



Florida Organics Recycling Center for Excellence (FORCE)
DEP Contract: SW204
Annual Report -Year Three

The Florida Organics Recycling Center for Excellence (FORCE) was created to centralize a facility capable of promoting and supporting focused, comprehensive, and integrated organics recycling throughout the State of Florida. The FORCE project commenced as a cooperative effort between Sumter County, the University of Florida/IFAS (UF/IFAS), and the Department of Environmental Protection. The partnership between these entities was intended to offer an ideal combination of practical experience, research capability, and public education resources. FORCE is designed to provide the structure necessary to develop Florida's organics recycling infrastructure and to support it with research and development of processing and marketing technologies.

This report will describe the events and activities of the third year of the FORCE project. The highlight of Year Three was the hiring of the FORCE Superintendent, Joan Bradshaw, and the award of various research and demonstration projects totaling approximately \$200,000. In addition, FORCE partnered for a second year in a row with RecycleFlorida (RFT) Today Organics Committee for a Technology Demonstration Event at FORCE. Infrastructure work on the FORCE demonstration farm site continued for the research projects there. As Year Three drew to a close, the most significant item completed was the authorization from the DEP Tampa Office to operate the digester through a Model Consent Order signed by both parties. Throughout the year, the FORCE project team partnered with industry peers and spoke at industry conferences for the purpose of bringing the FORCE name and mission to the forefront of the Florida organics recycling industry. FORCE partnered with the RFT organics committee to revise and print a Best Management Practices for erosion and sediment control as part of a FORCE education and marketing project. Both the information bibliography and technology database are now uploaded on the FORCE website (www.floridaforce.org).

Year Three also saw many challenges for operating the FORCE Digester and implementing awarded R&D projects on the FORCE site based on finalizing three outstanding permitting items that related to the County's Materials Recovery Facility, Composting Facility, and Long-Term Care. The County anticipates receiving all three permits with conditions in May 2004.

The accomplishments conveyed below are grouped according to the six project activities:

- Design
- Construction
- Operation
- Market Development, Education and Training
- Evaluation, Monitoring and Testing
- Project Management

1.0 Design

1.1 Engineering, Planning, Construction, and Inspection:

Sumter County and Kessler Consulting, Inc. (KCI) staff had various meetings to discuss Digester #2 engineering and planning issues and resolutions.

1.2 Plan Certification and Permitting:

In Year Three the County met on numerous occasions with the Tampa DEP office to bring closure to the three permits previously mentioned. All additional documentation and information regarding Request for Additional Information (RAIs) have been received and approved by the DEP . The County responded to this RAI. On July 1, 2002, a permit modification was received from the DEP allowing construction of all in-feed and discharge equipment associated with the Force Digester. In addition, the permit modification language included approval to perform acceptance testing with soil or finished Class A compost without requiring further permit modifications.

Approval from the DEP to process solid waste in and operated the digester remains outstanding. The operating permit was submitted to the DEP regional office in Tampa by the County's Engineer, Springstead Engineering. Kessler Consulting researched and prepared an analysis of the DEP compost rules and EPA Part 503 Rule. In addition, a meeting was held between KCI and the DEP SW District office to discuss the regulations that apply to compost with regard to the operating permit application.

Acceptance Testing was attempted in mid-July 2002. A motor equipment failure prevented successful completion. Following re-installation of the repaired motor by the A-C, Acceptance Testing was attempted again in early September 2002 and was successful.

Research is being and will continue to be conducted to document the physical changes taking place to the organic material in the original digester on a daily basis. Based on the results of the research, information will be gathered to prepare the application for permit modification for the operation of the digester. The modification will include the operating procedures for the processing of compost material from the time it enters the digester through final screening and testing.

2.0 Construction

2.1 Office Space Trailer:

There was no additional construction relative to the office space trailer.

2.2 Demonstration Farm Site Preparation and Maintenance

The demonstration farm was utilized to continue Phase II of the UF/IFAS Forestry. Sumter County staff continues to provide in-kind contribution to UF/IFAS for compost materials and labor assistance at the farm. This demonstration project was also featured during a tour at the RFT/FORCE Technology/Equipment Demonstration Event on December 4, 2003.

2.3 Installation and Maintenance of Digester:

The FORCE Digester foundation had to be repair due to a failure. A/C Equipment Services staffing repaired the foundation due to the County engineer's incorrect load calculation. At the request of the department, the in-feed, transfer, and discharge conveyors were constructed and installed for the new digester.

2.4 Laboratory

There was no laboratory equipment purchased this year by the current (new) FORCE project team.

2.5 Irrigation System and Maintenance

The main irrigation line and 10 risers installed in Year Two continue to be utilized through the Forestry Crop R&D Project, Phase II. This project was originally installed in Year Two through a UF/IFSA partnership and continued in Year Three and will continue in Year Four as an awarded FORCE R&D project through Phase II of the project.

3.0 Operation

3.1 Process Technology Procurement and Testing:

The second phase of the Organics Technology Database has been completed and it is now uploaded on the FORCE website (www.floridaforce.org). Vendor information is included in the areas of composting processing equipment, ancillary items, additives, and miscellaneous items not fitting into either of the three categories.

Sumter County secured the Wright Environmental Management Composting System through a public-to-public partnership with and in-kind conation from Alachua County. It is anticipated that this technology will either be utilized on-site in the future RFP2 process.

3.2 Feedstock Procurement/Processing:

Although produced by Sumter County's original digester, in Year Four, approximately 3,000 cubic yards (cy) of Sumter County compost valued at \$ 30,000 was donated to various FORCE or FORCE related projects. The following describes the projects for which the compost was donated by the County:

Project	CY	Private/Public
Forest Crop Establishment:	300 cy	Public
Forest Crop Expansion	300 cy	Public
Withlacoochee Project	300 cy	Public
Todd Farms Turf Project	600 cy	Private
Golf Course Projects	1,000 cy	Private
Misc. Outreach Projects	500 cy	Public

UF/IFAS (Don Rockwood) Forestry R&D Project: From December 2003 to April 2004, the FORCE study was doubled in size from its original plot establishment to extend the evaluation of Sumter County compost in order to expand the evaluation. Additionally, 290 tons of Sumter County compost was applied in late January 2004 in the 3.4-acre **TD** Study 106 near Brooksville, FL, on a sandhills site on the Withlacoochee State Forest in collaboration with the Florida Division of Forestry.

Administrative Costs – Supplies and Travel:

Routine travel occurred by the FORCE Superintendent and other appropriate County FORCE staff. In

addition, capital purchases were made to aid with the assistance of the Superintendent's marketing and education activities. These two items were a vehicle and a computer.

3.0 Market Development, Education, and Training

4.1 Educational Analysis and Outreach, Website

The FORCE brochure continues to be widely distributed. Brochures are distributed at Solid Waste, Recycling, and Composting conferences, conventions, meetings, and workshops, both in state and nationwide, attended by project team members and, notably, at "Government Day", an annual event sponsored by The Villages, a large, fast-growing retirement-focused community spanning parts of Sumter, Lake and Marion counties.

The FORCE website, www.floridaforce.org, continues to be enhanced. During the year several updates were made to the website, highlighted by the addition of text and photos on the Activities page. The County work to expand the website each quarter since it is a continual work in progress product. The website now contains two centralized education items. First, an organics bibliography. Second, an organics technology database.

The following periodicals featured the FORCE project or project component:

- Recycle Florida Today's *Renewable News* Newsletter
- SWANA Florida Chapter's *Talking Trash* Newsletter

4.2 Technical Advisory Group (TAG) Committee Meetings:

Two TAG meetings were held during Year Three: February and December 2003 in Sumter County, Florida. Preparations for these meetings included soliciting and developing agenda items; development, preparation, reproduction, and distribution of handouts; and notification to and follow-up with TAG members and other interested parties. As required by the contract, Sumter County published announcements for these meetings in the Florida Administrative Weekly and notified DEP of this forthcoming announcement. The TAG was presented with the FORCE Annual Work and Operating Plans and Budgets for Year 3 and Year 4 for review and approval. Preparation and distribution of TAG contact list and relevant project and organics industry updates were distributed to the TAG on a timely basis.

Topics discussed at the December meeting was the timetable for Year 4 planning documents and

solicitation of proposals for research project topics from respective TAG industry areas as well as additional funding and improving meeting participation and industry marketing of organics. TAG members were notified of the projects approved for funding. In addition, members were introduced to the new Superintendent at the December meeting, which was held in conjunction with the RFT/FORCE Technology Demonstration Event.

4.3 Market Development

The FORCE Superintendent held meetings with various organics industry generators and end-users. Superintendent produced drafts of the following marketing source guides:

- Florida Vegetable and Fruit Growers
- Florida Sod & Landscape Companies

4.4. *Conferences and Meetings*

On May 29, 2003 FORCE partnered with the Southeast Rural Community Assistance Project, Inc. to sponsor a one-day workshop at the FORCE facility on Composting Solid Waste in Rural Communities. Approximately 10 people were in attendance at the event.

On December 4, 2003 FORCE partnered with Recycle Florida Today to host the second annual Technology/Equipment Demonstration Event in Sumter County. Approximately 75 people from all over the state were in attendance at the event.

A FORCE representative attended all RFT organic committee meetings held in 2004.

A presentation about the FORCE project and activity updates was given by Kessler Consulting, Inc. at both the SWANA Florida Sunshine and RFT Annual summer conferences.

The FORCE Superintendent attended the U.S. Composting Council's Annual Conference in January 2004.

4.5 *Demonstration Farm Operations*

The UF/IFAS (Don Rockwood) R&D project addresses the need for environmentally sound, economically feasible, practical, and applicable solutions for recycling and utilizing organics by research on and

demonstration of fast-growing forest tree responses to Sumter County compost, development of guidelines for compost use on these short rotation forest crops, estimation of associated economic and environmental benefits, and dissemination of this information to clientele. During this first quarter of the project, our research and demonstration study at FORCE was doubled in size to extend the evaluation of Sumter County compost on four forest crops by planting over 2,000 trees in four cultural treatments. Sumter County compost was also included in a study planted in January on a sandhills site near Brooksville, FL, to assess cultural options for cypress.

4.0 Evaluation, monitoring and testing

5.1 Scientific Advisory Council (SAC) Protocol Development

The SAC report was received and approved by the County and the DEP.

5.2 Feedstock and Products Testing:

No activity results to report at this time.

5.3 Environmental Monitoring

No activity to report at this time.

5.0 Project Management

6.1 Personnel:

A few significant staffing changes occurred at Sumter County in Year Three. They included:

- The resignation of Terry Hurst, Digester Facility Superintendent. He was replaced by Chuck Jett.
- The hiring of the FORCE Superintendent, Dr. Joan Bradshaw.
- The retirement of Garry Breeden, FORCE Director and Sumter County Public Works Director. His position for solid waste, recycling, and composting services has not been filled. At this time, all FORCE staff members, including the project consultant, report to Bernard Dew, the County Administrator and FORCE Grantee Project Director.

6.2 Administrative Fees – Indirect Costs:

Only indirect costs for University work are billed through its invoices to the County.

6.3 Annual Work Plans and Budgets:

The FORCE Superintendent has prepared the following draft documents currently under review by the County and FORCE project directors, Bernard Dew and Mitch Kessler:

- Funding Enhancement Plan
- Education and Marketing Plan

Sumter County prepared the Year 4 Operating Plan and Budget as well as the Year 5 Projected Activities, and solicited input from the TAG.

6.4 Project Coordination and Administration:

The project team meets at a minimum on a monthly basis. The FORCE Grantee Project Director, Co-Director, FORCE Superintendent, Digester Facility Superintendent, Project Consultant attend these monthly planning and action meetings.

In Year Three (January 2004), after the retirement of Garry Breeden, the project's consultant was asked by the new Grantee Director, Bernard Dew, to assist with the management of the County's engineer in order to help expedite the outstanding permitting issues relative to the operation of the FORCE digester. Due to the nature of this work and time to manage the County engineer's deliverables a significant amount of time and money than anticipated was expended in the project management and engineering/permitting/planning component for Kessler Consulting's services. The management of engineering services by KCI in the last quarter of 2003 allowed to bring to closure two years worth of outstanding engineering permitting issues to operate the new FORCE digester.

FORCE continues to evaluate potential equipment opportunities and funding resources, including, but not limited to federal, state, local, and private funding opportunities.