

**PORTLAND SEWAGE: What Happens After You Flush?**

*Use the article from the Oregonian, "River of sewage flows from Sellwood to North Portland treatment plant each day," to answer these questions.*

1. Name a hazardous material that could still be in treated wastewater.
2. What act set wastewater treatment standards?
3. What government agency sets wastewater standards?
4. What section of Portland does sewage travel to in the 'Big Pipe'?
5. How much does the Big Pipe project reduce sewage overflow into our rivers?
6. What are three types of wastewater that gets collected in the Big Pipe?
7. If you flush at school, how long does it take for your flush to travel to the wastewater treatment plant?
8. What and when is 'rush hour' for sewage?
9. What are the rivers (in order) that treated wastewater from 1) Portland, 2) Washington County, and 3) Clackamas County are dumped into?
10. Name a toxin industries are required to remove before wastewater enters the sewer system.
11. What is an item rakes might scrape off sewage water at the treatment plant?
12. What often clogs pipes?

13. What do microbes do to sewage wastewater at the treatment plant?
14. What chemical is used to disinfect wastewater?
15. Who eats treated wastewater? (YUM!)
16. How much treated wastewater flows into the Columbia River from Portland?
17. If you flush at your house, about how long does it take before your treated flush water enters the Columbia River?
18. What is produced during sludge treatment that is used for almost half the treatment plant's energy needs?
19. Where does Portland's sludge end up after treatment?
20. How is sludge recycled?
21. What 'product' is shot from spreaders onto Kent Madison's farm?
22. Was human poop used as a fertilizer before this century?
23. Is the sludge from Portland which is used on farmland treated first to reduce bacteria?
24. Can sludge be applied to USDA-certified organic produce?
25. What are 2 possible health effects some people think might be a problem for people living near farms spreading sludge?