



Middle Fork Holston River and South Fork Holston River (Main System) – surface water sources treated by chemical and physical means including conventional coagulation, sedimentation, and filtration to remove particulate matter; chlorination for disinfection; and fluoridation for the promotion of dental health.

## Municipal Water

Municipal water supplies almost always contain trace components at levels which are regulated to be safe for consumption. Some other components such as trace levels of aluminum may result from the treatment process. Fluoride and other ions are not removed through conventional water filter treatments.

## 5 μ Filtration

Filter cartridges for sediment removal are rated in microns. A micron rating for a water filter is a way of indicating the ability of the filter to remove contaminants by the size of the particles.

Particle	Particle Size (Microns)
Beach sand	100-2000
Human hair	70
Household dust	40
White blood cells	25
Bacteria	3
Lead Dust	2
Spider web	2-3
90% of all oil contaminants	0.5-2
Viruses	0.005 - 0.3
Oxygen	0.0005

## Carbon Filtration

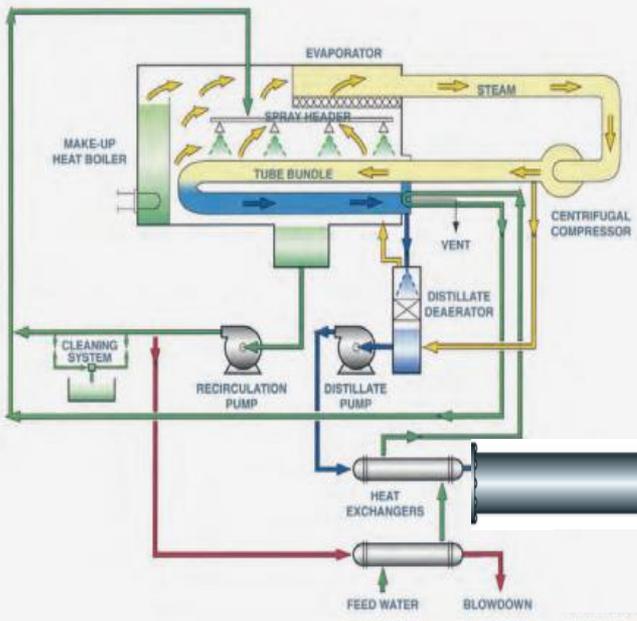
Active charcoal carbon filters are most effective at removing chlorine, sediment, volatile organic compounds (VOCs), taste and odor from water. They are not effective at removing minerals, salts, and dissolved inorganic compounds. One pound (454 g) of activated carbon contains the surface area of 100 acres.

## Water Softening

Ion exchange resins are used to remove hard water minerals such as calcium, magnesium and other metal Cations from the water supply. During the ion exchange process, hard water ions become trapped on the resin and are exchanged for sodium ions, creating soft water.

# Vapor Compression Distillation

Incoming feed-water is preheated by the outgoing blow-down and distillate. Feed-water is sprayed over the evaporator tube bundle. A portion of the spray is evaporated as steam and the remainder is collected in the sump to be recirculated. Steam generated inside the evaporator is drawn through demisters by the centrifugal compressor and is superheated to 250° F /121° C in the compression process. The steam condenses inside the evaporator tube bundle and is collected as PURE DISTILLATE. The distillate is pumped through the heat exchanger and into storage.



## Ambient Storage

“Room Temperature” or normal storage conditions, which means storage in a dry, clean, well ventilated area at temperatures between 15° to 25 °C (59° – 77 ° F) or up to 30 ° C

## UV Disinfection

Method that uses short-wavelength ultraviolet (UV-C) light (240-280 nm) to kill or inactivate microorganisms by destroying nucleic acids and disrupting their DNA, leaving them unable to perform vital cellular functions.

## Final 1.0 μ Absolute Filtration

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White blood cells	25
Bacteria	3
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## Ozone Disinfection

0.2-0.4 ppm of “all natural” oxygen (O<sub>3</sub>) is bubbled through the water immediately before being bottled as the final disinfection step. Within a few hours, the ozone converts back to stable O<sub>2</sub> and dissipates from the sealed bottle.

## Filling/ Capping



# Ultra-pure Distilled Misty Mountain CPAP Water

Product meets the definition of “purified water” in the 23<sup>rd</sup> revision of the United States Pharmacopeia. Food grade stainless steel is exclusively used throughout the entire manufacturing process. Bisphenol free 18-20 high gram weight PET Class 1 and HDPE Class 2 recyclable bottles. Completely free of all Trihalomethanes, organophosphates, aluminum, and fluoride. 100 % free of ALL known viruses and bacteria. Endotoxin androgen free.