



Now *That's* a Trash Bag!

“It’s like a big sealed bag full of trash.” When Stephen Nichting says ‘big’, he’s talking about a sealed plastic bag of trash covering 70 acres of land 150 feet deep. Nichting is the manager of the Upper Piedmont Environmental landfill in Person County. In May he welcomed Granville County’s Environmental Committee for a tour of the landfill. “With the old system, landfills were just mounds of trash covered with dirt in unlined excavated holes. But then they realized that pollutants were draining out of the trash and sometimes getting into the groundwater in the area. Now landfills are sealed in high density polyethylene plastic to protect the groundwater.”

A bag that size calls for some heavy duty plastic – about the thickness of heavy cardboard (60mil) and stiff like a frisbee. There is an 18” layer of clay and a leak-proof layer of fabric filled with bentonite (geosynthetic clay) under the plastic. On top of the plastic they put another layer of protective fabric and 2 feet of sand or stone for drainage. The stone also protects the plastic liner. A system of pipes in this layer of stone collects a mixture of rainwater and ‘rot’ water that leaches out of the decomposing garbage. As this ‘leachate’ drains through the garbage it picks up any chemicals that people have thrown out with their trash. To protect the groundwater, the leachate liquid is pumped into tanker trucks and taken to the Wastewater Treatment Plant in Roxboro.

Waste Industries carries about 225 truckloads (about 1000 tons) of garbage from Granville County to the Upper Piedmont site each week, at a cost of \$31.57 per ton. (That’s about \$1.5 million per year in fees to businesses, residents, and taxpayers in cities and rural areas of Granville County.) The landfill also serves a 60 mile area including Vance, Person, and Franklin Counties; Henry County, Virginia; and the City of Reidsville. On average, the two site operators unload 120 truckloads – 900 tons of trash – into the landfill each day.

The site opened in 1997 with a permit for 70 acres of landfill. Close to 45 acres have been used in nine years. At this rate the original permit will last about 11 more years. The Upper Piedmont site has more space available, but the owners, Republic Services, will have to negotiate a new contract with Person County, before they can expand the landfill area. The State permitting process often takes 5-7 years. Some citizens may object to a new permit for environmental reasons. Others will support the permit because finding another place to dispose of the garbage for this region would be expensive and difficult.

“There is an obvious burden to residents around the landfill – a sacrifice so the rest of us can get rid of our garbage,” Nichting comments. “The odor is not so bad – we work hard to control that. But the noise of the trucks backing up goes on all day every day. We acknowledge the fact that the noise did not exist prior to the landfill.” To control odors and to keep rain out, the site operators cover the disposal area with large tarps and soil each evening. Each morning, they open the site by pulling off the tarps and scraping off the dirt before adding more garbage.

It costs between \$250,000 and \$350,000 per acre to construct the “big plastic bag” and the layers that protect it. When an area or ‘cell’ of about 5 acres gets full, they prepare a new cell by building the bottom lining – layers of soil, engineered clay, fabric, plastic, gravel and piping. They finish up the old cell by covering it with an 18” layer of protective clay and a layer of plastic that is heat-sealed at all the seams so it won’t leak. They top it off with 2 feet of soil and a cover of shallow-rooted plants. Republic Services will be required to maintain the safety and environmental integrity of the site for at least 30 years after closing it.

The Citizens’ Environmental Committee visited the site in May to learn more about what happens to our garbage after we throw it out. The Committee was formed by the Granville County Commissioners to monitor issues that affect the health of the environment in the County. The Committee meets eight times a year. This fall they plan to visit the Oxford Wastewater Treatment Plant, the Kerr Lake Regional Water System, and SGWASA’s water and wastewater facilities in Butner. Any citizen who is interested in learning more about the committee or in joining them on any of the fall tours may call 693-0742 during business hours.