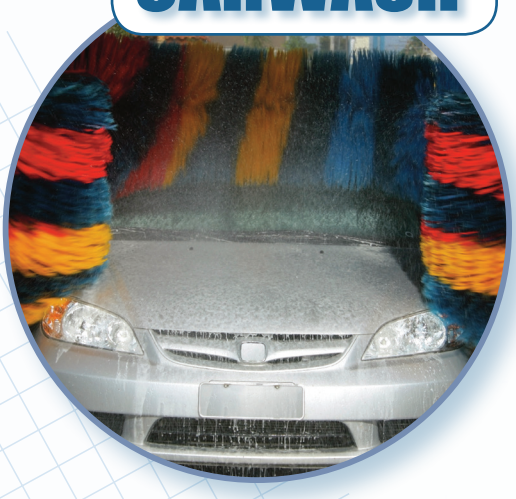
Canature™ WaterGroup
Commercial/Industrial Engineering Division

CASE STUDY
CARWASH



As a carwash owner, water quality is essential to not only a high-quality wash but also your **daily operating & longer-term capital costs.**

Two types of treated water are typically used in carwashes:

1. **Soft Water -** Untreated hard water (containing undesirable levels of calcium and magnesium minerals) will react adversely with all soaps and detergents. When heated, hard water forms harmful scale. A water softener exchanges these harmful minerals with harmless sodium ions.

   Benefits:

   - Detergent use can be reduced by 50%[1]
   - Higher foam levels, more consistent cleaning performance[2]
   - Lower water heating costs & extended equipment life - each 5 grains of hardness causes 4% loss in efficiency[3]
   - Protect flow rates from scale build-up through pipes, sprayers and nozzles

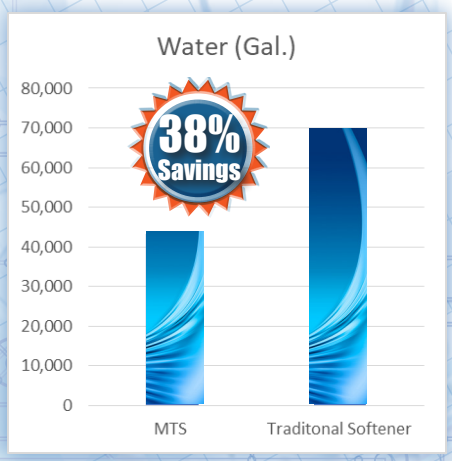
2. **Spot Free Water -** White spots are caused by both hardness minerals and high levels of total dissolved solids (TDS). Water with over 50 part per million (ppm) will leave spots.

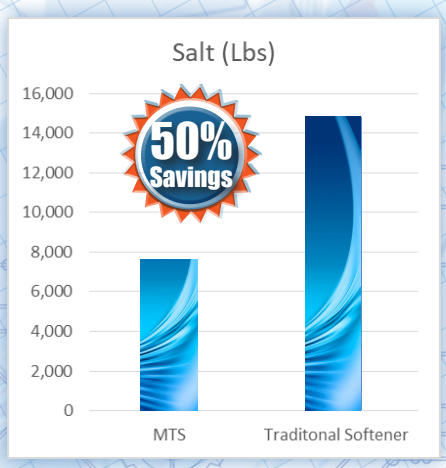
   While softened water will remove hardness minerals in exchange for sodium, this will not reduce the TDS. While spotting caused by sodium is easier to rinse away than that caused by the hardness minerals, the final rinse should have TDS levels below 50 PPM. Reverse Osmosis systems provide the ideal water for low TDS spot free final rinse.

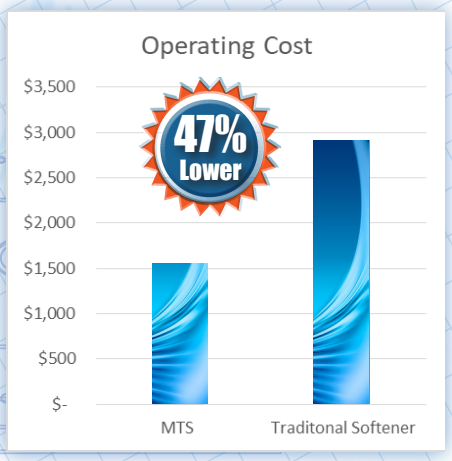
95 MTS Series Commercial Water Softener

High-Efficiency Technology Provides Savings You Can't Ignore!

Canature WaterGroup offers the newest high-efficiency water softening technology. The **Multiple Tank Softening System (MTS)** provides a higher **Return-On-Investment (R.O.I.)** through significantly lower salt and water usage as well as other advantages when compared to traditional water softeners.







[1] The Detergent Savings Study, Water Quality Research Foundation (2010)
[2] http://www.carwash.com/the-cold-hard-facts-about-water/
[3] The Energy Savings (Battelle) Study, Water Quality Research Foundation (2009)

CAR WASH - SINGLE AUTOMATIC

MAXIMUM HARDNESS - GPG	10	20	30	40	50
WATER USED PER WASH - GAL	38	38	38	38	38
AVERAGE WASHES PER DAY	55	55	55	55	55
TOTAL GALLONS PER DAY	2,090	2,090	2,090	2,090	2,090
TYPICAL COMMERCIAL SOFTENER					
SOFTENER EFFICIENCY - GRAINS PER POUND SALT	2,000	2,000	2,000	2,000	2,000
SALT CONSUMPTION PER YEAR - POUNDS	3,814	7,629	11,443	15,257	19,071
REGENERATION WATER PER YEAR - GAL	17,800	35,600	53,400	71,199	88,999
95MTS - HIGH EFFICIENCY					
SOFTENER EFFICIENCY - GRAINS PER POUND SALT	4,000	4,000	4,000	4,000	4,000
SALT CONSUMPTION PER YEAR - POUNDS	1,907	3,814	5,721	7,629	9,536
REGENERATION WATER PER YEAR - GAL	11,125	22,250	33,375	44,500	55,624
ANNUAL OPERATING COST - SALT ($USD)					
SALT COST PER 40 - 45 LB BAG	$6.00	$6.00	$6.00	$6.00	$6.00
TYPICAL SOFTENER	$572	$1,144	$1,716	$2,289	$2,861
95MTS - HIGH EFFICIENCY	$286	$572	$858	$1,144	$1,430
SALT SAVINGS	$286	$572	$858	$1,144	$1,430
ANNUAL OPERATING COST - WATER ($USD)					
COST PER GALLON WATER - 0.01	$0.01	$0.01	$0.01	$0.01	$0.01
TYPICAL SOFTENER	$178	$356	$534	$712	$890
95MTS - HIGH EFFICIENCY	$111	$222	$334	$445	$556
WATER SAVINGS	$67	$133	$200	$267	$334
ANNUAL SAVINGS (MTS SOFTENER vs. TRADITIONAL SOFTENER)					
SALT SAVINGS (LBS)	-1,907	-3,814	-5,721	-7,629	-9,536
SALT SAVINGS %	-50%	-50%	-50%	-50%	-50%

WATER SAVINGS (GAL)	-6,675	-13,350	-20,025	-26,700	-33,375
WATER SAVINGS %	-38%	-38%	-38%	-38%	-38%

OPERATING COST SAVINGS ($)	**$353**	**$706**	**$1,058**	**$1,411**	**$1,764**
OPERATING COST SAVINGS (%)	**47%**	**47%**	**47%**	**47%**	**47%**

Sources:

Water Used Per Wash -https://www.statisticbrain.com/car-wash-car-detail-industry-stats/

Average Washes Per Day - https://www.statisticbrain.com/car-wash-car-detail-industry-stats/

Industry Leading Support From Start to Finish

Canature WaterGroup has a dedicated division of

Professional Engineers with decades of experience focused solely on the Commercial market. The CIED Team supports and compliments our knowledgeable Field Sales Team. Together they provide complete support starting from the water analysis, sizing and selection right through to the installation.

- **Water Analysis**
- **System Selection & Sizing**
- **Professional Drawings and Specifications**
- **Installation Support**

MTS Softener Benefits:

Optimum Softening Efficiency

MTS systems use 40-50% less salt and regeneration water compared to conventional systems. During periods of high flow demand, tanks come on-line to add flow rate capacity. During periods of low flow demand, tanks go off-line ensuring optimal efficiency and product water quality.

Lower Capital Cost & Increased Flexibility

MTS systems are easily expandable and scalable. Additional tanks can be added to increase the capacity of the system as needed resulting in a lower initial investment compared to larger single or duplex systems.

High Quality Soft Water Assurance

Most traditional systems cannot detect low flow rates (or any flow during a power outage) resulting in system capacity being consumed undetected. MTS systems can detect flow rates under 1 g.p.m. and total flow during power outages for up to 9 hours insuring all water being treated is accounted for.

Consistent High Quality Soft Water

MTS series systems are engineered to prevent “channelling” which in other types of systems can cause hard water to leak through the bed during periods of low flow rates. MTS systems bring tanks on and off-line so that the flow rate through the tanks is always at optimal efficiencies to ensure high quality soft water.

Simple Installation and Maintenance

The MTS systems are simple to install and maintain. Service technicians familiar with common residential products can easily install or service MTS systems.

Reverse Osmosis Systems

Affordable solutions for applications up to 12,000 gallons per day.

Remove up to 98% of total dissolved solids in raw feed water.

Designed, Engineered & Assembled in the U.S.A.

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Commercial/Industrial Engineering Division

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