

SOLID WASTE AUTHORITY OF PALM BEACH COUNTY

**INNOVATIVE GRANT PROJECT #IG1-12
FINAL REPORT**

**MODEL WASTE REDUCTION & RECYCLING PROGRAM
FOR
FLORIDA DETENTION & CORRECTIONAL FACILITIES**



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March 2004

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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 Introduction	1
1.1 Background	1
1.2 Goals and Objectives	1
1.3 Innovation	2
1.4 Outreach to Intended Audience	3
1.5 Acknowledgements	5
2.0 Project Implementation	6
2.1 Equipment and Services	6
2.2 Cooperative Effort	7
2.3 Project Elements and Timeline	7
2.3.1 Waste Characterization and Generation Studies	7
2.3.2 Purchasing Audit	11
2.3.3 Program Benchmarking	x
2.3.4 Waste Reduction Program Development	x
2.3.5 Waste Reduction Program Implementation	x
2.3.6 Ex-offender Job Placement and Inmate Labor Utilization	x
2.3.7 Analysis of Statewide FDOC Program	x
2.3.8 Waste Reduction Guide for Florida Facilities	x
2.3.9 Program Outreach	x
2.3.10 Project Timeline	x
2.4 Problem Resolution	x
3.0 Project Results	x
3.1 Project Accomplishments	x
3.2 Advanced Technologies	x
3.3 Potential for Increased Material Recovery	x
3.4 Technology Transfer	x
3.5 Cost-Effectiveness	x
3.6 Nontraditional Materials	x
3.7 Recommended Next Steps	x

<u>Table</u>	<u>Page</u>
2.1 Purchase and Utilization of Equipment and Services	6
2.2 Composition by Weight of Solid Waste Generated, Disposed and Recycled at PBSO Detention Centers	8
2.3 Composition by Weight of Solid Waste Generated, Disposed and Recycled at Sumter Correctional Institution	9
2.4 Estimated Composition by Weight of Solid Waste Generated at Florida Correctional Facilities	10
2.5 Survey of Potential Solid Waste Industry Employers	x
2.6 Florida County Utilization of Inmate Labor for Solid Waste Activities	x
2.7 Project Timeline	x
3.1 Cost by Project Element	x

Figure

2.1 SWA and KCI staff sorting waste from the PBSO detention centers	x
2.2 Baled corrugated cardboard at the PBSO Main Detention Center	x
2.3 Textile collection container at the PBSO Main Detention Center	x
2.4 Scrap metal collected at the PBSO Stockade and Drug Farm	x
2.5 Pallets and yard waste at the PBSO Stockade and Drug Farm	x
2.6 Collection of oil filters at PBSO Vehicle Maintenance	x
2.7 Bicycle repair area at PBSO Drug Farm	x
2.8 Furniture refurbishment shop at PBSO Drug Farm	x
2.9 Stored corrugated cardboard at SCI	x
2.10 Steel cans collected at SCI	x
2.11 Reusable bread racks at SCI	x
2.12 Reuse food trays at SCI	x

Appendices

Appendix A	Technical Advisory Group Members
Appendix B	Notice of Availability – <i>Waste Reduction and Recycling Guide for Florida Correctional Facilities</i>
Appendix C	Press Release
Appendix D	Inmate and Ex-offender Job Placement Programs
Appendix E	Employer Benefits of Hiring Ex-offenders
Appendix F	Sumter County Certificate of Work Completion

SECTION 1.0 INTRODUCTION

1.1 Background

This project came about as a result of discussions between the Solid Waste Authority of Palm Beach County (SWA) and the Palm Beach County Sheriff's Office (PBSO) regarding expansion of and improvements to the existing recycling program at the PBSO detention centers. Concurrently, Sumter County had been assisting the Sumter State Correctional Institution (SCI) with collection and processing of its recyclables. As a result, SWA submitted an innovative grant proposal entitled *Model Waste Reduction and Recycling Program for Florida Detention and Correctional Facilities* that would allow SWA and Sumter County to more effectively assist PBSO and SCI, provide funding for acquisition of necessary equipment and supplies, and create a model program for use by other correctional facilities in Florida.

The Florida Department of Environmental Protection (FDEP) funded the project through its 2000-2001 Innovative Recycling/Waste Reduction Grant Program (Grant Project #IG1-12). This document represents the final report for this project.

In addition to the project partners mentioned above, SWA also enlisted the assistance of Kessler Consulting, Inc. (KCI) because of the firm's extensive experience in assisting Florida communities and businesses with planning, evaluating, and implementing comprehensive waste reduction and recycling programs.

1.2 Goals and Objectives

The primary goal of this project was to develop comprehensive waste reduction programs at the PBSO detention centers and SCI, and to utilize these programs to develop a model program for use at correctional facilities throughout Florida. In accomplishing this goal, the project also strived to achieve the following objectives:

- To benchmark current recycling and waste management practices at the PBSO and SCI facilities.
- To reduce the quantity of waste disposed at the PBSO and SCI facilities in an efficient and cost-effective manner.

- To incorporate waste prevention, reuse, recycling, composting, and environmentally preferable procurement as part of the comprehensive waste reduction programs.
- To gain an understanding of the waste stream composition and waste generation rate at Florida correctional facilities.
- To evaluate the cost-effectiveness of a statewide Florida Department of Corrections (FDOC) waste reduction program.
- To develop a guide, based on the experiences at the PBSO detention centers and SCI, to assist other Florida correctional facilities in establishing waste reduction and recycling programs.
- To research inmate utilization and job placement opportunities in the recycling and solid waste field.

1.3 Innovation

The five project elements that were intended to contribute to project innovation were (1) waste stream characterizations and generation studies at correctional facilities, (2) environmentally preferable purchasing practices, (3) analysis of a statewide FDOC program, (4) Technical Advisory Committee, and (5) guidebook for Florida correctional facilities.

Waste Stream Characterization and Generation Studies: To our knowledge, this was the first time that a waste characterization study (WCS) was conducted at a county and a state prison facility, and the results compared and combined to develop an estimate of the waste composition in Florida correctional facilities. At the same time, the generation rate per inmate was calculated. Both the waste composition results and the generation rate were then compared with similar data from the New York State Department of Correctional Services (NYDOCS) to validate the data. This data was then used to develop the waste reduction programs for the PBSO and SCI facilities, as well as to develop a model program for correctional facilities statewide.

Environmentally Preferable Purchasing Practices: The waste reduction programs focused not only on waste prevention, reuse, recycling, and composting, but also incorporated environmentally preferable purchasing (EPP) as part of the comprehensive program. EPP

recommendations included purchasing products and product packaging with reduced toxicity; that would generate less waste; manufactured from recycled materials; that were more durable or capable of being repaired, refurbished or upgraded; or that could be recycled.

Analysis of a Statewide FDOC Program: To our knowledge, this was also the first time an analysis was conducted of the potential economic impacts and environmental benefits of a statewide FDOC comprehensive waste reduction program. Based on the waste composition and generation studies and the programs designed for the PBSO and SCI facilities, an analysis was conducted of implementing a similar program in FDOC facilities throughout Florida.

Technical Advisory Group: A Technical Advisory Group (TAG, see Appendix A) was developed during project initiation. The TAG included representatives from SWA, Sumter County Solid Waste Department, PBSO, SCI, FDOC, FDEP, Prison Rehabilitative Industries and Diversified Enterprises (PRIDE), the Southern Waste Information eXchange (SWIX), NYDOCS, and the solid waste recycling industry. The purpose of the TAG was (1) to provide technical assistance and practical advice during development of the waste reduction programs, and (2) to help overcome institutional barriers that make it challenging to implement a waste reduction program within correctional facilities. While the TAG proved valuable for the first purpose, changes in personnel at PBSO, SCI, and FDOC did not provide consistency in TAG membership and made it challenging to successfully overcome institutional barriers.

Guidebook for Florida Correctional Facilities: This project resulted in development of a *Waste Reduction and Recycling Guide for Florida Correctional Facilities*, which appears to be the first guidebook of its kind in Florida focused on this audience. The guidebook provides waste prevention, reuse, recycling, composting, and EPP program elements that are relevant to correctional facilities. It is intended to provide guidance when developing a waste reduction program, yet allow for site-specific considerations and adaptations.

1.4 Outreach to Intended Audience

The intended audience includes (1) management and staff at PBSO and SCI, (2) FDOC management and staff, (3) Florida correctional facilities, and (4) local solid waste managers and recycling coordinators.

Management and Staff at PBSO and SCI: Throughout the project, SWA, Sumter County, and KCI staff worked closely with PBSO and SCI staff. Numerous meetings were held to inform and update management and staff about the project and its progress. Because of changes in management and staff at both PBSO and SCI, repetitive meetings were sometimes needed to educate newly appointed personnel about the project and obtain their buy-in.

FDOC Management and Staff: FDOC participation in the TAG and in providing technical assistance with an FDOC solid waste and recycling survey were intended to engage FDOC in this project; however, changes in FDOC management and staff resulted in limited interest or participation in the project. Although FDOC utilized the survey form developed by KCI, they significantly modified it and required submittal of a public records request before sharing the results with project participants. Outreach to FDOC will also include mailing copies of the statewide FDOC analysis and the *Waste Reduction and Recycling Guide for Florida Correctional Facilities* to FDOC's Bureau Chief of Field Support Services and Recycling Coordinator, with an offer to provide both documents electronically for their distribution to FDOC facilities. Although a workshop for FDOC facility managers and recycling coordinators was originally planned, instead it is recommended that a meeting with FDOC management and appropriate staff be requested by FDEP in order to present the results of this project. We believe this would be more productive than a workshop, because management support would be necessary for implementation of a consistent agency-wide waste reduction programs at FDOC facilities.

Florida Correctional Facilities and Local Solid Waste Personnel: A notice (see Appendix B) of the availability of the guidebook is being e-mailed or mailed to federal correctional facilities in Florida, to county solid waste directors, and to local recycling coordinators. In addition, a press release (see Appendix C) about the project and the availability of the guidebook is being sent to the *Florida Specifier*, RecycleFlorida Today, Inc. (RFT),

SWANA Florida Sunshine Chapter, SWIX, Florida League of Cities, Florida Association of Counties, Florida City and County Management Association, and major Florida newspapers. An article about the project and its results is under development. In addition, abstracts will be submitted for presentation of project results at upcoming state conferences.

The SWA produced a video providing information on how the project started and the main objectives for the implementation of the program. This video has discussion on a number of aspects of the overall recycling program implemented at the Palm Beach County Main Detention Center and other PBSO facilities. Future conferences or interested correctional facilities will also have access to the video.

1.5 Acknowledgments

SWA would like to thank the Palm Beach County Sheriff's Office, Sumter County, and Sumter State Correctional Institution for their participation in this project. SWA would also like to thank the members of the Technical Advisory Group for their time and assistance, and to particularly acknowledge the advice and insight provided by James Marion with the New York Department of Correctional Services. SWA would also like to thank Kessler Consulting, Inc. for their technical assistance, project coordination, and report preparation.

SECTION 2.0
PROJECT IMPLEMENTATION

2.1 Equipment and Services

Table 2.1 provides a list of equipment and services that were purchased to assist with this innovative grant project, and how each was utilized.

TABLE 2.1 PURCHASE AND UTILIZATION OF EQUIPMENT AND SERVICES	
Equipment or Service	Utilization
¾ ton utility vehicle	Transport containers and recovered materials collected at PBSO detention centers
Hydraulic baler	Bale recovered materials at PBSO detention centers (Stockade)
EarthTub composting system	Conduct pilot composting program for SCI Forestry Farm food waste
Roll-off container	Collect recyclables at SCI
Roll-off truck	Service recycling containers at SCI
Set-up transformer	Provide electricity to operate baler, donated by Sumter County to SCI
Skid steer loader	Move and load recyclables collected at SCI
Editing console	Produce waste reduction program video
Panasonic DVD pro deck	
Kessler Consulting, Inc. - consulting services	Coordinate project activities
	Conduct waste composition studies, waste generation analyses, and purchasing audits at PBSO and SCI
	Benchmark existing solid waste management activities and develop waste reduction programs for PBSO and SCI
	Research inmate utilization and job placement opportunities
	Conduct analysis of statewide FDOC program
	Develop waste reduction guide, tracking and reporting system, and sample educational materials
	Prepare reports, press releases, and notices

2.2 Cooperative Effort

This project was a cooperative effort between SWA, PBSO, Sumter County, SCI, and KCI. Technical assistance was provided to the PBSO detention centers and SCI, as well as actual collection and hauling services. The equipment and supplies necessary for each facility were identified and purchased. In addition, the studies conducted and lessons learned at one location could be utilized by the other, and the information and experience acquired through both programs was used to develop a recommended model program.

The project proposal intended for FDOC to be a cooperative partner in the project. While lines of communication with various staff members and management were initiated, the desired level of cooperation was never achieved due in part to changes in FDOC management and staff. However, opportunities exist to share project results with FDOC, in particular the statewide analysis and guidebook, to educate them about the benefits of a comprehensive waste reduction program, and to encourage program implementation.

2.3 Project Elements and Timeline

This project consisted of nine primary elements. These elements and the project timeline are discussed in the subsections below.

2.3.1 Waste Characterization and Generation Studies

Following initial kick-off meetings with PBSO and SCI staff, site visits of the facilities were conducted and available information regarding existing solid waste and recycling procedures and costs were requested and reviewed. Waste characterization studies were then conducted at both locations.



Figure 2.1. SWA and KCI staff sorting waste from the PBSO detention centers.

At PBSO, the waste stream composition was determined for four individual facilities: Main Detention Center, Vehicle Maintenance, Stockade and Drug Farm, and West Detention Center. In addition, the data of the four facilities were combined to estimate the

overall composition of the PBSO detention center waste stream. The quantities of materials currently collected for recycling at each facility were also estimated, and the composition by weight of solid waste generated, disposed, and recycled at the PBSO detention centers was calculated and is presented in Table 2.2.

TABLE 2.2 COMPOSITION BY WEIGHT OF SOLID WASTE GENERATED, DISPOSED AND RECYCLED AT PBSO DETENTION CENTERS				
Material Categories	Generated	Disposed	Recycled	Recycling Rate
Newspaper	7.0%	8.8%	1.5%	5.3%
Corrugated Cardboard	10.6%	4.7%	28.7%	66.8%
White Ledger	6.3%	5.7%	8.3%	32.3%
Other Mixed Paper	9.7%	10.0%	8.7%	22.1%
Non-recyclable Paper	10.5%	13.8%	0.0%	0.0%
Gable-top Containers	2.0%	2.7%	0.0%	0.0%
PET Containers (#1)	0.6%	0.8%	0.0%	0.0%
Natural HDPE Containers (#2)	0.1%	0.2%	0.0%	0.0%
Pigmented HDPE Containers (#2)	0.2%	0.2%	0.0%	0.0%
Polystyrene Plastic	1.6%	2.1%	0.0%	0.0%
Other Plastic Bottles/Containers	0.6%	0.9%	0.0%	0.0%
Other Plastics	8.3%	11.0%	0.0%	0.0%
Tin/Steel Cans	1.4%	1.9%	0.0%	0.0%
Aluminum Cans	0.3%	0.4%	0.0%	0.0%
Other Ferrous/Nonferrous Metal	5.1%	1.8%	15.1%	73.4%
Glass	0.3%	0.4%	0.0%	0.0%
Textiles	2.2%	2.4%	1.7%	18.7%
Electronics	0.8%	1.1%	0.0%	0.0%
Compostable Food Waste	8.7%	11.6%	0.0%	0.0%
Non-compostable Food Waste	1.4%	1.8%	0.0%	0.0%
C&D Debris	1.6%	2.1%	0.0%	0.0%
Wood Waste	0.1%	0.1%	0.0%	0.0%
Yard Waste	2.0%	0.0%	8.3%	99.9%
Other Miscellaneous	11.8%	15.7%	0.0%	0.0%
Automotive Waste	6.8%	-	27.7%	100.0%
Total	100%	100%	100%	24.6%

A waste composition study was also conducted at SCI and the quantities of materials currently recycled were estimated. Table 2.3 provides a summary of the composition by weight of solid waste generated, disposed and recycled at SCI.

TABLE 2.3 COMPOSITION BY WEIGHT OF SOLID WASTE GENERATED, DISPOSED AND RECYCLED AT SUMTER CORRECTIONAL INSTITUTION				
Material Categories	Generated	Disposed	Recycled	Recycling Rate
Newspaper	0.9%	4.0%	0.0%	0.0%
Corrugated Cardboard	5.7%	3.0%	6.5%	87.3%
White Ledger	7.8%	9.9%	7.2%	70.1%
Other Mixed Paper	5.3%	17.1%	1.6%	22.5%
Non-recyclable Paper	5.6%	23.8%	0.0%	0.0%
Gable-top Containers	0.7%	2.8%	0.0%	0.0%
PET Containers (#1)	0.1%	0.6%	0.0%	0.0%
Natural HDPE Containers (#2)	0.2%	0.8%	0.0%	0.0%
Pigmented HDPE Containers (#2)	0.2%	0.9%	0.0%	0.0%
Polystyrene Plastic	0.3%	1.1%	0.0%	0.0%
Other Plastic Bottles/Containers	0.2%	0.7%	0.0%	0.0%
Other Plastics	2.6%	10.8%	10.0%	0.3%
Tin/Steel Cans	1.3%	0.5%	1.6%	92.-%
Aluminum Cans	0.7%	2.2%	0.2%	22.6%
Other Ferrous/Nonferrous Metal	10.5%	0.2%	13.7%	99.5%
Glass	0.1%	0.4%	0.0%	0.0%
Textiles	0.6%	2.6%	0.0%	0.0%
Electronics	0.0%	0.1%	0.0%	0.0%
Compostable Food Waste	51.4%	7.0%	65.3%	96.7%
Non-compostable Food Waste	0.4%	1.5%	0.0%	0.0%
C&D Debris	0.0%	0.0%	0.0%	0.0%
Wood Waste	2.6%	0.1%	3.4%	99.2%
Yard Waste	0.6%	2.4%	0.0%	0.0%
Other Miscellaneous	2.2%	7.6%	0.5%	18.6%
Total	100%	100%	100%	76.2%

The waste composition studies from PBSO and SCI were then combined to estimate the composition of solid waste generated at Florida correctional facilities, which is presented in Table 2.4. For comparison, the table also presents the waste composition of state correctional facilities in New York. The two compositions are similar, with the quantity of plastics and wood waste lower in Florida facilities, and the amount of metals higher.

TABLE 2.4 ESTIMATED COMPOSITION BY WEIGHT OF SOLID WASTE GENERATED AT FLORIDA CORRECTIONAL FACILITIES			
Material Categories	Estimated Florida		NYDOCS*
Newspaper	4.2%		
Corrugated Cardboard	8.5%		
White Ledger	7.3%		
Other Mixed Paper	7.8%		
Non-recyclable Paper	8.5%		
Gable-top Containers	1.4%		
<i>All Paper</i>		38%	40%
PET Containers (#1)	0.4%		
Natural HDPE Containers (#2)	0.2%		
Pigmented HDPE Containers (#2)	0.2%		
Polystyrene Plastic	1.0%		
Other Plastics	6.1%		
<i>All Plastics</i>		8%	15%
Tin/Steel Cans	1.4%		
Aluminum Cans	0.5%		
Other Ferrous/Nonferrous Metal	8.0%		
<i>All Metal</i>		10%	5%
Glass	0.2%	0%	0%
Textiles	1.5%	2%	3%
Electronics	0.5%	0%	0%
Compostable Food Waste	30.4%		
Non-compostable Food Waste	0.9%		
<i>All Food Waste</i>		31%	30%
C&D Debris	0.8%		
Wood Waste	1.3%		
Yard Waste	1.4%		
<i>All Wood Waste</i>		4%	7%
Other Miscellaneous	7.4%	7%	0%
Total	100%	100%	100%

* Source: James Marion, New York Department of Correctional Services.

In addition, the average waste generation rate (prior to any diversion) was calculated for the PBSO detention centers and SCI, then combined to estimate an average generation rate for Florida facilities. Approximately 1,450 pounds of waste are generated per inmate per year, or nearly 4 pounds per inmate per day. About 1.2 pounds of this 4 pounds is food waste.

2.3.2 Purchasing Audit

Purchasing audits were conducted at the PBSO detention centers and SCI. Although PBSO did not have a computerized system to track purchases, staff provided a tour of the warehouse area and explanation of the types of products purchased. At SCI, staff provided a tour of the warehouse area and administration area with explanation of the types of products purchased and received. Additionally, FDOC's regional purchasing representative, Larry Phillips, was involved in providing information regarding purchasing procedures and EPP feedback for SCI.

Based on the information obtained, a summary of primary product purchases and EPP recommendations were developed. Recommendations included procedures for establishing an official EPP program, purchasing decisions that can result in generation of less waste, and purchasing recommendations specific to the types of products typically purchased by the PBSO facilities. The latter included meeting the minimum recycled-content levels established by the U.S. Environmental Protection Agency (EPA).

EPP reports, entitled *Environmentally Preferable Procurement for Palm Beach County Detention Centers* and *Environmentally Preferable Procurement for Sumter Correctional Institution*, were then prepared for and presented to PBSO and SCI staff. Mr. Phillips was provided an opportunity to comment on the draft EPP document for SCI, but no comments were received.

2.3.3 Program Benchmarking

Based on the facility site visits, available information about current solid waste contracts and management practices, and the waste composition and generation studies, the solid waste systems at the PBSO detention centers and SCI were benchmarked. The PBSO

information was presented in a document entitled *Solid Waste Benchmark Report for the Palm Beach County Detention Centers*, and the SCI information was included in the *Solid Waste Benchmark and Waste Reduction Report for the Sumter Correctional Institution*.

In addition to waste composition data, the benchmarking summaries also included estimated tonnages for collected waste and recyclables, handling procedures for solid waste and recyclables, management and disposal costs, recycling revenues, and existing waste prevention activities. This information was reviewed with facility staff, and served as the foundation for developing comprehensive waste reduction programs for PBSO and SCI.

2.3.4 Waste Reduction Program Development

Comprehensive waste reduction programs were then designed for the PBSO detention centers and SCI. For PBSO, the plan was presented in the *Waste Reduction Action Plan for the Palm Beach County Detention Centers*. In summary, the action plan includes the following:

- Program start-up – steps that should be taken during initial implementation to ensure the program’s success.
- Waste prevention – recommendations include general waste prevention activities as well as specific actions targeted at reducing or eliminated certain waste types.
- Recycling – recommendations are provided individually for each of the four PBSO facilities because of differences in waste stream compositions, geographic location, proximity to markets, and available space.
- Special materials management – suggestions are provided for managing special types of waste, such as wood pallets, office furniture and equipment, obsolete electronics, and rechargeable batteries.
- Education and promotion – elements of an effective education and promotion campaign are presented.

The document also estimates the benefits of implementing the action plan. By fully implementing the plan at each of the four facilities, wastes could be reduced by an estimated 31% to 71%, with an overall potential for all four facilities of at least 50% waste

reduction. The economic benefits would be dependent upon the program elements implemented; however, reduced collection and disposal costs and increased recycling revenue appear feasible with full program implementation.

For SCI, the plan was presented in the *Solid Waste Benchmark Report and Waste Reduction Action Plan for the Sumter Correctional Institution*. In summary, the action plan includes the following:

- Program Maintenance – since a program was already in place, steps that should be taken to ensure the program’s continued success.
- Waste prevention – recommendations include general activities that can be implemented as well as specific actions targeted at reducing or eliminated certain waste types.
- Recycling – recommendations are provided for the Forestry Camp and the Main Compound/PRIDE Facilities.
- Special materials management – suggestions are provided for managing special types of waste, such as wood pallets, office furniture and equipment, obsolete electronics, lead from the gun ranges, and rigid HDPE plastic containers from PRIDE.
- Education and promotion – elements of an effective education and promotion campaign are provided.

2.3.5 Waste Reduction Program Implementation

Program Implementation at the PBSO Detention Centers

SWA and KCI assisted PBSO with implementing waste reduction program improvements. Some of the key implementation activities that have occurred to date include the following:

- SWA donated a baler and trailer to bale and transport fiber to SWA. This allowed PBSO to market the material to SWA through a Commercial Materials Purchase Agreement and generate revenue from this commodity.

- PBSO utilized grant funds to purchase a ¾-ton utility vehicle to serve as a dedicated vehicle to transport baled fiber to SWA. Prior to acquisition of the vehicle, SWA assisted with transporting materials.
- PBSO utilized grant funds to purchase a second hydraulic baler to bale fiber collected at the Stockade and Drug Farm.
- SWA serviced a textile collection dumpster located at the Main Detention Center and transported the materials to market. When the rag company that initially received these collected textiles decided to no longer accept them, SWA identified an alternative market to use the textiles as animal bedding.
- The types and quantities of containers needed to implement the program were identified. They were either purchased utilizing grant funds or donated by SWA. Container types included desk-side bins for office paper, Bullseye containers for collection of fiber and commingled containers in central collection areas, wheeled box containers for collection of textiles and transport of fiber to storage areas, and wheeled carts for storage and transport of recovered materials.
- Container labels for desk-side and central collection containers were designed and printed.
- Educational materials were drafted and provided to PBSO for its use, including Recycling Instruction Sheets for staff at each of the four PBSO facilities, an employee waste reduction checklist, and an all-staff program kick-off memo.



Figure 2.2. Baled corrugated cardboard at the PBSO Main Detention Center.



Figure 2.3. Textile collection container at the PBSO Main Detention Center.



Figure 2.4. Scrap metal collected at the PBSO Stockade and Drug Farm.

- Tracking and reporting spreadsheets were developed and provided to PBSO for its use.

At the time this report is being prepared, recovery activities at the PBSO detention centers include collection of cardboard, mixed paper, and textiles at the Main Detention Center; collection of mixed paper, scrap metal, and automotive waste at Vehicle Maintenance; collection of cardboard, scrap metal, and yard waste at the Stockade and Drug Farm; and no recovery program at the West Detention Center.

In addition, onsite repair activities at the Drug Farm include bicycles, computers, and furniture refurbishment



Figure 2.5. Pallets and yard waste at the PBSO Stockade and Drug Farm.



Figure 2.6. Collection of oil filters at PBSO Vehicle Maintenance.



Figure 2.7 Bicycle repair area at PBSO Drug Farm.



Figure 2.8 Furniture refurbishment shop at PBSO Drug Farm.

Program Implementation at SCI

Sumter County and KCI assisted SCI with implementing program improvements. The following activities have been conducted to date to assist with implementation of the recommended waste reduction program at SCI:

- Sumter County provided SCI with the use of a closed-top roll-off until the weather protection shelter for the paper processing area was built.
- Sumter County donated a horizontal baler to SCI to assist with preparing corrugated cardboard for market.
- Sumter County also donated the use of three, 40-yard roll-off container to collect and store recyclables. Utilizing grant funds, Sumter County purchased a roll-off truck to service the recycling roll-offs at SCI.
- Sumter County provided SCI with a roll-off container to collect and process rigid HDPE 30-gallon containers from the PRIDE laundry facility.
- Sumter County provided SCI with in-kind recycling collection service for cardboard, tins cans, and ferrous metal, which are delivered to and processed at the County's materials recovery facility.
- Sumter County also donated roofing materials and utilized grant funds to purchase additional supplies needed to construct a weather-protected shelter for storage of recyclables, Gaylord boxes, and baler equipment.
- Tracking and reporting spreadsheets were developed and provided to SCI for its use.



Figure 2.9. Stored corrugated cardboard at SCI.



Figure 2.10. Steel cans collected at SCI.

Ongoing recovery programs at SCI include corrugated cardboard, office paper (white ledger and mixed paper), steel food cans, aluminum beverage cans, scrap bulky ferrous metal (lawn mowers, bed frames, computer casings, and metal cabinets), rigid HDPE commercial plastic jugs, other nonferrous metals (copper #1 and 2, plain copper wire, aluminum, and miscellaneous bulky aluminum items), some wood pallets, food waste, waste water, oil, radiators, and batteries. Onsite repair of goods includes bed frames, lawn mowers, bicycles (donated), and appliances.



Figure 2.11. Reusable bread racks at SCI.

Onsite reuse activities include some wood pallets, bread and milk crates, lawn mowers, bed frames, culinary supplies (plastic plates, sporks, and cups), and some corrugated cardboard, vehicle parts, and packing supplies. Program elements recently implemented at the facility include collecting leased pallets on site and returning them to CHEP International, and recovering plastic rigid HDPE laundry jugs with assistance from Sumter County.



Figure 2.12. Reuse food trays at SCI.

Remaining garbage is sent to the Sumter County Solid Waste, Recycling, and Composting Facility to be composted. A planned future program modification is a lead recovery program for bullets from the gun range using FDEP's Pollution Prevention lead recovery program as a guide. Ongoing program implementation also includes conducting a pilot food waste composting program in conjunction with Sumter County and the Florida Organics Recycling Center for Excellence (FORCE). An EarthTub in-vessel composting unit will receive food waste from the SCI Forestry Camp and will be operated by Sumter County staff. This pilot will provide valuable information about the feasibility of composting food waste using an in-vessel system.

2.3.6 Ex-offender Job Placement and Inmate Labor Utilization

Ex-offender Job Placement

The purpose of the job placement component of this project was to research existing job placement programs for ex-offenders and to develop enhanced opportunities for placement in the solid waste industry. The placement of ex-offenders in productive jobs is of critical concern because a correlation has been found between an inability to find work and recidivist behavior.

Task activities included researching existing job placements programs to assist ex-offenders. A summary of the key programs identified in Florida and Palm Beach County is provided in Appendix D. In addition, benefits to companies that hire ex-offenders were identified. A summary of the identified benefits is provided in Appendix E.

A survey of solid waste businesses and industries was then conducted to determine their interest in being included in a database of potential solid waste jobs that would be made available to PBSO, SCI, and other agencies involved in ex-offender job placement. The survey also requested job descriptions and qualifications for the types of jobs that might be available. The survey was sent to solid waste businesses or agencies in Palm Beach County and Sumter County. No recipients returned the survey form; however, follow-up telephone calls to six businesses revealed some interest in utilizing inmates with the proper experience and training (see Table 2.5). Because of the limited response, it was determined that development of a database was not practical. However, the businesses contacted indicated that the employer incentives currently available through Florida's One-Stop Centers were looked upon favorably, and that these incentives need to be better publicized to increase awareness in the business community.

TABLE 2.5
SURVEY OF POTENTIAL SOLID WASTE INDUSTRY EMPLOYERS

Company	Response
Envirolight, Inc. Riviera Beach, FL	Interested but current business climate does not allow involvement at this time
Liberty Scrap Metal, Inc. West Palm Beach, FL	No response
Republic Services Ft. Lauderdale, FL	No response
SP Recycling Company Cocoa, FL	Company experience with ex-offenders has not been very positive, but willing to try again
Trademark Metals Recycling West Palm Beach, FL	No response
Waste Magic Recyclers West Palm Beach, FL	No response
Waste Management, Inc. Pompano Beach, FL	Individual locations would work through local One-Stop Centers
Amos's Refuse Bushnell, FL	No response
Beeman's Lake Panasoffkee, FL	Not interested, just a small family operated business
Central Carting Disposal, Inc. Dade City, FL	No response
Inter-County Recycling Leesburg, FL	No response
Jerry Hardin Recycling Oxford, FL	No response
Sumter County Solid Waste, Recycling, & Compost Facility Lake Panasoffkee, FL	Utilized inmate labor; interested in considering qualified ex-offenders for employment
Town & Country Refuse, Inc. Leesburg, FL	No response
Trash Busters Wildwood, FL	Not interested

Certification Programs

As mentioned in Table 2.5, Sumter County currently utilizes inmate labor from SCI at its Materials Recovery Facility (MRF) under a contractual arrangement with FDOC. Facility staff indicated that letters of recommendation have been written for ex-offenders who previously worked at the facility. In addition, Sumter County currently recognizes the outstanding inmate of the month and provides a certificate for exemplary performance.

This interest led to researching the possibility of augmenting this informal “training and placement” activity with a formal solid waste certification program. Such a certification program is an option that should be further explored since it would provide greater marketability of ex-offender skills. Because of the time and cost involved in establishing a certification program, the scope of this project did not allow for inclusion of this. The Department of Education oversees and must approve any curriculum that is adopted for a certification program. In addition, a certified instructor must be utilized for classroom instruction, which can range from 300 to 2,000 hours depending on the subject matter and level of training needed. The requirements would be established based on a more detailed understanding of the solid waste and recycling job classifications being targeted.

However, Sumter County is currently evaluating the use of an informal inmate Certificate of Work Completion in its partnership/contract with SCI. This certificate would detail the hours of work completed in the following areas: tipping floor, materials recycling facility, compost processing area, mechanical area, and/or safety training. The certificate could be used by ex-offenders seeking employment in the solid waste field. A draft certificate is under review by Sumter County and SCI and is provided in Appendix F.

Inmate Labor Utilization

A survey was also conducted, with the assistance of SWIX, of County Recycling Coordinators to determine the current level of inmate labor utilization. Of the 28 responses received, 17 counties reported at least some utilization of inmate labor. These seventeen counties provided pertinent information regarding the number of inmate hours worked and the nature of their assignments. This information is summarized in Table 2.6.

**TABLE 2.6
 FLORIDA COUNTY UTILIZATION OF INMATE LABOR
 FOR SOLID WASTE ACTIVITIES**

County	# of Hours Per Week	Area Assigned	Recyclable Materials Handled
Brevard	100	Yard waste, landfill	None
Clay	40	MRF, roadside	ONP & commingled materials
Franklin	40	MRF/yard waste, landfill	ONP, OCC, glass, aluminum cans, wood chips
Hamilton	35	Landfill, recycling center	ONP, OCC, etc.
Highlands *	32.5	MRF	ONP, OCC, aluminum & steel cans, magazines, phone books, plastic, glass
Indian River	40	Landfill	None
Jackson	240	MRF	Paper, OCC, plastics, aluminum, tin cans
Lafayette	32	MRF, landfill	All materials
Leon	30 +	MRF, transfer station, landfill	OCC, electronics, litter pickup
Liberty	40	MRF, curbside recycling collection, yard waste, transfer station, landfill	None
Madison	25-35	MRF, other miscellaneous assignments	ONP, OCC, glass, plastic, aluminum, steel cans, office paper, tires
Marion	75	Landfill, roadside litter, illegal dumping	None
Martin	80	Water & waste treatment facilities	None
Palm Beach	15-20	SWA programs & events	Furniture from the Business Equipment Reuse Center
Santa Rosa	40	MRF	ONP, OCC, mixed paper, glass, aluminum & steel cans, plastics #1 & #2
St. Johns	30	Landfill	Hazardous household waste
Sumter	320	Tipping floor, MRF, and composting area	All materials, including organics
Taylor	200	MRF	ONP, OCC, aluminum, plastic, tin cans

ONP = Old newspaper OCC = Old corrugated cardboard

* Highlands County—Work Release only

2.3.7 Analysis of Statewide FDOC Program

An important element of this project was to take the information obtained from the programs developed for the PBSO detention centers and SCI, and utilize them to evaluate the potential operational, economic, and environmental impacts of implementing a comprehensive waste reduction and recycling program at FDOC facilities statewide. FDOC operates 123 facilities, including major institutions, annexes, work camps, work release centers, and road prisons; has an inmate population of over 77,000; and employs about 24,000 personnel.

The analysis revealed that FDOC could reasonably strive to reduce its waste stream by 50% through waste prevention, reuse, recycling, and composting. Based on the assumptions presented in the report, *Analysis of a Statewide Florida Department of Corrections Waste Reduction Program*, such a program should result in net economic benefits to FDOC, primarily through avoided collection and disposal costs. The report also quantifies environmental benefits (e.g., energy savings and reductions in greenhouse gas emissions, other air emissions, waterborne wastes, and use of virgin timber) utilizing an Environmental Benefits Calculator developed by the National Recycling Coalition and supported by EPA.

2.3.8 Waste Reduction Guide for Florida Facilities

The lessons learned from development of the PBSO detention center and SCI programs were also utilized to develop a *Waste Reduction and Recycling Guide for Florida Correctional Facilities*. This guide is intended for use by any federal, state, or local correctional facility located in Florida. It walks through the basic steps of planning, designing, and implementing a comprehensive waste reduction program, including waste prevention, reuse, materials exchange, composting, recycling, and EPP activities that are relevant to correctional facilities. While the guide is intended to provide a blueprint for developing a model program, it also allows for site-specific considerations and adaptations.

The guide provides standard forms for conducting a waste assessment and for tracking and reporting program progress. It also includes sample container labels and educational

material that can be customized by a facility, and provides additional information resources to further assist with program planning.

2.3.9 Program Outreach

The waste reduction guide, which compiles the lessons learned from this project into a user-friendly document, greatly assists with the transfer of project results to other correctional facilities in Florida. As mentioned in Section 1.4, notification of the availability of this guide is being conducted through the following venues:

- A notice (see Appendix B) is being e-mailed or mailed to federal correctional facilities in Florida, county solid waste directors, and local recycling coordinators.
- A Press release (see Appendix C) is being sent to the *Florida Specifier*, RFT, SWANA Florida Sunshine Chapter, SWIX, Florida League of Cities, Florida Association of Counties, Florida City and County Management Association, and major Florida newspaper.
- An electronic version of the guide is being sent to FDEP as part of the final project deliverables for inclusion on the agency's Website.
- A copy of the guide and the FDOC analysis is being mailed to FDOC's Bureau Chief of Field Support Services and Recycling Coordinator, with an offer to provide both documents electronically for distribution to FDOC facilities.
- With FDEP's guidance and participation, a meeting with appropriate FDOC management is recommended to discuss the project results.
- An article about the project and its results is under development.
- Project abstracts will be submitted for presentation at upcoming state conferences.
- The video will be available for use at upcoming state conferences. This video can also be presented to other correctional facilities that may be considering implementation of waste reduction/recycling programs.

2.3.10 Project Timeline

Table 2.7 presents the completion schedule of the nine primary project elements.

**TABLE 2.7
 PROJECT TIMELINE**

Project Element	Initiation Date	Completion Date
Waste characterization and generation studies	August 2001	April 2002
Purchasing audits	September 2001	June 2002
Program benchmarking	June 2001	July 2002
Waste reduction program development	June 2001	March 2003
Waste reduction program implementation	June 2001	March 2004
Ex-offender job placement and inmate labor utilization	December 2001	March 2003
Analysis of statewide FDOC program	May 2002	November 2003
Waste reduction guide for Florida facilities	February 2003	January 2004
Program outreach	February 2003	Ongoing

2.4 Problem Resolution

Development and initiation of the waste reduction programs at the PBSO detention centers and SCI took longer than anticipated due to the challenge of ensuring that appropriate management and staff were involved in the process and also because of changes in staff positions that occurred during the project. For example, SCI had four different wardens during the project period, and each new warden had to be briefed on the project and its objectives to garner his support before work could continue. In addition, equipment acquisitions by PBSO experienced delays because of the time required for PBSO to review and approve a contract with SWA for such acquisitions. For these reasons, project period extensions were requested and granted by FDEP.

As mentioned previously, another issue was the limited participation in the project by FDOC at the statewide level. Because of this, the methodology for conducting the analysis of a statewide FDOC waste reduction program was altered to account for the limited site-

specific information available regarding FDOC facilities. In addition, it was determined that the workshop for FDOC facility managers and recycling coordinators would not be productive, and a meeting with senior-level management at FDOC is recommended instead.

The scheduling of the video shoot was a difficult task. As mentioned earlier, with changes in staff responsible for the recycling program, it was difficult coordinating the video with necessary individuals.

SECTION 3.0

PROJECT RESULTS

3.1 Project Accomplishments

This innovative grant project resulted in the following accomplishments:

- Benchmarking existing solid waste management systems and purchasing practices at the PBSO detention centers and SCI, and development of waste reduction action plans for both entities that include waste prevention, reuse, recycling, composting, and environmentally preferable purchasing (EPP).
- Ongoing implementation of the PBSO and SCI waste reduction programs developed through this project.
- Completion of waste composition studies and waste generation analyses for the PBSO detention centers and SCI, and utilization of this information to develop general composition and generation data for other Florida correctional facilities.
- Analysis of a statewide FDOC waste reduction and recycling program.
- Development of a waste reduction and recycling guide for use by any federal, state, or local correctional facility in Florida.

3.2 Advanced Technologies

The technologies utilized in this project are not in themselves advanced, but their application in this project was unique for Florida. For example, waste composition and generation studies are common solid waste management planning tools; however, through this project these tools were used to develop waste composition and generation information that can be applied to other correctional facilities in Florida. In addition, to our knowledge, a comprehensive waste reduction guide has never before been developed specifically for use by Florida correctional facilities, nor has a comprehensive analysis of the operational, economic, and environmental impacts of an FDOC waste reduction program that is implemented at its facilities statewide. The integration of EPP as an integral part of the waste reduction programs developed as part of this project is also not commonplace.

3.3 Potential for Increased Material Recovery

Although program implementation is ongoing at the PBSO detention centers and SCI, the waste reduction action plans developed for the facilities estimate the potential for increased material recovery.

The benchmarking analysis for PBSO indicated that the detention centers generated about 1,312 tons of solid waste per year and recovered about 323 tons, or 25%, of that waste. The action plans calls for doubling waste reduction to over 650 ton, or 50% of the waste generated, by reducing some wastes (e.g., gable-top containers and paper), initiating or increasing the recovery of other wastes (e.g., corrugated cardboard, office paper, newspaper, scrap metal, cans, plastic bottles, and textiles), and implementing composting of food and yard waste. Suggested tracking documents were provided to the PBSO facility for future tracking of the recycling efforts.

The benchmarking analysis for SCI indicated that SCI generates approximately 1,593 tons of solid waste per year and recovers about 1,290 tons, or 81%, of the waste generated. The remaining 303 tons of waste is sent to the Sumter County Solid Waste, Recycling, and Composting Facility (SCSWRCF) and is further processed at the Materials Recovery Facility. From there, the remaining waste is processed in a rotary digester tube and made into compost. Therefore, 100% of SCI's institutional waste is recovered for reuse onsite, recovered for recycling onsite or at SCSWRCF, or composted at SCSWRCF.

The action plan for SCI calls for increasing recovery at the SCI facility by an additional 10% before it is further processed at SCSWRCF, and reducing waste by 30 tons per year. This action plan can be met by reducing some wastes (e.g., additional office paper and warehouse receiving materials), increasing the recovery of other wastes (e.g., newspaper, gable-top containers, plastic containers, and textiles), and implementing composting of food and/or yard waste.

The analysis of a statewide FDOC waste reduction program also included estimates for potential waste reduction. Assuming that waste generation is approximately 1,450 pounds per inmate per year, it was estimated that FDOC facilities generation approximately 55,590 tons of solid waste annually. Recovery information available from FDOC indicated that

less than 6% of the waste stream is recovered per year. By implementing a comprehensive program that includes waste prevention and reuse; recycling of corrugated cardboard, office paper, scrap metals, aluminum cans, textiles, and wood pallets; and composting of food and yard waste, FDOC should be able to achieve a 50% waste reduction rate.

3.4 Technology Transfer

The information gained from this project is clearly transferable to any federal, state, or local correctional facility in Florida. Although each facility is unique in many respects, the composition of the waste streams at correctional facilities should be similar. Slight variations may exist depending upon the material purchases at each; for example, some facilities may buy more products in bulk or utilize reusable dishware and utensils. However, all administrative facilities will generate large quantities of fiber and all inmate facilities will generate significant amounts of food waste. Correctional facilities tend to generate little, if any, glass. These similarities in waste composition aid in the transferability of the results of this project.

Creation of the *Waste Reduction and Recycling Guide for Florida Correctional Facilities* will greatly enhance the ability to transfer project results to other facilities. In addition to outlining the steps necessary to implement a program and explaining key elements to consider for inclusion in a correctional facility program, the guide also provides a standard waste assessment form, standard tracking and reporting form, sample labels and educational materials, and useful information resources.

3.5 Cost-Effectiveness

Table 3.1, *Costs by Project Element*, summarizes the costs of the project, including grant funds expenditures and in-kind contributions for each project element.

TABLE 3.1 COSTS BY PROJECT ELEMENT			
Project Element	In-Kind	Grant Funds	Total
Waste characterization and generation studies	\$17,000	\$40,000	\$57,000
Purchasing audits	\$4,000	\$10,552	\$14,552
Program benchmarking	\$14,500	\$15,000	\$29,500
Waste reduction program development	\$14,500	\$23,000	\$37,500
Waste reduction program implementation	\$87,895	\$120,500	\$208,395
Ex-offender job placement and inmate labor utilization	\$9,250	\$13,000	\$22,250
Analysis of statewide FDOC program	\$6,250	\$20,000	\$26,250
Waste reduction guide for Florida facilities	\$9,000	\$25,000	\$34,000
Program outreach	\$16,250	\$8,052	\$24,302
Report preparation	\$10,750	\$15,000	\$25,750
Project administration	\$25,624	\$14,000	\$39,624
Total	\$215,019	\$304,104	\$519,123

As mentioned previously, program implementation is ongoing at the PBSO detention centers and SCI. However, the waste reduction action plans developed for the two entities estimated potential cost savings if the action plans were fully implemented and avoided collection and disposal costs fully realized. In addition, the analysis of a statewide FDOC waste reduction program also calculated potential cost savings.

Palm Beach County Detention Centers

Based on information provided by PBSO at the beginning of the project, it was estimated that approximately 1,012 tons of the 1,312 tons of garbage generated annually were disposed of at a cost of about \$49.00 per ton for collection and disposal, which does not include the annual solid waste assessment charged by SWA that amounted to an additional \$87 per ton disposed. An estimated 233 tons of recyclables (not including automotives wastes) were recovered at a cost of about \$36.82 per ton. The waste reduction action plan

developed for PBSO estimated the potential economic benefits of the plan based on the following assumptions:

- Bases recyclable material quantities on the waste composition study results and information provided by PBSO and SWA staff.
- Assumes recovery of corrugated cardboard (OCC), white ledger, newspaper (ONP), mixed paper, food waste, scrap metal, commingled containers, and textiles at the Main Detention Center; recovery of OCC, mixed paper, scrap metal, aluminum and steel cans, textiles, and automotive waste at Vehicle Maintenance; recovery of OCC, white ledger, ONP, mixed paper, food waste, yard waste, scrap metal, commingled containers, and textiles at the Stockade and Drug Farm; and recovery of mixed paper, food waste, and aluminum cans at the West Detention Center.
- Assumes a 75% recycling rate is achieved for most materials included in the action plan, with the exception of those for which a higher rate has already been achieved, in which case this higher rate is utilized.
- Uses an average Commercial Materials Purchase Agreement (CMPS) revenue share of \$37.12 per ton for corrugated cardboard and \$78.72 per ton for white ledger, which are based on the average revenue shares paid by SWA over the previous year.
- Assumes that all containers and equipment needed for implementation are purchased with grant funds or provided by SWA or a vendor, and that PBSO is responsible for the labor and ongoing resources needed for program sustainability.
- Assumes that PBSO adjusts its garbage collection agreements as more materials are recycled and less garbage collection capacity is needed.
- Assumes in-house collection and processing are conducted by inmates at low or no cost.
- Does not include operating and maintenance costs to SWA or PBSO for handling or transporting recovered materials.

By fully implementing the waste reduction action plan, it was estimated that the PBSO detention centers would dispose of only 640 ton per year for a potential savings in avoided collection and disposal costs of over \$18,000. This does not include the reduction in SWA's solid waste assessment that would result from reduced disposal needs. By increasing the amount of waste diverted from disposal to 548 tons per year, baling corrugated cardboard and white ledger and selling them to SWA through a CMPA, and slightly altering management and marketing of other recyclables, it was estimated that recyclables could have a net value of about \$10 per ton. This would result in a net annual benefit of nearly \$14,000. These two figures combined, the total estimated potential benefit of the PBSO waste reduction action plan was approximately \$32,000 per year.

Sumter Correctional Institution

Based on projected solid waste generation, it was estimated that approximately 303 tons of the 1,593 tons of garbage generated annually were disposed of at a cost of \$ 49.50 per ton for collection and disposal. In addition, an estimated 1,290 tons of recyclables were recovered at no charge by the recycling vendors. The waste reduction action plan developed for SCI estimated the potential economic benefits of the plan based on the following assumptions:

- Bases recyclable material quantities on the waste composition study results and information provided by SCI and Sumter County staff.
- Assumes additional recovery of OCC, white ledger, ONP, food waste, scrap metal, aluminum cans, steel cans, and automotive waste.
- Assumes a 50% recycling rate is achieved for most materials included in the action plan, with the exception of those for which a higher rate has already been achieved, in which case this higher rate is utilized.
- Assumes that there is a potential to receive a 50% revenue share from the County for OCC. Uses an average revenue share of \$36.45 per ton for OCC, \$5.52 per ton for steel

cans, and \$12.96 per ton for scrap metal, which are based on the average revenue share agreed to by SCI and Sumter County in their recyclable contract agreement.

- Assumes that all containers and equipment needed for implementation are purchased with grant funds or provided by Sumter County or a vendor, and that SCI is responsible for the labor and ongoing resources needed for program sustainability.
- Assumes that SCI adjusts its garbage collection agreements as more materials are recycled and less garbage collection capacity is needed.
- Assumes in-house collection, and transfer of MSW are conducted by inmates at low or no cost.
- Assumes in-house collection and separation of recyclables are conducted by inmates at low or no cost.
- Does not include operating and maintenance costs to Sumter County for handling or transporting recovered materials.

By fully implementing the waste reduction action plan, it was estimated that the SCI would dispose of only 273 tons per year for a potential savings in avoided collection and disposal costs of over \$1,498. By increasing the amount of waste diverted from disposal by 29 tons per year, baling OCC and white ledger and selling them to Sumter County and Jefferson Smurfit, respectively, and slightly altering management and marketing of other recyclables, it was estimated that recyclables could have a net value of \$30.50 per ton, depending on final negotiations. This could result in a net annual benefit of nearly \$889. These two figures combined, the total estimated potential benefit of the SCI waste reduction action plan was approximately \$ 2,387 per year.

Florida Department of Corrections

With on the limited information available, KCI estimated the waste reduction potential and economic benefits of implementing a statewide FDOC waste reduction program based on the following assumptions:

- Assumes that OCC, ONP, aluminum cans, and scrap metals (including tin/steel cans) would be recovered at all facilities at the following recovery rates:
OCC – 80% Aluminum cans – 75% Scrap metal – 80%
ONP – 75% Tin/steel cans – 75%
- Assumes that office paper would be collected at three-fourths of the facilities, resulting in recovery of 70% of white ledger and 50% of other mixed paper.
- Assumes 50% of textiles would be recovered for recycling.
- Assumes that food and yard waste from half of the facilities (those that generate the greatest amount) would be composted, resulting in 60% diversion of these wastes.
- Assumes that about 20% of wood waste consists of wood pallets that would be recovered for refurbishment or ground for use as a composting bulking agent.
- Assumes that plastics that are currently recovered would continue to be recovered.
- Assumes processing and marketing arrangements as further outlined in *Analysis of a Statewide Florida Department of Corrections Waste Reduction Program*.

Based on these assumptions, KCI estimated that FDOC could potentially increase its waste reduction rate to 50% through waste prevention (3,000 tons) and waste diversion (25,031 tons). The potential economic benefit to FDOC of implementing such a comprehensive waste reduction program was estimated at over \$2 million annually. Most of this benefit would be realized through avoided collection and disposal costs. The actual economic benefit would be dependent upon processing and marketing arrangements established by FDOC and the level of interest and commitment of the agency in creating an efficient and cost-effective program.

Based on the assumptions outlined above and using the Environmental Benefits Calculator developed by the National Recycling Coalition and supported by EPA, KCI also quantified

the potential environmental benefits of a statewide FDOC program. Provided below is a summary of these potential annual environmental benefits:

- Energy savings of nearly 615 billion BTU, or enough energy to power more than 5,000 homes for one year.
- Reduction in Greenhouse gas emissions of over 19,000 million tons of carbon equivalents, which is equivalent to removing 14,500 passenger cars from the road each year.
- Reduction in air emissions, the most notable being 15,700 tons of carbon dioxide and 687 tons of methane.
- Reduction in waterborne wastes, the most notable being 31 tons of dissolved solids, 14 tons of suspended solids, and 8 tons of chemical oxygen demand.
- Reduction in the use of virgin timber, with an estimated savings of nearly 119,000 trees.

3.6 Nontraditional Materials

The most significant “nontraditional” material included in this project is food waste. Given that over 30% of a typical correctional facility’s waste stream is food waste, diversion of this material can significantly impact the effectiveness of a waste reduction program. This has been demonstrated in other locations, such as New York State, where food waste composting is an integral part of their waste reduction program and has allowed NYDOCS to achieve waste reduction rates of 50% or higher.

Although SCI’s food waste is being diverted to a local pig farm, the future of this market is questionable. Onsite composting appears to be the most promising outlet for correctional facility food waste. As part of this project, in-vessel composting systems were researched and an EarthTub system was purchased. Sumter County is in the process of conducting a pilot project using food waste collected at SCI. Once completed, the results of this pilot will be shared with interested correctional facilities and through the Florida Organics Recycling Center for Excellence (FORCE).

3.7 Recommended Next Steps

Although this report marks the completion of the innovative grant project, it also represents a starting point for expanding waste reduction to other correctional facilities operating in Florida. The following next steps are recommended to continue the efforts initiated by this project:

- Results of the project, the FDOC analysis, and the *Waste Reduction and Recycling Guide for Florida Correctional Facilities* should be provided to and reviewed by senior-level management at FDOC and FDEP. A meeting between the two agencies is recommended to provide encouragement to FDOC management to actively pursue a cost-effective, comprehensive waste reduction program at its facilities.
- Should FDOC make a policy decision to implement such a program, technical assistance and support will likely be needed from FDEP and other professionals. Meetings with private vendors should be initiated in order to further define available recycling collection and processing services, and to obtain private sector involvement in developing a workable program. In addition, hands-on technical assistance would be needed to establish functional composting systems at FDOC facilities.
- The progress of the PBSO and SCI programs, as well as other correctional facilities with effective waste reduction programs, should continue to be tracked to serve as models or case studies for other facilities.
- A more extensive food waste composting project should be conducted that focuses specifically on systems for onsite composting at correctional facilities. FDOC should be an integral part of such a project to ensure that project results would be incorporated into FDOC's operations.

In conclusion, based on the analyses conducted through this project, the composition of a typical correctional facility, and the availability of inmate labor, implementation of waste reduction programs at Florida correctional facilities offers tremendous potential. Encouraging and assisting with establishment of such programs should provide not only

valuable environmental benefits but also cost savings for individual facilities and the taxpayers of Florida.

APPENDIX A

TECHNICAL ADVISORY GROUP MEMBERS

Technical Advisory Group Members
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APPENDIX B

**NOTICE OF AVAILABILITY –
*WASTE REDUCTION AND RECYCLING GUIDE FOR
FLORIDA CORRECTIONAL FACILITIES***

March 29, 2004

[Insert Address]

Re: **Now Available - *Waste Reduction & Recycling Guide for Florida Correctional Facilities***

Dear *[Insert name]*:

The Solid Waste Authority of Palm Beach County and Kessler Consulting, Inc. are pleased to announce the availability of a new how-to guide for developing and implementing a comprehensive waste reduction program at correctional institutions.

The guidebook, *Waste Reduction and Recycling Guide for Florida Correctional Facilities*, was developed through an innovative recycling grant from the Florida Department of Environmental Protection (FDEP). It is based on ideas gleaned from programs developed for the Palm Beach County detention centers and Sumter County State Correctional Institution, as well as from other innovative programs around the United States.

The manual includes tools for conducting a waste assessment, strategies for designing a cost-effective program, examples of how to educate employees and inmates, and forms for tracking progress and measuring waste reduction.

To obtain an electronic or printed copy of the guide, please contact Kessler Consulting at 813-971-8333 or nmcnew@kesconsult.com. The guide should also soon be available on FDEP's Website (www.dep.state.fl.us/waste/categories/recycling/).

We hope you will take advantage of this new resource that is available at no charge. Should you have any questions regarding the guide or require additional assistance, please do not hesitate to contact us.

Regards,

Kessler Consulting, Inc.

Robin Mitchell
Senior Consultant

APPENDIX C

PRESS RELEASE

Media Release

Contact: Robin Mitchell, Kessler Consulting, Inc.
(813) 971-8333
rmitchell@kesconsult.com

March 29, 2004

FOR IMMEDIATE RELEASE

**Innovative Grant Project Demonstrates
Waste Reduction Opportunities at Florida Prisons**

According to a recently completed project, funded by the Florida Department of Environmental Protection (FDEP) through its innovative recycling grant program, State and federal correctional facilities in Florida generate an estimated 70,000 tons of solid waste annually. And that doesn't include waste generated at county-operated detention centers.

Fortunately, incredible potential exists for reducing and recycling waste at correctional institutions. Waste composition studies conducted at two facilities revealed that over 30% of the estimated 4 pounds of waste generated per inmate per day is food waste. Another 30% of the waste stream consists of recyclable paper.

Combined with other recyclable materials, including plastic and metal containers, scrap metal, textiles, wood, and yard waste, over 70% of a typical correctional facility waste stream could be reduced through waste prevention, recycling, and composting.

In fact, Sumter County State Correctional Institution, one of the facilities participating in the project, achieved a 75% recycling rate. Comprehensive waste reduction programs in other states, including New York, South Carolina, and Indiana, have achieved diversion rates of 50% or higher. By reducing waste, facilities can also reduce the costs of collecting and disposing of that waste, which will help offset the costs of a waste reduction program.

One project result is a valuable resource manual, a *Waste Reduction and Recycling Guide for Florida Correctional Facilities*. This guidebook includes tools for measuring waste reduction, strategies for designing and implementing cost-effective programs, examples of how to promote the program, and a form for tracking and reporting program progress.

This innovative project was led by the Solid Waste Authority of Palm Beach County. Project partners included the Palm Beach County Sheriff's Office, Sumter County, Sumter County State Correctional Institution, and Kessler Consulting, Inc. A copy of the guidebook can be obtained through the FDEP Website (www.dep.state.fl.us/waste/categories/recycling/) or by contacting Kessler Consulting (nmcnew@kesconsult.com or 813-971-8333).

APPENDIX D

INMATE AND EX-OFFENDER JOB PLACEMENT PROGRAMS

INMATE AND EX-OFFENDER JOB PLACEMENT PROGRAMS

Various programs in Florida target specific inmate populations with a variety of job training tools including on-the-job training, classroom instruction, and preparation for transition back into society. This appendix provides an overview of the more established and active job placement programs designed to assist inmates and ex-offenders in transitioning to the job force.

Prison Rehabilitative Industries and Diversified Enterprises, Inc. (PRIDE)

Contact: Robert Whitaker, 727-556-3326

PRIDE is a private, not-for-profit corporation providing on-the-job training and job placement in secure prison environments to help ex-offenders with the transition back into society. PRIDE operates 55 industries in 20 correctional institutions in Florida and provides marketable recognition in the form of national or educational certification. Since its establishment in 1981, PRIDE has worked with the Department of Corrections and other correctional and vocational programs to reinforce the importance of relevant training, education, and job placement assistance to help reduce recommitment. PRIDE claims a recommitment rate that is half the national average.

To further enhance inmate training, PRIDE emphasizes quality control and workplace safety at each of their business enterprises. This further prepares inmates for the real-world work environment and brings added value to future employers.

Florida Department of Corrections (FDOC)

Contact: Hillard Goldsmith III, 850-410-3299

FDOC provides inmates an opportunity to earn vocational certificates as well as administers programs providing inmate labor by way of Community Work Squads. FDOC also sponsors a community networking initiative called Project Re-Connect, which provides post-release job placement services to ex-offenders who have completed either a GED or vocational educational program while in prison. In addition, FDOC houses the Bureau of Workforce Development and Distance Education.

Bureau of Workforce Development

Contact: Jim Vallandingham, Program Manager, FDOC, (407) -975-7410.

This division of FDOC focuses on vocational and applied technology training in high labor market demand occupations. A total of 165 inmate workforce development programs are in place at 47 facilities. The program provides job knowledge and skills as well as career exploration and employability skills. This bureau also administers the Project Re-Connect program, an offender job placement program that provides pre-apprenticeship opportunities for youthful offenders. In addition, the Corrections Distance Learning Network (CDLN) uses satellite and video conferencing technologies to provide staff development and educational programming at numerous downlink sites. Assistance is also provided for teachers to obtain their Florida Department of Education teaching certificates.

Project Re-Connect

Contact: Linda King, 850-921-3363

This project attempts to bridge the gap between job-seeking ex-offenders and potential employers. The program brings potential employers into the institutions through job fairs and speaking engagements. In response to issues raised by employers, Project Re-Connect attempts to provide a good work ethic to inmates including dependability and the ability to work as a team. This program is available only to those who have earned a GED or vocational certificate while incarcerated. Initiated in 1998, Project Re-Connect is currently offered at 36 of the 64 institutions and work camps statewide.

Community Work Squads

These work squads have been used historically by FDOC to provide short-term contract work for other governmental agencies such as Forestry, Transportation, and for cities and counties. Specific assignments include vehicle maintenance, construction, and general labor. In the past, work squads have also been used for school beautification projects, renovation and repair, as well as special assignments at the Division of Blind Services and for various non-profit and charitable organizations.

Agency for Workforce Innovation

Contact: Tom McGurk, Director, (850) -921-5421.

This agency was transitioned out of the Department of Labor and Employment Security by an act of the Legislature and began full operation on October 1, 2000. The new agency is responsible for workforce development programs, welfare transition, unemployment

compensation, and labor market information. Prison job placement is just one focus of this agency's outreach.

Palm Beach County Workforce Development Board (WDB)

Contact: Katherine Burns, Probationers Educational Growth Coordinator, (561)-841-0233

WDB is a private, nonprofit organization charged with overseeing a development strategy that is responsive to the needs and concerns of employers and job seekers. The program focuses on workforce development centers, high skills/high wages, welfare-to-work, and school-to-work initiatives; however, the program focus is not geared specifically to inmate jobs. According to David Gilbert and Margaret Gomez of the Palm Beach County Sheriff's Office (PBSO), a database is maintained at the Drug Farm that includes potential employers that are willing to provide jobs during the "half-way house transition" phase from inmate to release. PBSO has expressed interest in training workshops or other initiatives that could help in the preparation of qualified inmates for their transition to the outside.

One-Stop Career Centers

The One-Stop Career Centers in Florida are part of a national labor exchange network that provides a link between employers and qualified applicants. The centers are located throughout the state in 24 regions that cover metropolitan areas as well as multi-county centers in rural areas. These centers are equipped to deal with the special needs of ex-offenders trying to re-enter the job marketplace. Ex-offenders are one of the special target groups that trigger qualifying credits for employers. One-stop locations can be found at: www.floridajobs.org/onestop/onestopdir/OneStopDirList.asp.

APPENDIX E

EMPLOYER BENEFITS OF HIRING EX-OFFENDERS

EMPLOYER BENEFITS OF HIRING EX-OFFENDERS

The training programs in place at correctional facilities can provide a qualified labor pool that can be utilized by private industry. At some facilities, such as Sumter Correctional Institution, selected inmates gain experience in performing solid waste and recycling tasks during their incarceration, which can translate to a shorter training period in a post-release position. Aside from a well-trained, qualified worker, other incentives are available for potential employers.

Work Opportunity Tax Credit (WOTC)

An employer who hires an ex-offender is eligible for a federal tax credit of up to \$2,400. Ex-offenders are just one of several target groups that can qualify for this employer incentive tax credit. Employers can receive tax credits equal to 40% of qualified wages for a maximum allowable credit of \$2,400 per employee if they work more than 400 hours the first year. If the individual works more than 120 hours but less than 400, a credit equal to 25% of qualified wages can be received. There is no limit to the number of employees for which the employer can receive the credit.

Job applicants must be interviewed for “probable eligibility” prior to a job offer. The employer must complete and sign a Pre-Screening Notice (IRS Form 8850) for the individual on or before the day the individual is offered employment. A signed Pre-Screening Notice must be mailed (postmarked) no later than 21 days from the employee’s start date in order for a tax credit to be claimed.

For eligible individuals, employers must submit a Request for Certification to the WOTC Coordinator at the Florida Agency for Workforce Innovation. A Request for Certification consists of sending the following:

- Individual Characteristics Form (ETA-9061)
- Pre-Screening Notice (IRS Form 8850)
- Documentary evidence of eligibility, which can be an official letter from FDOC or a probation officer that verifies the individual is an ex-offender, identifies the conviction, and states the release date

A new Fax-On-Demand service for obtaining forms is available by calling 1-877-828-2050. Completed forms must be sent to:

WOTC Coordinator
Agency for Workforce Innovation
Bldg. L
325 John Knox Road
Tallahassee, FL 32303
850-921-3299

Federal Bonding Program

The Federal Bonding Program provides \$5,000/six-month individual fidelity bonds to employers for job applicants who are deemed speculative. The application process is relatively quick and can be completed at any One-Stop Career Center operated by the Agency for Workforce Innovation. Bonding coverage becomes effective immediately when the authorized state or local employment security office personnel have certified the bond, and the applicant has begun work.

APPENDIX F

SUMTER COUNTY CERTIFICATE OF WORK COMPLETION

