Reverse Osmosis	This process requires energy supplied from a pump to push water through a membrane. By continually pushing water through the membrane, water is filtered because the heavy impurities can not pass through the membrane.
Chemical Treatment	This process involves disinfecting water with chlorine. This is usually how public water supplies remove disease-causing bacteria.
Freeze/Thaw Evaporation	This method lowers the freezing point of water to form ice crystals. The ice crystals become the higher quality water, while the solids and impurities remain in the liquid. The ice crystals are then collected and thawed.
Ion Exchange	To purify the water, this method replaces calcium and magnesium ions with sodium and chlorine ions. This low-energy process generally calls for subsequent treatment methods, such as chemical treatment.
Deionization or capacitive desalination	Water is pumped through thin sheets of carbon aerogel. The sheets trap the impurities and allow only clean water to pass through.
Electrodialysis reversal	This process dissolves both positive and negative membranes to separate charged ions, or impurities, from a water solution.
Ultraviolet light	This process essentially purifies water by killing the impurities with UV light.
Distillation	This process involves boiling water and then passing the water through a cooling device. The water then condenses into a purified form