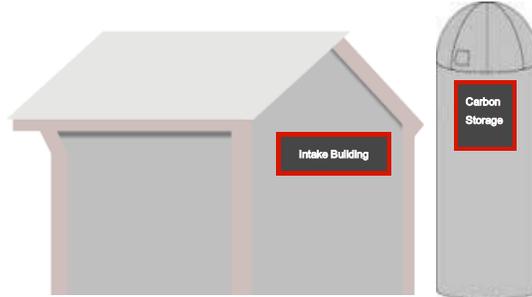


# OUR WATER TREATMENT PROCESS



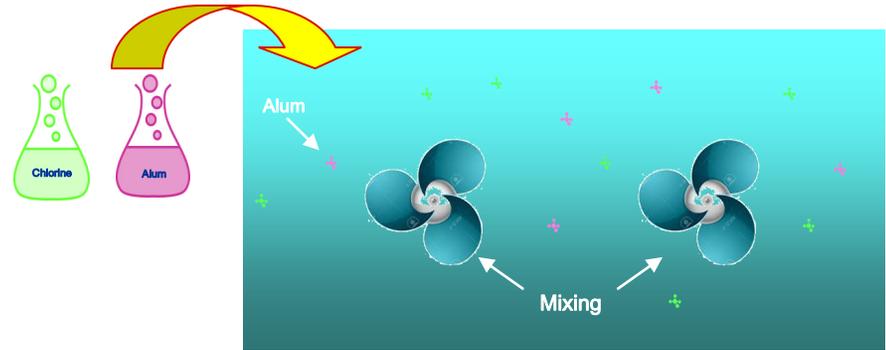
1

Raw surface water is taken in from the Mississippi River via an intake pipe and flows to the intake building.



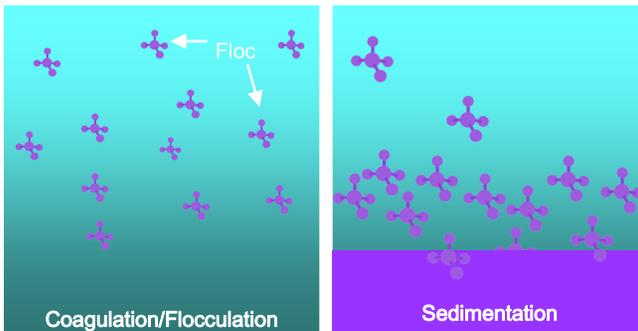
2

Here the water flows through a large mesh screen to remove debris, and a chemical called Carbon is added to remove unwanted tastes and odors from the water. The water is then pumped to the water plant for further treatment.



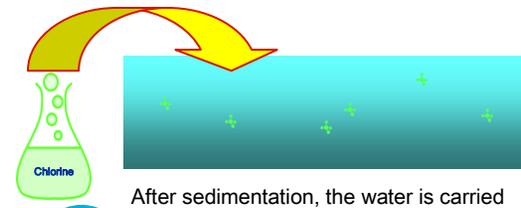
3

At the water plant the water is treated with a chemical called Aluminum sulfate (alum). Alum is used in a process called coagulation, which helps dirt, bacteria, algae, and other particles bind together and form larger particles called floc. These chemicals are added to the water and mixed using large propeller mixers.



4

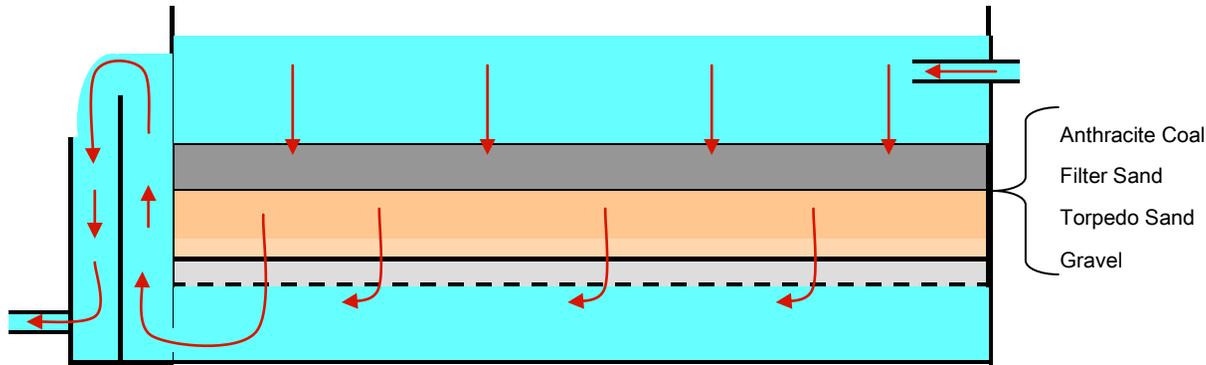
During the coagulation/flocculation stage of treatment the water goes through a series of basins that mix progressively slower and allow floc to become heavy enough that it will drop to the bottom of the sedimentation basin. The floc is then removed from the bottom of the sedimentation basin using a large sweep.



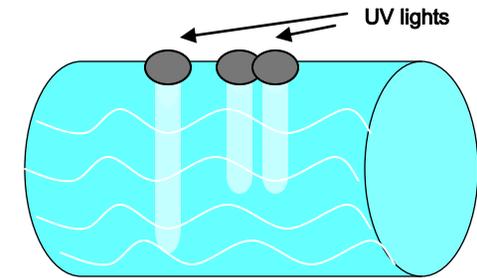
5

After sedimentation, the water is carried through a settled water channel to the filters. Chlorine is added in the settled water channel to disinfect the water.

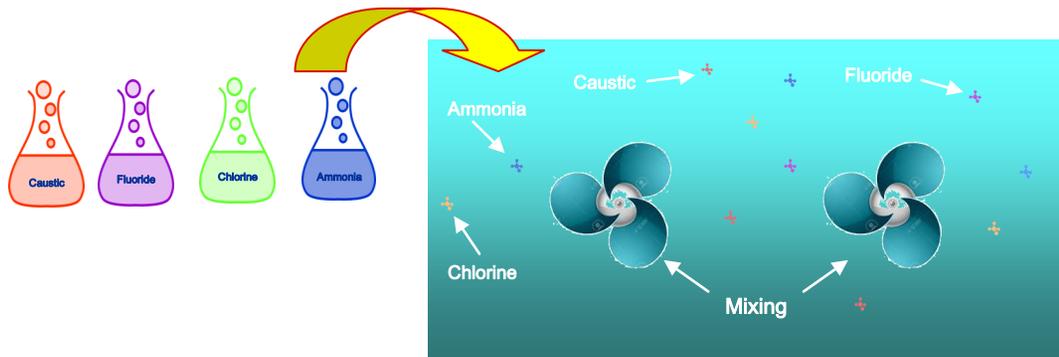
# OUR WATER TREATMENT PROCESS



**6** Any particles remaining in the water after coagulation and sedimentation are removed by passing the water through filters made from crushed coal (anthracite), sand, and gravel. The filters catch the small particles and do not allow them to pass through the filter.



**7** Some organisms in the water, such as Giardia and Cryptosporidium, are resistant to disinfection treatment and therefore must be inactivated. We treat the water with ultraviolet (UV) radiation to inactivate these organisms.



**8** After UV inactivation, the water is treated with a combination of chlorine and ammonia to form a product called chloramine. Chloramines further disinfect the water while hindering the formation of unwanted trihalomethanes (THMs). In addition, Fluoride is added to the water to help protect our teeth from decay, and Caustic is added to help stabilize the pH of the water.



**9** Finally, based on consumer demands, finished water is pumped from the clearwell storage tank at the water plant to the cities' four water towers for additional storage. The water then flows through underground water mains and water service lines to homes and businesses throughout the city.