

RCU Wastewater Education

Elementary Curriculum

[United States Environmental Protection Agency \(USEPA\) Elementary Resources](#)

Click above to visit the USEPA's Environmental Kids Club. Select the "Water" link and then the "Sewage In Your Face" link to access the City of San Diego's interactive wastewater resources.

Middle School Curriculum

RCU Wastewater Facts

Below fact serves as an introduction for the wastewater lessons and activities. It summarizes RCU's role within the community, briefly describes wastewater usage and treatment and more.

Facts and Figures

We serve part of Richland County.

- We have about **100,000 customer accounts**.
- About **5 local utilities**, Carolina Water Service, Inc., City of Columbia, Midlands Utility, Inc. Palmetto of Richland County, LLC and Palmetto Utilities Inc. partner with us to provide residents with efficient and effective wastewater and storm water services.

Our wastewater services cover 279 square miles.

- About **1,100 miles** of sanitary sewer pipe cover RCU's service area.
- **42 pump stations** push wastewater across the RCU area.

Our treatment plants run 24/7.

- Broad River Wastewater Treatment Plant (BRWWT) treats **2 million gallons** of wastewater per day.
- Hopkins Wastewater Treatment Plant treats **50,000 gallons** of wastewater per day.

We give you peace of mind.

- Each person creates about **80 gallons** of wastewater daily, on average.
- Each day, RCU prevents **100,000 pounds** of waste from entering the Broad River through wastewater treatment.

[Numbers Matter - Part 1 - School Usage Lesson](#)

The lesson aligns with core content standards in Practical Living and Math for grade seven. Students will be introduced to RCU role in the community, learn the term wastewater and discuss daily activities that use water. They will discover the amount of water used by the average individual and the amount of water used by their class in a single day of school. They will compare and analyze data, make bar graphs and participate in an environmental discussion.

[Numbers Matter - Part 2 - Home Usage Lesson](#)

The lesson aligns with core content standards in Practical Living and Math for grade seven. Students will be able to measure the amount of water they use at home on an average day and will develop an

awareness of how much water they consume and dirty. They will compare and analyze data, work in groups, calculate percentages and angle measures, construct and interpret basic circle graphs, present their findings and participate in an environmental discussion.

[EPA Water Source Book](#)

Browse the bottom of the page for your grade level and click on "Drinking and Wastewater Treatment." This environmental education program explains the water management cycle using a balanced approach showing how it affects all aspects of the environment. All activities contain hands-on investigations, fact sheets, reference materials and a glossary of terms. Activities are organized by objectives, materials needed, background information, advance preparation, procedures and resources. All parts of the program may be printed and copied. For more information, see the links below "About Water Sourcebooks."

High School and Up

RCU Wastewater Fact Sheet

This fact sheet serves as an introduction for the following wastewater lessons and activities. It summarizes RCU's role within the community, briefly describes wastewater usage and treatment and more.

[WEF Lesson](#)

The Water Environment Federation (WEF) has created a wastewater treatment lesson suited for students in grades nine through 12. You can download this lesson by clicking here. WEF is a not-for-profit, educational and technical organization with a strong history and reputation as a definitive resource in water quality.

[EPA Water Source Book](#)

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Videos and Electronic Resources for All Ages

[Liquid Assets](#)

Click above to visit the Liquid Assets page where you can watch a 4-minute trailer or a 16-minute documentary overview. If you would like to check out the full length documentary, please contact RCU's Environmental Education Manager by calling 803.576.1384 or emailing fricka@rcgov.us.

[Water Environment Federation \(WEF\) Aquaventurer Time Machine](#)

The Aqua Venturer© is an interactive global timeline of water and wastewater past, present, and future. Learn the story of water, its treatment and use throughout history, and its importance to life on Earth. At the click of a mouse, you can browse through more than 10,000 years of history with interesting anecdotes, colorful photos, video clips and music.

<https://www.youtube.com/watch?v=SroBLDjuiSE>

*Make sure to download the Teacher Guide for lesson ideas that incorporate the wastewater timeline. These lessons can be adapted to upper elementary through high school instruction.