

DATE ISSUED: June 5, 2003 REPORT NO: 03-124

ATTENTION: Natural Resources & Culture Committee
Agenda of June 11, 2003

SUBJECT: Hazardous Electronic Waste

REFERENCE: Manager's Report No. 03-006, dated January 8, 2003

SUMMARY

THIS IS AN INFORMATION ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF THE COMMITTEE OR THE COUNCIL.

BACKGROUND

On January 15, 2003, the Natural Resources and Culture Committee (NR&C) directed City staff to develop guidelines, in conjunction with San Diego Data Processing Corporation (SDDPC), for the procurement, use, and end-of-life management of electronic equipment purchased by the City, and to develop a pilot project for the collection, dismantling, and recycling of computer monitors and televisions. NR&C also directed the Governmental Relations Department (GRD) to support legislative and regulatory solutions encouraging comprehensive and innovative solutions to electronic waste issues. The following report is an update of the actions taken in response to the Committee's directions.

DISCUSSION

As discussed in the January 8, 2003 Manager's Report, surplus computer components (e.g., monitors and CPUs) have been redistributed between City departments, auctioned in bulk as surplus, and on occasion donated to non-profit organizations or schools. Changes to these internal processes are being made to conform with new regulatory mandates and to provide a more sustainable management of electronic wastes.

New policies and procedures will be established through a combination of a new Council Policy for City departments and agencies and an Administrative Regulation defining City department roles and responsibilities. Once developed, staff will return to this Committee with a draft Council Policy for the management of hazardous electronic waste for your consideration.

The State is also developing guidelines for the management of electronic wastes. While the State guidelines continue to be amended, City and SDDPC staff will use the key issues identified in their draft guidelines as a framework for the development of City guidelines. These protocols will include:

- Recommendations for an energy efficient purchasing policy for electronic equipment,
- Procedures for sustainable internal reuse, donations and recycling, and
- Policy to ensure that computer components past their usable life are recycled to the extent possible with the remainder disposed of in an appropriate manner.

1. Guidelines for procurement of electronic equipment

In developing the guidelines, two City Council Policies (Council Policy 100-14 - Procurement: Recycling Products, and Council Policy 900-18 - Purchase of Energy Efficient Products) will be referenced. Council Policy 100-14, directs the purchase and use of recycled products whenever possible, and discourages the purchase of products that cannot be recycled or reused. The City's guidelines will include purchasing computer components which maximize the options for reuse or donation, and the ability to be recycled.

Council Policy 900-18, establishes a policy to purchase energy efficient office equipment. Replacing CRTs with Thin-film Transistor displays (TFTs) will result in doubling the useful life, from 5 to 10 years respectively, of computer monitors. In addition, TFTs use significantly less energy. A CRT monitor consumes 90 watts of electric power per hour of operation, while a TFT uses 17 watts per hour. Switching to TFTs would save the City almost \$145,000 annually in energy costs for each 2,500 CRT units replaced with TFTs.

2. Guidelines for internal reuse

Last year, the City purchased approximately 2,500 computer systems. The City is formalizing the process and responsibilities for the internal reuse of computer components via an MOU between the City and SDDPC. As contained in the MOU, departments with computers that no longer meet their needs will notify SDDPC. SDDPC technical staff will determine if the components can be used by other City departments, especially General Fund departments.

Before computer components are transferred, donated or recycled, they will be purged of their records and programs and tested for functionality. Staff has estimated that annually up to 2,000 computer components may be transferred, 500 computer components may be donated, and up to 2,000 computer components may be recycled.

Redeploying used computer components to other departments could save the General Fund purchasing costs. Examples of recent inter-department transfers include the transfer of computer monitors from the Environmental Services Department (ESD) to the Police Department (PD). In turn, PD transferred used laptops to ESD that were installed in refuse collection supervisory trucks to enable GPS tracking and the routing of trucks. Based on this inter-departmental transfer, ESD and PD saved approximately \$95,000.

3. Guidelines for end-of-life management

Auctioning of computer components. Staff evaluated the current process for auctioning computer components that are past their end-of-life with no other productive use. Auctioned computers are usually technologically obsolete or non-functional. Based on input from the State of California, Department of Toxic Substances Control, this end-of-life practice will be discontinued due to concerns about ensuring regulatory compliance and the potential long-term liability.

Donation of computer components. Computer components with a minimum of 1-2 years of remaining useful life and are no longer useful to any City department, will be evaluated for donation to other public agencies or non-profit organizations. The City will establish a list of prospective recipients, and SDDPC will determine if the requests can be filled with available resources.

Donations resulting in classroom or vocation school use both in the United States and Mexico will be a priority. This summer, the City is establishing a pilot project for donating computers for use in classrooms through the Teaching Technologies Foundation of America for local schools and the Municipality of Tijuana for its municipal schools. The results of the pilot donation project will be used to finalize the guidelines for future donations. SDDPC staff is also exploring the possibility of donating older infrastructure items such as network equipment to vocational schools in the United States and Mexico.

Recycling of computer components. The City will continue to use its current vendor for recycling components which are no longer needed. ESD and SDDPC will initiate a Request for Proposal (RFP) to ensure the best pricing for these services.

City staff has proposed that departments purchasing computers pay a hazardous electronic waste/environmental fee in advance to fund the processing and recycling costs of newly purchased and legacy electronic wastes from past purchases. Staff anticipates that the Information Technology Governance Committee will consider this proposal at a meeting in the near future with implementation shortly after its adoption. If approved, a separate fund will be established for these activities. The fee level will be reviewed annually and the fund will continue until a statewide alternative electronics waste management strategy is implemented.

4. Pilot project results

ESD has conducted pilot projects to evaluate the feasibility of:

- Disassembling computer monitors and televisions to determine the cost and feasibility of recycling CRT non-glass components,
- Conducting community cleanups to include CRT pickups, and
- Conducting community collection event(s) for electronic wastes.

Disassembly of computer monitors and televisions. ESD staff conducted a pilot project to determine the cost of disassembly and the feasibility of recycling dismantled CRT components. This cost was compared to the costs of recycling intact units. While staff determined that disassembling CRTs is feasible and cost effective, continuing the pilot project activities on an on-going basis is not recommended at this time due to the need to hire additional staff, acquire additional equipment, and to establish a location to expand the disassembly work to handle the City's on-going needs.

Community cleanups. ESD collected CRTs at selected community cleanup events by advertising this service. Since September 2002, approximately 6.5 tons of CRTs have been collected. Because an existing California Integrated Waste Management Board Grant (Grant) will fund the collection of an estimated five to six tons of CRTs per month through March 2005, ESD will expand this collection service to all of its community cleanups.

Community collection event(s). Using Grant funds, the City will be able to collect an additional 185 tons of CRTs from approximately 3,000 residents. By the end of June 2003, ESD anticipates completing contract negotiations for hazardous electronic waste event operations and pricing for next fiscal year. Once negotiations are completed, an event schedule will be established.

5. Proposed Legislation

Senate Bill 20 (Sher), introduced this year, would require manufacturers of computer monitors and televisions to develop and finance a free and convenient system for recycling their devices. Based on NR&C's direction on January 15, 2003, ESD, in cooperation with GRD, sent a letter in support of this legislation. Staff will be monitoring the progress of this bill to ensure that any amendments do not shift the responsibility to local government without adequate resources.

CONCLUSION

The City will continue to develop strategies to address hazardous electronic waste issues facing the City in a manner that promotes sustainability and energy efficiency. City staff will continue to focus on providing cost effective and convenient electronic waste recycling services for our

residents. In cooperation with the Governmental Relations Department, staff will continue to comment on proposed legislation to define roles and responsibilities of local government, electronic and technology manufacturers, and consumers while ensuring an adequate funding source for implementing local government's responsibilities.

Respectfully Submitted,

Chris Gonaver
Deputy Director, Environmental Protection Division
Environmental Services Department

Robert A. Epler, Assistant Director
Environmental Services Department

Approved: George I. Loveland
Senior Deputy City Manager

Attachment: [Council Policy 100-14](#)
[Council Policy 900-18](#)