

**DAS Statewide Policy**

**SUBJECT:** Sustainable Acquisition and Disposal of  
Electronic Equipment (E-Waste/Recovery Policy)

**NUMBER:** 107-009-0050

**DIVISION:** State Services Division  
State Procurement Office and State Surplus Property

**EFFECTIVE DATE:** 1/1/2007

**APPROVED:**



**POLICY/  
PURPOSE:**

In support of the Governor's Sustainability Executive Order 06-02, this policy adopts the Electronic Products and Acquisition Technology (EPEAT) standards for the acquisition and disposal of electronic equipment to attain these objectives:

- a. Prevent hazardous materials from entering the waste stream.
- b. Consider the cost of "end-of-life" take-back disposal services in the initial acquisition costs of electronic equipment.
- c. Maximize re-utilization of all universal waste and materials contained or used in electronic equipment.
- d. Encourage design and manufacture of new electronic equipment for re-use.
- e. Refurbish existing electronic equipment for reuse with minimal consumption of energy.
- f. Prevent release of sensitive or protected information from the State's control.

This policy also defines that all surplus and excess electronic equipment as "E-Waste," which is to be disposed of by re-use, in its current form or by disassembly into usable components or elements, without entering any waste stream or compromising information security requirements. This policy directs state agencies to return the E-Waste to any manufacturer or vendor meeting criteria for disposal of hardware and data or to DAS Surplus.

**AUTHORITY:**

Governor's Executive Order # 06-02, ORS 279A.075, 279A.250 through 279A.280, OAR 125-246-0700, and OAR 125-246-0800, EPEAT Criteria, <http://www.epeat.net/Criteria.aspx>.

**APPLICABILITY:**

This policy applies to all State agencies subject the Department of Administrative Services authority under ORS 279. It may voluntarily be applied to State agencies with independent authority.

**ATTACHMENTS:**

Exhibit A – Property Disposal Request (PDR)  
Exhibit B – Data Clearing/Sanitization Standards.  
Exhibit C – List of Acquisition and Disposal Charges

**ACQUISITION:**

State agencies purchasing computer equipment including; desktops, computer laptops, computer monitors, input or output devices will utilize EPEAT environmental criteria contained in a public standard, IEEE 1680 in the evaluation and award of contracts for computer desktops, laptops, or computer monitors provided that in the judgment of the State's Chief Procurement Officer there is sufficient competition between responsible suppliers to warrant cost competitive purchases and the application of EPEAT is feasible.

**DEFINITIONS:**

**Authorized E-Waste Vendor/Manufacturer:** A contractor who has been awarded a state or agency contract for the disposal of E-Waste and has agreed to provide certificates of destruction and meet disposal criteria set forth in this policy.

**Authorized Supplier:** A supplier with a price agreement or contract awarded by DAS Procurement to sell appropriate IT goods to state agencies and local governments.

**Certificate of Destruction:** Affirmation in writing from any manufacturer, vendor, legal entity or person that all data, existing operating system software, information, or formatting has been irretrievably destroyed without any concurrent retention or use of retention devices in the destruction to approved sanitization methods provided for in Department of Defense Directive DOD 5220.22-M, Chapter 8, Sect 3 (Sanitization Matrix) at <http://www.dtic.mil/whs/directives/corres/html/522022m.htm>.

**Disposal Criteria for E-Waste:** **Data/Information** – complete removal and absolute destruction of all data, information, operating system software, firmware or non-writeable read-only media, and formatting in compliance with approved sanitization methods provided for in Department of Defense Directive DOD 5220.22-M, Chapter 8 (Exhibit B). **Hardware** – third-tier accountability that all hazardous material has been safely transferred for re-use or to an EPA-approved hazardous waste site; that all materials have been re-used in existing or elemental form; that no materials have been deposited in any landfill; that no components were transferred to another country without disassembly or de-manufacture.

**Electronic Waste (E-Waste):** Excess or surplus, obsolete or non-working electronic equipment including, but not limited to Information Technology Equipment, Information Technology Equipment Waste, Televisions, Copiers, Facsimile Machines, Oscilloscopes, telephones, radios and electronic test equipment and other equipment that is primarily comprised of circuit boards, and or CRT monitors, plasma monitors, and liquid crystal displays.

**End-Of-Life (EOL) Management:** design, acquisition, shipping, configuration and programming standards which maximizes safe re-use of all materials, at the lowest cost and energy consumption.

**EPEAT:** EPEAT is a procurement tool developed under the sponsorship of the United States Environmental Protection Agency to help institutional purchasers in the public and private sectors evaluate, compare and select desktop computers, notebooks and monitors based on their environmental attributes. EPEAT provides a clear and consistent set of performance criteria for the design of products, and provides an opportunity for manufacturers to secure market recognition for efforts to reduce the environmental impact of its products.

**Excess or Surplus IT Equipment:** Equipment that is no longer needed for use by the owning state agency.

**Manufacturer's Buy Back/Take Back Program:** A "buy-back" provision in a contract/state price agreement is where the cost of returning the electronic equipment component is pre-paid within the acquisition, which is usually offered as a "green" or an "environmentally preferred purchase" item within state price agreements. A "take-back" provision is where the cost of returning the electronic equipment component is paid for as an additional charge upon return. Under the contract, the selling contractor certifies the sustainable disposal of all returned

components and the destruction of all data or re-formatting of the hard drives to Department of Defense standards. Under these provisions, manufacturers must furnish a Manufacturer's Disposal Receipt certifying that the supplier has received the equipment and intends to destroy it including the hard drive back to the sending agency.

**Manufacturer's Disposal Receipt (MDR):** The form used to document the transfer of E-Waste from a State Agency to an Authorized Supplier with a Manufacturer's Buy Back/Take Back Program. Typically signed by the Authorized Supplier's representative at the time the electronic equipment is removed from an agency's possession.

**Obsolete IT Equipment:** IT Equipment that no longer supports software used by the agency, is not interoperable with other required IT equipment, or is not cost effective to make interoperable with other required IT equipment used by the agency.

**Property Disposition Request (PDR):** The form used to transfer personal property ownership from one State Agency to another. This form is also used by State Agencies, and municipalities, to identify excess personal property available for surplus disposal. All PDR's must be signed by a management representative and may also be signed by the employee who completed the inventory indicated on the form. This form confirms to submitting state agencies that DAS Surplus has removed all data and/or disposed of E-Waste as set forth in this policy.

**State Agency:** Every state officer, board, commission, department, institution, branch or agency of state government whose costs are paid wholly or in part from funds held in the State Treasury, and includes the Legislative Assembly and the courts, including the officers and committees of both, and the Secretary of State and the State Treasurer in the performance of the duties of their constitutional offices.

**State Procurement Office, State Services Division, Department of Administrative Services (DAS Procurement):** The state program responsible for developing contracts and price agreements for the E-Waste disposal and IT Equipment purchases with Authorized Suppliers. This program is responsible for the management and facilitation of the Manufacturer's Buy Back/Take Back Program.

**State Surplus Property, State Services Division, Department of Administrative Services (DAS Surplus):** The state program responsible for policy guiding the disposal or excess and surplus property. The program operates the Property Distribution Center for the purpose of receiving excess and surplus agency property and disposing of the property including E-Waste.

#### **TRANSFER OF OWNERSHIP OF E- WASTE.**

This policy directs state agencies to transfer ownership of all E-Waste using either of the following options listed below.

#### **OPTION 1 – Vendor Disposal or Manufacturer Buy-Back/Take-Back Program**

State agencies may return E-Waste to a manufacturer or vendor meeting criteria for disposal as set forth in Exhibit B in this policy. State agencies may return E-Waste to any vendor meeting criteria for disposal, regardless of source of purchase. State agencies may still return any E-Waste to DAS Surplus, regardless of the availability of a Buy-Back/Take-Buy program by a manufacturer or the availability of a

disposal vendor.

- I. State agencies shall acquire, identify, and manage all IT equipment to maximize investments and opportunities to plan for EOL management, where available.
- II. DAS Procurement will maintain Manufacturer's Buy Back/Take Back Programs within all contracts, price agreements, intergovernmental agreements, and cooperative price agreements. Currently, all contracts for desktop and laptop computers contain these programs. The costs to the state agencies for use of these programs vary by manufacturer; the cost of disposal may be included in the acquisition pricing, or charged as a fee depending on vendor. These programs will also require that the supplier certify that sensitive and confidential information will be destroyed and properly disposed of according to Oregon DEQ and EPA hazardous waste rules. State Procurement Office (SPO) will require a supplier with an authorized Manufacturer's Buy Back/Take Back Program to furnish a Manufacturer's Disposal Receipt (MDR) and a Certificate of Destruction to the agency that disposed of E-Waste.
- III. DAS Surplus delegates its authority to dispose of E-Waste under ORS 279A.280(C) to state agencies for the purposes of either returning E-Waste to an electronic product manufacturer or to a vendor who meets data sanitization/clearing and disposal requirements set forth in Exhibit B in this policy. State agency shall perform a cost/benefit analysis to determine the comparative value of returning E-Waste to manufacturers, vendors, or to DAS Surplus. To assist state agencies in this determination, a listing of the current charges for transfer of E-Waste by manufacturers under state price agreements/contracts is attached as Exhibit C to this policy. State agencies using the option shall maintain on file for each E-Waste component, the disposal receipt (MDR) and/or the certificate of destruction.

#### **OPTION 2 – DAS Surplus Take-Back Program and Disposal**

If Option 1 is not used, state agencies shall transfer all E-Waste directly to DAS Surplus under existing procedures for disposal of surplus property.

- I. DAS Surplus is responsible for maintaining documentation indicating the subsequent distribution, disassembly, rebuilding, re-use, costs, and/or revenues in the transfer of E-Waste under its direct control. DAS Surplus will forward the PDR form back to the submitting agencies for property management purposes.
- II. DAS Surplus will ensure that all sensitive, proprietary and licensed data is irretrievably removed from storage containing devices (i.e., Hard Disk Drives, BIOS, etc.). DAS Surplus shall ensure that all hard-drives are reformatted to Department of Defense standards set forth in Exhibit B in this policy.
- III. State agencies shall pay for the transportation of E-Waste sent to DAS Surplus. DAS Surplus shall recover costs for ultimate disposal and information security/data removal through re-sale of rebuilt E-Waste components and/or a disposal fee.
- IV. DAS Surplus will document the data removal and system specifications for all E-Waste refurbished and sold or transferred.
- V. DAS Surplus will offer a Take-Back option for all refurbished items sold or transferred. Purchasers of refurbished electronic equipment from DAS Surplus will be required to agree to the above Take Back or to disposal through a contractor or organization that certifies the equipment will be recycled and all resulting waste will be disposed of through an EPA approved hazardous waste facility.

STATE OF OREGON  
PROPERTY DISPOSITION REQUEST

**Exhibit A**  
Property Disposal Receipt  
E-Waste/Recovery Policy

Submit White, Blue and Yellow to Department Of General Services, Retain Pink Copy. Approved Copy will be returned.

<input type="checkbox"/> Excess or Surplus <input type="checkbox"/> Salvage or Scrap <input type="checkbox"/> Lost or Stolen <input type="checkbox"/> Intra-Agency Transfer <input type="checkbox"/> Trade-In <input type="checkbox"/> Other							Department		PDR Number <b>E 3388</b>	
Type of Request	Agency No.		Unit or Division		Date					
Prop. Tag #	Inventory Number	Quantity and Unit	Description, Location, Present Condition, Make, Serial Number, Statement of Circumstances, etc.	Year Acquired	Acquisition Cost	Estimated or Inventory Value	Resale Price			
We certify that the above is correct and recommend disposition as follows (Show trade-in offered and amount if any, and Purchase Request or Contract Release Order Number)										
Signature of Accountable Person			Date	Phone No.	Signature of Department Head		Date			
1 <input type="checkbox"/> FURNISH TITLE TO DEPT. OF GENERAL SERVICES STATE SURPLUS PROPERTY: SEND "PROPERTY TAG" WITH EQUIPMENT. THE PROPERTY TAG SHOULD INCLUDE THE FINAL MILEAGE, LIST ALL SPECIAL EQUIPMENT SUCH AS: (1) THREE, FOUR, OR FIVE SPEED TRANSMISSION; (2) FOUR, SIX OR EIGHT CYLINDER ENGINE; (3) FOUR OR SIX WHEEL DRIVE; (4) WARN HUBS; (5) SPECIAL TRACTION REAR END (LIMITED SLIP DIFFERENTIAL); (6) TWO SPEED REAR AXLE; (7) POWER STEERING; (8) POWER BRAKES; (9) AUTOMATIC TRANSMISSION, AND (10) OTHER OPTIONAL EQUIPMENT REMOVE FROM INVENTORY RECORDS WHEN NOTIFIED THAT AUTHORIZED DISPOSAL HAS BEEN COMPLETED. ATTACH VEHICLE CONDITION REPORT(S) TO PDR.										
2 <input type="checkbox"/> Deliver to _____ INSTRUCTIONS: TAG EACH ITEM WITH A "PROPERTY TAG" PREPARE AND SEND WITH PROPERTY, PER DEPARTMENT OF GENERAL SERVICES ADMINISTRATIVE RULES.										
3 <input type="checkbox"/>										
4 <input type="checkbox"/> Make disposition as follows:										
STATE SURPLUS PROPERTY MANAGER					Date	Date Registered				
I certify that the property listed above has been disposed of in compliance with above instructions <input type="checkbox"/> Recorded										
Receipt No.	Purchase Order No.	Date of Receipt or P O		Signature	Date					

## Exhibit B – E-Waste Clearing and Sanitization Requirements

### DOD 5220.22-M CLEARING AND SANITIZING MATRIX [NISPOM 8-306]

#### CHAPTER 8 Automated Information System Security

##### 8-302. Media Controls.

e. Authorized sanitization procedures for the most commonly used memory and storage media are defined in the sanitization matrix.

##### Clearing and Sanitization Matrix

<http://www.dss.mil/isec/chapter8.htm>

MEDIA	CLEAR	SANITIZE
<b>Magnetic Tape</b>		
Type I	a or b	a, b, or m
Type II	a or b	b or m
Type III	a or b	m
<i>Method m is used on all magnetic tapes.</i>		
<b>Magnetic Disk</b>		
Bernoullis	a, b, or c	m
Floppies	a, b, or c	m
Non-Removable Rigid Disk	c	a, b, d, or m
Removable Rigid Disk	a, b, or c	a, b, d, or m
<i>Floppies and Bernoullis use method m, rigid disks use method c. If method c is unsuccessful due to disk failure, then method m is used.</i>		
<b>Optical Disk</b>		
Read Many, Write Many	c	m
Read Only	m, n	
Write Once, Read Many (Worm)	m, n	
<i>Nearly all optical disks are read-only, so method m is used on all optical disks.</i>		
<b>Memory</b>		
Dynamic Random Access Memory (DRAM)	c or g	c, g, or m

Electronically Alterable PROM (EAPROM)	i	j or m
Electronically Erasable PROM (EEPROM)	i	h or m
Erasable Programmable ROM (EPROM)		m
Flash EPROM (FEPROM)	i	c then i, or m
Programmable ROM (PROM)	c	m
Nonvolatile RAM (NOVRAM)	c or g	c, g, or m
Read Only Memory ROM	m	
Static Random Access Memory (SRAM)	c or g	c, g, or m
<i>DRAM and SRAM is reused as it does not retain any information after power is removed (Method g).</i>		
<i>NOVRAM and FlashRAM(FEPROM) devices (i.e. Thumb drives, mp3 players, programmable chips, network routers.) and any device with personal information or confidential settings have all sensitive information and/or personal settings removed and device returned back to factory settings (Method c and/or i). This also includes EAPROM, EEPROM, and PROM devices as listed above. At present, Erasable Programmable ROM (EPROM) devices are destroyed via method m since Surplus contactor has no ultraviolet erasing equipment.</i>		
<b>Equipment</b>		
Cathode Ray Tube (CRT)	g	q
<i>If screen-burn is present, monitor is recycled.</i>		
<b>Printers</b>		
Impact	g	p then g
Laser	g	o then g
<i>For Laser printers with memory, all IP addresses, names, phone numbers, and network information is returned to OEM settings before sale. Method o is used to remove any remaining image from the printer drum, then if said information is not removable, method n is used.</i>		
<i>Impact printers, if found to be economically viable, are sold without their ribbons. Ribbons are destroyed (p.) However, older impact printers are usually found to be non working and are recycled in their entirety.</i>		

**Clearing and Sanitization Methods:**

- a. Degauss with a Type I degausser.
- b. Degauss with a Type II degausser.
- c. Overwrite all addressable locations with a single character.**
- d. Overwrite all addressable locations with a character, its complement, then a random character and verify. THIS METHOD IS NOT APPROVED FOR SANITIZING MEDIA THAT CONTAINS TOP SECRET INFORMATION.**
- e. Overwrite all addressable locations with a character, its complement, then a random character
- f. Each overwrite must reside in memory for a period longer than the classified data resided.
- g. Remove all power to include battery power.
- h. Overwrite all locations with a random pattern, all locations with binary zeros, all locations with binary ones
- i. Perform a full chip erase as per manufacturer's data sheets.
- j. Perform i above, then c above, a total of three times.
- k. Perform an ultraviolet erase according to manufacturer's recommendation
- l. Perform k above, but increase time by a factor of three.
- m. Destroy - Disintegrate, incinerate, pulverize, shred, or melt.
- n. Destruction required only if classified information is contained.
- o. Run five pages of unclassified text (font test acceptable).
- p. Ribbons must be destroyed. Platens must be cleaned.
- q. Inspect and/or test screen surface for evidence of burned-in information. If present, the cathode ray tube must be destroyed.



## Exhibit C – Listing of Acquisition and Disposal Costs (Statewide E-Waste/Recovery Policy)

### Acquisition Costs

The table shows the current pricing of a typical standard desktop and monitors and laptop purchased from current price agreements and a comparable EPEAT certified equipment.

Standard Configuration	Current Price	Anticipated Price with EPEAT	Notes
HP dc5100 MT	\$613.74	\$613.74	No change in price
HP dc7600 MT	\$840.00	\$840.00	No change in price
HP xw4300	\$1,183.71	\$1,183.71	No change in price
HP nc6230	\$1,302.49	\$1,302.49	No change in price
HP nc8230	\$1,489.78	\$1,489.78	No change in price
CTL GS8 Basic System	\$699.00	\$724.00	Includes Front & back disposal, PC only
CTL GS8 Advanced System	\$899.00	\$924.00	Includes Front & back disposal, PC only
CTL GS8 Workstation	\$1189*00	\$1214.00	Includes Front & back disposal, PC only
CTL SL700 aka Green Machine	\$793.00	\$793.00	EPEAT Certified

### Disposal Costs

The table shows key disposal costs related to the disposal of a typical desktop computer and monitor through a manufacturer's buy back program as a current option in PC contracts and through the Surplus Property Program. The costs are related to specific charges and do not include in internal costs incurred in the disposal process.

Option 1 Disposal through Buy Back from Manufacturer	Option 2 Disposal through Surplus Property	Notes
Property Distribution Center (Surplus) Disposal - all components	Pickup and deliver to PDC Cleansing Hard Drive Disposal to recyclers	\$ 0.28 per pound Current state price agreement rate is \$0.28 per pound for disposal, with no re-use or certified data sanitization/clearing. Cost for is all E-Waste.
HP Disposal - desktop and monitor	\$25 each per desktop/laptop/notebook \$30 each per monitor	Pricing under current PA
HP Disposal - server	\$25 per 2-way server \$35 per 4-way server \$45 per 8-way server	- De-installation service - removal and recycle of equipment and packaging materials at end of life
HP Disposal - printer	\$25 per desktop printer	- Disposal according to EPA standard with electronic certification
HP Disposal - other items	\$0.40 per lb for cables, external modems, and misc. smaller items	

				- Residual value recovery if applicable
HP Disposal - transportation	None provided for within the current price agreement.			State agencies responsible for transportation costs
CTL Disposal -desktop and monitor	\$25 00 each per desktop \$25 00 each per monitor			Under current PA, it is: Index price (per CTL's web site) - 40%. If paid during Acquisition, not payable upon disposal.
CTL Disposal - other items	\$0 35 per LB /disposal only			
CTL - Asset Recovery & Take Back Program - PC and monitors	Amount resold - 20%			Only when a resale takes place; otherwise no recovery amount
CTL Disposal - transportation	None provided for within the current price agreement.			State agencies responsible for transportation costs
Eco-Lights Disposal Contract	\$ 0 28 per pound. No data sanitization/clearing certified.			