SPECCO H² TREATMENT
water • wastewater • stormwater systems
Tel. (787) 782-0690
Fax (787) 782-0685
www.speccoenv.com

SPECCO ENVIRONMENTAL
SPECIAL PROJECTS ENGINEERING AND CONSTRUCTION COMPANY INC.

Potable Water Systems

Water is a valuable resource on earth. Even though 70-75% of earth's surface is cover with water, less than 1% of the fresh water can be used for human consumption.

Taking that into consideration, water efficiency awareness programs and alliances were created to promote the efficient use of water and to increase of conservation as a way to ensure an adequate water supply.

In a survey done in the Unites States, 36 states can expect water shortage by 2013 because water demands increased by 209%.

Around the world , drinking water purification systems area commonly used for improving water for drinking and cooking and in others areas they used the syetem to meet the requirements of medical, pharmacology, chemical and industrial applications and in other cases for areas that you don't have access to clean water.

Drinking Water Standards
EPA sets standards for drinking water after much review and input from scientists, organizations and interest groups. Primary drinking water standards apply to contaminants which have health effects and are regulated for public water systems. Primary standards are usually established through maximum contaminant levels (MCL), but may be established through a mandatory treatment technique (TT). Tests for water include microbiological, inorganic chemicals, organic chemicals such as pesticides, synthetic organic chemicals (SOCs), volatile organic chemicals (VOCs), and radionuclides. Tests also measure physical, chemical, or nuisance contaminants such as water hardness, taste, and odor. This publication discusses the standards and health consequences for microbiological, inorganic chemicals, and nuisance contaminants.

Microorganisms
Microorganisms include the organisms in water that are capable of reproducing or growing either in water or in the host, once ingested. These contaminants include bacteria, protozoa (often in cyst form), viruses, fungi, and worms. These microbiological contaminants have been responsible for the majority of illness, disease, and death associated with polluted drinking water. Outbreaks still occur, though infrequently, in the United States, but are much more common in less developed countries where less attention is given to sanitation, water protection, and water treatment. Entry into the body is normally through drinking water, but breaks in the skin and other passageways such as inhalation also may be avenues of entry. Most diseases can be transmitted through water and some are transmitted primarily by water. Contaminated

food or objects (such as fingers) put in the mouth are other avenues of exposure. Poor well construction and lack of maintenance are the greatest contributors to microorganisms in your water.

Secondary drinking water standards apply to contaminants that have aesthetic effects on water and may affect some people. The secondary standard is reported as secondary maximum contaminant level (SMCL). These "secondary standards" are not enforceable.

SPECCO has focus on providing the complete alternative to your drinking water need. Depending on the effluent required and the standard applicable Specco purification methods can includes filtration, water softening, reverse osmosis, ultraviolet light, ozone, ultra and nano filtration, and carbon treatment among others.

Ultraviolet

Is a non-chemical approach to disinfection. In this method of disinfection, nothing is added which makes this process simple, inexpensive and requires very low maintenance. Ultraviolet purifiers utilize germicidal lamps that are designed and calculated to produce a certain dosage of ultraviolet (usually at least 16,000 microwatt seconds per square centimeter but many units actually have a much higher dosage.) The principle of design is based on a product of time and intensity - you must have a certain amount of both for a successful design. If desire Specco can provide Chemical disinfection products using chlorine in tablets or liquid form.

Softeners:

Water that contains dissolved calcium, magnesium, iron and manganese is commonly referred to as "hard" because these metals can combine with other compounds to leave hard scales or stains on the surfaces they touch, as well as interfering with the effectiveness of soap and other cleaning products. Water may also contain other dissolved unwanted minerals such as lead, nitrates, aesthetic chlorine, aluminum, organics that produce off tastes and odors, and other impurities. The proper selection of a

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WaterTech REIONATOR® ion exchange water conditioner can greatly reduce or eliminate the problems caused by the presence of hardness and other unwanted minerals from water supplies.

Reverse Osmosis :

Is a separation process that uses pressure to force a solution through a membrane that retains the solute on one side and allows the pure solvent to pass to the other side. More formally, it is the process of forcing a solvent from a region of high solute concentration through a membrane to a region of low solute concentration by applying a pressure in excess of the osmotic pressure. The membranes used for reverse osmosis have a dense barrier layer in the polymer matrix where most separation occurs. In most cases the membrane is designed to allow only water to pass through this dense layer while preventing the passage of solutes viruses and bacterias. This makes this technology ideal for desalinitation. RO is clearly the best technology available to reduce drinking water contaminants.

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Filters:

Specco filters designed to trap dirt and sediment. An excellent choice for high sediment areas. High dirt capacity means longer life for other post filters systems. In those areas where turbidity (suspended solids or sediment) is high, it may be necessary to use a separate pre-filter to keep the primary filter from clogging up prematurely. Specco filters have a broad range of applications beside potable water; cooling towers, storm water, process waters, aquacultures, inlet waters, and tertiary treatments among others.

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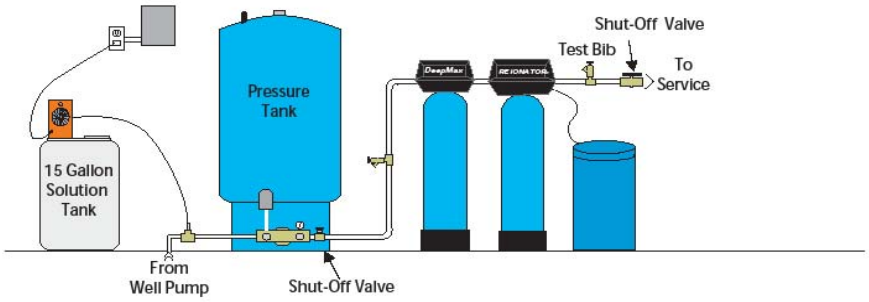
With Automatic Filtration and REIONATOR™



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02/08/2006 Chris Shaw

THINK GREEN…THINK SPECCO

ONE STOP SUPPLIER FOR YOUR WATER NEEDS