



HOW IS WASTEWATER CLEANED?

1

As you can see people have made me dirty with all their wastes.

I have been collected in sewer pipes and now have to be cleaned at a wastewater treatment works.

- KEY:
-  large objects
 -  grit
 -  oils
 -  fine solids
 -  germs
 -  dissolved nutrients

2

When I arrive at the works I pass through bar screens that trap large objects like rags, papers and plastics.

3

I then flow into grit chambers where I slow down and the heavy objects like stones, sand and soil are removed.

4

In primary settling tanks, fine solids and some germs from human wastes sink to the bottom forming a layer of primary sludge. The oils float to the surface. The primary sludge must be treated further to make it safe.

5

Special tiny organisms are added to me in tanks called bioreactors. These organisms eat the dissolved nutrients.

Bioreactor organisms

6

In secondary settling tanks, the bioreactor organisms and some germs sink to the bottom to form secondary sludge. The secondary sludge is then treated further.

7

Now I am almost clean. In disinfection tanks, chlorine gas is sprayed onto me to kill any remaining bioreactor organisms and germs.

8

After disinfection, I am clean and ready to go into a river.