

# Product Stewardship A Success for Maine

Case  
Study

#2

## Electronic Waste



*"Finally I've been able to recycle all the old computers, TVs, and other devices piling up in my basement that I didn't know what to do with. I haven't been seeing as many old electronics dumped by the side of the road— now they're getting recycled instead."*

— Ray Sirois, Resident of Harrison

In 2004 the Maine Legislature addressed a major emerging problem by enacting a recycling law for discarded electronics. The law created a program that shares recycling costs with manufacturers. It has been tremendously successful at protecting the environment, creating jobs, cutting costs and saving money. Maine's leadership and success in electronics recycling has been influential across the country and has brought significant benefits to the economy and environment.

Consumer electronics – the computers, smartphones, televisions, and other devices that Americans use every day – contain toxic materials. If these items are thrown away, they can release lead, arsenic, mercury, cadmium, brominated flame retardants, and other toxins into air, land, and water. In 2010 alone, Americans discarded more than 380 million electronic devices, totaling over 2.4 million tons. Every time a manufacturer introduces a newer, sleeker computer, tablet, or phone, old ones become obsolete. It is no wonder electronic waste, or e-waste, is the fastest growing portion of the American waste stream.

In Maine, it is estimated that more than ten million pounds of TVs and computer monitors become available for recycling each year. Without recycling programs, these devices would end up in Maine's traditional waste stream destined for incineration and landfills. When this waste is burned in an incinerator, toxic materials can be released into the air; when buried in landfills, toxic chemicals can leach into soil and drinking water. In the U.S., 40% of the lead in landfills and 70% of heavy metals in landfills comes from discarded consumer electronics. People can suffer serious health problems from lead exposure, including brain and kidney damage and anemia. In the environment, lead exposure can harm fish, birds, and other wildlife.

Before Maine's program began in 2006, only a few towns collected televisions and monitors for recycling. Those towns typically charged between \$15 and \$30 per unit. This fee deterred Mainers from bringing their unwanted electronics for recycling.

### Real Results

Maine's program has recycled more than 37 million pounds of e-waste, including an estimated 4 million pounds of lead. Access to e-waste recycling locations and events has increased, and drop-off fees have decreased significantly. The program has created jobs in the collection, consolidation, hauling, and recycling of e-waste; protected the health of people and wildlife; and reduced costs for local governments and taxpayers by \$11 million.

### What is "Product Stewardship"?

Product Stewardship is an advanced recycling strategy that requires manufacturers to share responsibility for the safe collection and recycling or disposal of their products and packaging. Product stewardship shifts recycling and disposal costs from taxpayers to producers and consumers.

### Shared Responsibility

Maine's e-waste product stewardship program creates a system in which consumers, municipalities, and manufacturers share responsibility for ensuring that electronics are properly recycled to reclaim useable materials and prevent the release of toxics to the environment.

# Product Stewardship Creates Jobs in Maine



**Under Maine's law**, private companies haul, consolidate, and recycle e-waste. As a result, new businesses have been created and existing businesses have expanded, creating jobs in Maine's "clean-tech" economy. Maine's commitment to its e-waste program has inspired businesses like North Coast Services to come to Maine, innovate in the clean-tech industry, reduce recycling costs for municipalities and their taxpayers and residents, and maintain high-quality jobs in the state.

## North Coast Services LLC, Scarborough

North Coast Services is an e-waste consolidation business with locations in Scarborough and Hampden, Maine and Portsmouth, New Hampshire. The company collects, consolidates, and enables electronic waste recycling for municipalities, small businesses, universities, and many other commercial and not-for-profit locations in Maine and New Hampshire. North Coast, which employs 10 full-time employees, is one of five Maine consolidation businesses approved to operate in Maine.

Billy Andrews, one of the three co-owners of North Coast, has been in the electronics recycling business in Maine for fifteen years. Billy and his business partners oversee all aspects of the business operation at North Coast. A native of Ellsworth, Billy enjoys expanding his business and creating innovative solutions that help protect the state he loves.

*"We operate with the highest integrity in this business. That's what has made us profitable in our first year of operation. That's why we've been growing over time."*

— Billy Andrews,  
North Coast co-owner

North Coast now collects and consolidates electronic waste from more than 35 municipalities, 10 school systems, and numerous small electronics repair businesses, housing authorities, and other locations. Employees pick up e-waste from municipal transfer stations and businesses and bring the items to a central facility where they are sorted, weighed, and consolidated. Workers then package the devices for transport to a recycler, which processes the materials according to environmentally sound management guidelines as required under Maine's law.

About 80% of the materials processed by North Coast are covered by Maine's e-waste product stewardship program. North Coast does not bill their customers for items covered under the law, but instead invoices electronics manufacturers for the recycling costs for their products. Before the law went into effect, consolidators charged customers 20-30¢ per pound for collection, plus transportation fees. Now that so much of what the company collects is under a product stewardship program, North Coast customers pay nothing to recycle covered devices, and pay around 5¢ per pound for non-covered devices.

"Because of Maine's shared responsibility system for discarded electronics, our customers save time and money by sending all their e-waste to us, instead of having to deal with multiple vendors," says Andrews. "The market has opened up and allowed us to provide a really critical service to municipalities, small businesses, and other small organizations."

**What's Covered:** Computer Monitors, Laptops, Tablets, TVs, Digital Picture Frames, Printers, Video Game Consoles

**Who's Covered:** Individuals, Elementary and Secondary Schools, Small Businesses and Non-Profits

# Product Stewardship Protects Maine's Environment



**Maine's product stewardship program** for e-waste has kept an estimated 4 million pounds of lead from entering the state's incinerators and landfills and has recycled more than 37 million pounds of e-waste since its inception in 2006. Lead poisons people and wildlife. In addition to containing significant amounts of lead, consumer electronics can contain harmful levels of arsenic, cadmium, mercury, flame retardants, phosphorous coatings, and PVC plastics, all of which threaten the health of people, wildlife, and the environment when buried in landfills or burned in incinerators. Recycling electronic products also reduces demand for raw materials and processing, thus reducing greenhouse gas emissions and natural resource extraction. Maine's program has prevented more than 600 million pounds of carbon-equivalent emissions.

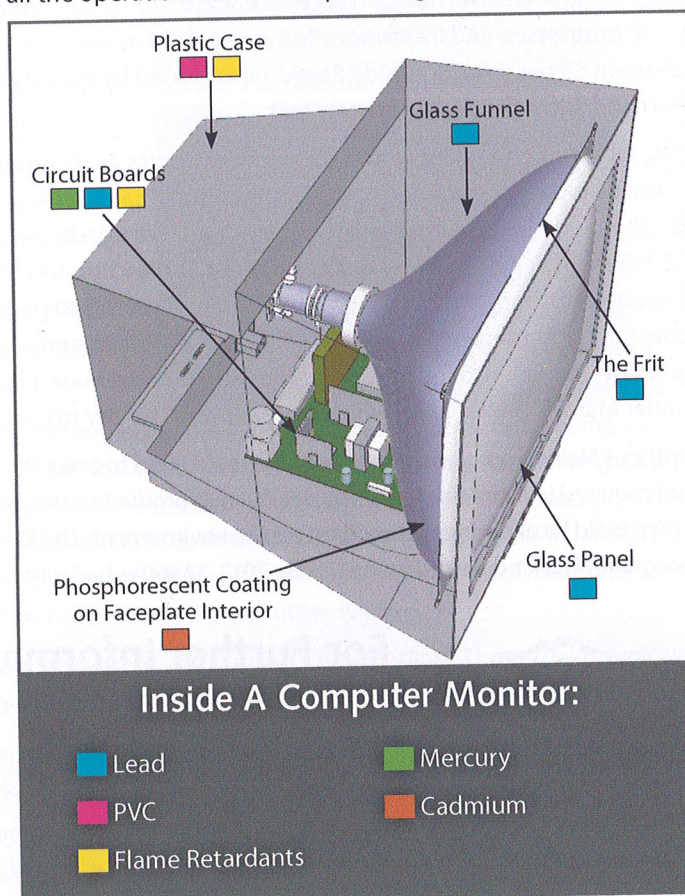
## Sandy River Recycling, Farmington

Ron Slater has served as manager at the Farmington area's regional recycling facility, Sandy River Recycling, since it began operations 22 years ago. Ron and three other employees handle all the operations at the non-profit organization, which serves as the central collection point for traditional recyclable materials including paper, aluminum, plastics, and glass, as well as electronic waste from transfer stations in 21 participating Franklin County municipalities.

The electronic waste operation at Sandy River handles more than 20,000 pounds of electronics each year. Since 2009, Sandy River's collection alone has kept more than 85,000 pounds of electronics, containing lead and other heavy metals and toxic chemicals, out of the trash.

"It's easy enough for us to pick up e-waste, just like we pick up other recycling from our towns," says Slater. "When we get a call, the guys go out in our trucks for a pickup and then we count and record the items by type and weight." When there's no more room for storage on site, e-Waste Recycling Solutions picks up the materials. This Lewiston-based company is Maine's largest electronics consolidator and only in-state recycler.

"We used to charge our member towns about \$6 per pound to cover our costs. Now that the manufacturers cover recycling costs, Sandy River does e-waste pickups for free," says Slater. Member towns have been able to reduce, and in some cases eliminate, the e-waste drop-off fee for residents and small businesses. As a result, more Mainers are keeping e-waste out of the Farmington region's landfills and incinerators.



# Product Stewardship Saves Money for Mainers



**In its first six years of operation,** Maine's product stewardship approach to electronic waste has saved taxpayers more than \$11 million. Because manufacturers are now paying a share of recycling expenses, many towns have been able to turn what used to be a cost borne by taxpayers into a revenue-neutral and sometimes profitable operation for the municipality. It has also resulted in convenient access to e-waste collection in most towns. Access to some form of collection is available to all Maine residents at more than 300 municipal collection sites statewide, or about 70% of Maine towns.

## Riverside Recycling, Portland

Riverside Recycling, which services the greater Portland region, accepts household electronic waste six days a week for free from all 63,000 Portland residents, as well as schools, and small businesses and non-profits. Riverside also accepts e-waste from other individuals, small businesses, and institutions from neighboring towns at a charge of about \$5 per item. Riverside Recycling is owned by the City of Portland and operated under contract.

“We fill about one trailer with discarded electronics every month – mostly old televisions and computer monitors,” says Portland’s Environmental Programs Manager Troy Moon. “We usually get about 30 TVs per day. And in the summer we often fill 2 or 3 trailers with e-waste every month.” Portland used to charge \$25 to \$30 per item to cover their costs; now they charge only a few dollars to non-residents and nothing for Portland residents. The fees have decreased dramatically because of the payments from manufacturers made under Maine’s e-waste law, which have allowed the city to pass along its savings to residents.

Without Maine's program, town budgets would need to cover the full costs of recycling covered electronics if manufacturers were not required to share this responsibility. Maine's product stewardship program for electronic waste has been a critical tool to reduce costs, build local businesses and protect the environment. The Electronic Waste Recycling Law was the first product stewardship program of its kind passed in the U.S. By 2012, 22 states had followed Maine's lead and adopted their own e-waste recycling laws.



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### For Further Information:

NRCM's Product Stewardship Project: [www.nrcm.org/issue\\_electronicwaste.asp](http://www.nrcm.org/issue_electronicwaste.asp)

Help support sustainable materials policies by joining NRCM's Action Network:

[nrcm.kintera.org/Action\\_network\\_signup](http://nrcm.kintera.org/Action_network_signup)

The Maine Department of Environmental Protection's Universal Waste Collection Locations Map:

[www.maine.gov/dep/gis/datamaps/brwm\\_recycling/](http://www.maine.gov/dep/gis/datamaps/brwm_recycling/)

Electronics Take-Back Coalition: [www.electronicstakeback.com](http://www.electronicstakeback.com)