

Innovative Recycling and Waste Reduction Grant IG07-02

FINAL REPORT September 1, 2009

Greening the Government One Building at a Time



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Kessler Consulting, Inc. is a proud Program Champion and Partner in the EPA WasteWise program.

City of Tallahassee IG07-02
Final Report
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Section 1.0
Introduction

1.1 Project Background

The City of Tallahassee (City) intends to demonstrate leadership in environmental protection and sustainability, and serve as a model to the businesses and residents of Tallahassee. The City is a Utility that provides electric, water, natural gas, and solid waste services, owns 212 properties and occupies 77 that house approximately 2,981 employees in various departments that provide valuable services to the community.

Of these 77 occupied properties, three of them account for the majority of employees and space utilized by City administrative staff. It is important for the City to reduce the environmental impacts the building occupants and operations have on the local community. The City also holds primary responsibility for purchasing goods and services for 15 departments totaling approximately \$ 580 million per year.

On June 29, 2006, the City was awarded an Innovative Grant by the Florida Department of Environmental Protection (FDEP) intended to demonstrate the Greening of municipal government, one building at a time. The project end date is August 1, 2009 with the final report due September 1, 2009.

1.2 Project Goals & Objectives

The intent of this project was to ensure that City departments and their employees routinely consider the environmental impact of their policies, practices, and daily actions at all levels of decision-making in City owned buildings. The project was implemented through a tiered approach that targeted department heads, purchasers and employees, and included the following phases:

- Develop and Announce City Environmental Green Policies
- Convene a Green Committee (*named: Greening the Government*) of City Departments
- Develop or utilize an existing Green Checklist/Assessment Form
- Conduct Site Assessments of three buildings
- Assess Procurement Practices
- Develop a Green Marketing Plan

- Pilot the Green Marketing Plan in one of the three largest buildings

1.3 Innovative Features

When this project was initiated, a literature search and review was conducted to uncover information pertaining to any Florida studies where a city did an assessment of its municipal operations to grade itself on how Green it is. That review included reports, journals, periodicals, and the Internet. The review revealed that although some Florida counties and cities were beginning to launch Green government initiatives, most did not have a comprehensive waste and source reduction as their primary purpose, employing environmentally preferable purchasing practices and Green building components.

In contrast, this grant project focused on source and waste reduction. It is a novel application of the existing Green process in that several concepts – source reduction, waste reduction, EPP/Buying Recycled Content, and Green building – have been integrated in a comprehensive manner within local government. The key to the success of this effort was the implementation of these concepts, beginning at the top of the organization and applying them horizontally across departments. This tactic removed barriers and enabled application citywide.

Key departments and employees can make or break a Green program and can hamper initiatives from moving forward if policies are not in place. This obstacle can be overcome by including these departments and employees in the design and decision making of Green program development and action. Continuous promotion of the program's environmental and economic benefits reinforces employees' awareness and willingness to implement Green choices.

1.4 Proposed Audience and Information Dissemination

The audience that has and will continue to be impacted by the project deliverables includes the following: City building occupants, other City employees, vendors, City residents, and the recycling and solid waste industry in Florida. The lessons learned and tools developed can be used by municipalities across the state.

Greening the Government team members continue to promote the project's results and the technologies demonstrated through presentations at various solid waste and building

industry conferences and articles published in industry journals. The following list provides an overview of where the project was presented or featured:

1. Florida Green Building Coalition (FGBC) Magazine, spring 2009, Issue 2, Volume 3 – Green City article.
2. Workshop held at the Recycle Florida Today (RFT) Issues Forum on January 24, 2008 to a group of approximately 50 solid waste and recycling professionals, the private sector and consultants.
3. RFT *Renewable News* Newsletter spring/summer 2008, article on Green City Silver award.
4. A presentation was made to the attendees of the 2nd Annual Campus and Community Sustainability Conference on October 15, 2008.
5. The City's Green Government activities were presented as a case study to local governments at the North America Government Finance Officers Association (GFOA) national conference held on June 16, 2008 in Ft. Lauderdale.
6. Mayor John R. Marks, III made a presentation on the City's Green activities at the U.S. Climate Summit.
7. A presentation was made to RFT discussing the Greening the Government project on June 6, 2007.
8. A presentation was made to the Supreme Court of Florida discussing City's Green activities on March 17, 2009.
9. A presentation was made at the PeaceJam Conference discussing the City's Green programs, Green Building and Recycling on March 22, 2009.

Section 2.0

Project Implementation

2.1 Initial Project Activities & Timeline

Project Schedule

The project schedule provided and the associated tasks within the initial scope of services were adhered to with one notable exception. The following chart depicts the project schedule.

Scope of Services		Quarter										
		12/2006	3/2007	6/2007	9/2007	12/2007	3/2008	6/2008	9/2008	12/2008	3/2009	7/2009
1	<i>Develop and Perform Benchmark Study</i>	X	X	X	X	X						
2	<i>Convene Committee, Develop City Goals and a Policy</i>	X	X	X	X	X	X	X	X	X	X	X
3	<i>Perform Assessment of Three (3) Buildings</i>		X	X	X	X	X					
4	<i>Develop City Green Building Marketing Plan</i>						X	X	X	X	X	X
5	<i>Implement Pilot Marketing Plan in One (1) Building</i>								X	X	X	
6	<i>Develop and Produce City Promotional & Educational Material</i>		X	X	X	X	X	X	X	X	X	X
7	<i>Assess Procurement Practices</i>		X	X	X	X	X	X				
8	<i>Order & Distribute Equipment, Containers & Supplies</i>		X	X	X	X	X	X	X	X	X	X
9	<i>Print and/or Place All Promotional and Educational Materials and Hold Workshops/Training for Staff</i>		X	X	X	X	X	X	X	X	X	X
10	<i>Program Management and Administration</i>	X	X	X	X	X	X	X	X	X	X	X
11	<i>Progress and Final Reports</i>	X	X	X	X	X	X	X	X	X	X	X

The information listed below details the scope of services listed in the City's contract with the FDEP, including the project tasks, a task description, and the deliverables for the project. The relative deliverables for each task are included in either the Appendices of this report or on a CD disk. Section 3.0 details the actual deliverable results prepared and produced.

Scope of Services

Task 1 – Develop and Perform Benchmark Study

Description: Develop or identify a Green checklist/survey or assessment form and distribute to City departments; gather and analyze information.

Deliverables:

- 1) Develop or identify checklist/survey/assessment
- 2) Distribution of survey assessment
- 3) Letter Report

Task 2 – Convene Committee, Develop City Goals and a Policy

Description: Identify program partners, solicit participation and conduct meetings as appropriate throughout grant period.

Deliverables:

- 1) List of committee participants
- 2) Conduct committee meetings
- 3) Committee agendas and meeting notes
- 4) City goals and policy

Task 3 – Perform Assessment of Three (3) Buildings

Description: A site assessment of each of the three (3) largest properties will be conducted and technical assistance provided to expand Green efforts.

Deliverables:

- 1) Assessments of City Hall, The Renaissance Building, and Gemini Building
- 2) Assessment documentation

- 3) Recommendations based on assessment results

Task 4 – Develop City Green Building Marketing Plan

Description: Develop a Green operation and marketing plan to be distributed to the three (3) pilot properties using waste reduction and Green building principles as part of the plan.

Deliverables:

- 1) Develop marketing plan
- 2) Distribution of marketing plan

Task 5 – Implement Marketing Plan/Pilot in One (1) Building

Description: Implement the Start Thinking About Recycling (STAR) Program plan outlined in the Marketing Plan in one (1) building.

Deliverables:

- 1) Meetings with appropriate building staff to discuss and prepare implementation schedule
- 2) Implementation of plan according to schedule
- 3) Report conveying results and impacts feedback

Task 6 – Develop and Produce City Promotional & Educational Material

Description: Develop relevant Green educational materials and promotional campaign for City Employees including pollution prevention, waste prevention, environmentally preferable purchasing (EPP), and Green Building using the LEED® 5 category rating system.

Deliverables:

- 1) Develop relevant flyers, brochures, and guides
- 2) Develop relevant press releases, articles, presentations, and email announcements

Task 7 – Assess Procurement Practices

Description: Procurement policies will be addressed using EPP principles and the five largest central contracts soon to be rebid will be identified for the potential to add Green language.

Deliverables:

- 1) Review and provide recommendations for one contract

Task 8 – Order & Distribute Equipment, Containers & Supplies

Description: Identify and order the containers and supplies needed for program implementation.

Deliverables:

- 1) Procurement and distribution of containers

Task 9 – Print and/or Place All Promotional and Educational Materials

Description: Print all promotional and educational material

Deliverables:

- 1) Procurement and distribution of printed promotional and educational material

Task 10 – Program Management and Administration

Description: Coordinate and oversee all project tasks and ensure compliance with FDEP agreement.

Deliverables:

- 1) Coordinate and manage project (Tasks 1-11)

Task 11 – Progress and Final Reports

Description: Prepare and deliver quarterly and final reports as specified by Grant contract.

Deliverables:

- 1) Ten quarterly reports
- 2) One final report

All quarterly and final reports were sent to the FDEP on time. The quarterly reports are not included as an Appendix in this report since the FDEP has already received and has them on file.

2.2 Equipment and Services Procured

Listed below are the equipment, supplies, technical services and promotionals procured for the project.

1st Quarter:

- Consulting and project management assistance from KCI

2nd Quarter:

- Consulting and project management assistance from KCI

3rd Quarter:

- Consulting and project management assistance from KCI
- FGBC Pre-Application

4th Quarter:

- Consulting and project management assistance from KCI

5th Quarter:

- Consulting and project management assistance from KCI
- Ecobags – Waste Reduction Employee Lunch Bags

6th Quarter:

- Consulting and project management assistance from KCI
- Ecobags – Waste Reduction Employee Lunch Bags

7th Quarter:

- Consulting and project management assistance from KCI
- Ecobags – Waste Reduction Employee Lunch Bags

8th Quarter:

- Consulting and project management assistance from KCI

9th Quarter:

- Consulting and project management assistance from KCI
- Ecobags - Waste Reduction Employee Lunch Bags

10th Quarter:

- Consulting and project management assistance from KCI
- Grainger and Bush Recycling Systems - hanging waste basket/black, lid/hanging waste basket/black, and polybag liners for baskets

11th Quarter/Final Period:

- Consulting and project management assistance from KCI
- Grainger and Bush Recycling Systems – hanging waste basket/black, lid/hanging waste basket/black, and polybag liners for baskets
- Midpoint International – Excel series 35 containers made from 100% recycled milk jugs
- The Green Logo - Printed seed paper (A2 sized note card)
- Positive Promotions - 101 Ways to Care for the Earth Educational activity book
- Oasis Bags - Reusable shopping bags for employees
- Proforma Anchor - Reusable coffee mugs for employees

2.3 Problems Encountered

There were no problems encountered during the duration of the project.

2.4 Modifications to Project Activities

In August 2008, the FDEP authorized a project extension to the City (Amendment #1) from October 1, 2008 to August 1, 2009 in order to complete project work activities to accommodate the pilot implementation.

Section 3.0
Project Results

3.1 Achievement of Goals and Objectives

The objectives stated in Section 1.2 were met specifically with the following project achievements:

Task 1 - Develop and Perform Benchmark Study

1. The project team elected to use the Florida Green Building Coalition (FGBC) Green Local Government Standard Designation (Checklist) in performing the benchmark study.
2. The FGBC local government standard is comprised of seven (7) steps. FGBC documents for the standard include:
 - a. Department checklists
 - b. Filter Tool
 - c. Pre-Application Form
 - d. Final Application Form
 - e. Request for Modification to FGBC Standard
3. Department Directors were asked to fill out the FGBC checklist for their department and provide the necessary supporting documentation. A Green Government Project Team provided outreach efforts in support of the benchmark process.
4. Tracking tools were used to monitor and consolidate the Checklist findings and results. Analysis of the benchmark study determined that the City qualified for Silver designation from the FGBC.
5. Mayor Marks signed the Green City Action Accord on August 22, 2007.
6. A press conference was held in January 2008 to announce the Mayor's signing of the FGBC's Green City Action Accord and its official Green City Silver designation.
7. A memorandum was drafted and transmitted to each City Department Director requesting timelines for implementation of activities to earn additional FGBC points for Green City Gold. This information will help the City with future planning activities, policy development, and to predict the FGBC Designation that might be achieved in the future.
8. The City achieved Green City Gold on October 14, 2008 and a public event recognizing the achievement was made on February 11, 2009.

Deliverables (Appendix A): 1) Letter Report and 2) FGBC Green City Silver Certification

Task 2 - Convene Committee, Develop City Goals and a Policy

1. The Green Government project team conducted team meetings monthly from November 2006 through June 2009, and will continue to maintain the committee and hold meetings after the grant period ends.
2. Guest speakers were invited to attend committee meetings to discuss environmental topics ranging from pharmaceutical recycling to solar energy. For example, Maureen Rogers gave the Committee a presentation on Green Cleaning and a hands-on workshop discussing how and why to implement Green Cleaning practices at work and at home. Committee members each received a Green Cleaning Kit containing Green-cleaning supplies.
3. KCI staff gave a presentation to the Committee entitled “Building Blocks: How I Live and Work Green” during the December meeting. This presentation discussed various Green activities that can be performed in everyday life to help preserve the environment, reduce waste and our carbon footprint.
4. City staff presented the “Green City Workshop” to the team. This workshop, which was developed for the Recycle Florida Today (RFT) Issues Forum, explained the process of obtaining the FGBC Green City designation.
5. Various policies were drafted, including, but not limited to a Waste Reduction Policy.

Deliverables (Appendix B): 1) First and Last Meeting Notes and 2) Waste Reduction Policy

Task 3 - Perform Assessment of Three (3) Buildings:

1. The Green Government Project Team (GGPT) elected to use the United States Green Building Council’s (USGBC) LEED[®] Existing Building (EB) Rating System Version 2.0 as a benchmark to assess the City’s three (3) largest buildings. The LEED system is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. LEED provides a complete framework for assessing building performance and meeting sustainability goals.

2. LEED sets a minimum number of standards in five (5) environmental areas: site, energy, water, resources and materials, and air quality/lighting. Although the City used the LEED EB checklist to assess the buildings, it did not seek LEED EB certification.
3. Total square footage for the three (3) buildings is 241,477. The buildings are listed below:
 - City Hall: 121,400 square feet, 430 occupants, 25 years old
 - Renaissance: 68,145 square feet, 282 occupants, 3 years old
 - Gemini: 51,932 square feet, 200 occupants, 30 years old (renovated 1995)
4. The assessment process provided the City with the ability to benchmark the amount of resources that could be saved through changes in operations, and to expand these efforts throughout the rest of the City's buildings. Assessment activities served to educate employees on how their actions have a personal impact and to make changes that have far reaching implication for Greening City operations.
5. Only the Gemini Building was able to achieve LEED points under the Energy and Atmosphere category.
6. The assessment identified that the existing staff and public space recycling programs needed improvement within all three (3) buildings. A comprehensive list of container needs was developed.

Deliverable (Appendix C): Three (3) Building LEED EB Report

Task 4 - Develop City Green Building Marketing Plan

- 1) A Green Building Marketing Plan (Plan) was developed for the City and distributed to City employees. The Plan defines Green Building, sets out the City's Green Building goals and objectives, and explains Green Building certifications. The Plan addresses the following aspects of sustainability:
 - a. Sustainable Sites (SS)
 - b. Water Efficiency (WE)
 - c. Energy and Atmosphere (EA)
 - d. Materials & Resources (MR)
 - e. Indoor Environmental Quality (IEQ)
 - f. Innovation in Upgrades, Operations and Maintenance (IUOM)
- 2) The Plan also established Building Ambassadors and Teams and an Energy Efficiency Task Team (EETT), and outlined the mission and responsibilities of

both. The Plan discusses the role and responsibilities of Building Supervisors/Team Leaders.

Deliverable (Appendix D): Green Building Marketing Plan

Task 5 - Implement Pilot in One (1) Building

- 1) The pilot project program was titled STAR: Start Thinking About Recycling.
- 2) A pilot was launched on the 4th Floor of City Hall on January 9, 2009 to test the program. Each existing garbage container was removed from employees' desks and a new, larger 28-quart recycling container was added. Employees were given a *saddle-bag-like* bin for garbage that clips onto their recycling bin. Cleaning crews were responsible for periodically removing recyclable-dry material from employees' offices and servicing garbage daily from these smaller bins. The benefits of this program include:
 - a. A widely accepted program with an easy transition for employees.
 - b. Teaches employees how little garbage they really generate in a professional office setting on a daily and weekly basis.
 - c. Reduces garbage generation with the smaller saddle bag bin.
- 3) Additional floors were added to the program. On March 3, 2009, the program was launched on the 1st Floor of City Hall. The 2nd and 3rd Floors began STAR on April 27, 2009, completing all of City Hall. Recent additions to the program included Renaissance and StarMetro Administration Building on June 8, 2009. In addition, the program launched in the Gemini building on June 15, 2009.
- 4) Most departments opted not to use the saddle bag and collect recyclables (dry waste) through deskside containers and remove garbage (wet waste) to a central location.

Deliverables (Appendix E): 1) STAR Pilot Program Plan and 2) Pilot Results

Task 6 - Develop and Produce City Promotional & Educational Material

- 1) KCI drafted several logos, the Utility Business Customer Service – Utility Marketing staff person revised it, and the GGPT selected one to brand this project. A copy of the official GG project logo is provided below.



- 2) Relevant promotional and educational materials were uploaded to the City's intranet for employee-wide access. These materials included finalized project materials and/or documents, education materials, and meeting notes and agendas.
- 3) Green educational documents included:
 - a. New employee orientation education card describing the City's Green Programs
 - b. Card suggesting what employees can do at home and at work to be Green
 - c. Presentation to be used to educate pre-kindergarten (Pre-K) level students on solid waste and recycling using the LORAX book
 - d. Posters were developed about the City's: Green City award, Solid Waste Services (SWS) LEED building, green fleet, and utilities' Green programs
 - e. Green educational articles distributed at GG meetings
 - f. Holiday waste reduction and conservation tips
 - g. Articles – RFT Newsletter and FGBC Magazine/Transferability
 - h. RFT January 2008 Green Local Government Workshop/Transferability
 - i. RFT Summer 2008 E-Newsletter Article
 - j. Awards Recommendations
- 4) Green promotional items included:
 - a. Waste reduction (Eco) bags
 - b. Printed seed paper (A2 sized note cards) made from 100% recycled paper
 - c. 101 Ways to Care for the Earth Educational activity book
 - d. Biodegradable pen
 - e. Newspaper pencil
 - f. Reusable coffee mug made from 100% soy proteins, starches, corn and/or wheat
- 5) A Green Promotional Product Vendor list was developed to assist the City in its future purchasing initiatives for products made of recycled content or organic materials.
- 6) A workshop sponsored by RFT that explains the process of obtaining FGBC Green City designation was filmed and aired as part of the City's Green public education efforts.
- 7) An Environmentally Preferable Purchasing (EPP) department agents' workshop was developed and conducted on July 17, 2008. Specific topics included:
 - a. The role of the Purchasing Agent in EPP
 - b. What is EPP?
 - c. Why try EPP?

- d. When is EPP not the answer?
- e. Are you already EPPing?

Deliverables (Appendix F): 1) Employee New Orientation Card, 2) Green Work-Home Card, 3) STAR Program Sample Poster, and 4) Holiday Waste Reduction Tips

Task 7 - Assess Procurement Practices

- 1) A form was developed for use by the procurement department to assess the purchasing process.
- 2) The City used its Printing Contract, which expired on December 31, 2008 to serve as the contract for Environmentally Preferable Purchasing (EPP) language inclusion.
- 3) New PowerPoint slides providing information on various EPP techniques and standards were prepared and included in the Procurement Department's new employee training.
- 4) A training session was conducted for all Purchasing Specialists in the City's Procurement Department. This training focused on procurement's role in EPP and how the Specialists can ensure that the City maximizes its environmental purchases. This training was expanded to include other Procurement Department employees.
- 5) An EPP Kit was developed that contains materials from the training described above, as well as specific information about the City's EPP program.
- 6) A Request for Information (RFI) was developed to gather information on Green products already used by the City. The information gathered will be used to develop Green Kits to showcase items already in use by the City plus samples of additional Green products available. The information will also serve to help set a City benchmark for environmental purchases and to continuously expand the use of EPP items.
- 7) A slide show was developed for Purchasing Agents to use to present information to the Departments, for whom they are responsible about the City's purchasing practices, including EPP principals.
- 8) An Administrative policy and procedure for Environmentally Preferable Purchasing (EPP) was developed and is currently under review by EPER staff.
- 9) Five contracts were reviewed and one paper contract and one solar lights for bus shelters' contract was rewritten to include recycled-content requirements and usage reporting for measurement purposes.

Deliverables (Appendix G): 1) Procurement PowerPoint Presentation, 2) RFI, EPP Kit Table of Contents, 3) Draft Policy, 4) Two Revised Contracts, and 5) EPP Procurement Assessment Checklist

Task 8 - Order & Distribute Equipment, Containers & Supplies

- 1) The City ordered various items for the grant project to support the Green Local Government Program/Green City, three-building assessment, and Green Building marketing plan.

Deliverables (Appendix H): 1) Recycling Bins and Garbage “saddle bag” bins

Task 9 - Print and/or Place All Promotional and Educational Materials

- 1) The City printed and distributed various promotional and educational materials for the grant project, including but not limited to: organic cotton Ecobags, printed seed paper (A2 sized note cards) made from 100% recycled paper, 101 Ways to Care for the Earth Educational activity book, biodegradable pen, newspaper pencil and reusable coffee mug made from 100% soy proteins, starches, corn and/or wheat.

Deliverable (Appendix I): 1) Promotional Example Photos

Task 10 – Program Management and Administration

- 1) The project was coordinated and managed through a combined effort by City and KCI staff to meet the grant contract deadline.

Task 11 - Progress and Final Reports

- 1) The City, with the support of KCI, prepared and transmitted the required reporting documents each quarter, including the reimbursement request, letter report, report attachments, invoice tracking document and relevant invoices and payments, and in-kind tracking documents.

Deliverables: The City prepared and transmitted ten quarterly reports and one final report. The quarterly reports have already been transferred to and received by FDEP. Additionally, this report concludes the City’s obligation to prepare a final report.

3.2 Use of Advanced Technologies or Processes

An innovation of the program was the use of the FGBC Green Local Government Standard as the Green checklist. It contains a protocol and grading for a Green Municipal Program focusing on source and waste reduction. The checklist acts as a continuous reinforcement of the City's Green initiatives and keeps the City striving for ongoing improvements and higher certification levels. The City was the first municipality to achieve Gold designation and was awarded the highest point level at the FGBC conference in June 2009.

A second innovation was the comprehensive Environmentally Preferable Purchasing program that was rolled out by the City. Appendix G and page 16, which is Task 7, details these activities.

A third innovation was the Start Thinking About Recycling (STAR) Program that was rolled out in City Hall.

The final and probably most innovative component of the project activities is that along with the project results and other factors, the Grant Manager for this project, Cynthia Barber, was made into the Director of a new department with a staff of 15 engineers, public administrators and administration. The department was named Environmental Policy and Energy Resources whose purpose is to spearhead the City's environmental and sustainability programs.

3.3 Waste Reduction Achievements

Storage and Collection of Recyclables

Innovative recycling containers were purchased and used by City employees in City Hall. The pilot was conducted on the 4th Floor of City Hall to test the program using containers that visually show employees that they generate more recyclables than garbage at desk-side by separating garbage into a smaller "saddle-bag" container clipped onto the larger recycling container. The intent of this program is to maximize the amount of recycling by employees and help encourage waste reduction. Visually employees see that they actually generate on a daily basis a smaller amount of garbage than recyclables. Appendix H features photos of the containers and supplies.

Recycled Content Usage

The City was able to rebid its paper contract and include recycled content paper for the following: business cards, including both pre- and post-consumer content.

Building Waste Management

An assessment was performed to review the storage and collection of garbage and recyclables from each of the three (3) buildings. Deskside and public space recycling containers were recommended for each of the buildings to be purchase and placed in the Renaissance, Gemini, and City Hall. A construction and waste management policy was developed during the Solid Waste Services (SWS) Green Building project and this policy can be utilized to meet the objectives of a 50 and 75 percent recycling rate for C&D debris as stated in the LEED EB protocol.

Additionally the following five (5) other items were evaluated and recommendations made to potentially achieve these rates:

1. Optimize the use of alternative materials, including recycled content and renewable materials, between 10 and 50 percent of total purchases;
2. Optimize the use of indoor air quality compliant products, between 45 and 90 percent of total purchases;
3. Prepare a policy to utilize sustainable cleaning products and materials, between 30 and 90 percent of total purchases; and
4. Move occupant recycling to between 30 and 50 percent.

These recommendations can be found in Appendix C.

3.4 Transferability

The City's experience has already and can continue to serve as a case study to show other Florida municipalities how to Green their government buildings and operations. The promotion and education materials may be duplicated and used by other cities and counties in Florida, as well as other states. Tallahassee created and held opportunities to transfer the knowledge gained during the process by staging events. They include the items listed below.

1. Green City Media Event. This event on February 11, 2009 publicized the awarding of the Green Local Government, Green City Gold designation to the City. The FGBC Executive Director presented the award to the Mayor.

2. Presentation North America Government Finance Officers Association (GFOA). The City’s Green Government activities were presented as a case study at this national conference held on June 16, 2008 in Ft. Lauderdale.
3. Green City Media Event. This event on January 9, 2008 publicized the awarding of the Green Local Government, Green City Silver designation to the City. The FGBC Executive Director presented the award to the Mayor.
4. Statewide Workshop. The City Communications Department filmed the workshop held on January 24, 2008 at the RFT Issues Forum, which explained the process for obtaining the FGBC Green City designation. The workshop was aired as part of the City’s Green public education efforts. It is anticipated that the workshop will be uploaded on the FGBC website in 2009.
5. Presentation Recycle Florida Today. The City’s Green Government activities were presented as a case study at the statewide conference held on June 6, 2007 in St. Petersburg, Florida.

3.5 Improvements in Cost Effectiveness and Efficiency

3.5.1 *Project Expenditures*

The table below provides a breakdown of the total in-kind contributions provided by City staff and project partners not directly paid for their services or time on the project. The total in-kind contribution required by the grant was \$62,200, but it actually equaled \$99,782.07 for the grant duration – an almost 50% in-kind contribution of total funds. The City exceeded its in-kind contribution commitment by \$37,582.07.

In-Kind Contributions	
Quarter End	Contribution
Work Period 1	\$ 6,920.96
Work Period 2	\$ 12,746.10
Work Period 3	\$ 10,997.25
Work Period 4	\$ 10,371.91
Work Period 5	\$ 13,427.03
Work Period 6	\$ 15,360.45
Work Period 7	\$ 6,604.04
Work Period 8	\$ 5,798.53
Work Period 9	\$ 6,163.05
Work Period 10	\$ 6,140.86
Work Period 11	\$ 5,251.89
Total	\$ 99,782.07

The table below provides a breakdown of the total cost of this innovative grant project and depicts the amount by category and vendor paid. The total grant funds expended equaled \$ 198,399.88.

Innovative Grant Expenditures	
Expenditure Type	Total Amount Per Vendor
<i>Professional Services</i>	
FGBC: Pre-Application Fee	\$ 500.00
Kessler Consulting, Inc.	\$ 131,179.57
RFT Approved Travel	\$ 858.66
Subtotal	\$ 132,538.23
<i>Printing</i>	
Ex-Cell Recycling Labels	\$ 142.08
Harvest Printing	\$ 595.40
Specialty Sportswear and Promotions, LLC	\$ 675.00
Subtotal	\$ 1,412.48
<i>Promotionals</i>	
Amazon	\$ 657.06
Staples	\$ 956.00
Ecobags	\$ 6,347.42
EcoWise	\$ 455.75
Green Logo Group/Contemporary Business Concepts	\$ 1,732.08
Keep America Beautiful	\$ 796.28
Motivators	\$ 665.00
Oasis Bags	\$ 7,390.25
Positive Promotions	\$ 944.05
Proforma Anchor	\$ 2,983.92
Super Media Store	\$ 1,799.00
Subtotal	\$ 24,726.81
<i>Containers/Supplies</i>	
Bed, Bath and Beyond	\$ 239.91
Busch Systems International, Inc.	\$ 2,003.06
Fibrex	\$ 2,424.50
Global Industrial Equipment	\$ 429.98
Grainger	\$ 14,015.74
Lowe's	\$ 583.17
Midpoint International	\$ 9,922.00
Stacks and Stacks Homewares	\$ 3,424.00
Wausau Tile	\$ 5,000.00
Western Equipment Distributors, Inc.	\$ 1,680.00
Subtotal	\$ 39,722.36
TOTAL	\$ 198,399.88

3.5.2 Avoided Disposal Fees

From a waste management perspective the primary objective of the project was to review the waste generation of the three (3) largest buildings and to recommend ways to reduce the waste and therefore costs. Listed below is a summary of the data from the waste reduction program for the three (3) buildings. Although costs increased by \$ 222.46 or 2.2% from '07 to '08, the City believes it may be able to reduce weekly service in City Hall or Gemini by one day per week with a rejuvenation of its recycling program (i.e. STAR) and expansion to include the public spaces in the building. Additionally, the City may be able to move from a compactor to a dumpster container with increased recycling for both employees and public spaces and possibly reduce costs.

Garbage Collection Service and Cost					
Building	Type of Svc	Container Size	Frequency	FY07	FY08
City Hall	Front-end Loader	8 cy	3 days per wk	\$3,506.88	\$3,622.32
Gemini (COT Growth Mgmt)	Front-end Loader	8 cy	3 days per wk	\$3,506.88	\$3,622.32
Renaissance Center	M/L Compactor	16 cy	every other wk	\$3,069.66	\$3,061.24
			Total Costs	\$10,083.42	\$10,305.88

According to the Solid Waste Services department, City buildings do not pay the department for recycling container rental or collection. There are no costs to report for these services. Therefore a cost comparison between solid waste and recycling can not be made.

Additionally, the result of the STAR program provides additional waste reduction information. They are included in Appendix E.

3.5.3 Cost/Benefit Assessment

The City implemented the following programs over the course of the grant project period in an effort to reduce costs in energy, water, operations and maintenance, or waste as a part of the Green Government program. The specific costs, savings, and returns are not known at this time, but they are considered to be impactful with long-term cost-benefits.

These programs were enacted to provide both environmental and economic benefits to City operations, residents, and businesses. These programs were developed by various staff members in departments across the City and assisted the City in achieving a Green City Silver and Gold certification.

1. Waste Reduction and Recycling
 - a. Programs for businesses to recycle and reduce waste generation
 - b. Backyard composting bins for residents to reduce the amount of garbage entering the landfill
 - c. Curbside recycling program for residents
 - d. New collection services for residents to 1x/wk garbage and 1x/wk recycling, eliminate backdoor service and make it a premium to increase efficiencies of collection service and not raise costs to residents
 - e. Tracks the types and amount of waste disposed and recycled
 - f. Maintains a comprehensive educational recycling program for residents and businesses
 - g. Recycling of City end-of-life electronic equipment is maintained and a policy developed for equipment energy conservation measures and features when not in use by employees
2. Environmentally Preferable Purchasing (EPP)
 - a. Training for procurement agents and department buying representatives
 - b. EPP contract checklist
 - c. EPP Guide for procurement agents to integrate EPP process in their daily contract activities
 - d. Two revised contracts to increase recycled content and solar use
3. Schools
 - a. An active student/teacher education program on the environment
 - b. Involving students in Green projects within schools such as the Schools on Solar and the CANpaign recycling program
4. Employee Education Program
 - a. New employee orientation training that includes an overview of the City's environmental activities
 - b. Card that tells employees what they can do at home and work to reduce energy and water use as well as reduce waste generation through minimization and recycling

5. Water Conservation
 - a. Maintain an education program to residents that promotes Xeriscaping, rainwater reuse, etc.
 - b. Created a reclaimed water infrastructure
 - c. Offer home and business audits
 - d. Achieved FDEP wastewater plant operations excellence awards
6. Energy Conservation Offerings
 - a. Five-year plan to achieve 59 MW (about 10%) of peak electric demand reduction and 146,000 MWh (about 5%) of energy savings by 2012
 - b. Customers being more energy efficient in order to reduce the City's peak demand
 - c. Offer green power to customers
 - d. Informative billing to customers by mail and online
 - e. Residential incentives such as free CFLs and energy audit kits (CFLs, low flow shower heads, wall gaskets and thermometer cards)
 - f. Home energy audits
 - g. Lighting and controls for outdoor courts, parks, and playfields
7. Energy Efficiency Offerings
 - a. Heating and air replacement
 - b. Light change outs
 - c. Improved controls such as programmable thermostats
8. Demand Reduction Programs for Residents
 - a. Smart metering coupled with time-of-use rates and customers ability to track usage, enabling them to improve their overall consumption
 - b. Incentives for direct load control
9. Solar Power
 - a. City Hall – Domestic Hot Water System
 - b. Unitarian Universalist Church
 - c. State of Florida: Capital Circle Office Center
 - d. Lights for StarMetro Bus Shelters
 - e. Schools on Solar program
10. Transportation/Fleet Innovations
 - a. Carpool and vanpool assistance
 - b. Uses LED traffic lights
 - c. Biodiesel Production – Current 275 gallons/day with goal to produce 40% of diesel usage

- d. Promote mass production of plug-in vehicles
- e. 16 hybrids
- f. Five compressed natural gas vehicles
- g. Five all electric vehicles

The aforementioned items were also further supported by Mayor Marks's signing of the "Mayor's Green City Action Accord," endorsing the Florida League of Mayors' and Florida League of Cities' adoption of a commitment to pursue actions that work toward improving and advancing Florida's environment and energy security. These actions enhance the local natural environment, provide economic benefits to the community, and improve the overall sustainability of Florida.