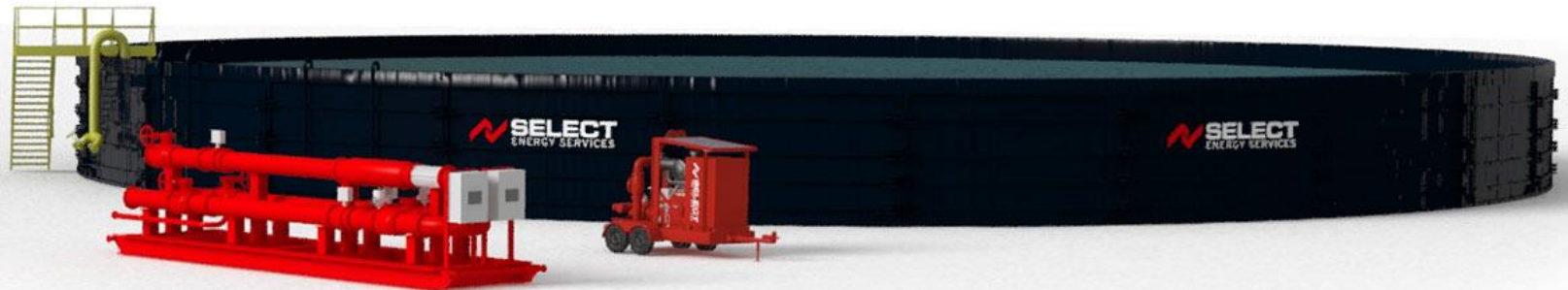


Automated Proportioning System (APS)

Optimizing Water Treatment Programs

Problem

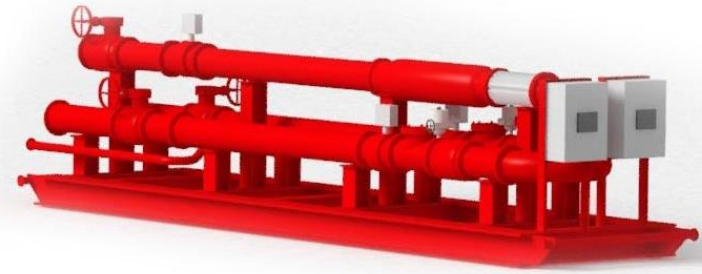
Inconsistent blend percentages and lack of real-time water quality data forces the operator to use more chemical than is needed, resulting in unnecessary expense with the potential to affect well production.



Automated Proportioning System (APS)

Accurately combines flowback or produced water volumes into a freshwater transfer.

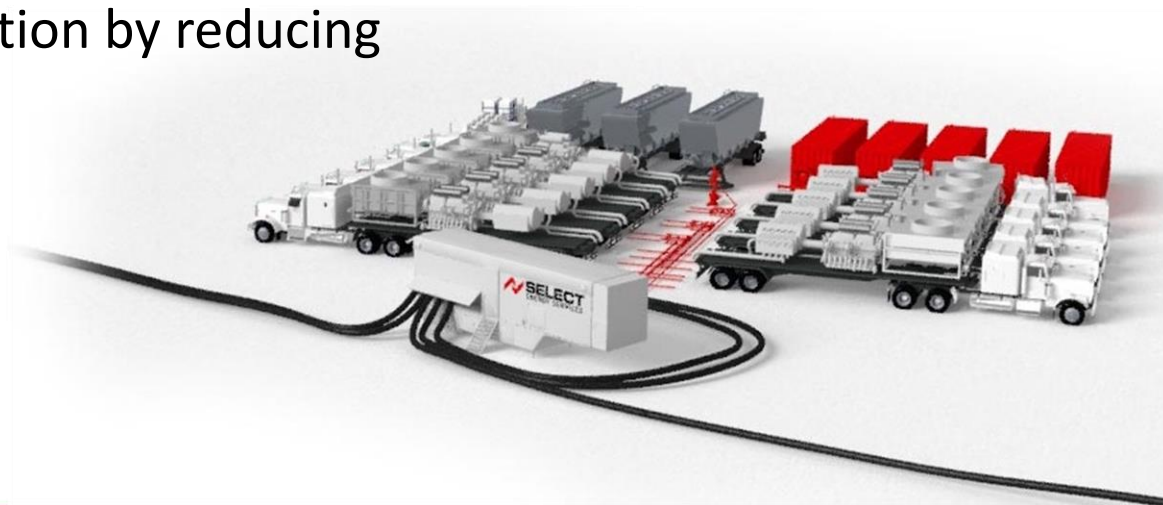
- Combines water to a specific conductivity number or blend percentage.
- Valves automatically maintain the target blend KPIs provided by the customer that is then input into a local PLC.
- Pumps respond to APS valves automatically to reduce the flow rate, maintain the proper blend, and reduce pressure on the line.



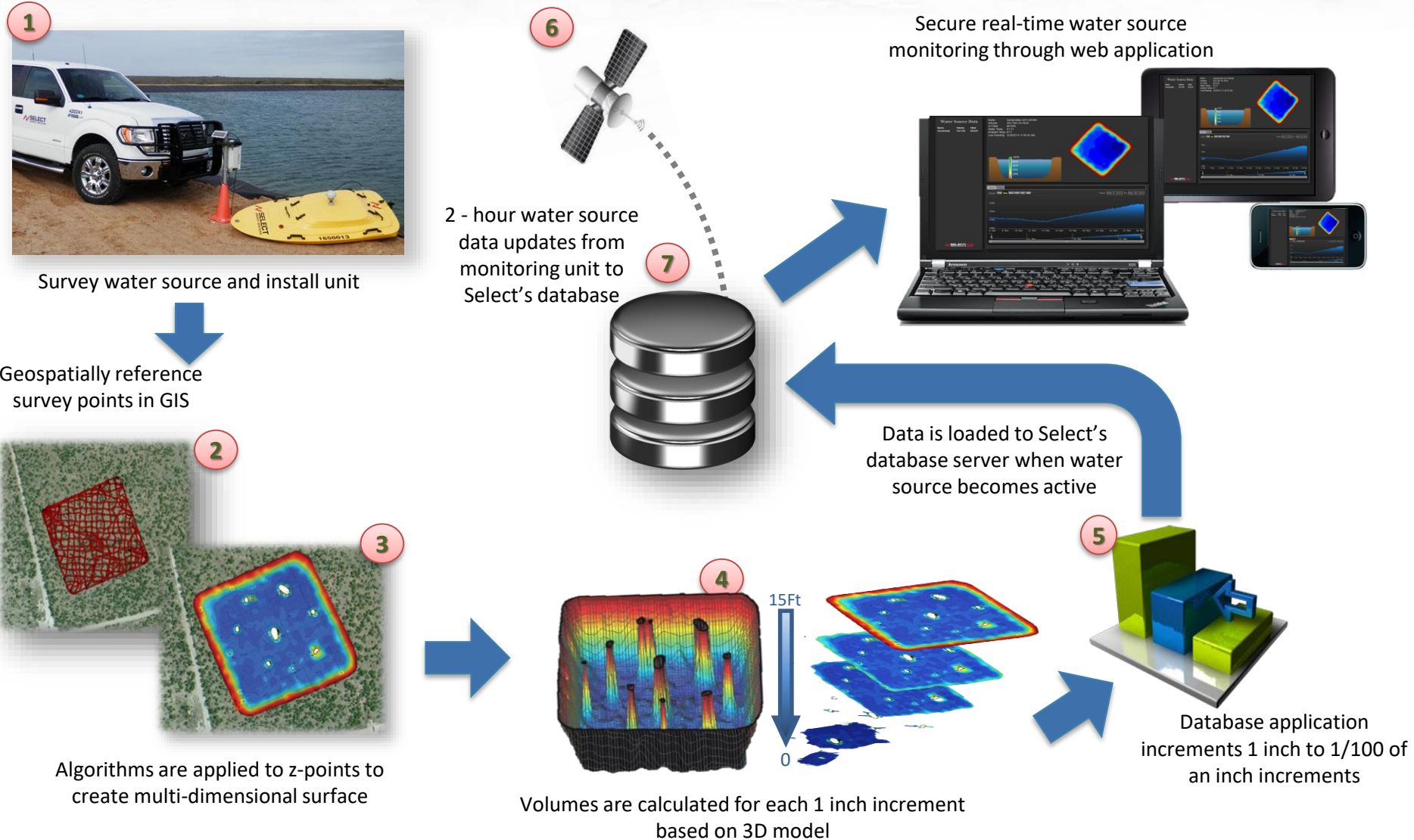
Automated Manifold Trailer

Centralized control for critical water storage on location.

- Direct, combine, halt flow of water to multiple destinations and storage tanks.
- Automatically actuated valves maintain volumes in up to 20 monitored tanks
- Dynamic to feedback — ideal for high-rate frac scenarios
- Improved safety on location by reducing walk-through traffic and tank level gauging

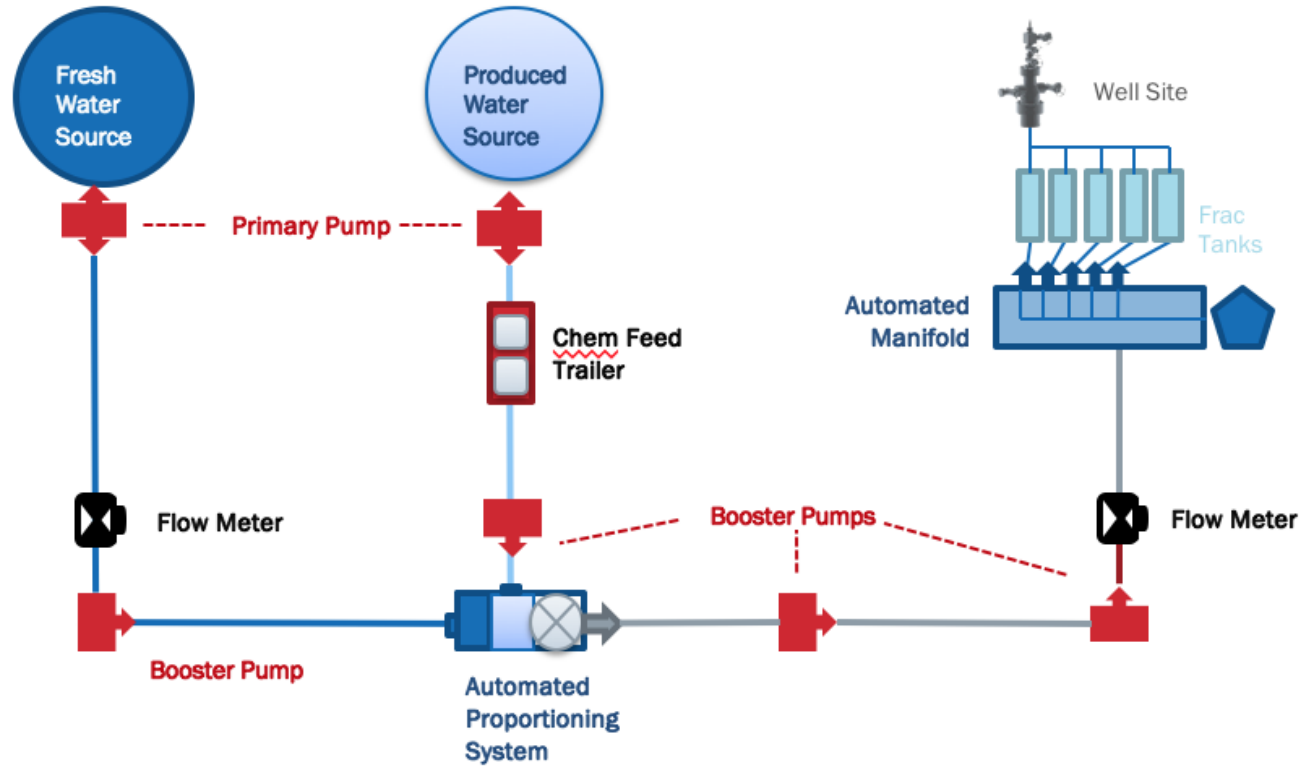


Pit & Drone Survey Process



Conclusion

Typical Fully Automated Project with Water Treatment



Treatment Highlight ChemFeed Trailer

- On-the-fly chemical dosing system
- High-rate oxidative biocide treatment



Questions?

