

**Florida Department of Environmental Protection
FY 2006-07 INNOVATIVE GRANT APPLICATION FORM**

Project Information (on applicant letterhead)

- 1) **Applicant Name:** City of Tampa
- 2) **Primary contact person:** Barbara Heineken
- 3) **Complete Address:** Solid Waste Department
4010 W. Spruce Street
Tampa, Florida 33607
- 4) **Telephone Number(s) (including SunCom number):** 813-348-1165
- 5) **E-mail address:** barbara.heineken@ci.tampa.fl.us
- 6) **Project Title:** *Participation Barriers to Commercial and Residential Recycling in an Urban Environment*
- 7) **Grant Request Amount:** \$199,500
- 8) **Length of project (months):** 24 months

Authorizing Signature

Title

PROJECT ABSTRACT

(No more than 20 lines. Every word over 20 lines will constitute a one point deduction.)
(do not delete the instructions on this page)

The profusion of cultures, languages and small businesses have helped to make the City of Tampa a varied, thriving and energetic community. However, a diverse urban population also poses challenges when developing marketing strategies to effectively overcome participation barriers to commercial/institutional (C/I) and residential recycling. Currently, the City of Tampa provides solid waste collection, disposal and recycling services for over 80,000 residential and commercial customers. Despite the fact that the same recycling programs are offered in all areas of the City of Tampa, there are several collection routes that fall significantly below the 38% citywide participation rate average¹ and numerous businesses within those areas that do not recycle. This raises two related questions: “What accounts for the lower participation rates?” and “How can participation rates be increased and sustained?” In order to answer these questions, The City of Tampa will undertake a study of participation barriers to commercial and residential recycling in an urban environment.

The languages, cultures, beliefs, attitudes as well as socioeconomic factors of an ethnically rich commercial and residential urban area all influence the likelihood of recycling participation. Even within these areas, there is a high level of diversity and barriers to recycling participation will differ. Effectively marketing recycling programs is dependent upon understanding the key factors that influence someone’s decision as to whether or not they will participate. Baseline participation rates, in three urban neighborhoods that have consistently yielded low tonnages, will be tracked. Then qualitative research will be conducted to identify the barriers to participation using focus groups. Those findings will be incorporated into a survey of businesses and residents. Results will be used to develop and pilot a community based marketing plan with the goal of increasing participation in these areas by 25%. Information derived from this project will benefit the citywide program by providing insights on how to more effectively market recycling to residents and businesses.

¹ “*Report on City of Tampa Recycling Program*,” March 11, 2004, Planning and Economic Group, Inc.

PROJECT DESCRIPTION

(1 page)

The City of Tampa generates approximately 360,000 tons of solid waste annually that are processed at the McKay Bay Refuse-to-Energy Facility. The Recycling Division is responsible for implementing, tracking and administering the Solid Waste Department's recycling program. The City offers businesses, which generate more than 60% of the overall waste stream, recycling of cardboard and office paper, and for restaurants and bars, aluminum, glass and plastic container recycling. The City of Tampa's residents do their part as well. The weekly curbside recycling program collects 400 tons of newspaper and 225 tons of aluminum cans, glass bottles and jars and plastic bottles monthly. All City of Tampa residents in single family residences have curbside recycling service available to them and the average participation rate is 38% citywide. However, there are opportunities to increase participation in recycling programs offered to the commercial and residential sectors particularly in the City of Tampa's more diverse urban areas.

Observations by recycling collection route drivers on participation, and records of tonnages revealed that three areas of the city have consistently had significantly lower than average results. Despite the availability of the same recycling program throughout the city and the same marketing methods having been employed, more businesses and residents within three urban areas of the city have selected not to participate. The languages, cultures, beliefs, and attitudes as well as socioeconomic (e.g., education, income, etc.) factors of an ethnically diverse commercial and residential urban area all influence recycling participation. In order to increase recycling, it is crucial to understand the barriers to participation and how to effectively encourage businesses and residents to adopt recycling behaviors. Most recycling programs launch large scale promotional campaigns that rely upon education and advertising to foster recycling behavior change. Principles of marketing show that an environmental analysis and diagnosis can help us assess the barriers and benefits to recycling as perceived by residents and business that do not participate. A marketing plan must consider key factors in the external environment that are important; these include social, cultural, economic, technological, political-legal, ecological, and competitive markets. This project will:

- **Track Baseline Data:** Obtain baseline data from three urban neighborhood collection routes that have consistently exhibited lower than average participation rates and yielded low recycling tonnages. Track collection tonnages for newspapers, aluminum cans and glass, and plastic bottles from residents and examine specific businesses for cardboard, paper and container diversion. Document actual participation rates for households. Interview collection route drivers regarding their observations.
- **Conduct Qualitative Research:** Conduct focus groups to elicit qualitative feedback regarding the perceived barriers and benefits to recycling participation and explore related solid waste and toxicity issues with area businesses and residents.
- **Perform Quantitative Research:** Incorporate focus groups results into phone survey questions for non-participating businesses and residents, including reuse, resource conservation, toxicity, C&D, and community-based incentives.
- **Implement Marketing Plan Pilot:** Use qualitative and quantitative research findings to develop and pilot a community based marketing plan to overcome barriers to participation in three select urban neighborhoods with a goal of increasing participation by 25%.

Criteria 1: TECHNOLOGIES

(1 page)

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(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

A literature review included a search of reports, periodicals, and the Internet for information pertaining to Florida studies on participation barriers to recycling in an urban environment. To our knowledge, there has no previous grant money awarded to research this topic, and there has not been a published report in Florida. Anecdotally, the City of Tallahassee was forced to discontinue recycling service in some areas of the city due to poor participation and contamination issues despite outreach efforts. For an increasing number of Florida's urban areas, it may be cheaper to stop recycling collection than to overcome participation barriers. It is our understanding that in contrast, Fort Lauderdale successfully expanded recycling in areas that exhibited low participation through community based outreach. Unfortunately, the results were not published.

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

Process: Although research is available on high participation suburban neighborhoods, not much is known about the factors that most influence diverse, non-participating urban communities. This project will identify key participation barriers to recycling in three culturally and socioeconomically diverse urban areas. Understanding what factors most likely motivate or detract from a business's or individual's decision to participate can be incorporated into recycling marketing plans and even help shape program design. Given the changing population trends throughout Florida, it is important that recycling staff better understand the factors that both pose barriers and also motivate people in our urban centers to recycle. For instance, Tampa's foreign born population increased by 66% from 1990 to 2000; the majority are from Latin America.²

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

A marketing plan will be developed based upon the research findings. Baseline participation rates and tonnages will be tracked and drivers will be interviewed for their observations. This project plans both a qualitative and quantitative evaluation of the barriers and benefits to recycling through focus groups and survey methods. Focus groups will uncover barriers, by learning more about attitudes, beliefs, socioeconomic and demographic factors that impact recycling participation. Once compiled, commonly recurring responses will highlight areas that need to be explored through a quantitative phone survey. The information derived from the phone survey will then form the basis of a community based recycling marketing plan.

Whereas most recycling programs launch promotional campaigns that rely upon education and advertising to attain recycling participation, these methods have been less effective in urban areas. Results of this study will be used to develop a community specific marketing plan which emphasizes removal of perceived barriers to recycling while enhancing its benefits. The innovative component of this project also lies in the use of community based incentives to encourage socio-economically challenged communities to participate in source reduction, waste reduction, recycling and composting programs. The most effective incentives for these communities will be identified through the focus groups and survey responses. For example, they might include: 1) Block captains or champions to encourage recycling; or 2) Challenges between areas with donation of recycled content items like picnic benches, bus benches, playground equipment, groundcover (crumb rubber), or a glassphalt basketball court for the local recreation center by the City.

² City of Tampa, *Tampa Profile – Population Characteristics*, www. TampaGov.net, page 6.

Criteria 2: TARGETS

(1 page)

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(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.

In Florida, the C/I sector comprises more than 51% of the overall waste stream³. The importance of this sector can not be ignored if the city is to achieve greater diversion. This proposal will identify the barriers to participation by small businesses within three areas of the city that have demonstrated lower than average participation in the recycling program, through focus groups and survey methods.

The City offers the C/I sector the opportunity to recycle the following materials:

- 1) Corrugated cardboard,
- 2) Office paper,
- 3) Aluminum cans,
- 4) Glass containers, and
- 5) Plastic containers

Additionally, affiliated solid waste material issues such as management of hazardous materials, construction and demolition debris from renovations, and reuse of materials such as pallets, will be explored during the course of this research. The quantities and types of these materials may vary significantly for suburban versus non-suburban areas. Education and economic factors could play an important role in determining how to target recovery of these materials. These factors will be researched and the findings will then guide the development of a marketing plan.

In addition to the C/I sector, the residents in these socio-economically and culturally diverse urban neighborhoods have also exhibited much lower than average participation rates in recycling, unlike more suburban areas, for reasons that are not completely understood. The intent of this project is to identify the barriers and factors that would most motivate urban areas to participate in the weekly curbside recycling program for newspapers and cans and bottles. Because residents in an ethnically rich and tightly knit community are often tied to their C/I sector by the nature of the family unit that these communities create, it brings these two sectors together more closely here than in a suburban setting. Many small convenience stores are a gathering place and also sell ethnic foods and cooking supplies, and offer a common and safe place for folks to walk to and gather for food, coffee, and beverages and to discuss family and work issues in their native language with familiar surroundings.

³ “*Solid Waste Management in Florida 2000*,” Florida Department of Environmental Protection, Bureau of Solid and Hazardous Waste, Division of Waste Management, page 7.

Criteria 3: BENEFITS

(1 page)

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(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

Focus groups will identify other solid and hazardous waste management issues that are of concern. Based upon those findings, questions on source reduction, resource conservation, reuse, composting, and toxicity will be included in the phone surveys. Results will have a bearing on the content of the marketing plan that is devised.

Toxicity

The city's brochure, "*Prohibited Wastes*," for commercial small quantity generators (SQG) will be made available to these businesses. It explains the proper management of oil, fluorescent bulbs, paints, and other hazardous materials. For residents, information on the city's hazardous waste drop-off sites will be distributed. The S.W.E.A.P. Program strives to help keep Tampa's neighborhoods clean by providing citizens with a means of disposing of unwanted household items that are too large for normal collection. A brochure entitled, "*A Citizen's Guide to Clean Neighborhoods*," lists how to handle materials found in the home that require special management. Similarly, household hazardous waste information will be made available to residents.

Sub-criteria 2 – Economic Benefits (10 Points)

By recycling, business owners may be able to reduce their level of trash service or the frequency of collection. Businesses may even be able to generate some revenue from their recycling materials, if they deliver them to a drop-off center. By increasing recycling participation and reducing contamination issues, recycling processing and disposal costs should also be reduced. Revenues from the sale of recycling commodities should be greater due to both the improved quality and quantity of recyclable materials being generated for collection.

Sub-criteria 3 – Cost Effectiveness (10 Points) Includes, but not limited to cost reduction, payback period, sustainability, and cost-effectiveness.

- **Cost Reduction:** By recycling more, businesses may reduce either their frequency of collection or their level of garbage service. Through an increased familiarity with program guidelines, contamination should decline and lower residuals at the MRF make recycling more cost-effective. The density of urban areas should make these routes the most cost-effective to collect.
- **Payback period:** The City of Tampa already provides collection and devotes significant ongoing resources to collection along these routes. The projected increase in participation by 25% and the associated increase in the quality and the quantity of materials collected will make the recycling program more cost-effective. It is very probable that the findings of this project can be applied citywide to boost residential curbside participation well above the 38% average and appreciably expand participation by the city's numerous businesses making the payback period even shorter.
- **Sustainability:** Tampa is committed to providing recycling services to all its residents and businesses. Through improved marketing, the goal is to make recycling more cost-effective and sustainable. The buy-in achieved from these areas through the community-based marketing plan should be sustainable.
- **Cost-effective use of vendors, etc:** Businesses within these urban areas are also potential sponsors for marketing the recycling program and could serve as effective conduits for providing information on recycling within their community.

Criteria 4: TRANSFERABILITY

(1 page)

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(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)

The increasing diversity of Florida's cities makes understanding barriers to recycling participation in urban areas essential. Recent trends of urbanization and economic growth continue to change the demographics of Florida. In the City of Tampa alone, the foreign born population increased 66% from 1990 to 2000. The demographics of the Tampa's population are echoed throughout other Florida cities.

In some instances, communities have ceased to provide recycling services in urban areas that have had poor participation and rampant contamination problems. Instead, gaining a greater understanding of the beliefs, attitudes, and means to overcome barriers to recycling and motivate people to participate in our urban areas will allow Florida to continue to provide effective business and residential collection programs.

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

The diversity of Florida's population continues to grow, particularly in our larger, urban areas. Census data from 2000 revealed that 78% of Florida's total population is characterized as White, 14.6% Black, and 16.8% of Hispanic origin⁴. The City of Tampa is willing to mentor any community recycling program that may benefit from a better understanding of barriers to participation in urban areas. Additionally, the City of Tampa will convene a meeting and invite representatives from Florida's twenty largest cities to discuss the methodology, findings, and implications of this research to their communities.

Results of this project have applicability around the state and should provide valuable insights into how best to develop a marketing plan that truly addresses the concerns socio-economically challenged businesses and residents hold about participating in recycling programs and the factors that they identify as motivating them to do so. A PowerPoint presentation, summarizing this project, will be offered at an annual Recycle Florida Today's Issues Forum and also at SWANA's Florida Sunshine Chapter Conference. Electronic versions of the focus group and phone surveys will be offered to statewide recycling coordinators and public works directors. Articles summarizing the results of the research will be published in trade and industry periodicals and journals.

⁴ "Florida Statistical Abstract 2004," Bureau of Economic and Business Research, Warrington College of Business, University of Florida, Section 01, page 4.

Criteria 5: LOCAL SUPPORT

(1 page)

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(10 Points) Demonstrate local support for the proposed project in commitment of cash or in-kind matching funds. Please provide the name, address and phone number of ALL contributors.

- **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**

Primary Supporters:

1. **City of Tampa – Solid Waste Department** Barbara Heineken, Recycling Manager
4010 W. Spruce Street, Tampa, Florida 33607 (813) 348-1165
In-kind Support (\$ 85,500)

For this proposed project, the City of Tampa will provide in kind support for the following project components:

- Supply staff coordination and management of project components within three select communities as well as overall project management;
- Provide operation staff and equipment time for the three pilot routes;
- Provide existing hazardous waste educational and other outreach materials to be distributed throughout the three selected community areas;
- Provide technical assistance and review of focus group and survey questions;
- Track participation data and tonnages;
- Supply recycling bins for all households and businesses needing them within the three select communities and arrange for delivery;
- Identify and enlist support of neighborhood and community organizations; and
- Prepare quarterly and final reports as well as reimbursement requests.

Secondary Supporters:

1. **Corporation to Develop Communities (CDC) of Tampa Inc.**
Chloe Cooney, President/CEO, 1920 E. Hillsborough Ave., Tampa 33610, (813) 232-1419
East Tampa Business and Civic Association
Laura Fuller, President, 3604 Lindell Avenue, Tampa 33610, (813) 813 241-6767
2. **Sulphur Springs Action League**
Joseph Robinson, President, P.O. Box #9415, Tampa 33674, (813) 932-9288
3. **Highland Pines Community Task Force**
Owedia Walker, President, 3002 Starr St., Tampa 33605, (813) 621-2590

BUDGET

(1 page using Budget Table Template)
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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/InnovativeGrants2006-07.htm).

Applicant: Solid Waste Department, City of Tampa, Barbara Heineken						Project Title: Participation Barriers to Commercial and Residential Recycling in an Urban Environment					
Budget											
(1) Tasks	Categories								Local Match		(12) Total Grant Request
	(2) Personnel	(3) Travel	(4) Equipment	(5) Supplies	(6) Contractual	(7) Construction	(8) Other	(9)* Total Budget	(10) In-Kind Match	(11) Cash Match	
Track Baseline Data	\$2,500.00				\$10,000.00			\$12,500.00	\$2,500.00		\$10,000.00
Conduct Qualitative Research	\$5,000.00				\$5,000.00		\$13,000.00	\$23,000.00	\$5,000.00		\$18,000.00
Perform Quantitative Research	\$2,500.00				\$7,500.00		\$20,000.00	\$30,000.00	\$2,500.00		\$27,500.00
Prepare Community Based Pilot Marketing Plan	\$8,000.00				\$10,000.00			\$18,000.00	\$8,000.00		\$10,000.00
Procure Necessary Containers, Equipment, and Supplies	\$7,500.00		\$38,000.00					\$45,500.00	\$7,500.00		\$38,000.00
Implement Pilot Marketing Plan	\$17,500.00		\$17,500.00		\$20,000.00			\$55,000.00	\$35,000.00		\$20,000.00
Identify and Procure Incentives for Pilot Participation Program	\$5,000.00			\$5,000.00			\$39,000.00	\$49,000.00	\$10,000.00		\$39,000.00
Project Management & Administration	\$5,000.00				\$15,000.00			\$20,000.00	\$5,000.00		\$15,000.00
Quarterly Reports	\$7,500.00				\$12,000.00			\$19,500.00	\$7,500.00		\$12,000.00
Final Report	\$2,500.00				\$10,000.00			\$12,500.00	\$2,500.00		\$10,000.00
TOTALS	\$63,000.00	\$0.00	\$55,500.00	\$5,000.00	\$89,500.00	\$0.00	\$72,000.00	\$285,000.00	\$85,500.00	\$0.00	\$199,500.00