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TECHNOLOGY



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Graham Russell (left) and Mike Wright of Guaranteed Recycling Xperts.

# Recycling in forefront

BY BOB MOOK  
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That 7-year-old personal computer you've been thinking about dumping in the trash represents what's becoming one of the world's biggest toxic-waste problems.

As the life cycle for technology gets shorter, e-waste — the stream of obsolete computers, printers, fax machines, televisions and cell phones being discarded by consumers and businesses — has become an increased threat to the ecosystem.

The Environmental Protection Agency estimates that as much as 70 percent of all heavy metals in landfills comes from electronic waste. Computer monitors are the largest source of lead in municipal landfills. The EPA estimates 4.6 million tons of electronic equipment were thrown away in 2000. About 65 million computers and 130 million cell phones are discarded in the United States every year.

Computers also contain significant amounts of mercury, arsenic, gallium, cadmium and beryllium — which could seep into the groundwater, where they could eventually reach plants and livestock.

Computers also contain anti-combustion materials that emit toxic fumes when they are incinerated, said John Brink of the EPA in Colorado.

In Colorado, where it's illegal for businesses to dispose of electronic equipment in dump sites, vacant office space is often used to warehouse computer equipment that has outlived its usefulness.

"You could go into any office downtown and find anywhere from a closet to full offices filled with obsolete computer equipment," said Graham Russell, a marketing consultant for Denver-based Guaranteed Recycling Xperts (GRX), which recycles old computers.

Though many companies and individuals may bypass the problems by selling the equipment to a broker or donating it to a nonprofit, GRX President Mike Wright said they're only prolonging the inevitable.

"A worthless computer is going to be worthless to the Boy Scouts, too," Wright said. "You're only passing the problem

along and reducing the chances that it will be disposed of properly."

As much as 80 percent of U.S. e-waste is exported to developing countries, where the equipment is scavenged for raw materials — often in poor working environments, Wright said. Water treatment in those countries is less sophisticated, increasing the risk toxic materials will reach drinking water.

"They use armies of slave laborers to harvest the raw materials like copper and gold," Wright said. "They don't care about the health of the workers or the environment."

Creighton Bildstein, president of ATNI, a Denver-based company that recovers telecommunications, networking and power-generating equipment, said his company rarely deals with computers.

"There are hardly ever any recoverable metals in today's computers," he said. "I would say the biggest problem is the monitors."

ATNI deals with Denver-based LifeSpan Technology Recycling Inc. for its computer recycling needs, Bildstein said.

Recycling companies such as GRX separate the components of the computer into plastics, metal, glass and copper wire.

"We take the circuit board out, run it through a hammer mill and shredder so all that's left is dust," Wright said. Lead from the computer monitors is shipped to a plant in Missouri, where it's recycled.

As consumers trash their TV sets in favor of flat-panel displays, Wright said more TVs and computer monitors will be dumped.

GRX charges 20 cents a pound to recycle obsolete computers. The company handles up to 150,000 pounds of equipment a month. Wright said the business employs seven people and has served about 400 customers since it was founded in 1999.

With Earth Day approaching April 22, Wright hopes more individuals and businesses will reflect on the environmental consequences and put their money where their consciences are.

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