



GENERAL ARTICLES

▶ EVERYTHING OLD IS NEW AGAIN

[Why minimizing waste products and recycling is good for business.](#)

Traditionally, the amount of waste produced in the United States has been tied to both population growth and the strength of the economy. In 1960, Americans produced 88.1 million tons of municipal solid waste; in 2005, that number jumped to 245.6 million tons. That's a lot of landfill.

Today, fortunately, both individuals and companies (large and small) are realizing that ecological awareness makes good sense. Reducing, reusing and recycling saves resources, energy and money; protects landfill space; and reduces litter and illegal dumping. It can even be a new source of income.

"Seventy percent of college grads think it's important to work for a company that's green," says Ken Kurtzig, CEO and founder of Marin County's iReuse, an industry leader in facilitating the reuse of unwanted products and materials. But it's not only young adults with a new diploma who are thinking about environmentally friendly business.

iReuse now works with everyone, from Fortune 500 companies to small residential clients, to leverage the tremendous benefits of reusing materials to save time and money while helping the community and the environment.

"Corporate sustainability has evolved quite a bit in the past couple years and will continue to improve exponentially," says Kurtzig. "Several years ago, most companies' environmental programs consisted of a few recycling bins scattered around the office just to satisfy employee interest. Now, many companies' environmental programs include recycling bins, 30 percent recycled content copy paper, reusable coffee mugs, improved lighting, green marketing material and myriad other programs.

"I believe that, in five or so years, every company with more than 100 employees will need a well-organized and comprehensive sustainability program to be competitive. The return on investment now for sustainability programs includes reduced operating costs, improved employee satisfaction, higher public visibility, competitive advantage and greater revenue. It's already becoming about maximizing the environmental and financial benefits of your decisions."

Kurtzig, a self-proclaimed "ecopreneur," officially launched iReuse in September 2005. Among the clients that have used its sustainability consulting services are PG&E, Salesforce.com, Birkenstock, Charles Schwab and Delta Dental. These companies leveraged Kurtzig's recycling industry experience to help develop and implement customized waste stream reduction programs. Prior to founding iReuse, Kurtzig was a consultant in the software industry and worked on an Internet startup; he combined his consulting skills with his passion for the environment and his desire to help nonprofits in the creation of iReuse.

Some of iReuse's fees for corporations are based on performance (as measured by net savings achieved over time), like the waste stream reduction program. It costs a client nothing to have iReuse analyze its waste stream and develop programs to reduce waste bills through resource conservation and increased recycling. iReuse then splits the cost savings as the company's waste bills go down. It's also started a similar program to improve companies' efficient use of power and water.

When it comes to surplus furniture and equipment, Kurtzig says the most cost effective measure to start with is internal reuse, if at all possible. When it's not, he suggests selling the items next, then donating (a company doesn't have to pay for hauling fees and can usually get a tax deduction). Only after these options have been exhausted should recycling be considered—meaning chopping up furniture or taking apart equipment to reuse the raw materials. The worst thing to do, both financially and environmentally, is to add something to landfill. Even something as small as double-sided printing, he says, can save companies thousands of dollars and reams of paper per year. Developing a simple and comprehensive green procurement effort can exponentially increase a company's financial and environmental benefits.

In just one year, Novato-based shoe manufacturer Birkenstock was able to keep 126 tons of materials out of local landfills through the iReuse surplus materials program, which managed the sale and donation of its unwanted products. And to date, nearby Autodesk has donated almost 50 tons of used furniture to the community with the assistance of iReuse sustainability consulting.

Kurtzig has also started working with companies to develop and implement "green" incentives and benefits for corporate clients. Through a local company that iReuse works with, Delta Dental employees can now purchase solar installation packages for their homes at a 20 to 30 percent discount off retail prices. He also helped Google create an offering for employees, which includes a \$5,000 incentive for purchasing alternative fuel vehicles. iReuse's motto is: "Make it so simple and cost effective to do the right thing

that you don't want to do anything else.”

Understanding your waste resources

In 1995, Tim Shea started FRG Waste Resources, a Napa-based company that found its market niche within commercial and industrial waste. FRG (which stands for Facilities Resource Group, though, says Shea, no one ever uses the whole name anymore) provides waste removal and recycling services to more than 300 businesses throughout the United States. Its mission is to provide customers with the knowledge, technology and services they need to achieve sustainable waste and recycling practices. A statistic on FRG's website notes the National Safety Council prediction that between 315 million and 680 million computers would become obsolete by 2007—and only 10 percent of them would be recycled. FRG works with a number of tech companies, including Cisco, Yahoo and Google. Although FRG doesn't actually perform the recycling, it does help set up and implement programs, and it collects and transports goods to local recyclers, if necessary.

FRG provides a number of services to help businesses with their waste materials. Its waste resources unit is a one-stop-shop, that helps clients design and implement total waste and recycling programs. This unit also is responsible for providing e-scrap (electronic scrap) services. It facilitates the capture, removal and disposal of special needs waste such as light bulbs, batteries, toner cartridges and outdated or otherwise noncompliant goods like office products and furniture. It's even worked with several well-known designer clothing brands to destroy surplus garments and designs to ensure works-in-progress do n't fall into the wrong hands.

FRG's main waste reduction goal is to provide businesses with generous cost savings—and with waste diversion rates of up to 85 percent or more for many clients, it's been extremely successful. With all the changes in government compliance for proper disposal of waste products, FRG has found that compliance to various state, federal and local environmental regulations can be daunting. To overcome these obstacles, it works with companies to assist them in meeting and understanding the often complicated requirements; each year, this is becoming a bigger part of FRG's business.

“FRG is a modern day ‘Sanford and Son,’” says Shea. Currently, the company sells items on eBay (mostly tech-related items, although it recently also sold an air hockey table that one company had in its break room). Its goal is to open an online store sometime this fall.

Goodwill to all

It's not just corporations that are involved with the green movement. Goodwill Industries has built its entire organization on discarded goods. Jennifer Swift, vice president of retail and operations, works in Santa Rosa overseeing the donation program for nine retail stores. “Goodwill was green before green was cool,” she says. Since 1902, it's collected people's unwanted goods and used the donations to help those in need. The money it raises is used to operate a job training program for people with disabilities.

One valuable service that's available to individuals and businesses in Sonoma County is the e-waste program. Goodwill accepts computers, televisions and consumer electronics at no charge to the donor (many waste agencies require the person discarding such items to pay a fee). Careful disposal of these items is important, because some electronics contain hazardous components. Computer monitors and televisions can contain leaded glass and materials such as beryllium, mercury, cadmium, nickel, zinc, silver and gold. Cadmium can also be found in batteries, and mercury can be present in relays and switches.

Goodwill recycles all possible parts by cutting off appliances' cords and pulling off plastics and metals. Computers contain valuable metals, and Goodwill sells the recyclable metals and other materials to outside companies that melt down the metals and package other materials to be sold and used again. Sorting materials that can be handled safely provides job training for people with disabilities. Yet, even though the nonprofit conducts regular e-waste drives, many individuals don't know about this service. Sonoma County's Administrative Offices takes advantage of the e-waste program.

“It's a great program for businesses, because it shows they're community-oriented through their support—and the donated equipment is almost always a tax write-off for their company,” says Swift. She adds that even an organization devoted to recycling can make changes that will save money and keep items out of landfills. When she arrived in Santa Rosa from Texas in 2003, the annual garbage bill for the local Goodwill outlet was \$75,000. Because of her retail operations experience, she was able to make changes that diverted goods from landfill; these items were then sold and shipped to other countries. The following year, the waste bill was reduced by half.

Approaching zero

“Five percent of the world's population produces 30 percent of its garbage,” says Patty Garbarino, president of Marin Sanitary Service (MSS). The 5 percent she's referring to are people living in the United States. Garbarino's family has a long history in Marin waste management, starting in 1956 when her father took over operations of the fledgling company of eight men and eight garbage trucks. MSS started the first curbside recycling program in the nation 28 years ago; today, it employs 240 people and operates what many

believe is the most sophisticated recycling plant in the country.

In 1989, the state passed the Integrated Waste Management Act, which called for programs to be put into place that were fashioned after MSS' program that was running in San Rafael. California recycled only 10 percent of its waste in 1990, but after implementation of the law, diverted 52 percent of its municipal waste. According to the California Solid Waste Management Board, Marin is now the number one county in the state as far as pounds of recycled material, per person, per day, with a recycling rate of more than 75 percent.

When MSS recently conducted a waste characterization study, it found that, of the 25 percent of waste that wasn't being diverted from landfills, 12 percent was food waste. The problem is, "Composting in California is challenging," says Garbarino. That's because, despite the agricultural benefits of composting (which is, basically, the cultivated decay of organic matter), the process creates small amounts of greenhouse gases (GHG). Due to this offsetting, it's difficult to get the appropriate permits for outdoor composting of food wastes.

One of MSS' latest research projects involves using a biocell for food waste. The waste "cures" in the cell for three weeks—it's all done indoors, so there are no methane emissions—and when it's done, it can be used as compost. "We're doing what we need to do to minimize our carbon footprint," says Garbarino. MSS plans to expand the project soon and hopes to partner with the local sanitary facility to use commercial food waste mixed with biosolids to produce energy from the created methane gas.

Garbarino believes the collaborative manner in which the company has approached management of solid waste is what's led to its success. She addressed the 2008 WasteExpo in Chicago in May, speaking about her company's groundbreaking zero waste efforts.

Garbarino believes much of the potential for progress lies in education. Simply put, individuals and businesses need to produce less waste: "Consumers need to be conscious about what they're buying and not buy things that can't be recycled. Recycling is the back door. We need to think about the front door."

Earth to earth

About 120 wineries in Napa County rely on Upper Valley Disposal Service & Recycling (UVDS&R) for grape pumice composting. And with a service area consisting of Yountville, St. Helena, Calistoga and Northern Unincorporated Napa County, reusing byproducts of the wine industry (discarded grape skins, seeds and stems) was a natural for the disposal company. UVDS&R has offered the service since 1966, when Robert Mondavi Winery crushed for the first time in Oakville (it's been a customer ever since).

"As the industry grew, we had to get better at what we do," says Christy Abreu, education director for UVDS&R and Clover Flat Landfill. Like Garbarino, Abreu is part of the family business; a fourth-generation St. Helenan, she and her family are committed to helping California move toward zero waste.

In 1995, UVDS&R converted its pumice composting system from windrow to aerated static piles. Ten blowers now induce airflow through the pumice piles, each controlling a 40-foot wide zone. Each pile measures 100-foot wide, 550-foot long and 12-foot high, resulting in a total volume exceeding 20,000 cubic yards per pile. Processed pumice turns into compost that wineries can use for growing their grapes (UVDS&R's compost is listed with the Organic Materials Research Institute). Ninety percent of the compost produced at its Rutherford facility is applied back into local vineyards; the remaining 10 percent is used by local landscape companies and home gardeners.

Waste related to the wine industry is just a small part of what UVDS&R processes. The company currently has a large debris recycling operation under construction, which will let it sort, separate and make new products from wood debris, concrete, asphalt, green waste, metals, cardboard and other single-stream materials that aren't included in existing recycling programs. It will be able to recover more than 15,000 tons of natural recyclables that are currently being missed and buried. This new process lets it make new products from old—including renewable energy—and will extend the life of the landfill (the last one operating in Napa County).

UVDS&R recently conducted a pilot food waste project in conjunction with the Napa Valley Vintners' 2008 Auction Napa Valley fund-raising event. The project encompassed general waste diversion, including recycling of all cardboard and glass along with food waste composting. Food waste is a major concern in the area given the abundance of restaurants and hospitality related businesses, so UVDS&R is hoping this pilot will begin creating new solutions.

The company recently initiated a program to help the wine industry recycle plastic shrink wrap. In the past, there was no real market for such a product—plus, it's physically difficult to handle. But things are changing rapidly in the world of recycling, and now, if the wrap is clean, clear and dry, UVDS&R can find a market. "We're really excited about the many market changes related to products in our waste stream," says Abreu. "It's opening doors to greater resource recovery, and that's the future."

Whose responsibility is it?

Similar to Garbarino's front door analogy is the "extended producer responsibility implementation plan," which was presented to the

Sonoma County Waste Management Authority (SCWMA) by R3 Consulting Group in January 2007. The phrase “extended producer responsibility” (EPR) best describes a long-term waste management solution that shifts responsibility for collection, transportation and management of certain waste products away from local governments and to product manufacturers. The plan would first focus on products that are toxic, because properly disposing of such items can be extremely expensive.

Rohnert Park city council member Tim Smith has been on the SCWMA board for four years and is currently its chair. Smith cites a recent Sacramento meeting regarding costs incurred by local governments for household hazardous waste disposal. It's estimated that less than 5 percent of products containing mercury, such as fluorescent light bulbs, are disposed of properly. Yet the cost to the public, statewide, for proper disposal of that small amount is millions of dollars. Without implementation of extended producer responsibility requirements, the many more millions of dollars needed to properly dispose of all such products will clearly be unaffordable to local governments.

“What I like about extended producer responsibility, besides it being good for the environment, is that it's an ideal ‘purple’ issue,” says Smith, referring to its appeal for both political parties. He says Democrats can get behind the plan because it's green, and Republicans support it because it's fiscally responsible.

Smith says the United States is far behind Europe and Canada when it comes to producer responsibility. Retailers could also be asked to participate, he continues, by establishing collection sites for batteries and other disposable products they sell. He'd like to see the state move ahead with EPR legislation “so each county wouldn't need its own ordinance.” Smith says a key in making this work is getting consumers involved—and making it easy. He cites Hewlett Packard, which includes an envelope for returning empty printer cartridges in every new printer cartridge package it sells. Smith also says manufacturers need to get away from the “design for disposal” mentality and adopt a “design for reduce, reuse or recycle” mindset instead.

The average person may not think much about it, but waste management is an important part of our daily lives. It's not always easy (or convenient) to be responsible about the waste we create, and it clearly takes commitment and conscience to make the changes necessary to make a difference. But it's in everyone's best interest to reduce, reuse and recycle. It's vital for conservation of the environment and preservation of our world for future generations. For businesses, it also means cost savings for the bottom line.

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