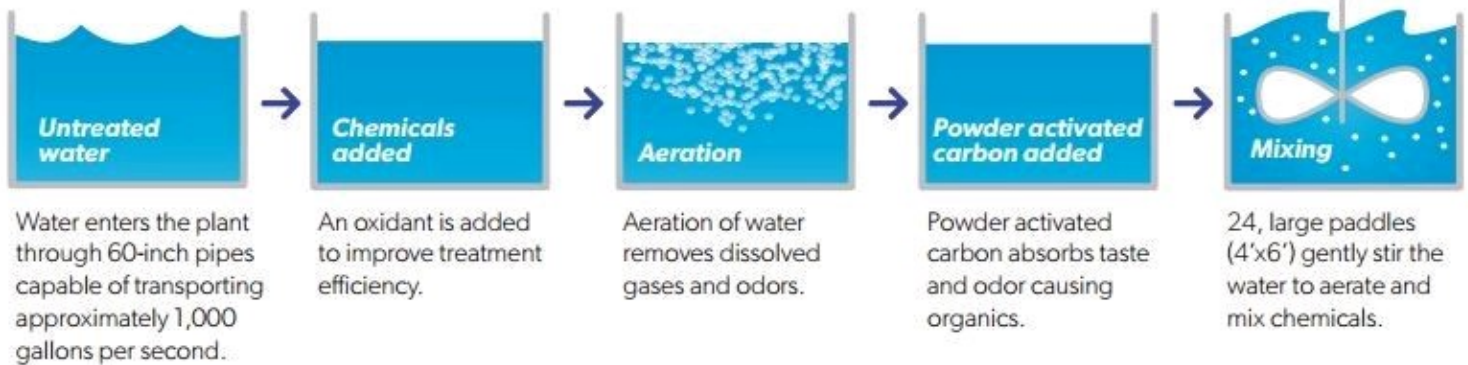
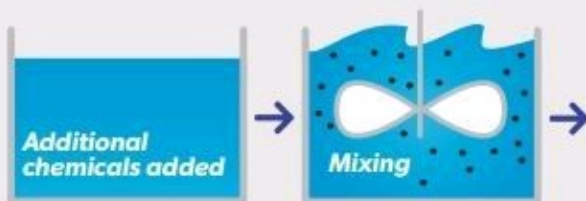


Water Purification Process

Step 1: Pre-Treatment



Step 2: Chemical Treatment

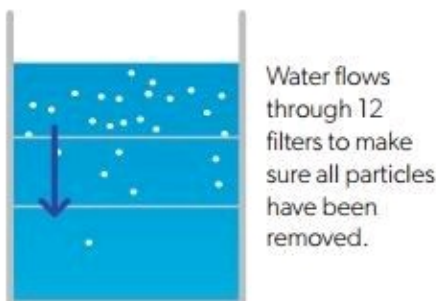


Step 3: Solids Removal



Air bubbles force contaminants to float, forming a dark sludge that is scraped off the water's surface.

Step 4: Filtration



Step 5: Disinfection



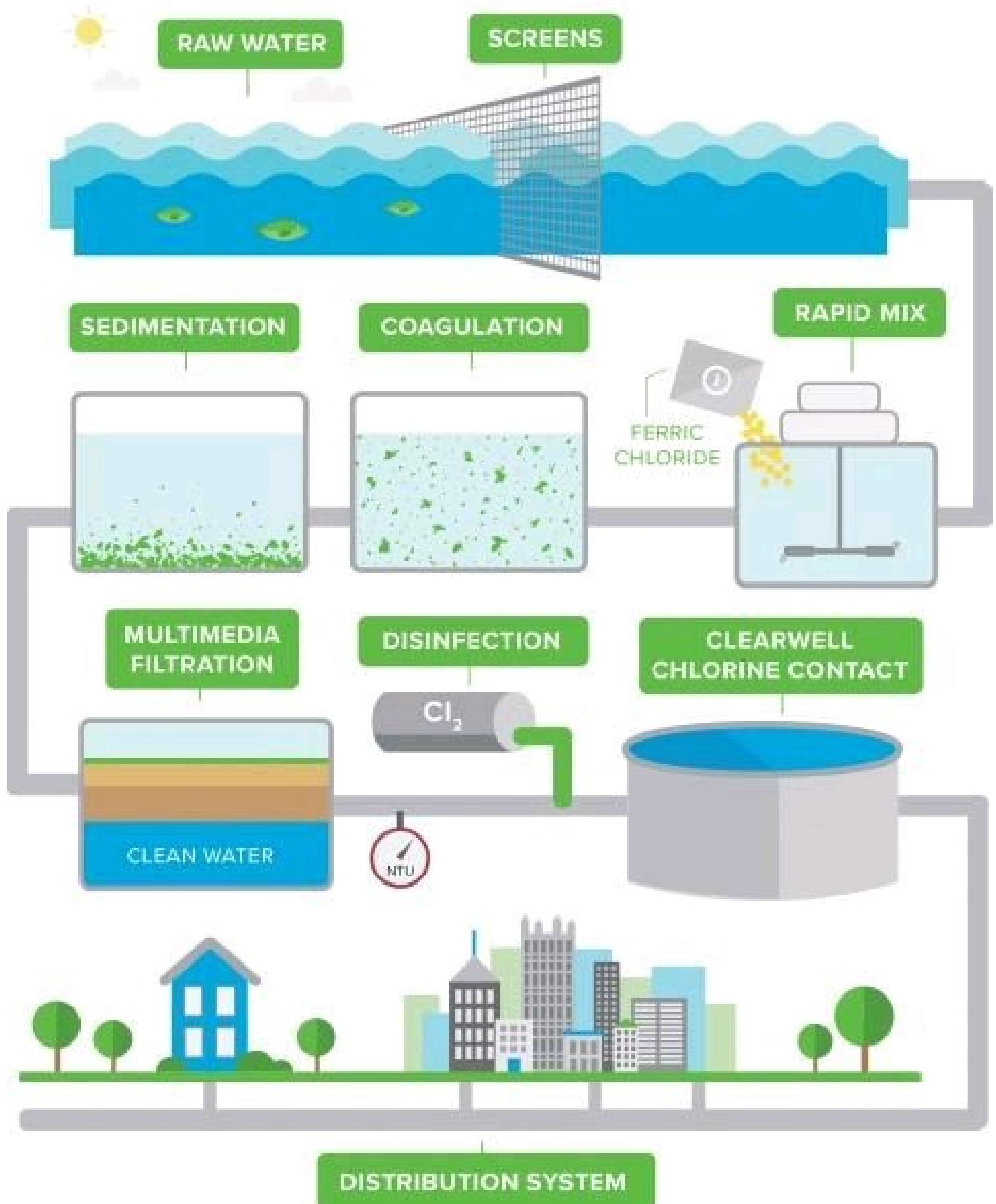
This final step provides residual chlorine, ensuring Washington County's water is clean and safe to drink.

**Purified water
ready for
distribution**

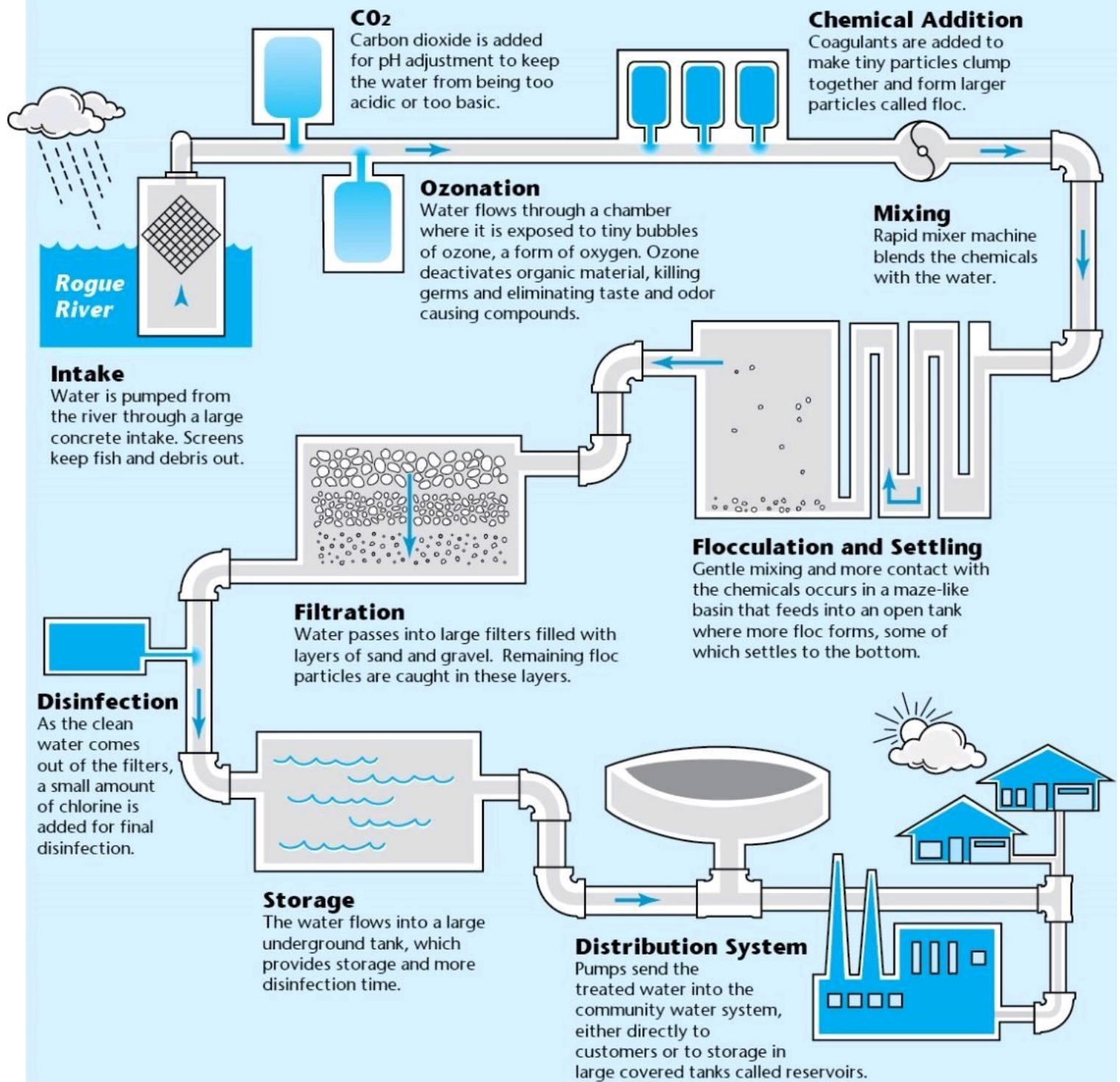


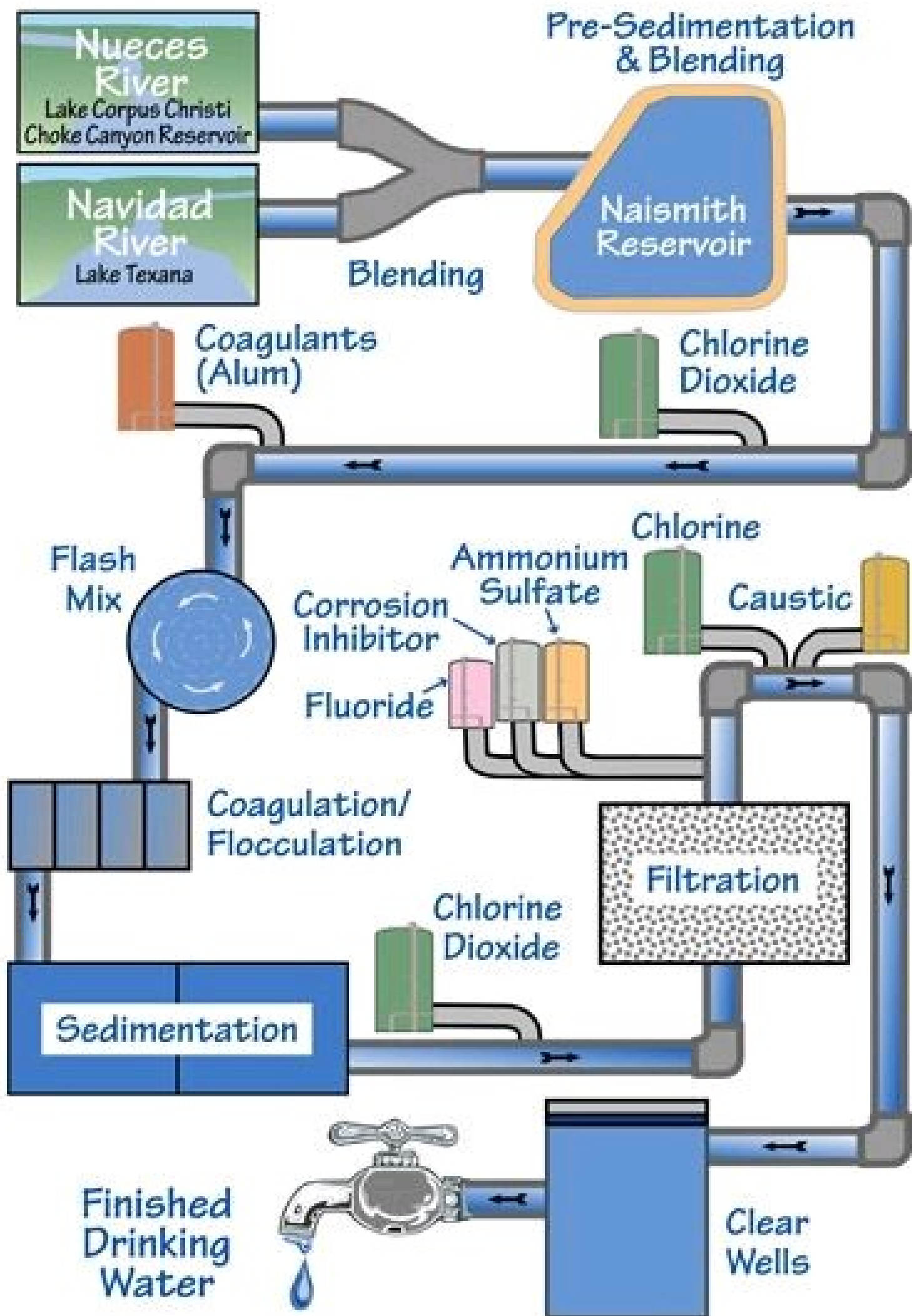


WATER TREATMENT PROCESS



The Treatment Process at the Duff Water Treatment Plant



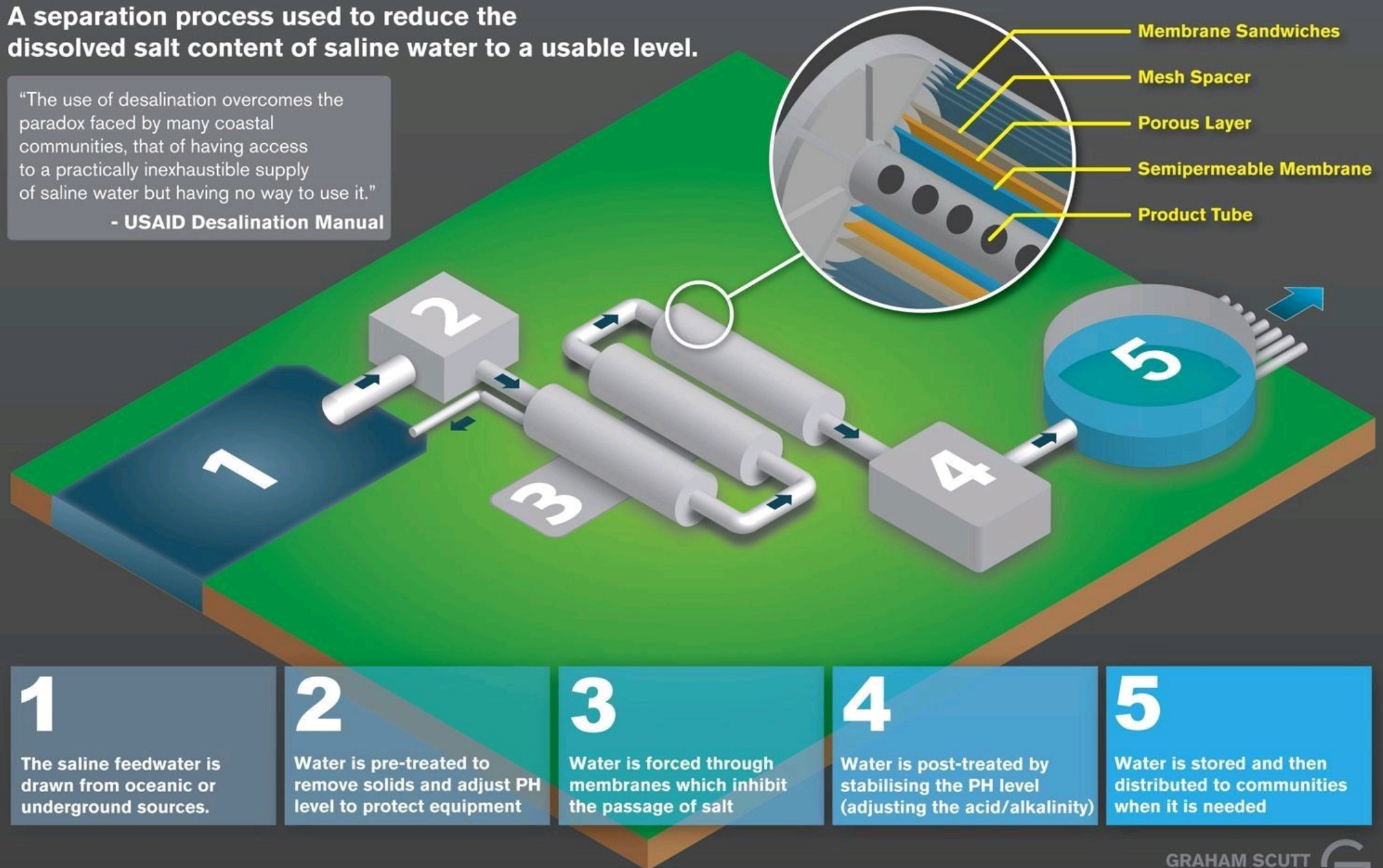


REVERSE OSMOSIS DESALINATION

A separation process used to reduce the dissolved salt content of saline water to a usable level.

"The use of desalination overcomes the paradox faced by many coastal communities, that of having access to a practically inexhaustible supply of saline water but having no way to use it."

- USAID Desalination Manual



1

The saline feedwater is drawn from oceanic or underground sources.

2

Water is pre-treated to remove solids and adjust PH level to protect equipment

3

Water is forced through membranes which inhibit the passage of salt

4

Water is post-treated by stabilising the PH level (adjusting the acid/alkalinity)

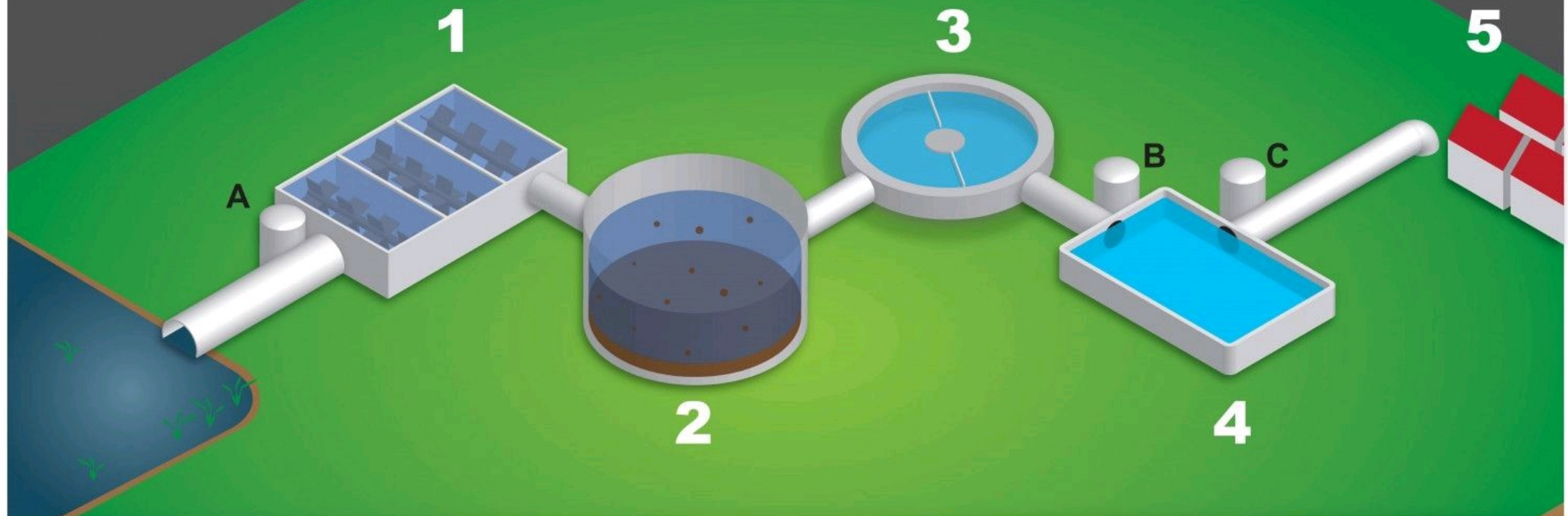
5

Water is stored and then distributed to communities when it is needed

WATER TREATMENT PROCESS

An overview of how water is cleaned and treated before distributing to the population.

(Methods vary between countries depending on water standards)



1

Coagulants are added to the water (A) and then mixed together. Heavy particles in the water then begin to stick together and form large clumps.

2

Water is allowed to settle in a tank and the heavy particles drop to the bottom. These particles are then scraped away to be used as fertiliser.

3

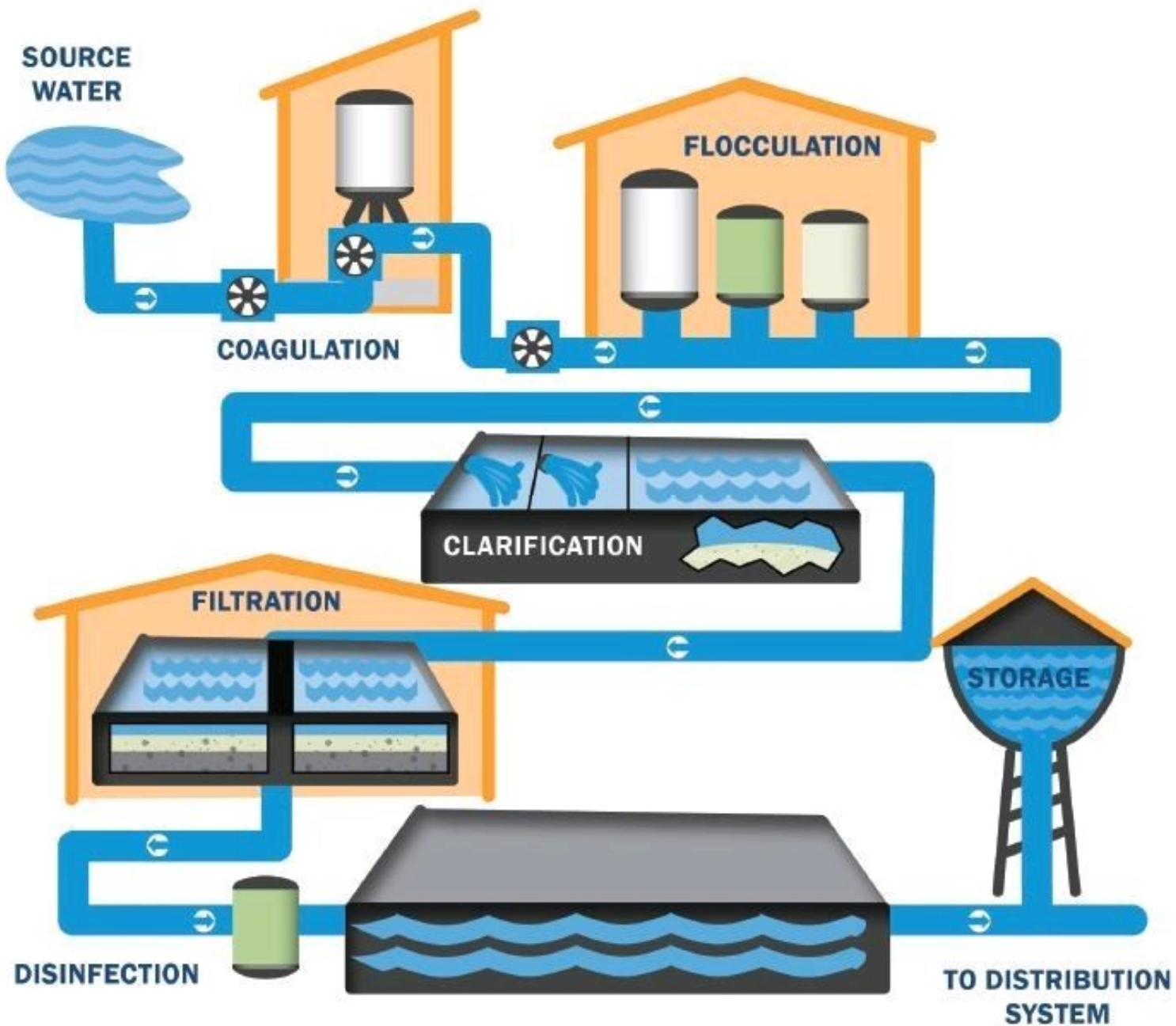
Water is then filtered through layers of fine granulated materials. As particles are removed, turbidity diminishes and clear water emerges.

4

To protect against any bacteria, viruses and other microbes that might remain, disinfectant (B) is added before the water flows into underground reservoirs.

5

pH is maintained by adding alkaline substances (C) to reduce corrosion in the distribution system and the plumbing in your home.



Source: US Environmental Protection Agency (EPA): <http://www.epa.gov/ogwdw/kids/watertreatmentplant/index.html>