



# RECYCLING ADVOCATES

February 2002

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*Involving people in creating a sustainable future through local efforts to reduce, reuse, and recycle*

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## **Recycler Profile: Total Reclaim/EcoLights NW**

– Lori Stole

During the NRC conference I had an opportunity to tour the Total Reclaim/EcoLights Northwest facility, located in south Seattle. These two businesses are operated in the same building, where they have been housed for the past one and a half years. Here, they accept fluorescent bulbs and CRTs for recycling from individuals and businesses, and handle these materials for several local jurisdictions. Co-owner, Craig Lorch, gave us background information and conducted the tour.

Total Reclaim started life in 1991 with reclamation services for refrigerant equipment and gases, which they continue to do in a downtown facility. They are the only EPA-certified reclaimers of refrigerants in Washington and Oregon, and are able to sell a complete line of reclaimed materials. With a mission of processing hard-to-recycle materials, they have now added fluorescent bulbs and CRTs to their processing capabilities.

In 1996, anticipating that fluorescent bulbs would become a regulated material, Total Reclaim started its EcoLights Northwest subsidiary. The fluorescent bulbs are manually loaded into an automated machine, which processes bulbs one by one, under a vacuum. The end caps are removed, the mercury/phosphor powder is removed and the glass is crushed.

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## **Materials Exchanges**

– Tanya Schaefer

Part of an NRC session, “Approaches to Local Market Development,” Oregon DEQ’s David Allaway discussed the state’s approach to materials exchanges.

Materials exchanges, or waste exchanges, operate under the theory that one person’s waste is another person’s treasure. Exchanges develop markets for reuse or recycling by linking businesses and individuals with each other, especially for difficult to recycle materials.

A materials exchange can supply listings, brokering services and/or storage, and can serve a range of geographic areas from local to international. It can be targeted to industry overall, residential or specific sectors, in addition to certain materials, reuse or recycling.

Oregon businesses use IMEX ([www.metrokc.gov/hazwaste/imex/](http://www.metrokc.gov/hazwaste/imex/)) funded by King County, and California’s CalMAX ([www.ciwmb.ca.gov/calmax/](http://www.ciwmb.ca.gov/calmax/)).

Oregon currently has five exchanges: a Bend exchange serving all types of businesses, the Portland Soil Trader, the Portland Chemical Consortium, Supply Our Schools in Clackamas County, and a residential exchange in Corvallis.

Currently, materials exchanges aren’t widely understood, promoted or used in Oregon. There is a confusing

overlap between local exchanges and the regional exchange, along with disagreement over how many are enough or too much.

Thus, DEQ analyzed whether Oregon needs its own materials exchange. An advantage would be an Oregon identity, addressing a perceived problem with IMEX which serves the Pacific Northwest. It would increase the number of Oregon-to-Oregon exchanges, and it might increase exchange opportunities for lower value materials due to lower transportation costs. Disadvantages include the costs to test, promote, and maintain an exchange; the potential to add to user confusion; more work for users who feel they have to list on multiple exchanges; and the possible reduction of interstate exchanges (>80% of Oregon exchanges on IMEX go out-of-state).

DEQ decided not to create an Oregon exchange; rather, its strategy is to support and promote local and existing exchanges. DEQ will evaluate the effectiveness of this strategy, and support the establishment of a materials exchange “search engine.” This Web portal ([www.NWmaterialsmart.org](http://www.NWmaterialsmart.org)) was just launched, and includes quick hyperlinks to regional exchanges and compelling cases studies of successful material trades. Program evaluation will include analysis of Web statistics, e.g., traffic relative to promotional timing. For more information, contact David Allaway at [allaway.david@deq.state.or.us](mailto:allaway.david@deq.state.or.us) or 503-229-5479.

### ***Recycler Profile, cont.***

This crushed glass is accepted locally as aggregate for cement production, at a small fee to EcoLights. The cullet is tested monthly for mercury, but there has not been a mercury contamination problem. Metals are sent to a local facility. The mercury/phosphor powder is sent to a mercury retorter in Pennsylvania or Indiana, where the mercury is cooked out of the powder. PCB ballasts are passed on to some Arizona and Alabama facilities. EcoLights processes about 40 tons of glass per month from the lamps.

Learn more about this company by visiting [www.ecolights.com](http://www.ecolights.com) or calling 206-343-1247.

The newest business for Total Reclaim is CRT recycling, which started about a year ago at the request of King County. All CRTs from King County collection events come here, the first CRT recycling program in Washington. Currently, more units are coming in than they can process, and pallets of CRTs were waiting outside as well as inside. They currently process about 1,200 units per week, and expect to expand their capacity soon.

Total Reclaim charges \$10 for drop-off of monitors. Aside from 17" monitors, which may be tested, they don't provide any reuse options for the CRTs. They charge on a weight basis for other electronics. Currently they receive few televisions, and it has been more difficult to establish the charge to accept these, as the parts are less valuable. They charge \$15 per unit and possibly more for larger units but may move to charging by weight.

In order to recycle CRTs, they first manually remove the plastic cases.

Housings with a fire retardant coating sprayed on the inside are not recyclable, and go to the landfill. Newer, plastic cases without this sprayed on coating are being shipped offshore whole, via a broker, for recycling.

The wiring harness and yoke are kept together, as this brings the best price. All metals are removed from the CRT. This "fluff" as they call it, is sent on for metal recycling. Eventually they will probably shred this material.

As the CRTs are isolated they are piled into gaylords, incurring some breakage. From here they are manually loaded, batchwise, into a crusher. Glass from black and white monitors does not have enough lead to be of concern. It is mixed with the fluorescent bulb cullet, and disposed of for use as aggregate, at a cost to Total Reclaim. The leaded CRT glass from color monitors is sent to Envirocycle, a glass-to-glass recycler located in the East. Total Reclaim pays transportation costs, but the cullet is accepted free of charge. Glass-to-glass facilities recycle this material back into CRT glass. The only U.S. CRT makers are Corning and Techniglass, located in Pennsylvania and Ohio. When the CRT market is replaced by flat panel technology the only option for leaded glass will be lead smelters, to the best of Lorch's knowledge, as he knows of no other U.S. facility that takes lead out of glass. While the different kinds of CRT glass, necks, face screen, and frit, have different dollar values, Total Reclaim chooses to ship this material commingled.

For more information about Total Reclaim Inc. or its Electronics Recycling Division, visit [www.totalreclaim.com](http://www.totalreclaim.com) or call 206-343-7443.

### **Master Recycler Program News**

Twenty-two new Master Recyclers completed the fall training at the end of November. Several are already volunteering in the community and reporting hours. Great job!

The 22nd training begins March 5 at Metro. Classes will be Tuesday evenings. Apply by February 21. For more information and an application, call Megan Cogswell at 503-725-2035 or visit <http://extension.orst.edu/multnomah/recycling>.

### **Look Up Your New Legislative District**

Are you curious to find out who represents you in Salem under the new legislative districts? Wait no longer - visit the Oregon League of Conservation Voters' Web site, [www.olecv.org/leglookup](http://www.olecv.org/leglookup), which is the first in the state to offer Oregonians a quick and easy way to find out who their elected officials are under the new districts.

By simply typing in your zip code, you can pull up your new district numbers. All it takes is one click to get your legislators' names. One more click provides your legislators' voting record on environmental issues, as well as contact information.

The new district boundaries apply for the 2002 elections and will remain in effect from now through 2011. Congressional districts have not yet been finalized.

The Secretary of State's web site, [www.sos.state.or.us/elections/other.info/maps.html](http://www.sos.state.or.us/elections/other.info/maps.html), provides maps of the districts.

## Using Prison Labor for Electronics Recycling

— Lori Stole

Some electronics recyclers are using prison labor to build an economically viable business. However, this practice is controversial, as critics feel it undercuts recyclers who are trying to develop a fair-wage, safe industry. Larry Novicky, from UNICOR, spoke at NRC about the history and goals of the federal prison labor program.

In order to train inmates for future employment and to ensure safe and secure operation of prisons, Congress established Federal Prison Industries in 1934. This is a self-supporting enterprise that chooses to be labor intensive. Inmates who participate must be working on a GED. Financial compensation for their labor, which is not considered a wage, goes into an account that helps support the inmate's family and meet other obligations. Prison Industries, now called UNICOR, operates at 110 locations, employing more than 22,000 inmates, and had FY 2001 sales of \$600 million.

UNICOR products and services cover eight areas:

- Electronics: largest supplier of spare electrical components to the U.S. government;
- Industrial products: metal products such as kitchen ware;
- Clothing and textiles: make one-third of the Army's Kevlar®;
- Office furniture;
- Graphics, printing;
- Services (ADP): data entry, distribution, call center services;
- Fleet management and vehicular components; and
- Recycled electronic products and services: the newest and smallest business, it pursues both reuse and recycling.

Novicky explained that UNICOR operates its facilities in a secure, safe and environmentally compliant manner, meeting both the letter and the spirit of all national, state and local environmental regulations.

UNICOR processes computer equipment, monitors, printers, modems, communication systems, test equipment, power supplies/electric motors, circuit boards; tests and tracks; and provides destruction services. Items that can't be reused are demanufactured into components that can be recycled. Their largest customer is the Department of Defense for whom they destroy hard drives. Facilities for electronics recycling exist, or are

being constructed, in Ohio, New Jersey, Florida, California and Texas. They provide services to the federal government, in addition to at least eight states, universities, cities, community collection programs and manufacturers. Public organizations, private companies and government agencies can purchase the recycled products.

Other recyclers led a discussion at the end of the presentation. When it was suggested that UNICOR unfairly competes with the private sector, Novicky countered that they don't want to compete and they don't advertise. They want to partner with other organizations in the areas that they don't cover, such as collection, transportation, disposition and logistics. A recycler stated that by the time he pays his environmental insurance premiums and pays his employees a living wage, he can't compete with prison labor. He also said that his experience with some government contracts has not been optimal, leaving him with a less valuable mix of material to process after cherry picking occurred. I think this debate will continue for some time!

For more information visit [www.unicor.gov](http://www.unicor.gov) or call 202-305-3732.

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### RECYCLING ADVOCATES

#### Membership Application

\$25 Regular    \$10-24 Living Lightly    \$50 Sustainer    \$\_\_\_\_\_ Other  
 Please enclose a check and mail to: PO Box 6736, Portland, OR 97228-6736

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone Day \_\_\_\_\_ Evening \_\_\_\_\_

E-mail \_\_\_\_\_

*\*Your membership contribution to RA is tax-deductible to the full extent of the law.*

## Upcoming Events

February 7, 7 p.m. Millennium Speaker Series: "How to Make the World a Better Place 3.0: Mid-course Corrections on Figuring Out What Matters Most," a presentation by Jeffrey Hollender, CEO of Seventh Generation. Free and open to the public. Portland State University, Smith Memorial Center, Room 338, 1825 SW Broadway. For more information, call 503-725-3711 or visit [www.millennium.pdx.edu](http://www.millennium.pdx.edu).

February 12, 7-9 a.m. "Product Stewardship and Electronics." Speakers Catherine Wilt and George Lundberg are a part of the Oregon Environmental Council's Forum for Business and the Environment. Multnomah Athletic Club, Portland. Advance registration required (breakfast included). For more information, visit [www.orcouncil.org](http://www.orcouncil.org) or call 503-222-1963 x106.

February 18, 7:30 p.m. Institute for the Northwest 2002 Evening Lecture Series, Dr. Richard B. Alley, "Earth System Dynamics: A Bumpy Ride." Lecture will be followed by a catered reception.

First Congregational Church, 1126 SW Park, Portland. For more information or series tickets, call 503-222-2537 or visit [www.inorthwest.org](http://www.inorthwest.org).

February TBA, 7:30 p.m. Recycling Advocates Board meeting. For location and information, call 503-777-0909.

March 7, 7:30-9:00 a.m., The Oregon Natural Step Network presents a breakfast meeting, City of Santa Monica: A Natural Step Case Study by Dean Kubani. To assure your place, prior registration is required. For more information, contact Steve Radtke at 503-241-1140 or [steve@nwei.org](mailto:steve@nwei.org), or visit [www.ortns.org/events](http://www.ortns.org/events).

March 7, 9:30 a.m.-5:00 p.m. Workshop. Smart Green Purchasing: Strategies and Tactics for Buying Environmentally-Sensitive Products and Services by Scot Case, Center for a New American Dream. Multnomah Athletic Club, Portland. For more information, contact Steve Radtke at 503-241-1140 or [steve@nwei.org](mailto:steve@nwei.org), or visit [www.ortns.org/events](http://www.ortns.org/events).

## Glass Recycling Forum

Due to changes in curbside collection, market downturns and concerns over the future of glass recycling, the Association of Oregon Recyclers, the Oregon Refuse & Recycling Association, and the Oregon Recycling Markets Development Corporation are teaming up to present a one-day education and strategy forum on glass recycling.

The forum is set for Friday, February 22, 2002, 9 a.m. to 3 p.m., 680 State Street, Micah Ballroom, (upstairs from the ORRA offices), Salem. The registration fee is \$25 and includes a \$5 parking pass for the day.

The forum is open to members of all three organizations and other interested parties. Register through AOR by February 15 at [www.aorr.org](http://www.aorr.org) or call 503-661-4475.



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