

**Florida Department of Environmental Protection
FY 2005-06 INNOVATIVE GRANT APPLICATION FORM**

Project Information (on applicant letterhead)

- 1) **Applicant Name:** Alachua County
- 2) **Primary contact person:** Sally Palmi
- 3) **Complete Address:** Waste Alternatives Department
P.O. Box 1188
Gainesville, FL 32602-1188
- 4) **Telephone Number(s) (including SunCom number):**
(352) 374-5245 x282
- 5) **E-mail address:** spalmi@co.alachua.fl.us
- 6) **Project Title:**
Building a Cost-Effective Commercial and Institutional Electronics Recovery Program
- 7) **Grant Request Amount:** \$200,000
- 8) **Length of project (months):** 24 months

Authorizing Signature

Title

PROJECT ABSTRACT

No more than 20 lines. Every word over 20 lines will result in a one-point deduction by grant application reviewers.

In April 1999, the Alachua County (County) Environmental Protection Department launched its very first electronics collection recovery event. Since that time the County has dedicated a permanent electronics (E) collection center at the Leveda Brown Environmental Park, partnered with Best Buy for a successful collection recovery event, and recently awarded a processing contract to Creative Recycling Services for processing its electronic scrap as a means to ensure domestic recycling of material. Through all of these efforts, the County still has not fully recovered the E-materials potential or reached the entire commercial/institutional (C/I) business sector. The County intends to develop its C/I electronics recovery program using the information gathered from DEP surveys performed in 2000 and 2003. These surveys include information from donation centers and thrift stores, computer and television repair centers, and the hotel/motel industry. The purpose of this project is to implement, for the first time, State survey results to develop a local program. The County intends to utilize the data to develop and implement a sustainable and cost-effective, localized operational and marketing program to reduce the costs of disposal for – and increase the material recovery and revenue stream for – E-scrap. An operational, pre-processing dismantling component will be piloted to also help reduce disposal costs and increase revenue returns. In addition, a statewide education and marketing plan utilizing C/I survey data for specific sector segmentation targeting businesses and business employees in the workplace will be developed to communicate the DEP’s proper handling and disposal message for a systematic statewide outreach program utilizing the existing solid waste and recycling outreach infrastructure already in place by Counties and Cities in Florida.

PROJECT DESCRIPTION

(1 page)

The proposed project will involve the following components targeting the commercial and institutional (C/I) sector, with the details of each described below:

Electronics Working Groups: Two groups will be created to help develop and implement the local commercial and institutional outreach and recovery program. The following entities will be invited to participate in a generator working group: University of Florida, Santa Fe Community College, the Alachua County School Board, Shands Hospital, and Nationwide Insurance Company. Members of the second working group of end-users will include Alachua Free Net, the Dignity Project, Goodwill, the Salvation Army, Keep Alachua County Beautiful, Boys and Girls Clubs, Association for Retarded Citizens (ARC), the Rev. Jenkins, and Alachua County Waste Alternative and Environmental Protection staff representatives.

Collection Program: The existing drop-off program at the permanent facility at the Leveda Brown Environmental Park is available for commercial drop-off. In addition, the County will heavily promote not only this location, but also such local reuse and resale facilities as the Salvation Army and Goodwill, and such commercial non-profit groups as the Dignity Project, Alachua Freenet, the Boys and Girls Clubs, and ARC.

Rate Structure Improvements: The County wants to evaluate and improve its fiscal year electronics commercial fee structure and develop an amendment process relative to the fees associated with its processing contract and the annual County processing fees to businesses. At present, the timing between the two is not parallel, causing an economic burden to the program. In addition, the previous contract allowed the County to provide free recycling for monitors and TV's smaller than a truckload. With the new contract, the County is now able to provide this free service to small and medium businesses that generate nominal amounts.

Pre-Processing Program: In order to capture additional electronic material revenue to offset costs and reduce its annual disposal fees for non-marketable electronics, the County will hire a full-time temporary worker to provide additional dismantling services to the electronic equipment. By implementing this pre-processing operational activity, the County hopes to garner more revenue for higher-value, separated electronic components. The County intends to evaluate the cost implications existing among additional labor costs, increased material revenue, avoided disposal and all the implications.

Material Marketing Program: The County has a new processing and demanufacturing contract with Creative Recycling Services (CRS). A CRS representative will work to train the County pre-processing employee to properly separate and demanufacture material for a higher commodity share based on its contract.

Local and Statewide Education, Outreach and Marketing Program: Utilizing the State's 2003 donation/thrift (D/T), hotel/motel (H/M) and television/computer repair center (TCR) survey results, the County will prepare a localized, but message-specific education, outreach and marketing program aimed at businesses and their employees using the State's recommendations for proper handling, disposal and recovery outlets for electronics material. The following will be developed:

- D/T, H/M and TCR Education Kits titled *Working with Local Government*
- Commercial/Institutional BMP Kit titled *Businesses and the Digital Divide*
- Message-specific education materials for businesses' employees
- Statewide Kit for County Solid Waste, Recycling, and Pollution Prevention Employees

Criteria 1: TECHNOLOGIES

(1 page)

(35 points) 0-15 points for meeting one of the following sub-criteria, up to 10 more points for meeting two, and up to 10 more points for meeting all three. Note: applicant may adjust space used to address each sub-criteria.

Sub-criteria 1 – Not in common Use in Florida

To our knowledge, no other County program utilizes an in-depth pre-processing system that includes both sorting and dismantling. The County will pilot this process and perform an economic analysis to review whether or not the addition of staff dismantling (pre-processing) helps increase material revenue and decrease disposal costs and by how much, as well as offsets the cost of an additional staff person.

Alachua will be the first County to apply State DEP E-survey results to a local program and help transfer this information and outreach material to other local governments.

In addition, commercial and institutional (C/I) survey information will be utilized to develop localized but specific messages and educational materials for C/I targets listed on Page 3 of the proposal.

Sub-criteria 2 – Novel application of an existing technology or process

Dismantling or demanufacturing is the process of systematically dismantling equipment along a production-line style using tools and labor, similar but in the reverse of its original manufacture. Demanufacturing allows the County to:

- Maximize its E-material contract with CRS.
- Reutilize parts to increase the economic viability of the recycling program by creating a higher value product.
- Feel confident its materials are being handled in a manner reflecting the highest concern for the preservation of the environment (e.g., domestic market use instead of Third World) before final processing.

Sub-criteria 3 – Overcoming obstacles to recycling/waste reduction in new or innovative ways

This project will overcome some of the largest obstacles for growing and expanding recovery and recycling efforts in Florida.

- 1.) Partnering specific C/I groups with local government as per the DEP survey result recommendations.
- 2.) Providing a comprehensive outreach program to the C/I Sector including the State's position as per the DEP survey recommendations.
 - a. Educating that hard-to-reach C/I sector and its employees who have not been motivated to change behavioral patterns for electronic recovery in the workplace.
- 3.) Developing a sustainable and cost-effective Electronics Recovery Program through improved County operational pre-processing, a C/I user rate structure, and an increase in recovery to decrease disposal costs.

Criteria 2: TARGETS

(1 page)

(10 Points) Demonstrate innovative processes to collect and recycle or reduce these targeted materials/sectors:
Construction and Demolition Materials, Commercial/Institutional Sectors, Waste Tires.

Note: If the proposed project also includes materials/sectors other than those targeted by this criteria, the project will receive less than the maximum 10 points allocated for the criteria.

Material Targets:

A 2003 International Association of Electronics Recyclers' (IAER) industry report suggests there are more than 500-million units of computer equipment (CPUs, monitors, and printers) currently installed in the United States. IAER estimates these units will be obsolete in less than five years. Florida DEP staff has focused on the cathode ray tube (CRT) found in almost every television and computer monitor as the most problematic material in the end-of-life electronics waste stream, due to its lead content. This is the material this grant will target.

Target Sector – Commercial and Institutional (C/I):

Most C/I entities do not understand or are not aware of the State's position for managing electronics. The C/I sector (universities, schools, hotels and hospitals) will be targeted with specific campaigns geared to their generator type or size and with specific "action-oriented" messages, including the State's position. In addition, this sector often deals directly with a demanufacturer and utilizes the County as a "disposal alternative" for non-marketable or lower-valued electronics. The County would like to educate this sector on the importance of building a sustainable and cost-effective local government program for all C/I electronics materials, including the higher-valued material.

Large Institutional Targets: Using specific messages, the county will target institutions that generate significant quantities of electronics – such as the University of Florida, Santa Fe Community College, the Alachua County School Board and Shands Hospital – for the increased recovery of electronics.

Large Commercial Targets: The County will target large businesses that generate significant quantities of electronics, such as Nationwide Insurance Company and hotel chains, to increase the recovery of electronics. Some of the large businesses in the County have participated in the program at the permanent collection site, but many have not, and not all businesses have been reached through a corporate-themed message.

Medium- and Small-Sized Commercial Targets: The County will target small and medium-size businesses that are not participating in the current program and educate them on the new County fee structure for electronics processing with specific generator size messages.

Commercial Donation Center Targets: The County will work to develop an electronics education and management program with Goodwill and the Salvation Army, to work in conjunction with the County to properly handle, dispose and recover electronics. The County will use the information from the *Seminole County 2003 Florida Donation Center and Thrift Store Electronics Survey Report* to develop a comprehensive outreach program as well as input from Center representatives. In addition, as a commercial entity, the Center's customers need to be educated about the fact that donation centers are a business and not a county or city disposal facility for unwanted or broken electronics.

Commercial & Institutional Employees: A commercial employee partnership program will be developed to educate employees in the workplace about the proper handling, disposal and recovery of the company's commercially generated electronics.

Criteria 3: BENEFITS

(1 page)

(35 points) Demonstrate the potential economic, environmental, and cost-effectiveness of the program's approach.

Note: applicant may adjust space used to address each sub-criteria.

Sub-criteria 1 - Environmental Benefits (15 points)

Methodology: By implementing a specific, targeted educational outreach campaign utilizing State survey results on a local level, Alachua County hopes to educate its C/I sector on the proper end-of-life management of electronics. With a proper source and waste education (reduction, reuse and recycling) collection and outreach campaign, this project can help to keep cathode ray tubes (CRTs) and electronics out of the State's landfills and reach a broader audience.

Toxicity: According to the DEP, the CRTs in televisions and monitors constitute the single largest source of lead in the State's municipal solid waste stream, overtaking lead-acid batteries in 1998. Lead has been shown to leach out of these CRTs, and research performed at the University of Florida and sponsored by the DEP shows that CRTs usually test to be a hazardous waste when subjected to the Toxicity Characteristic Leaching Procedure tests. Many CRTs are still destined for the landfill unless State and local governments actively educate the section of the C/I sector that is still not participating in a recovery about proper end-of-life management for electronics with specific, targeted outreach programs as proposed by Alachua County.

Sub-criteria 2 – Economic Benefits (10 Points)

The single largest obstacle to initiating local E-waste programs is the cost associated with recycling large, bulky televisions and monitors as well as devoting time and money to additional pre-processing and separation of CPU component parts. A County study found that it costs roughly \$14.65 to recycle each CRT, (staff time, transportation, recycling fees, etc.). Alachua County hopes to reduce this cost by initiating the following practices: (1) maximize the revenue fee structure in its new contract with Creative Recycling Services (CRS) through a County pre-processing operation, paying for recycling by type of product rather than a flat rate for all electronics; (2) hire a staff member to perform the pre-processing activities and evaluate the staff cost relative to increased material revenue, and (3) work with CRS to identify ways to lower disposal costs through pre-processing. Alachua County feels that with the initiation of some of these practices, the County can reduce its disposal costs by up to 25% annually and increase its revenue share by 10% - 25%.

Sub-criteria 3 – Cost Effectiveness (10 Points)

(Includes, but not limited to cost reduction, payback period, sustainability and cost-effectiveness.)

It is the goal of this grant project to determine and develop the most cost-efficient method of pre-processing electronics through component separation to increase the revenue stream and to reduce disposal costs. If Alachua County successfully reduces the costs associated with electronics disposal (\$25,000), and increases material recovery and/or revenue up to 25%, this program has the ability to make up the cost of the grant in a relatively short time frame. In terms of disposal costs, it could reduce these costs by approximately \$5,000 to \$10,000 annually. The revenue amount is difficult to project at this time due to the County's contract change. It was relatively nominal with the previous contract.

Criteria 4: TRANSFERABILITY (1 page)

(10 Points) Demonstrate transferability of technology and processes and specify how the project will promote transferability. Note: applicant may adjust space used to address each sub-criteria.

Sub-criteria 1 – Transferability of technology and processes (5 points)

Pre-processing operational application: The operational information gathered by utilizing a staff person to sort and dismantle electronics at the County’s permanent collection center at the Leveda Brown Environmental Park will be transferable to any of the other 66 counties in Florida with a permanent facility or processing area for CRTs and other electronics.

Pre-processing cost analysis: The cost analysis that will be performed to evaluate the impacts of adding a staff person to dismantle electronics will be of value for comparative purposes not only for Alachua, but also for the other 66 counties in Florida.

Landfill disposal cost reductions: The disposal cost reduction implications utilizing the pre-processing operational activity will be of importance to all other counties in Florida. County staff has spoken with larger counties that say they pay up to or more than \$100,000 a year for electronic disposal for non-marketable materials.

Increased Revenue Share Through Contracting: The additional increased revenue-share by maximizing an E-contract utilizing a County pre-processing operational activity will be of importance to all other counties in Florida.

Sub-criteria 2 – How project will promote transferability (5 points)

Most counties and cities in Florida have initiated some sort of electronics recovery program and approximately \$2.1-million in state seed money was distributed to 29 counties in Florida to help establish and implement pilot electronic products recycling and collection programs.

In addition, 50 counties have a permanent hazardous waste collection center or area – and 17 others have an area – at their disposal site for receiving and storing electronics for demanufacturing through a vendor contract. Although many of these county sites have proposed implementing a dismantling staff person for additional pre-processing beyond basic sorting of types of electronics, it is our understanding from DEP hazardous waste staff that none have actually piloted or implemented it. The results of this project will be transferable for their evaluation. Using a 25% reduction in the average annual E-disposal fees for Alachua and Miami-Dade, the total savings for all the counties would total approximately \$1.1-million.

In addition, each county in Florida has either a Salvation Army or Goodwill thrift center that receives electronics from residents and has to handle them in some manner. Some have multiple locations and regional distribution and collection centers. A *Donation Center and Thrift Store Electronics Management Kit – Working with Local Government* will be developed and distributed to all the large donation centers statewide. The aforementioned information is applicable to hotels/motels and computer/TV repair centers.

Marketing kits will be developed for the following Commercial/Institutional (C/I) Sectors: 1) Large Businesses (D/C, H/, TCR), 2) Medium and Small Businesses, and 3) the Institutional Sector. These kits will be distributed to Counties/Cities in Florida. In addition, a marketing kit will be distributed to the representative(s) responsible for the electronics program in their county and/or city.

Criteria 5: LOCAL SUPPORT (1 page)

Total Local In-Kind Support: Approximately \$ 95,000.

(10 Points)	Demonstrate local support for the proposed project in commitment of cash or in-kind matching funds.
• 00 points	0% up to and including 1% of total project cost
• 01 points	Greater than 1% up to and including 10% of total project cost
• 02 points	Greater than 10% up to and including 20% of total project cost
• 03 points	Greater than 20% up to and including 30% of total project cost
• 04 points	Greater than 30% up to and including 40% of total project cost
• 05 points	Greater than 40% up to and including 50% of total project cost
• 06 points	Greater than 50% up to and including 60% of total project cost
• 07 points	Greater than 60% up to and including 70% of total project cost
• 08 points	Greater than 70% up to and including 80% of total project cost
• 09 points	Greater than 80% up to and including 90% of total project cost
• 10 points	Greater than 90% up to and including 100% of total project cost

Public Sector Support – Alachua County Waste Alternatives Section: In-Kind of \$20,000

The county will provide in-kind support for the project by the participation of a representative from this department who will participate in the further development and implementation of the project, including utilizing the Alachua County WasteXchange online resource.

Public Sector Support – Alachua County Environmental Protection Dept.: In-Kind of \$30,000

The county will provide in-kind support for the project by the participation of a representative from the hazardous waste department who will participate in the further development and implementation of the project as well as manage the pre-processing staff. In addition the existing permanent collection center will be utilized.

Commercial/Institutional Sector Participants: In-Kind of \$15,000

For this project, the County will partner with the businesses of all sizes and their employees will participate in evaluating their current electronics program and expanding it further. In addition, these entities will participate in the working group meetings.

Commercial Non-Profit – Alachua Free Net: In-Kind of \$2,500

A representative from this organization will participate in the working group and potentially receive donated computers from C/I participants.

Commercial Non-Profit – Dignity Project: In-Kind of \$2,500

A representative from this organization will participate in the working group and potentially receive donated computers from C/I participants.

Commercial Non-Profit – Goodwill and Salvation Army: In-Kind of \$10,000

A representative from this organization will participate in the working group and help develop the statewide donation center outreach program and education kits.

Public Sector Organization – Keep Alachua County Beautiful: In-Kind of \$2,500

A representative from this organization will participate in the working group and help with developing and distributing the electronics recovery message to the business community.

Commercial Non-Profit – Three Boys & Girls Clubs: In-Kind of \$7,500

A representative from this organization will participate in the working group and potentially receive donated computers from C/I participants.

Commercial Non-Profit – Association for Retarded Citizens: In-Kind of \$2,500

A representative from this organization will participate in the working group and potentially receive donated computers from C/I participants.

Commercial Non-Profit – Ministries of Computers/Rev. Jenkins: In-Kind- \$2,500

A representative from this organization will participate in the working group and potentially receive donated computers from C/I participants.

BUDGET

(1 page using Budget Table Template)

Describe the project's budget allocated by task and budget categories per the Budget Table Template available from DEP's Innovative Grants web site in Microsoft Excel digital format:

(www.dep.state.fl.us/waste/categories/recycling/pages/InnovativeGrants2005-06.htm).

See DEP excel spreadsheet that is attached.