



# Electronics Recycling

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## INTRODUCTION

Discarded electronics represent a growing waste stream. State and local government agencies have identified electronic waste as their most significant waste problem with respect to management costs and potential environmental impacts. Electronic waste has become a primary concern as a result of the proliferation of new electronic products combined with their rapid obsolescence, low recycling rate and their potential to contain hazardous materials. Computer monitors and other equipment with Cathode Ray Tubes (CRT's) contain lead & mercury as well as other toxic materials that could be released to the environment if not handled properly. According to the EPA, over four billion pounds of e-waste was discarded in the United States in 2005, accounting for between 2% and 4% of the municipal solid waste stream. As much as 87.5% of this was incinerated or dumped in landfills. Only about 12.5% of the total was recycled.

The export of electronic waste to developing countries is also of concern. Some electronic recyclers in the United States are sending discarded products to China, India, Pakistan, and other developing countries, where labor costs are lower and environmental regulations are often lax or not enforced. There, recycling is often conducted without precautions to ensure worker safety and to prevent toxic releases to the environment, according to the Product Stewardship Institute.

## REGULATIONS

### **King County Waste Acceptance Rule**

As of October 1, 2005, King County residents and businesses may no longer dispose of computers, laptops, monitors, TVs and cell phones in the garbage or at transfer stations.

### **City of Seattle Municipal Code**

Prohibits the disposal of computer monitors, TV's or any other device that contains cathode ray tubes (CRTs) from any residential or commercial customer in the municipal solid waste or at the Seattle transfer stations. ([Seattle Municipal Code 21.36.025](#) – Unlawful Disposal; [21.36.026](#) – Household Hazardous Waste; [21.36.029](#) – Small Quantity Generator)

## Washington's Electronic Product Recycling Program

Beginning January 1, 2009: A new law will require manufacturers to provide electronic product recycling services for televisions, desktop computers, laptop computers, and monitors at no cost to households, small businesses, charities, school districts, and small governments

- [Fact Sheet](#)
- [Electronic Product Recycling Program Chapter 173-900 WAC Regulation](#)

### USAGE HISTORY AND EXPERIENCE

King County agencies have been recycling obsolete computers, television sets and other electronic equipment with a local recycling firm since 2002. There is growing concern about the ultimate effects of landfill, disassembly, or incineration of computers and electronics, which contain a variety of heavy metals and other toxic constituents. Of special concern are cathode ray tubes (CRTs), which are no longer accepted at the King County landfill, because they contain large amounts of lead.

King County Code requires working equipment to be redistributed within the county or donated or auctioned. Non-working equipment is recycled through a local recycler, through the Washington State contract for electronics recycling services which requires that electronic components be recycled domestically. During the past year, agencies recycled 1,400 computer monitors, 70,000 pounds of other electronic equipment and 7,600 pounds of batteries of various types associated with this equipment.

Having completed a pilot program in 2002 and a three year term contract (2003-2006), under which King County recycles obsolete equipment in a way that minimizes harmful impacts on human health and the environment, the county now uses the State of the Washington contract for electronics recycling. Please see below for more information.

### BID AND CONTRACT LANGUAGE

#### King County's Supply Contract

This section contains excerpts (shaded area) from the provisions of King County's 2003 Invitation-To-Bid for Electronic Recycling Services:

Please note: This contract expired in 2006. King County now uses the State of Washington contract Recycling Services, Electronic ([Bid #09108](#))

#### Section 5 - Specifications

##### 5-1 Purpose

The purpose of this Invitation to Bid (ITB) is to establish a contract that will enable King County to obtain Electronics Recycling Services as requested by various King County Departments, Divisions, and agencies. The contract period shall be one (1) year from the date of award of this ITB. King County may extend the contract period for two (2) additional one-year periods in accordance with the County's best interest and at the sole option of the County.

King County defines electronics recycling as the means that equipment is reused, dismantled, or processed for the reuse or refining of its component parts so as to bring or restore the material to a state in which it can be used as a feedstock for manufacturing processes.

##### 5-2 Mandatory Requirements

- A. Vendor shall not maintain outdoor piles of dismantled equipment or parts, unless secondary containment is provided to prevent dust or runoff to drains.
- B. Burning or incineration shall not be considered recycling for the purposes of this contract.

C. Monitors, Televisions and other equipment containing Cathode Ray Tubes (CRTs):

Vendor shall separate the plastic housings, copper wires and metals, CRTs and other materials. The CRTs shall be recycled at domestic (United States and Canada) glass-to-glass recycling facilities, lead smelters, or glass recyclers, per the Washington State Department of Ecology's Interim Enforcement Policy. Other components shall be recycled at appropriate recycling facilities. The vendor shall document any materials that cannot be recycled and that are disposed, per section 5-4 Usage Reports.

D. Other Electronic Equipment (i.e. CPUs, circuit boards, power supplies, laptop computers, peripherals, VCRs, cables, etc)

Vendor shall recycle the electronic equipment at appropriate domestic (United States and Canada) recycling facilities, in accordance with all Federal, State and Local regulations. The vendor shall document any materials that cannot be recycled and that are disposed, per section 5-4 Usage Reports.

E. Batteries

Vendor shall recycle batteries at a permitted battery recycling facility.

F. Bidders shall designate where the items will go for reuse, demanufacturing, recycling, or disposal. The list shall include all designated facilities that are involved in the handling and processing of the equipment. The list shall include each sub-contractor, broker, recycler, processor and transporter used in fulfilling this contract, and for each, shall provide a contact person, phone number, site address, and EPA ID number, if applicable. Bidders unable to provide a list, at the time of bid, of designated facilities will be disqualified.

G. The contractor shall allow physical inspection of their facilities, including those of any sub-contractor, at any time upon notification by King County, to verify certification and to pre-qualify any and all subcontractors to be used in conjunction with this contract.

H. The contractor shall be currently operating out of a commercial facility, which is open and accessible to County personnel, without prior notice during normal business hours. Facilities shall be available between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday (excluding holidays).

### 5-3 Regulatory Compliance

Vendor shall comply with all Federal, State, and Local regulations, and shall handle Dangerous Wastes in compliance with WAC 173-303, regardless of whether or not the processing location is in Washington state.

The Vendor shall comply with the Washington State Department of Ecology's Interim Enforcement Policy Conditional Exclusion for Cathode Ray Tubes and Related Electronic Wastes, and shall provide a copy of the letter submitted to the Department of Ecology that notifies Ecology that they are handling CRTs and other electronic wastes.

### 5-4 Usage Reports

Annually, the contractor shall furnish to the Procurement Services Section usage reports showing a summary of the services and/or history of each county agency for the previous contract year. The report must show at minimum, the reporting period, description and total quantity of each item recycled/processed during the period, county agency, and total dollars billed per agency. King County reserves the right to request additional information, if required, when reviewing contract activity.

Quarterly, the contractor shall furnish to the Solid Waste Division usage reports showing the following:

A. The Vendor shall list each sub-contractor, facility, and transporter used in fulfilling this contract, and for each, shall provide a contact person, phone number, site address, and

EPA ID number, if applicable. The report shall also include the process and/or procedure used for each batch or unit accepted from the County.

- B. Vendor shall provide documentation, describing which, if any, materials were disposed, the final destination of such materials, and the method of disposal.

**Section 6 – Pricing**

**RECYCLING**

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITIES	PRICE
1	CRT	350	\$ _____/unit
2	Television, under 27"	20	\$ _____/unit
3	Television, over 27"	20	\$ _____/unit
4	Batteries Batteries contained within equipment including, but not limited to: lead acid, nickel-cadmium, nickel metal hydride, lithium, lithium-ion	100	\$ _____/pound
5	Other Electronic Equipment King County defines other electronic equipment as: computer terminals, central processing units, laptop computers, main frame computers, power cables/connectors, power supply units, printed circuit boards and computer cards, printers, scanners, keyboards, mice, VCR, stereos, radios, telephones - all types, copiers, fax machines	3250	\$ _____/pound

**TRANSPORTATION**

Transportation of items to be recycled may be done by awarded Vendor or King County Agency personnel, at the County's discretion.

Pick up by awarded Vendor shall occur within 48 hours of call from King County Agency personnel.

There will be no transportation charges for items dropped off by King County.

	DESCRIPTION	ESTIMATED QUANTITIES	PRICE
6	Price per trip within Seattle City Limits	50	\$ _____/trip
7	Price per trip outside Seattle, but within KC	20	\$ _____/trip

## State of Washington Contract

### Recycling Services-Electronics & Spent Light (#09108)

Contract language excerpt:

Ecolights Northwest (Total Reclaim, Inc parent company) will provide services for collection, transportation, recycling, and disposal of spent lighting (lamps, tubes, and bulbs) and lighting ballasts, and used electronics including but not limited to computers, monitors and televisions, and other electronic equipment and peripherals. They will also provide a certificate of recycling/disposal for all materials collected. The program's intent is to keep spent lighting and electronics out of landfills, manage any dangerous waste and recycle materials as feasible.

## FOR MORE INFORMATION

- [E-Cycle Washington](#) - Washington now has a FREE, convenient and environmentally responsible recycling program for computers, monitors, laptops and televisions for households and small businesses.
- [Take It Back Network](#) lists recycling options throughout King County
- [Seattle area electronics recyclers database](#)
- [Western Electronic Product Stewardship Initiative \(WEPSI\)](#)
- [Product Stewardship Institute](#)

## VENDOR INFORMATION

King County's Current Contract Vendor (based on state bid):

[Total Reclaim/Ecolights](#)

Phone: (888) 214-2327 or (206)343-7443

- King County PO #'s: [B21907B](#) or [443963](#)