Dewatering of Sludge

Johns Creek Environmental Campus

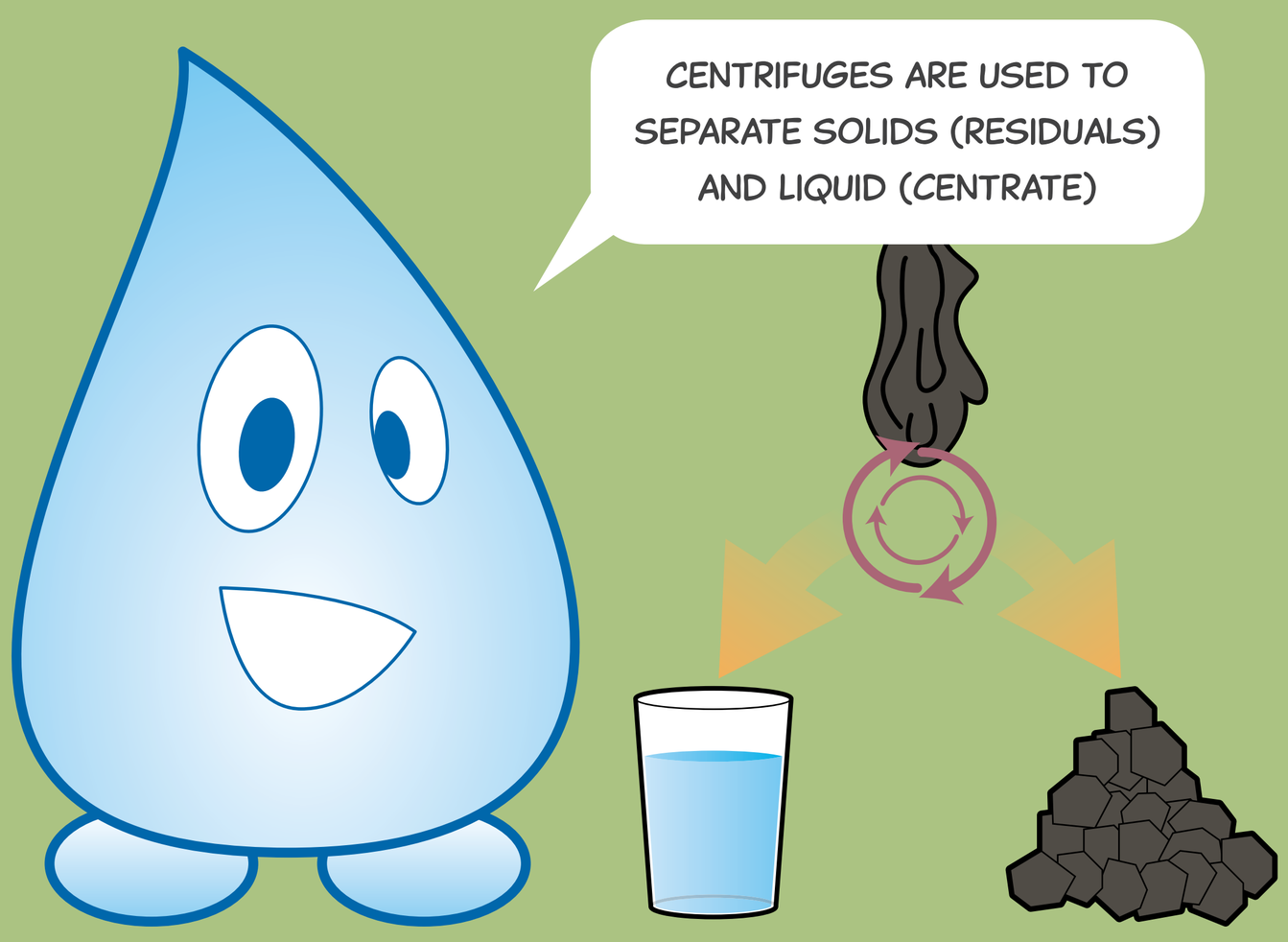
FULTON COUNTY

Dewatering of residuals is the physical process of removing the water content of the "sludge." Sludge is dewatered to reduce the cost associated with transporting the waste residuals to a disposal site and taking up space in a landfill, because there is simply less volume. Dewatered residuals are also easier to handle.

At the Johns Creek Environmental Campus, sludge is dewatered using centrifugation. Sludge is fed into three centrifuges that spin at high speeds. The sludge is separated into a dense cake of residuals and a waste liquid stream (centrate). The centrate is recycled back into the plant for treatment while the dewatered residuals (cake) are discharged directly to a container located below each centrifuge. These dewatered residuals are then sent to the landfill for disposal. A chemical polymer is added to the sludge feed line to improve solids capture and centrate quality.

High Speed Centrifuge separate water from the residuals

Dewatered residuals are collected and trucked to a landfill



Dewatering / Chemical Storage Process Design Parameters	
Number of Centrifuges for Solids Dewatering	3 (2 duty/1 standby)
Capacity of Centrifuge (each)	425 gpm / 2,700 lb/hr
Design Feed Total Solids Concentration	1 to 2.5 percent
Dewatered Residuals Total Solids Concentration	20 percent
Design Solids Capture	95 percent
Number of Centrifuge Pumps	3 (2 duty and 1 standby)