



# The Clear Water Revolution

Joining forces to treat  
and reuse wastewater

AWT Annual Convention and Exposition – September 2017



*A leading provider of water treatment solutions.*

# The World's Water Problem...



- By 2030, world demand for water will outstrip supply by 40 percent.
- Close to half of the world's population will be living in water-stressed areas.

Source: "[A Blue Revolution – Global Water](#)"

# Historic Market Opportunity



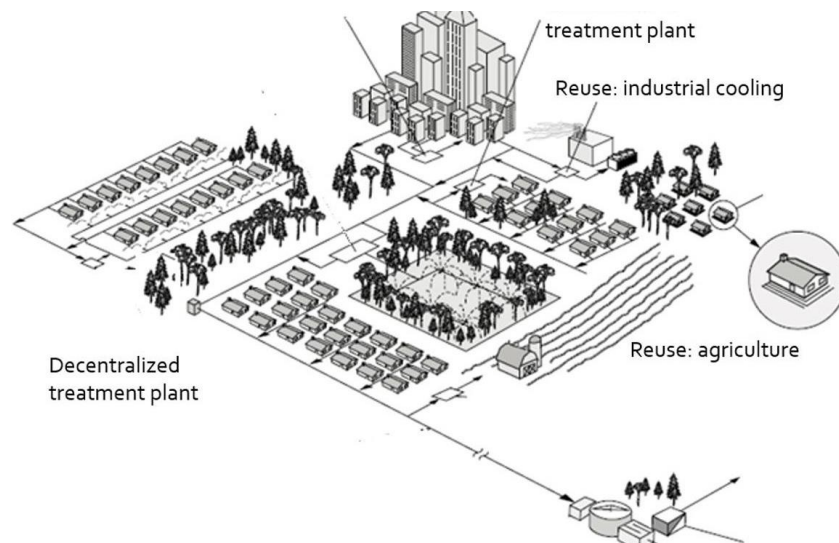
- Global water services industry to double to \$1 trillion by 2020.\*
- US Market: \$130 billion (2010), sectors growing 20% annually.\*\*

\* [A Blue Revolution – Global Water](#)  
\*\* [American Water Works Association](#)

(2012)  
(2011)

# Meanwhile, Decentralization...

- America's water treatment infrastructure is broken.
- Quarter trillion dollars required to fix it – not going to happen!
- Alternative: end users process water on site.
- This is the distributed water revolution.



Source: [Lux Research](#): The Future of Decentralized Water

# US Growth Drivers



- Corporate specialization:
  - *End-users focus on their core business and outsource water treatment.*
- Shortages & low quality feedwater sources:
  - *End-users adopting alternative sources requiring more treatment.*
- Regulation & risk management:
  - *More stringent regulations with associated risks for failure.*
- Higher demand for complete water solutions:
  - *Partial solutions lead to failures and higher risk.*
- Water reuse & recycling:
  - *Increasing emphasis on environmental sustainability.*

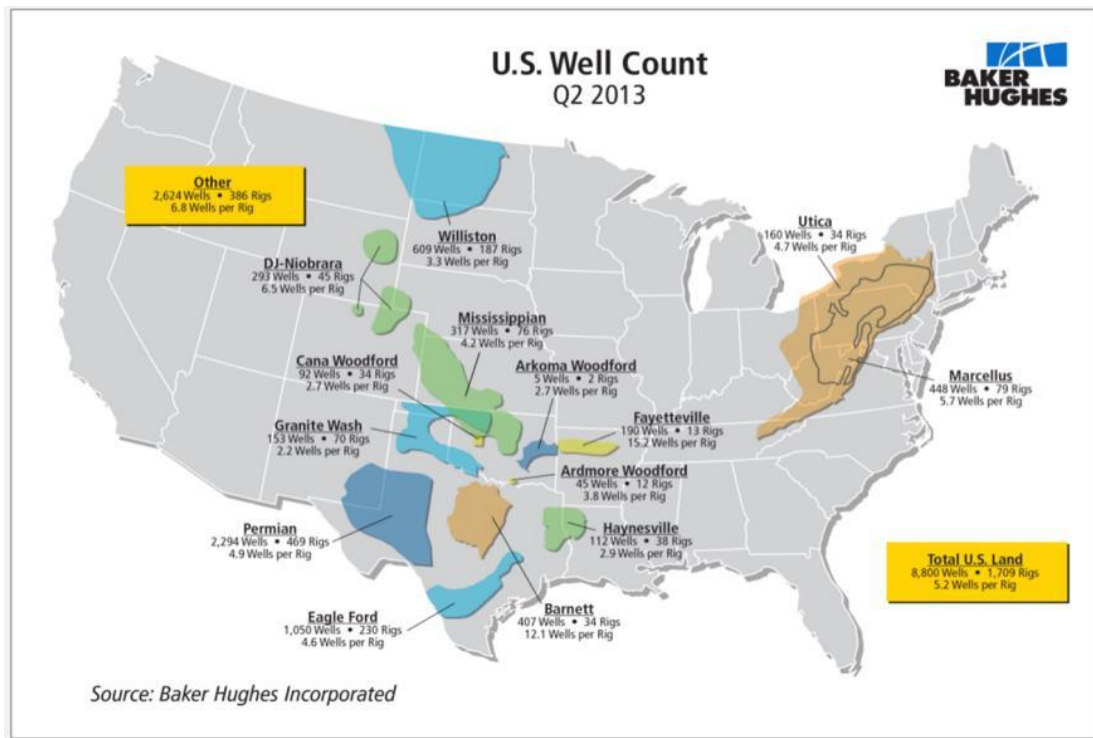
\* [Industrial Water Services](#), Global Water Intelligence (2015)

# Breaking Down the Market?



- Certain Applications Are National
  - Municipal Waste, Drinking Water
- Industrial Applications Have Particular Challenges
  - Oil & Gas
  - Bottled Drinking Water
  - Beverages
  - Process Water
  - Landfill Leachate
  - Pharmaceutical
  - Livestock
  - Dairy & Cheese
  - Electronics
  - Mining
  - Irrigation
  - Environmental

# Highly Variable Requirements



- High level of total dissolved solids (TDS)
- Oil and grease
- Suspended solids
- Dispersed oil
- Dissolved and volatile organic compounds
- Heavy metals
- Radionuclides
- Dissolved gases and bacteria.
- Chemicals (additives) used in production such as biocides, scale and corrosion inhibitors, and emulsion breakers



# Bottled - More Than Tap Water



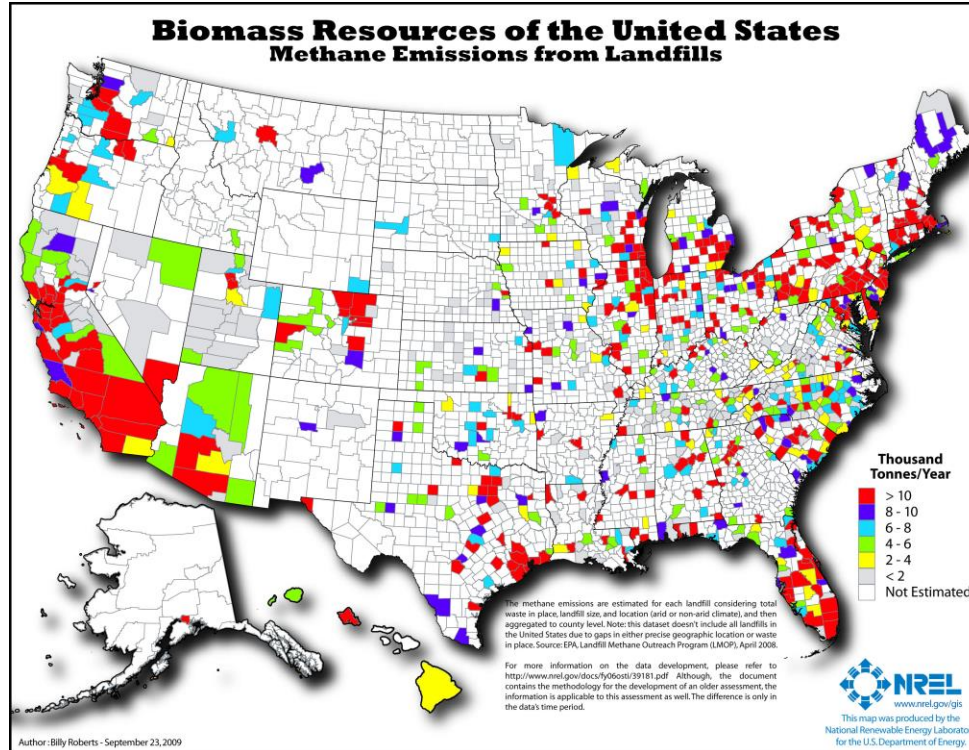
Bottled water is full of hormone-disrupting chemicals. Anti-estrogens and anti-androgens are present in the majority of bottled water.

[PLOS Pathogens](#)

(2013)



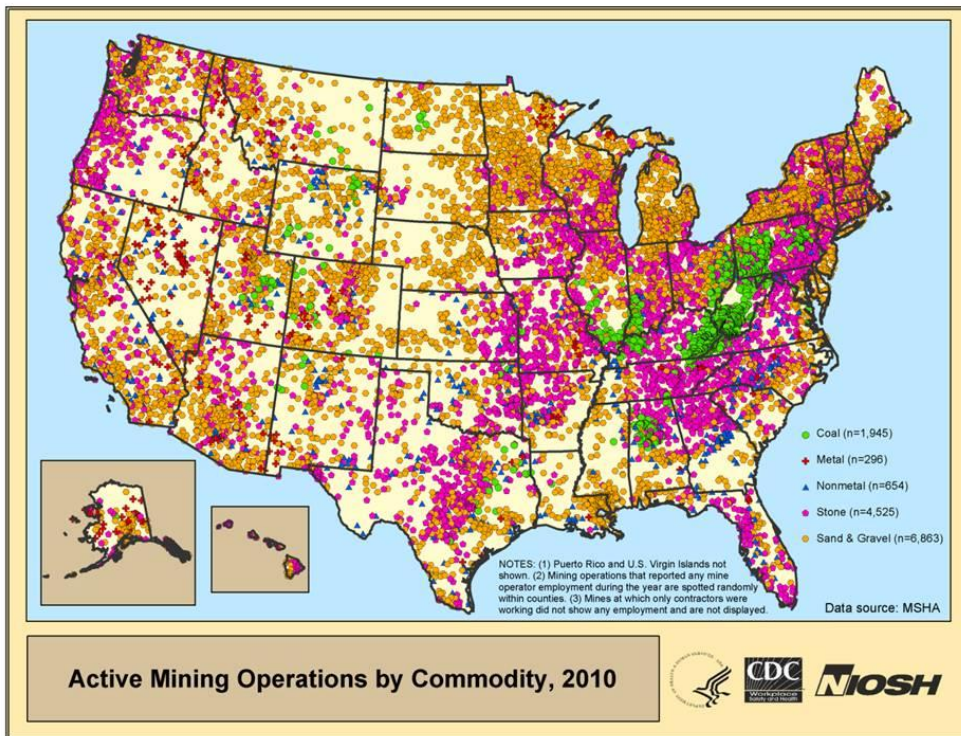
# Toughest Challenges



Four groups of contaminants:

- 1 - Dissolved organic matter (alcohols, acids, aldehydes, short chain sugars etc.),
- 2 - Inorganic macro components (common cations and anions including sulfate, chloride, iron, aluminum, zinc and ammonia),
- 3 - Heavy metals (Pb, Ni, Cu, Hg), and
- 4 - Xenobiotic organic compounds such as halogenated organics, (PCBs, dioxins, etc.).

# Mining – Effluent Challenges

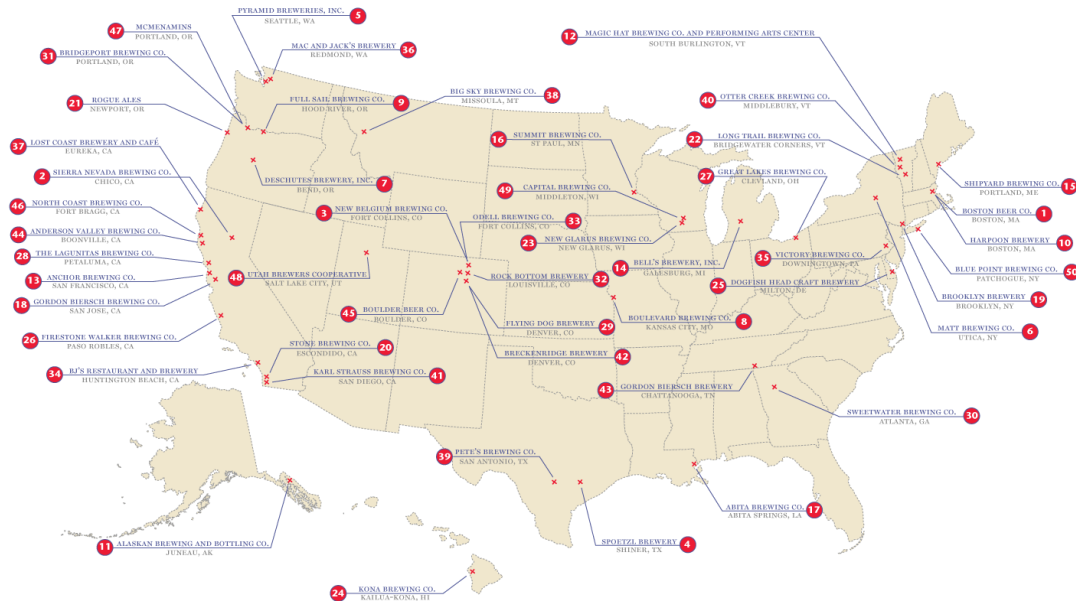


Potential contaminants:  
Dissolved arsenic,  
copper, lead, nickel, zinc,  
cyanide, radium-226,  
total suspended solids,  
pH and toxicity

# Purification & Effluent Treatment



## TOP 50 CRAFT BREWERS IN AMERICA

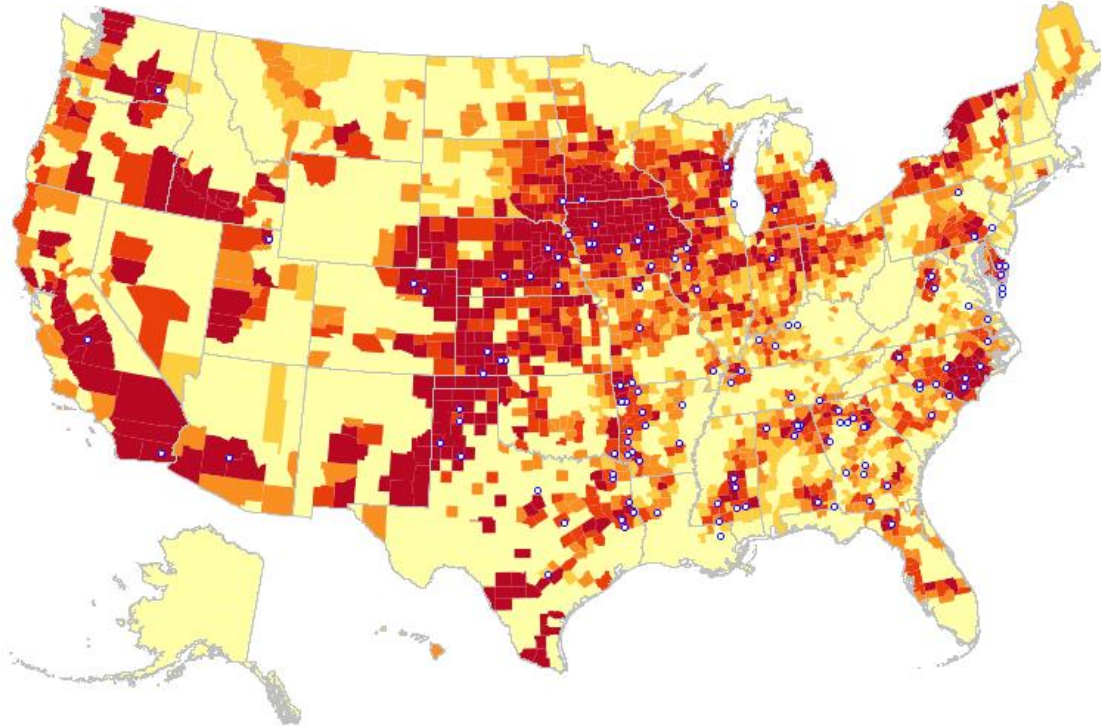


sloshspot.com

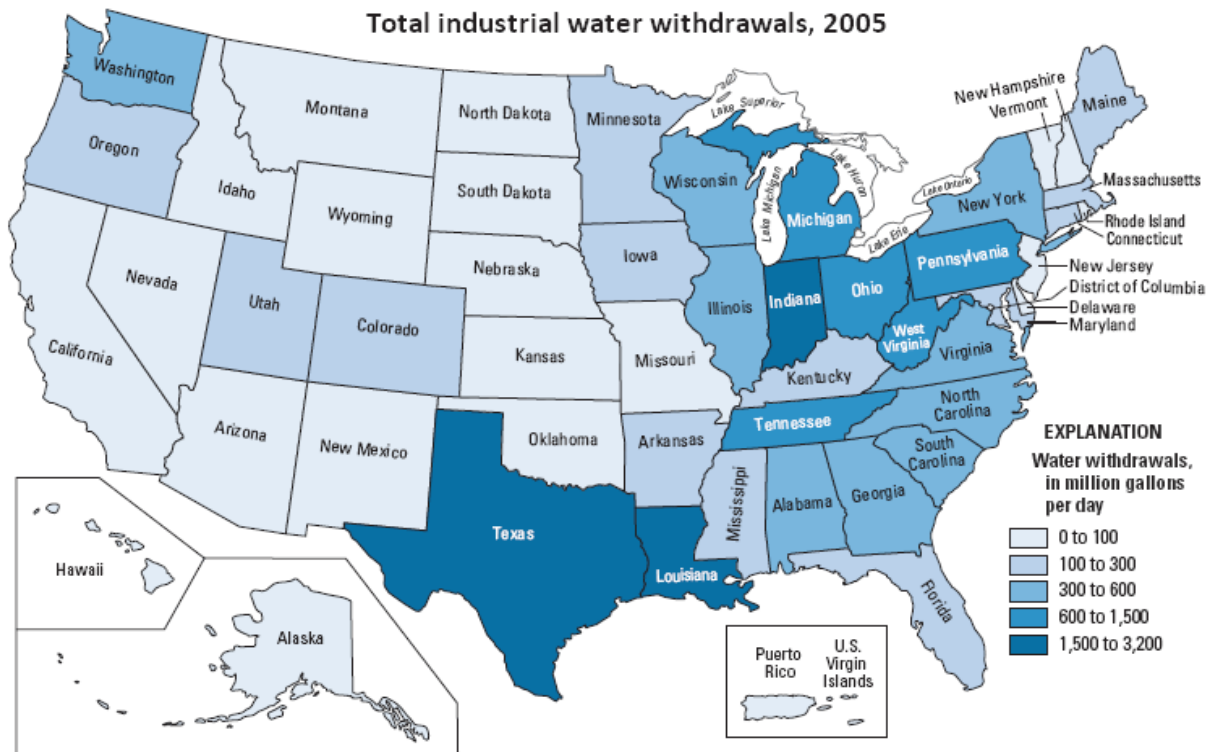
SOURCE: BREWERS ASSOCIATION TOP 50 LIST  
(BASED ON BEER SALES VOLUME)



# Meat Farms – Effluent Challenges



# Huge Variety of Challenges



# What Does The Market Want?



- End users do not have nor want in-house expertise.
- End users do not want just a pump or a membrane or ....
- End users want/need a complete solutions.
- End users want guaranteed performance.
- End users want excellent customer service.
- End users want the best pricing.

# Typical Service Suppliers

- Large service suppliers such as Veolia, Suez, Nalco ....
  - Typically deal with large projects.
  - Typically supported by engineering firms who design infrastructure.
  - Typically lower service levels with less than entrepreneurial spirit.
- Smaller service suppliers or system integrators like: Progressive Water, Pure Aqua, Dynatech, AdEdge, Harn ....
  - Typical projects range from \$25K to \$5M.
  - Very customer oriented with great customer service.
  - Support from equipment and chemical suppliers



# Fragmented US Services Market



- Over 100 U.S. local and regional solution providers with...
  - Established customer bases, high percent of repeat clients.
  - Specialization: potable, power, process, waste...
  - Strengths: membranes, media, chemicals...
  - Highly personalized customer service...
  - Limited sales representation and marketing scope.
- Companies are owner-operated, entrepreneurial.

“This is a highly fragmented and regulated industry with limited competition for complete service providers”\*

\* [Heckmann to Acquire Thermo Fluids](#) (2012)

# How Solution Providers Provide Better Service to End Users?



- By networking together in a Group:
  - Share market and application solution knowledge
  - Bring new technologies to solve a treatment problem.
  - Better performance with more effective designs.
  - Lower costs with better manufacturing expertise.
  - Lower costs by sharing engineering and manufacturing capacity.
  - Consolidate corporate outsourcing to national accounts.
  - Better long term service programs from regional “partners”.

# Group Benefits

- What are the benefits to my company?
  - Access to new business through the Group's customers.
  - Access to new technology and manufacturing expertise.
  - Access to the Group's national sales rep network.
  - Access to more bid opportunities.
  - Access to new service opportunities.
  - Access to financing.
  - Access to PR, website development & eCommerce
- Bottom line is higher sales growth and more profits while maintaining my independent operation.

# Why Join the Group?



- Answers questions you have been asking yourself:
  - How can I build on my success and take it to the next level?
  - How can I gain maximum advantage?
  - How can I keep my decision making independence?
  - How can I gain personal liquidity and exit strategy?

# Why Join the Group?



- What does it personally mean to owners?
  - Personally gain from your company's standalone growth.
  - Personally gain from your company's growth due to the Group.
  - You maintain your brand and independent decision making.
  - Your employees benefit from company growth and stock options.
  - You participate the Group Business Team for future growth.
  - You participate in the appreciation of OriginClear stock.

# Management Team



Riggs Eckelberry

Founding Chairman  
and CEO

Multiple dotcom exits including  
Yellowpages.com in 2004.  
Prepped CyberDefender for  
NASDAQ IPO mid 2000s.

Jean-Louis Kindler

President, OriginClear  
Technologies

Co-founder of OC joint venture  
Ennesys. CEO MHS Equipment  
(42 M€, 360 employees in 2008)

Bill Charneski

President, OriginClear  
Group

15 years Dow Chemical in  
management, sales; acquisition  
and innovation track record.

Marc Stevens

President, Progressive  
Water Treatment

Over 15 years, built PWT into  
solid water player with  
outstanding reputation.