



Overview:

Hydrosmart’s bond breaking technology works on all minerals in water. It alters the otherwise predictable outcomes that occur if left untreated: i.e. unfavourable outcomes due to the minerals bonding. Altered outcomes by use of the technology are that minerals are relatively freed from bonding.

Gains differ for various uses and there is usually no significant lowering of Total Dissolved Solids (TDS) or Electrical Conductivity (EC) readings. In most cases these will remain the same or similar due to the same atomic masses being present before and after. Changes effected are instead in the charged state of the compounds, through dissociation of ions.

Application	Comments
Drip Irrigation - farms	<ul style="list-style-type: none">• water commonly at 1,500 ppm to 4,000 ppm• used to unblock irrigation systems and improve plant health and crop yields• the more iron and calcium the better to boost the vigour and growth of plants when minerals become “unlocked” from water
Vineyards using bore/dam sources	<ul style="list-style-type: none">• up to 4,000 ppm on vines with improved growth, fruit quality and yields the more iron and calcium the better the boost to vigour and growth when minerals become unlocked from water
House holders using bore water	<ul style="list-style-type: none">• lawns - up to 10,000 ppm• gardens and vegetables - water up to 6,000 ppm the more iron and calcium the better the boost to vigour and growth when minerals become unlocked from water
Ranch/homestead owners using bores and dams	<ul style="list-style-type: none">• lawns-up to 10,000 ppm• gardens and vegetables - water up to 6,000 ppm the more iron and calcium the better the boost to vigour and growth when minerals become unlocked from water
Turf Farms	<ul style="list-style-type: none">• iron, scale, salinity issues varying levels as high as 76 ppm iron, 3000 ppm on greens 8,000 ppm on fairways• the more iron and calcium the better the boost to vigour and growth when minerals become unlocked from water
Golf Courses	<ul style="list-style-type: none">• iron, scale, salinity issues varying levels as high as 76 ppm iron, 3000 ppm on greens 8,000 ppm on fairways• the more iron and calcium the better the boost to vigour and growth when minerals become unlocked from water

Mining	<ul style="list-style-type: none"> • iron, calcium, gypsum scale removal and prevention, corrosion protection, chemical free softening of water used in campsites (bunkhouses), 1000 ppm (drinking), 5000 ppm (bathing and washing) • dewatering operations 1000 to 100 000 ppm, average 35,000 ppm
Stock water Sheep	<ul style="list-style-type: none"> • up to 9,000 ppm • prevent, reduce scouring and make water more appealing to drink
Stock water Beef Cattle	<ul style="list-style-type: none"> • up to 8,000 ppm • make water more appealing to drink, put weight on
Stock water Horses	<ul style="list-style-type: none"> • up to 5,500 ppm • make water more appealing and put weight on, improve muscle tone
Stock water Dairy Cattle	<ul style="list-style-type: none"> • up to 3,500 ppm • make water more appealing to drink, put weight on
Stock water Pigs	<ul style="list-style-type: none"> • up to 2,500 ppm • prevent/reduce ulcers, unblock pipes and feeders, make water more appealing to drink
Stock water Poultry	<ul style="list-style-type: none"> • up to 2,500 ppm • maintain watering system into sheds, descaling of cooling/misting fans
Seawater sites	<ul style="list-style-type: none"> • algae and microorganism management and water clarity improvements (shark bay tourist site) • ballast water on ocean-going ships
Wastewater	<ul style="list-style-type: none"> • textile industry - increase efficiency of treatment up to 20,000 ppm, remove and prevent blockages • municipal - increase water clarity
Freshwater aquaculture	<ul style="list-style-type: none"> • algae and microorganism management and water clarity improvements • reduce frequency of maintenance on filters

The specific rationale generally upheld by each of these clients varies, and comes under the following headings. These are not our claims, these are what the client is looking for. Often the outcomes match to the client's objective/s.

Irrigation client's rationale:

Irrigators both large and small of all styles and types from vineyards to orchards to vegetable farms to turf farms. All are looking to get better growth and profit outcomes using less water to do so.

Organic farming client's rationale:

Organic farmers who wish to clear out mineral blockages from irrigation system without the use of chemicals that may negatively affect soil microbiology and interfere with organic licensing. Improve percolation/penetration through soil to roots.

Greenhouse grower client's rationale:

Greenhouse farmers/operators generally want maintenance-free irrigation systems with improvement in yields. Especially price-by-weight crops

Stockman/rancher's rationale:

Ranch operators want to increase animal's preference to drink the available groundwater (which is free/cheap), rather than rain/dam/river water which they may pay for or is low in supply. They want animals to put weight on when drinking the groundwater.

County/council client's rationale:

Municipal counties/councils for irrigating parks and gardens with improved growth, infrastructure protection, lower water consumption due to easier percolation/penetration through soil to roots

Golf course client's rationale:

Golf Courses use artesian bore water and Hydrosmart to prevent blockages of pipes/sprays and increase grass health and vigour significantly. Prevention of iron staining on golfer's clothes

Ranch/station client's rationale:

Homes of farmers forced to use alternative substandard water sources to keep farm and home gardens going when rain water runs out or low and to have calcium/iron/salt managed in house and garden use.

Utility client's rationale:

Utilities looking to reduce chemical costs and offer non-chemical scale management

Wastewater client's rationale:

Textile factories wish to reduce chemical inputs on wastewater or produce wastewater of a greater clarity. Utilities and industries wish to clear large pipes of built up sludge that contains a mixture of organic and inorganic material. Counties wish to increase efficiency of secondary and tertiary effluent treatment ponds. Many uses on ship waste water including prevention of struvite buildup.

High tech client's rationale:

Clean-tech groups seek to reduce reliance on high energy consumption methods of water treatment. Chemical engineers seek to have new tools for transformation of molecules and compounds.

Aquaculture client's rationale:

Facilities that grow aquatic animals as food, or for display, wish to: increase water quality, increase average longevity of individual animals, and reduce frequency of maintenance on filters.

Mining client's rationale:

Campsite/township lime scale management. Mining engineers also have problems with minerals blocking large diameter pipes, reducing flow, blocking fine nozzles, preventing drum or spray function. Hydrosmart can also be used to improve profitability through mineral dissolution at the point of extraction, such as during grinding or leaching.