

TruClean™

Water Management Services and Solutions

Providing an operationally simplistic water management solution—without sacrificing safety and treatment effectiveness—comes down to chemistry. **Our chemistry.**

The oil and gas industry uses a significant amount of water in the pursuit of hydrocarbons and natural gas. So whether it is water for hydraulic fracturing applications or water from producing wells, the need for a safe, operationally simplistic, yet highly effective water treatment is critical for clients.

On average, a shale well requires six million gallons of water to drill and complete, while in a producing well, for every barrel of oil, eight to ten bbls of water is typically produced. In each of these applications (instances), the water is typically very poor quality and contains contaminants, such as microbes, salts, and iron that if left untreated will lead to cause damage of downhole and surface equipment.

In an effort to keep water costs low, while protecting equipment and meeting rigorous safety and regulations, the obvious method is water recycle. Which is why Innospec Oilfield Services continues to evolve its **TruClean** Water Management Services and Solutions portfolio.

With its TruClean offering, Innospec takes a prescriptive treatment approach to solving challenges in:

- Frac and Water Storage Pits
- Injection Wells
- Pipelines
- Produced Water Tanks
- Producing Wells
- Production Separation Equipment
- Refinery
- SWD
- Water Reclamation/Reuse Facilities
- Water Storage Systems (Commercial)

Operationally simplistic, TruClean products are purely chemical. That means no expensive equipment is required.

Giving you a clear performance and economic advantage, our basin-specific field support—backed by unequalled expertise with product synthesis—allows us to develop, deliver and implement a superior treatment program that addresses your increased focus on cost without sacrificing safety or effectiveness.

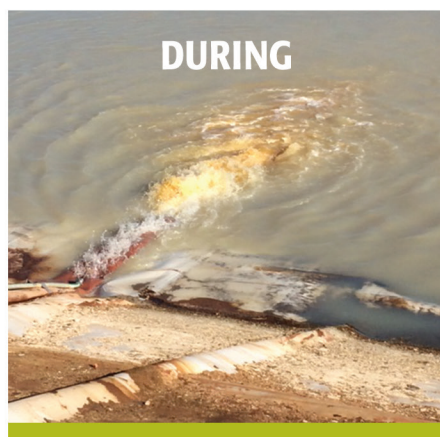
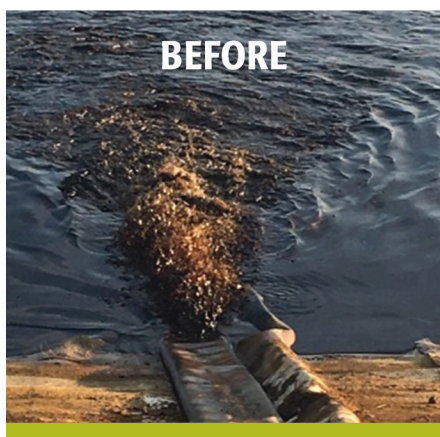
Backed by more than 40+ years of field and technical experience, **TruClean** Water Management Service is specifically designed as to provide clients a versatile, one of a kind chemistry to keep treating costs low—yet effective.

TruClean delivers clear performance and cost advantages over competitive products.

Flowback and produced water can have both ferrous and ferric iron known as total iron, along with calcium, magnesium, barium, strontium and other known scale-forming ions.

As a bio-chelant, the **TruClean** products specifically chelate ferrous and ferric iron at a ratio of 2:1 and 3:1, respectively on a stoichiometric dry weight basis. This treatment plan improves the economics over competitive products—which must overcome other di/tri-valent cations.

For example, in head-to-head field proven tests with the environmental anti-microbial reagent Tetrakis (Hydroxymethyl) Phosphonium Sulfate—better known as THPS—**TruClean** required 70% less product volume on a 100% wt. basis to control ferric scales.



TruClean can be combined with a multitude of other oilfield additives to create a robust combination product when required and has been applied as a primary or secondary constituent to approved cap string, gas-lift, production, and stimulation products.

TruClean can also be applied in an oxidizer mixture to provide iron control during and after the oxidation process. This suite of products also includes various formulations to include just an oxidizer, and oxidizer with an iron chelant and also a tri-combination of oxidizer/iron chelant and water wetting compounds to assist in removing oil from the solids making it easier to address the solids. **TruClean** is not affected by pH. It can be applied in an acidic environment (with 28% HCL) and has sequestering capacity to a pH of 13.5 (above other competitive chelants).

PRODUCT NAME	DESCRIPTION
TruClean 1000	Registered PAA Biocide/Iron Sulfide Scavengers
TruClean 2000	Non-Registered Iron Sulfide/H ₂ S Scavengers
TruClean 2050	Iron Chelant
TruClean 2056	Iron Chelant (Heavily Winterized)
TruClean 4003	Oxidizer
TruClean 4004	Oxidizer/Water Wetting Compound
TruClean 4006	Oxidizer/Iron Chelant
TruClean 4007	Oxidizer/Iron Chelant/ Water Wetting Compound
TruClean 4008	Oxidizer/Iron Chelant/ Water Wetting Compound



Scale/Corrosion and Iron Control Tri-Combo Series

A blend of organic acids for treating scale, corrosion and iron, Innospec also offers our CSW tri-combo solutions to include an iron chelant, a scale inhibitor and a corrosion inhibitor package all of which are specifically designed to remediate iron sulfide and prevent iron sulfide or any precipitating ferric scale.

PRODUCT NAME	DESCRIPTION
CSW-9509 CSW-9537	The CSW series consists water soluble blended formulations of corrosion, scale and iron chelating compounds and dilutions that are specifically designed to control multiple issues with one product application.
CSW-9528 CSW-9720 CSW-9722	
CSW-9700 CSW-9702 CSW-9730 CSW-9732	
CSW-9550 CSW-9750 CSW-9752	

When it comes to complete water management solutions, Innospec has the answers to your most pressing treatment cost, safety and performance concerns.

It's simple: perfect chemistry between you and your oilfield chemical supplier results in superior returns. From initial recovery straight through to injection well storage, Innospec has the right chemistry that gives you the cost, performance, and protection advantages you need in today's oil market.

For additional information about our **TruClean** product line, please call us at **713-936-4340**, or visit us at **www.InnospecOilfield.com**.