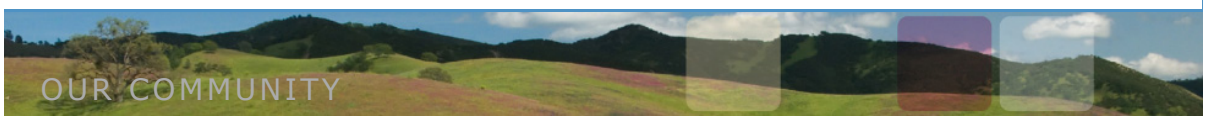
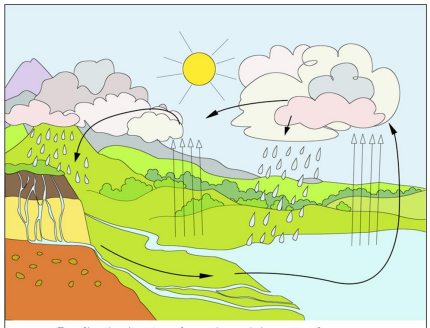


Uses of Desalinated Water

Desalinated seawater is used wherever high quality water is needed. Desalination is a natural process. As part of the hydrological cycle water is desalinated as it evaporates from the sea, and it provides the worlds' fresh water supplies as it falls in the form of precipitation. Modern desalination plants also start with seawater and remove salt and other contaminants to supply freshwater to communities in more than 150 countries. Today, more than 23 billion gallons per day of high quality drinking water is produced using reverse osmosis seawater desalination. Desalinated seawater is produced primarily for municipal/potable use and for agricultural irrigation but is also used extensively in many other applications where high quality water is required. For example, it is used to produce scale free water for boilers for the production of steam and where very high quality water is needed for the manufacture of pharmaceuticals, semi-conductors and hard disk drives.

> "As the State Water Action Plan lays out, water recycling, expanded storage and serious groundwater management must all be part of the mix. So too must be investments in safe drinking water, particularly in disadvantaged communities. We also need wetlands and watershed restoration."
>
> **Edmund G. Brown Jr.**
> *State of the State Speech, January 22, 2014*



Desalination is not modern science, it is a natural process: Sun or solar desalination is used by nature to produce rain which is the main source of fresh water on earth. All available man-made distillation systems are duplication on a small scale of this natural process.

Reverse osmosis membranes can be configured to produce virtually any quality of water desired. Today's seawater membranes reject about 98.8% of sodium chloride and other dissolved minerals. As seawater has a total dissolved solids (TDS) content of approximately 35,000 mg/l, the product water from seawater RO plants will have a TDS of well below 250 mg/l TDS. (The international standard for drinking water established by the World Health Organization is 500 mg/l TDS.)

Historically, the high energy use and high cost of the finished water has limited the use of desalination. New innovations in technology, along with the use of cold, clean water and heat rejection from the data center, result in a substantial decrease in power need.

> "If we could ever competitively, at a cheap rate, get fresh water from salt water, that it would be in the long-range interests of humanity which would really dwarf any other scientific accomplishments."
>
> **President John F. Kennedy**
> *1962*

This decrease, along with the ability to purchase low cost power due to the data center result in a much lower finished water cost than could be achieved with a stand alone desalination plant. As surface water and groundwater becomes less accessible because of overdraft and contamination, and sea levels continue to rise, cost effective desalination has been identified in the ***California Water Action Plan 2016 Update*** as part of our future water portfolio. The 2016 report ***What Will be the Cost of Future Sources of Water for California*** issued by the California Public Utilities Commission found that the overall cost of water, including recycled water, desalination and conservation, will be higher in the future.

Cost Comparison of Desalinated Water to Other Widely Used Consumer Goods

Product	Average Price ($/gal)
DWD Desalinated Water*	**0.005**
Bottled Water	3.84
2% Milk	5.49
Orange Juice	5.49
Coca-Cola	6.40
Tide Laundry Soap	15.36
Starbucks Coffee	32.00
Olive Oil	39.68

* Water Delivery at Fence