**NEW HOMES** 

CUSTOM & LUXURY HOMES

REFURBISHED HOMES

WATER FRONT PROPERTIES

**HOUSE BOATS** 

RETIREMENT COMMUNITIES

OFFICE COMPLEXES

MOBILE HOME COMPLEXES

ENHANCE
WATER QUALITY,
AND
IMPROVE
OPERATING
EFFICIENCY
AND EQUIPMENT
LIFE CYCLE

PROTECT
PLUMBING
EQUIPMENT &
APPLIANCES

ENVIRONMEN-TALLY FRIENDLY

CLEANER WATER IS HEALTHIER WATER

## WHAT IS IN OUR WATER?

# IS YOUR WATER SAFE ENOUGH TO USE & DRINK?



## **ARE YOU PREPARED?**

Do You Have An Effective Water Treatment System? FILTRATION • DEPOSIT CONTROL • DISINFECTION • PURIFICATION

TRIANGULAR WAVE TECHNOLOGIES FLUID MANAGEMENT SYSTEMS

YOUR VERSATILE FLUID MANAGEMENT SYSTEMS TO EFFECTIVELY MEET THE NEEDS OF ANY APPLICATION RESIDENTIAL, COMMERCIAL & INDUSTRIAL.

CONTROL SCALE DEPOSITS • BACTERIA • CORROSION • ALGAE

• COLLOIDS IN A VARIETY OF FLUID SYSTEMS

**YOUR SIMPLE AND SAFE SOLUTION** 



#### **Money Savings**

- Do you spend hundreds of unnecessary dollars per year for bottled water?
- Is it there when you need it?
- Do you know that 3/4 of all bottled water has ground water sources?
- Do you know what comes out of the ground?
- What will be in our water supply, ground water, or reservoirs tomorrow?
- Did you know that nearly half of all bottled water is treated municipal water?
- Do you taste the plastic from the container after you had a drink?
- Do you want to pay for water that still contains chemicals?
- Do you really want to carry, lift and store bottled water?
- Is the bottled water you buy good and safe enough for your family?
- Why pay someone else for something you can do for yourself?

#### Remember This...You Get What You Pay For

How many times have you bought the cheapest and been disapointed when it broke or failed to perform to your expectations? And how many times have you bought the best and been well pleased for a long time.

Many people mistakenly use traditional salt softeners for a purpose for which they are ineffective!...

#### SALT SOFTENERS DO NOT PURIFY WATER.

According to university studies, "People who have heart or circulatory problems or who are on low sodium diets may not want to soften their water. In addition to sodium, softened water (can be) harmful in other ways. Water contains trace elements of vital minerals found only in the human body; these tiny amounts have a profound effect on human health are removed by softeners. Softened water is not recommended for watering plants, lawns, and gardens due to its sodium content." twtwatertreatment.com deposit control systems give the benefits of soft water without adding harmful salt or removing health giving minerals.

#### **ENERGY SAVINGS:**

Initial estimates indicate savings of between 15% to 30% on water heating bills in hard water areas.

#### REDUCED HOUSEHOLD MAINTENANCE:

Prevents scale build-up and dissolves existing scale, making water heaters more efficient.

#### PROVIDES THE EFFECT OF SOFTENED WATER:

The water is scum-free and gives the benefit of soft water on skin, hair, clothes, and food preparation.

#### REQUIRES LITTLE OR NO MAINTENANCE

No moving parts. Design life cycle at 20+ years.

#### **PORTABLE AND COMPACT:**

Can be disconnected and brought with you when moving.

#### **EASY INSTALLATION:**

Requires little or no plumbing. A domestic electrical supply is all that is required. (other voltage/current sources available upon request).

#### **A New Beginning In Water Treatment**

- twtwatertreatment.com gives you water safe enough to drink, bath and cook.
- Free consulting
- Money back guarantee: Our treatment systems are designed and crafted to the same exacting standards required of fluid conditioning products and systems manufactured worldwide.



#### IMPROVE THE QUALITY & TASTE OF YOUR WATER

Control Scale Deposits/Bacteria Corrosion Algae/Colloids In Your Water-Fed System.

Eliminate the biofilm that serves as a breeding ground for disease -causing bacteria, collecting in your pipes, tubing and equipment.

#### THERE ARE THREE BASIC CAUSES OF WATER/FLUID **RELATED PROBLEMS**

#### Scale

- Problems: Loss of heat transfer efficiency
  - Flow restriction in pipes and frozen valves
  - Back pressure increases energy needed to pump
  - Reduced reaction vessel capacity
  - Localized corrosion
  - Visible surface scale objectionable

#### **Adverse Water Chemistry**

Problem: • General corrosion

#### Biofilm

- Problems: General corrosion Bio-corrosion (both general and
  - Sludge
     Disease and odors
     Bacteria, Algae, Fungus,

#### The End Results of Water Problems

- Wasted water Ruined equipment High energy costs
- Productivity losses
   Product contamination or quality problems
- Disease and odor in the water environment

#### **Materials That Deposit on Equipment and Cause** Water/Fluid Problems

Materials may be animal, vegetable, mineral, or corrosive water chemistry. The sources of the materials include: pollution, wind borne dirt, algae, chemical additives, viruses and bacteria that occur abundantly in the natural environment, and process components themselves. Some of the materials can grow, such as bacteria, algae, fungus, etc. A growing list of man-made poisons includes pesticides, herbicides, chemical fertilizers, auto emissions, industrial waste, etc.

#### **Treatment**

#### Scale, Adverse Water Chemistry & Biofilm Can Cost You Money!

Untreated fluid used in boilers, hot water systems, cooling towers and other fluid related equipment contains dissolved salts, gases and traces of many minerals and metals. These elements are the direct cause of scale buildup in pipes and equipment. If left untreated, scale buildup can increase fuel costs, repair and ongoing cleaning costs, downtime and may eventually result in significant equipment replacement. The bottom line is that if the problem-causing materials are controlled, then 85% to 90% of the problems are eliminated. Treatment options include removal and control.

- Removal involves physical or chemical cleaning, filtration, ion exchange, softening, demineralization, reverse osmosis.
- Control involves adding chemicals or ozone, or electro-magnetically conditioning the water.

#### What do I have to Know

Selecting a system that meets your needs is an important step. However, it is not as simple as reading a few ads for various filters and other treatment systems, or looking at a few samples, and/or industry catalogs.

The most effective fluid treatment systems utilize a variety of both removal and control methods depending upon the specific nature of the system/water being treated and its intended use. These combinations of techniques can be deployed to effectively solve your specific problems and can be designed to function together in a way that will enhance the effectiveness of each component in achieving the desired results.

#### Selecting a System for Your Needs

A comprehensive approach to selecting a fluid treatment system includes:

- Testing your water or fluid to determine the specific problems in it and your area
- Selecting the system and/or components of a system that will solve these problems
- · Installing and monitoring your system
- Periodically re-testing to insure that your old problems are being treated and controlled, and that new problems have not developed.

#### Installing and Monitoring Your System

A qualified engineer, plumber (and sometimes an electrician) is often required to install the system you select. It is recommended that you carefully review the owners manual and other literature accompanying your various components, and develop a thorough understanding of what you have. This little bit of extra effort is well worth your time and attention. Then prepare a service schedule (put it on your calendar) to insure that you are replacing filters, UV lamps, or other components as recommended by the manufacturer.

#### **Testing**

Although the testing approach may seem bothersome, it is like a good routine physical by a health-care specialist. Avoiding this step is to assume that "what you don't know won't hurt you." Sorry, but it will! Avoiding the truth may result in health problems and costly repairs to your plumbing system and other equipment.

#### Periodically Re-test and Evaluate Performance

Simply owning a water treatment system does not guarantee that your water will be safe forever. In addition to monitoring your system and providing for replacement of parts, you also need to periodically test and re-evaluate the quality of the water coming into your system to determine if changes or upgrades are needed. The ultimate responsibility is yours.

Conserve Water, save Energy...Non-Chemical, Safe, Cost-Effective water Treatment



## Salt and chemical-free water conditioning for any application

#### PREVENTS SCALE BUILD-UP

 Scale particles in the water receive an enhanced surface charge that causes them to repel each other and from the walls of the equipment.

#### **ELIMINATES TOXIC CHEMICALS**

- · No recurring chemical expense.
- No handling and storage of hazardous chemicals on site.
- No chemical discharge.

#### **REDUCES CORROSION**

- Reduces bio-corrosion by preventing the formation of biogrowth on vessel surfaces where bacteria can attack the metal.
- With higher concentration ratios and TDS, the pH will be higher and there will be much less tendency for corrosion.
- Prolongs life cycle of equipment.
- Increased cycles of concentration in cooling systems= significant water savings

#### **CONTROLS ALGAE AND BACTERIA**

- Bacteria and algae must attach to something before they
  can feed and reproduce. The Triangular Wave System keeps
  the bacteria, algae, and their food dispersed in the water, off
  of surfaces, and away from their biofilm breeding ground.
- Eventually the biofilm will die, too.
- Improve the operating efficiency and life cycle of process infrastructure and equipment.

#### SHORT PAYBACK PERIOD

- The combined reduction of water, chemical and energy costs is enough to pay for the Triangular Wave System in as little as 9 to 18 months.
- With the Triangular Wave Treatment, the systems can run
  at higher concentration ratios, meaning the amount of water
  removed as blowdown and the corresponding sewer
  charges are greatly reduced. TWT treatment equipment is a
  reusable investment and retains its value if you move your
  facility or reengineer your plumbing system, TWT equipment
  moves with you.
- With no chemicals being added, the requirements for pretreatment of blow down are eliminated.
- One time cost vs. recurring monthly chemical= better profit margin
- Labor costs for maintaining the systems will be reduced.
- Labor costs to clean the vessel surfaces will be reduced.
- Costs to replace corroded parts like heat exchanger tube. bundles, etc. will be reduced.
- Less downtime for equipment repairs and maintenance= increased production
- The Triangular Wave System requires little or no maintenance.
- There is little electrical current flow through the electromagnetic system
- Reduces energy costs use through improved heat transfer efficiency.

- Increased heat transfer from non-scaled tube surfaces= significant energy savings
- Easy interface with facility management hardware and software systems for centralized management

## THE TRIANGULAR WAVE SYSTEM GIVES ALL OF THE BENEFITS OF SOFT WATER WITHOUT THE HARMFUL SALTS

- Give the benefits of soft water without adding harmful salt or removing health giving minerals.
- Prevent any further hard scale build-up in and on water equipment and fixtures.
- Remove the existing scale that is inside the water system.
- Soften the existing hard scale around taps, basins, and toilets, etc.
- 5. Reduce soap scum and improve the lather of soap.
- 6. Make the water feel silkier.
- Reduce the harsh effects of hard water on skin and clothes.
- 8. Reduces water spotting on fixtures and surfaces in contact with the water.
- Provides a much more environmentally friendly solution to hard water – no salts or chemicals.
- 10. The water will taste better, as pipes will be cleared of both mineral and biological deposits.
- 11. Plants that receive the treated water will grow better.

## HERE IS WHAT YOU GET WHEN YOU PURCHASE A TWT FLUID MANAGEMENT SYSTEM!

- The knowledge that you are protecting you family, pets and assuring them of a clean water solution.
- · Cleaner water is healthier water
- In effect, a clean, corrosion-free delivery system is restored and maintained in a environmentally safe and chemicalfree manner. The result is clean pipes and tubing with no biofilm and reduced contamination.

## END-TO-END WATER TREATMENT SYSTEMS FOR YOUR HOME OR OFFICE

Buy and install a complete  $TWT^{\circ}$  water treatment system or the TWT component desired.

#### FILTRATION SYSTEMS:

Filters are designed to trap various kinds of debris, dirt and organic particles that will otherwise enter your equipment and/or plumbing system, restrict your water flow and create a breeding ground for bacteria. Filtration is the first line of defense for residential, commercial, industrial facilities, where the source of water may be ponds, wells or streams that have high exposure to contamination from airborne pollutants, surface run-off, agricultural or industrial waste or similar dangers.

The first step in achieving clean water is to install a filtration device that effectively removes particulate matter and similar debris. Filtration is an important step in water treatment, especially for water intended for human consumption. Filtration systems provide a bacteriostatic environment and are designed to remove, volatile organic chemicals, hydrogen sulfide and sulfur, herbicides, pesticides, chemical fertilizer residues, trihalomethanes and many other pollutants.

Continued next page



The filtration units utilized in TWT systems are comprised of several filter types and media that remove harmful chemicals, metals, and toxins from the water as it passes through these layers. Filters used in staged filter housings are configured as illustrated on system trade ads. Upon request if needed other filter mediums and filters used in system can be determined by a water quality analysis. If fluid conditions require additional micronic particle trapping for enhanced results, filters are available in various micronic sizes providing flexibility & adaptability to meet the needs of all fluid conditions & applications.

#### TWT® PATENTED DEPOSIT CONTROL TECHNOLOGY

The basic component in the TWT systems is the deposit controller. It is comprised of a microprocessor, solenoid coil wrap and/or a reaction chamber. The microprocessor is a patented controller that functions like a computer to relay a continuous electrical power supply to the solenoid coil and/or reaction chamber. The reaction chamber is plumbed into the main water in-take line and/or just before each piece of vital processing equipment, and provides a factory wrapped wire coil forming a solenoid. The solenoid conveys the triangular wave signal at the appropriate power level (as allowed by the model chosen) to the water passing through the chamber. This signal constantly changes the polarity, frequency, and amplitude of the current entering the water.

This triangular wave treatment produces several benefits. It increases the capability of the water to hydrate scale ions and other colloidal particles. In effect, the surface charge of the hydrogen molecules is enhanced and the water is made "wetter". This "hydrated" water can dissolve unwanted particles, suspend them in solution, and allow them to be easily filtered out or flushed from the system. Accordingly, the mineral and biological particles that cause scale, deposits, and corrosion are dissolved and washed away.

#### **ULTRA VIOLET DISINFECTION/PURIFICATION:**

The UV disinfection technology used in the system to provide -pathogens. As water passes through the UV chamber, UV light will attack and render harmless any bacterial, viral or spore contamination present in the treated water. "High intensity UV light destroys these contaminats with a 99.9% or greater kill rate"The output water is thus disinfected and offers exceptionally high quality for human consumption.

## TWT° DISINFECTION, PURIFICATION, DEPOSIT CONTROL TECHNOLOGY-ALL-IN-ONE PACKAGE SOLUTION

Skin adsorption:The swimmer should consider skin adsorption when choosing the pool disinfectant. I've often heard comments that excessive swimming or bathing will dry out the skin. Actually, it;s quite the opposite. Your skin, in contact with the water, absorbs water rather than drying out. It's the chemical contaminants, chiefly chlorine, which because of their oxidizing or bleaching ability causes loss of body oils and dry irritated skin. The skin is probably the primary route of human exposure to water pollutants. The American Journal of Public Health states that a minimum of 83 percent and possibly 91 percent of the chemicals entering th body came through the skin.

Without an adequate disinfection, algae, viruses, fungi, and other micro-organisms can originate, grow exponentially, and infest the average pool in less than one hour. Believe-it-or-not algae can double itself, in a poorly managed pool, every four to five hours and bacteria can double itself every four to five minutes.

It's a scientific fact that one Ecoli micro-organisms in twenty four hours. Believe-it-or-not! Diseases too numerous to mention affecting the ears, eyes, nose, throat, skin and internal organs are often spread from one person to another in swimming pools.

#### INTEGRATED WATER TREATMENT SYSTEMS

TWT® technologically advanced method for water management. Triangular Wave Technologies, Inc. All-In-One fluid management systems, the ultimate in water treatment & conditioning

TWT® systems are factory engineered and assembled, applying all of the needed elements for maximum fluid protection, management, and peace of mind in one simple packaged solution. TWT® Filtration, Microprocessor Deposit Controller, Reaction Chamber, and UV Disinfection units are combined to provide a start-to-finish answer to simplified prevention, treatment and management of water line contamination dangers. The TWT All-In-One Fluid management water disinfection/purification systems are unique, compact, self-contained units for the treatment of water.

TWT offers several systems designed to treat and fit your individual & specific needs.

Point-of-Entry (P.O.E.) & Point-of-Use (P.O.U.)

\*\*DON'T WAIT\*\*...contact us today for information on how to purchase the system that works best for you!



The Triangular Wave System gives owners the positive benefits of soft water without the harmful salts



Eliminate toxic chemicals & salts
No recurring chemical expenses
No handling and storage of hazardous chemicals on site
No hazardous salt contamination



Improve the quality and taste of water at your home. office...

Why spend hundreds of dollars for bottled water?

Do you really want to carry, lift and store bottled water?

TWTWaterTreatment.com
Technologically advanced method
for water/fluid management &
control.

The Smart Method

No Matter How Tough The Job...
TWT® Has The Solution!

CHEMICAL FREE

TWTWaterTreatment.com-The Ultimate in Water Treatment & Conditioning

The green way

