



# North American Companies as Zero Waste Leadership Examples

by Gary Liss

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The North American companies from A-Z highlighted below have provided tremendous leadership in Zero Waste. These companies have already diverted more than 90% of their wastes. GRRN considers them to be Zero Waste Businesses, or 'darn close.' These companies have made a conscious commitment to waste reduction and recycling, and found that they could come remarkably close to operating without wasting but careful attention to their manufacturing processes.

- **Amdahl Corporation**, Santa Clara, California USA - Winner of 1998 NRC Outstanding Corporate Leadership Award, 90% Waste Diversion since 1990, Reuse & Recycle: Loose Fill, Polystyrene, Polyurethane Foam, Polyethylene Foam, Polypropylene, Instapak Packaging Foam, #1 & 2 Plastic Containers, Manufacturing Plastic Scrap, Office Paper, Cardboard, Wood, Cans, Bottles, Metals, Wire, Circuit Boards, Building & Demolition Materials, Furniture, CRTs, Fluorescent Tubes, Tooling, Copier & Laser Printer Tone Cartridges, Reusable Product Packaging, Used Products, Donate Perishable Food to Second Harvest, Bulk Pump Dispensers for Condiments, Double Side Copies, Email to Reduce Paper, Electronics Bulletin Board & Web pages for Online Access to Jobs, Forms, Benefits & Other Company Info
- **Battery Council International** (USA) reported in the June 19, 2000 edition of Waste News that the average annual recycling rate for the lead in lead-acid batteries is now 94.6 percent. The lead-acid battery industry has been recycling its products for more than 70 years, and today operates an infrastructure of retailers and service providers that collect spent batteries from customers. The same trucks that deliver new batteries pick up the spent batteries for delivery to secondary lead smelters. Consumer, commercial and industrial users turn in spent batteries for recycling when they buy new batteries. The lead and plastic from spent batteries is used to produce new batteries. The recovered sulfuric acid electrolyte also can be used as new product, or neutralized. BCI is a nonprofit association that conducts education campaigns. BCI has drafted model recycling laws that have been adopted by 37 states, which prohibit disposal and require retail collection of spent batteries. **contact:** Ronald Pogue, BCI, 401 North Michigan Avenue, Chicago, Illinois 60611, 312-644-6610, Fax: 312/321-6869, [info@batteryCouncil.org](mailto:info@batteryCouncil.org) or <http://www.batteryCouncil.org>
- **Brewers of Ontario**, Ontario, Canada - Brewers of Ontario serves 12 million people and has 6,000 employees. In 1997, it had US\$1.4 billion in sales, 32 breweries in the system, 429 retail stores and 16,000 licensed locations. The system has a 99% Bottle Takeback Rate (15-20 times), 97.6% of all packaging is diverted and 80% are refillable bottles (with a \$.10 deposit). In 1998, they reported that their system provided a reduced cost/bottle (\$.01 vs. \$.10 for Al and \$.12 for 1 way Glass) and reduced disposal costs by 89% (from \$1.5 Million to \$170,000, 1992-1997). The Brewers invested \$75 Million in 1992 in industry-standard bottles. They recover: Aluminum Cans, PET Containers, Plastic Bags, Stretch Wrap, Photodegradable Tear-Away Hi-Cone Plastic Rings, Office Paper, Computer Paper, Corrugated, and Steel (caps). In a survey they had done in April 1997, they found that 89% of the public want

tougher environmental laws; 74% believe manufacturers and consumers should be financially responsible for containers (i.e., curbside programs should not be subsidized by taxpayers). In March 1998 exit interviews they found that their deposit & recycling system was viewed as more valuable than well-organized stores, polite, friendly staff or convenient days and times of operation.

- **Collins & Aikman**, Dalton, Georgia USA - Sent zero manufacturing waste to landfill in 1998. Implemented waste minimization programs and energy efficiency programs that over the past four years (1998) have allowed them to increase production 300%, lower all corporate waste 80% and use no more energy than what they did four years ago. (ref. Phil Bailey, 9/11/98, personal communication). **contact:** Dobbin Callahan, 800-241-4902x2309, [mresearch@aol.com](mailto:mresearch@aol.com)
- **Epson, Inc.**, Hillsboro, Oregon USA - Epson recycles 90% of their materials, then disposes of rest of their waste in a waste-to-energy(WTE) facility. As the WTE facility has a 10% residue that goes to landfill, they consider their overall diversion of waste from landfill to be 99%. They recycle the following materials at their facility: ABS plastic; Alcohol/Flux waste from manufacturing; Aluminum Cans; Batteries; Blood borne Pathogen waste; Cardboard OCC; CDs; Circuit board scrap; Computer scrap; Dry Garbage; GPPS (black trays from printer assembly); HIPS (black, random and mixed polystyrene; Ink cartridges and toner; Ink sludge from ink treatment; Ink treatment resin filters; Laminated copper; Lamps & Ballast; Magazines (manuals); Manufacturing equipment; Metal - (steel, tin); Metal Special (copper, brass, etc.); Mixed paper (desk side recycling); Office furniture; Packing material (peanuts); PBT regrind (plastic's black regrind); Pins on tape; Plastic bags, film, and wraps; Polycarbonate (heat proof trays); Polycarbonate (multi color parts); Polypropylene (battery trays, 118 white trays); Polypropylene (ink cartridges); Polystyrene foam #6; Polystyrene trays; Printer cords and cables; Pure water resin filters; PVC plastic trays, Mpa tape, IC tubes; Solder dross ; Solder scrap; Sorted white ledger (print test paper); Used oil and grease from kitchen; Used oil from compressors and mold machines; Used printers / computer / electrical equipment; Wet Garbage; Wood (pallets, scrap) Yard debris Plastic film. **contact:** George Lundberg, Environmental & Safety Engineer, 503-617-5607, [george.lundberg@epi.epson.com](mailto:george.lundberg@epi.epson.com)
- **Fetzer Vineyards**, Hopland, California USA -- America's seventh largest premium wine producer, located in Hopland, California. Fetzer has reduced its garbage by 93 percent since establishing a baseline figure in 1990. Its goal is to achieve zero waste by 2009. Last year Fetzer recycled over 326 tons of materials. The winery recycles paper and cardboard, cans, glassware, metals, antifreeze, pallets - even its wine barrels. They compost 4000 tons of grape pomace each year. Landscaping is based on zeriscape practices. Even defective corks are given to a company who makes corkboards and barstools with them. All of the vineyards Fetzer owns are certified organically grown. **contact:** Patrick Healy, Environmental Coordinator: [patrick\\_healy@b-f.com](mailto:patrick_healy@b-f.com) or [www.fetzer.com](http://www.fetzer.com)
- **Hewlett-Packard**, Roseville, California USA (9,000 employees) is diverting 92-95% of its solid waste; saving almost a million dollars a year in avoided waste disposal costs (\$870,564 in 1998). HP recycles cardboard, metal, foam, plastic peanuts, low density polyethylene plastics (LDPE), Instapak, polystyrene plastics, and reuses and recycles pallets. **contact:** Bill Coffee, Somers Building Maintenance (HP contractor), 916-785-7595.
- **Interface, Inc.**, Dalton, Georgia USA - commercial carpet maker. In 1999, 4 of 16 Interface manufacturing facilities diverted more than 90% of their waste from landfills. Several others are in the 80% range. Since 1994, Interface has eliminated more than \$90 million in waste. Interface has pioneered, among other things, the 'Evergreen Lease,' giving the company and its customers economic incentives to take back old carpets and recycle them, while assuring customers of clean, attractive carpets. Interface is reexamining its sources of waste and creating ways to reduce and finally eliminate them. It's redesigning and rethinking products so that it can deliver more with less. It's reengineering production processes to reduce resource consumption. If part of a process or product doesn't add value, it eliminates it. And that philosophy goes beyond manufacturing. Its aim is zero waste in every discipline, from accounting to sales to human resources. Interface also recently introduced its biodegradable carpet tile, the first of its kind that replaces petroleum-based nylon with fiber from corn. Interface has a ReEntry program, that will reclaim existing carpet tile or broadloom and either recycle, downcycle, or repurpose it. Interface guarantees that old carpet they collect (theirs or competitors) won't end up in a landfill. **contact:** Buddy Hay, [Buddy.Hay@interfaceinc.com](mailto:Buddy.Hay@interfaceinc.com) or

Reva Revis, 312-961-9067, [Reva.Revis@interfaceinc.com](mailto:Reva.Revis@interfaceinc.com)

- **Mad River Brewery**, Blue Lake, California USA. Currently diverts 98% of its garbage from landfills from its 15,000 square foot facility. They produce less than two 90-gallon cans of trash per week and saved over \$35,654 in 1998. They recycle scrap, metals, glass, and office paper. They compost spent grain & hops. Hops are also broadcast on pastures. Grain is also made into livestock & poultry feed. They rebuild and recycle pallets. Construction materials are reused & salvaged. They store reusables on-site. They take-back 6 pack containers. They reuse plastic mesh backs from grain shipped in by donating them to a composter to package compost and to Bolla to make into reusable shopping bags. Cellulose filter pads and staff food scraps are composted on site. PET & metal strapping is recycled. Shrink wrap is donated to Mt. People's Warehouse to recycle. Cardboard boxes are recycled. Bottles, 6 pack containers & cardboard are made of recycled material. Even part of everyone's job description is to reuse & recycle. **contact:** Bob Ornelas, Box 767, Blue Lake, CA 95525, 707-269-0398, [arcatacy@tidepool.com](mailto:arcatacy@tidepool.com).
- **Namibian Breweries**, Namibia, Africa. The sorghum brewery in Tsumeb in Southern Africa opened in January 1997 with the message "good beer, no chemicals, no pollution, more sales and more jobs." The brewery is a fully integrated biosystem with 40 different biochemical processes to reuse everything (heat, water, wastes, and CO2). The brewery produces 7 times more food, fuel & fertilizer, 4 times as many jobs & 12 more products, compared to conventional beer producers. Spent grain is used to grow mushrooms. Chickens eat earthworms set loose in grain. Digester for mushroom, chicken feed & chicken wastes generates methane gas for steam for fermentation. Alkaline water (normally needs chemicals to treat) goes into fish ponds (8 different types of fish sold) & spiruline algae (70% protein helps on child malnutrition). **contact:** Mrs. Brigitte Sass or Mr. G. Roux, 264-61-262-915x2122 or Gunter Pauli at the Zero Emissions Research Initiative (ZERI) of the United Nations University ([gunter\\_pauli@rocketmail.com](mailto:gunter_pauli@rocketmail.com) or [dellasenta@ias.unu.edu](mailto:dellasenta@ias.unu.edu))
- **Pillsbury**, Minnesota USA. Pillsbury, MN. The Eden Prairie facility diverts over 96% of waste generated and the Chanhassen plant diverts over 94%. Pillsbury has adopted a Zero Waste goal. All the original Pillsbury plants (before recent acquisitions) are reducing and recycling at or above 90% annually. Overall, Pillsbury's manufacturing facilities recycled or reused 83% of all manufacturing waste in fiscal 1999. The 83% takes into consideration new acquisitions, which have decreased the diversion rates for the total, but Pillsbury says that's going to be turned around soon. This included enough paper and cardboard to save 200,000 trees, almost 82 million gallons of water, and more than 48 million kWh of electricity. Pillsbury increased recycled content of its folding cartons for dry mixes to approximately 50%. Pillsbury's distribution centers now use rented or recycled shipping pallets for the majority of its products.  
Pillsbury has adopted a principle in their Environmental Affairs program to eliminate potentially harmful discharges and emissions into the air, onto land, and into water. Pillsbury strives to improve their waste efficiency by 10% each year. They estimate that they save over \$500,000 per year through these efforts at the Eden Prairie and Chanhassen plants alone. **contact:** Dottie Shay, Environmental Health & Safety Manager, 612-474-7444x7576, [Dshay@Pillsbury.Com](mailto:Dshay@Pillsbury.Com), [www.pillsbury.com/about/successstories.asp#waste](http://www.pillsbury.com/about/successstories.asp#waste)
- **Xerox Corp.**, Rochester, New York USA - Since the early 1990s, Xerox adopted Waste-Free Factory environmental performance goals. The Waste-Free Factory criteria include significant reductions in waste, emissions, and energy consumption, and increased recycling. In 1998, worldwide non-hazardous solid waste recycling rates reached 88% and savings amounted to \$45 million. In 1998, Xerox set environmental requirements for its suppliers worldwide, to design products that are durable and reusable, in factories that make dramatic reductions in air, water, and solid waste. Xerox is asking all of their facilities and suppliers to achieve a 90% reduction in all emissions from a 1990 baseline. In 1999, a revision of the Waste-Free Factory criteria will increase focus on reducing waste generation. **contact:** Anne Slocum, [Anne.Slocum@usa.xerox.com](mailto:Anne.Slocum@usa.xerox.com) or Jack Azar, [Jack\\_Azar@wb.xerox.com](mailto:Jack_Azar@wb.xerox.com), 716-422-9266.
- **Zanker Road Landfill**, San Jose, California USA - Zanker has had an overall diversion rate of more than 90% for the past five years. Zanker owns and operates three major recycling and composting facilities in the San Jose area. Currently up to 2,000 tons per day is received at the Zanker Road Landfill facilities, of all types of materials. Zanker currently processes and markets yard waste and compost, wood waste, cardboard, gypsum, concrete, clean and mixed

demolition debris, metal and bulky items. The material produced from the C&D processing is sold mostly to construction and paving contractors as Class II aggregate and engineered fill. Wood is sold as biomass fuel and soil amendments. Metals are separated and sold by categories of tin, #2 unprepared steel, copper, brass and aluminum. Zanker markets its finished organics products to over 170 customers and has more demand for its products than it produces.

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