

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

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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 second year of the FORCE project. The highlight of Year Two was the Dedication Ceremony in October 2002, bringing together legislative and industry leaders from around the state to tour the FORCE site. The Dedication Ceremony was in conjunction with the SE Composting Conference and the RFT Organic Technology Demonstration Event. Infrastructure work on the FORCE demonstration site was substantially completed, the digester is in place, and as Year Two drew to a close, research ideas were being discussed to modify the operation of the digester for the purpose of moving material through the digester in less time. The main irrigation line was installed by Sumter County as well as 10 risers and ancillary irrigation equipment installed by UF/FAS. Throughout the year, FORCE staff networked 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. A few research projects were initiated by UF/IFAS staff including: a Forestry Demonstration plot on the farm, a bioassay of Sumter County compost, a pasture establishment project, and a residential turf project. The RFT organics committee initiated a revision of the Best Management Practices for erosion control as part of a FORCE education and marketing project. The first round of the FORCE information bibliography was completed. A technology database was created listing various equipment vendors, innocuolent makers, and ancillary equipment vendors across the country involved in the organics industry.

Year Two also saw many challenges for the project. Due to a stop work order by the County and a termination of the existing contract with the University, significant personnel changes on the UF/IFAS side took place, and a restructuring of the working relationship with UF/IFAS was a focal point of activity in the later half of Year Two. It is believed that much of the compost research and demonstration activities that were planned in Year Two will commence in Year Three as a new research partnership is being formed with the University.

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 monitored the digester, maintaining it in preparation for future Acceptance Testing, by daily turning of the digester to maintain proper lubrication, monitoring fluid levels, and making notations of adjustments to be made by the vendor. The vendor, A-C Equipment Services (A-C), made regular site visits to make adjustments and observe the Acceptance Testing.

### *1.2 Plan Certification and Permitting:*

Shortly before the conclusion of Year One, the County received a Request for Additional Information (RAI) from 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:*

Additional office furniture and office supplies were either purchased or moved by UF/IFAS and Sumter County from Gainesville to FORCE Office / Lab. The University Extension and Agricultural Agents occupied the FORCE office space in Year Two. The modular building housed their offices.

### *2.2 Demonstration Farm Site Preparation and Maintenance*

Five sod demonstration plots and six landscape demonstration plots around the FORCE Office / Lab were installed by UF/IFAS staff Erik Spalvins and Gene Shaner. An in-kind contribution from TAG member Zellwin Farms came in the form of 5 pallets of Saint Augustine sod. Plot signage was installed at the FORCE test plots and Kidder site. Quality evaluations made on December 19 showed that equivalent rates of compost tilled into the soil produced better growth than surface applications of the compost, and that all compost treated plots produced better growth than unamended soils.

NOTE – Component parts of this irrigation system were purchased using non-FORCE money.

### *2.3 Installation and Maintenance of Digester:*

The in-feed, transfer, and discharge conveyors were constructed and installed for the new digester.

### *2.4 Laboratory*

Additional equipment and supplies were either purchased or moved by UF/IFAS from Gainesville to the FORCE Office / Lab.

## 2.5 Irrigation System and Maintenance

The main irrigation line and 10 risers were procured and installed by Sumter County as well as ancillary irrigation equipment installed by UF/FAS. The plot irrigation system for the Pasture crop trial was installed by UF/IFAS staff Gene Shaner and Erik Spalvins. Irrigation system components for the sod and landscaping trials around FORCE Office-Lab were also installed by UF staff.

NOTE – Component parts of this irrigation system were purchased using non-FORCE money. The same is true for the irrigation system installed for the forestry tree project.

## 3.0 Operation

### 3.1 Process Technology Procurement and Testing:

The technology review and evaluation process continued. A comprehensive list of vendor information was compiled and narrowed down. This data was placed in a database. A mailing, consisting of an introductory letter and the FORCE brochure, was sent out to vendors who can provide innovative technologies or processes under the preliminary checklist of parameters. Recipients of the letter responded by visiting the website and phoning the project's toll-free number to inquire further. Respondents were asked to send information about their company, products, processes, technologies, and a statement of their interest in the project. KCI staff reviewed, evaluated, and followed up with vendors who provided information in response to the initial mailing. The process was slowed down by KCI's role in helping the County resolve and facilitate the UF/IFAS management and administrative sub-contractor issues.

Ongoing attempts, but unsuccessful ones, continue in order to have Eglin Air Force Base respond to the initial discussion regarding the possible transfer of their AgBag system to FORCE. Eglin environmental staff had originally discussed donating and moving an unused AgBag system to the FORCE site. Sumter County entered into discussions with Alachua County for the donation of the Wright Environmental Management System to the FORCE Technology Center. It is anticipated that this transfer between Counties will occur in Year Three.

### 3.2 Feedstock Procurement/Processing:

No activity to reported by UF/IFAS staff.

### 3.3 Administrative Costs – Supplies and Travel:

Routine travel occurred by UF/IFAS staff to the farm demonstration site from the university.

## 4.0 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. A third printing was authorized in September 2002.

The FORCE website, [www.floridaforce.org](http://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 DEP contract manager was very helpful and provided a organic regulatory page to be uploaded on the FORCE website.

A brief mention of FORCE was made in the Recycling Roundup section of the October 2002 issue of National Recycling Coalition’s *NewsWire*. A full-page article about FORCE was featured in the November 2002 newsletter of American Public Works Association’s Florida West Coast Branch.

An article on the topic of Compost Use in Nurseries is in progress by UF/IFAS to be published in *Ornamental Outlook*.

The compost bibliography and literature review, of which the preliminary drafts were initiated and to be completed by Dr. Zinati, was expanded to approximately 230 records by UF/IFAS staff Gene Shaner and Erik Spalvins. UF/IFAS has completed the first version of the bibliography. In addition, DEP Contract Manager completed a organics regulatory page to be uploaded along with this first version.

UF/IFAS staff Erik Spalvins reviewed and acted as a resource for Florida Yards and Neighbors PowerPoint materials on backyard composting and mulch selection targeted to homeowners as an extension activity.

Close contacts have been maintained between FORCE Extension and other Sumter County Extension Agents by Erik Spalvins and Gene Shaner. The County has requested that UF/IFAS provide information about these contacts initiated for additional FORCE follow-up. Mr. Spalvins, FORCE extension agent, attended a local FNGA meeting and acted as a resource for FNGA Board of Directors and members.

The athletic practice field project continued in the monitoring phase by UF/IFAS. NOTE: This project is not an approved FORCE project and is not funded through FORCE.

#### *4.2 Technical Advisory Group (TAG) Committee Meetings:*

Three TAG meetings were held during Year Two: July 2002 and December 2002 in Sumter County, Florida, and February 2003 at The Villages in Lady Lake, 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 2 and Year 3 for review and approval. Preparation and distribution of TAG meeting minutes, contact list, and DEP Quarterly Reports were distributed to the TAG on a timely basis.

#### **July 2002 Meeting**

At the July 2002 meeting, updates were given on various facets of the project. A presentation about barriers to compost marketing, including the results of a survey, was given by Alan Hodges of the Food & Resource Economics Department of IFAS. Other topics of note were additional funding sources and possible research/demonstration projects.

#### **December 2002 Meeting**

The December 2002 meeting was a special meeting called by Sumter County as a result of letters distributed to the TAG, SAC, DEP, and UF/IFAS staff, by then Co-Director, Wayne Smith. The purpose of the meeting was to directly address the TAG members and DEP representatives and answer questions regarding Dr. Smith's comments about FORCE management, contractual requirements, administrative, and operational items. The County wanted to address the items point-by-point and provide historical information to the TAG and to communicate the ongoing County struggle to have the UF/IFAS subcontractor identify a dedicated leader and manager of the University's FORCE activities. Sumter County Co-Director Garry Breeden and Contract Administrator Miriam Zimms responded to every comment made by Wayne Smith

The TAG praised Sumter County for requiring UF/IFAS to meet contractual obligations and expressed hope that the FORCE project will identify a new working relationship with new UF/IFAS staff. Sumter County informed the TAG members that a new relationship would be established with UF/IFAS and that the meetings with Deans Waddill and Jones had gone well. It was communicated to the TAG that the Deans had expressed their commitment to the project and desire to provide a new working relationship with the FORCE partners and project activities. Most importantly, Garry Breeden notified TAG members that a stop work order had been issued to UF/IFAS prior to their receipt of the letter form Wayne Smith.

In addition at this December meeting the TAG representative from the Department of Agriculture & Consumer Services gave an update on an issue which had been of concern to certain TAG members: the recent discussions with the US Composting Council and the Fertilizer Technical Council regarding nutritional claims made by some marketers of compost.

Other topics discussed at the December meeting was the timetable for Year 3 planning documents and solicitation of proposals for research project topics from respective TAG industry areas. TAG members were provided a document to fill out and return to Miriam Zimms by early January. Miriam received project ideas and proposals from TAG and non-TAG members.

### **February 2003**

The February 2003 meeting was attended by Dean Richard Jones of the Office of the Dean for Research at UF/IFAS, who expressed IFAS' desire, particularly his and Dean Christine Waddill, Dean for Extension at IFAS, to continue IFAS participation in the project and to help structure a new and improved working relationship. Although unable to attend this meeting due to a prior commitment, Dean Waddill is now the primary contact for the project on the UF/IFAS side. Also at this meeting, the draft Operating Plan and Budget for Year 3 were distributed with a request for TAG members to review and provide feedback. The TAG approved the Year 3 Operating Plan and Budget. Updates were provided on the research and demonstration projects that were still approved to be underway, including a review of the draft bibliography by TAG members. TAG members were also provided with updated administrative information, such as contact lists, and a binder for use in organizing the handouts distributed at meetings.

Bill Hinkley, Chief of the Solid Waste Bureau of the Florida Department of Environmental Protection, attended all three TAG meetings. Additionally, all three meetings were also attended by non-TAG members, representing various interests around the state, with a vital interest in the FORCE mission.

Sumter County and KCI staff stayed in contact with TAG members throughout Year 2 for the purpose of

getting feedback on operating plans and budgets, hearing ideas for research and demonstration projects, and learn of other issues of interest to the TAG.

#### *4.3 Market Development*

Through an effort with Chris Snow, RFT TAG Member representative, RFT organic committee members participated in a FORCE open house, held in Tampa on May 28, to network with UF/IFAS staff. According to TAG members, UF staff did not follow-up on the organic research and education recommendations as well as posed partnerships.

#### *4.4. Conferences and Meetings*

Miriam Zimms participated in RFT's Organics Division meeting in West Palm Beach in September 2002 to discuss FORCE project objectives and goals, status of the FORCE project and staffing, the statewide integration process flow for the project, and to discuss and identify additional FORCE funding opportunities.

UF/IFAS sponsored the Composting in the Southeast Conference and Expo "Recycle Organics '02" with FORCE as a contributing partner. During the year Sumter County staff, KCI staff, and UF/IFAS staff took part in various Steering Committee meetings and conference calls to finalize plans and preparations. The conference took place October 6-9 at the Westin Innisbrook Resort in Palm Harbor, Florida. A presentation about the FORCE project was featured during the first day's plenary session. Garry Breeden, Mitch Kessler, Erik Spalvins, Eugene Shaner, Dr. Wayne Smith, and Dr. Dennis B. McConnell attended the Composting in the Southeast Conference and gave tours of the FORCE Office Lab and Farm demonstration sites.

A FORCE dedication ceremony took place on the FORCE site on Oct. 9. Local dignitaries and media were invited, as well as legislators and regulators from Tallahassee and area solid waste professionals. The Governor was invited but was unable to attend because of a prior commitment. Representatives Hugh Gibson and David Russell were among the featured speakers. Following the dedication ceremony, the RFT Organics Committee hosted an equipment demonstration. Over 150 public and private sector representatives attended the dedication ceremony and demonstration event. Preparations for this event, conducted by Sumter County and KCI, consisted of development and production of a press packet, press releases, and information sheets; coordination with Facility staff to make the appropriate site arrangements; and coordination with staff at The Villages, which provided lunch for the event. Additionally, preliminary FORCE material was prepared for distribution at the ceremony. KCI developed and managed the database and mailings for the event, mailed out invitations and press packets,



and followed up with phone calls, faxes and e-mails.

KCI staff attended the U.S. Composting Council's Annual Conference in January 2003 as representatives of FORCE. A presentation was given to the attendees about the project, and KCI staff networked with attendees and was present at Board and committee meetings representing FORCE.

#### *4.5 Demonstration Farm Operations*

Research plots to evaluate the response of pasture grass to compost application were established by UF/IFAS. Limited plant growth due to cold weather has precluded a definitive response evaluation of the pasture grass plots to compost applications. However, initial responses prior to the onset of below 55-degree temperatures revealed a positive response to all compost applications.

NOTE – Component parts of this irrigation system was purchased using non-FORCE money.

### **5.0 Evaluation, monitoring and testing**

#### *5.1 Scientific Advisory Council (SAC) Protocol Development*

UF/IFAS completed a recommended SAC report currently under review by Sumter County.

#### *5.2 Feedstock and Products Testing:*

Bioassays were conducted of the Sumter County MSW/BS compost by UF/IFAS at various stages of finishing. A final report is in preparation by UF/IFAS.

#### *5.3 Environmental Monitoring*

No updates for the year provided by UF/IFAS.

### **6.0 Project Management**

#### *6.1 Personnel:*

In addition to the resignation of Co-Director Wayne Smith, the circumstances of which are described in Section 6.3, the following UF/IFAS personnel changes took place during Year Two:

- Gladis Zinati left the project in September 2002 to take a position at Rutgers University.

- Due to the termination by the County of the UF/IFAS contractual arrangement, Erik Spalvins and Eugene Shaner ended their association with the project in January 2003.
- Dennis McConnell remains associated with the project, as described in Section 6.4, only for the purpose of resolving invoicing questions and outstanding deliverables.
- Christine Waddill, Dean for Extension at UF/IFAS, is, as of January 2003, the project's primary contact on the UF/IFAS side.
- Dr. Richard Jones and Julie Cole are responsible for financial and invoicing items.

### *6.2 Administrative Fees – Indirect Costs:*

UF/IFAS bills for its indirect costs through its invoices to the County.

### *6.3 Annual Work Plans and Budgets:*

Sumter County instructed UF/IFAS to prepare a detailed work plan of its activities for Year 1 and Year 2. By mid-year the County was concerned with the UF/IFAS leadership, management and administration of the FORCE research, education, and demonstration components of the project. Several meetings and discussions were held with the UF/IFAS management team to discuss the County's concerns and to rectify the situation. The UF/IFAS management team has seen a turnover of the Project Manager and the Research Manager in the last year. In addition, UF/IFAS invoicing issues were discussed with UF/IFAS for over a year. The County expressed its concern to the University regarding the impacts of these turnovers to the FORCE project.

A detailed work plan and budget was prepared by UF/IFAS and was under review by Sumter County. KCI prepared a timeline-budget overview sheet to be utilized with the detailed work plan for Sumter County's review. In addition, since the TAG had requested to review these items at a previous TAG meeting, Sumter County distributed the items via email and fax to the members. UF/IFAS Co-Director, Wayne Smith, was frustrated that Sumter County sent out the work plan for review by the TAG. Shortly following this transmittal, a letter of resignation was received from Dr. Smith from the project. Due to the lack of leadership and management associated with Dr. Smith's role in the project for UF/IFAS, Sumter County accepted his resignation.

Sumter County prepared the Year 3 Operating Plan and Budget, and solicited input from the TAG.

### *6.4 Project Coordination and Administration:*

The co-directors, Garry Breeden, Sumter County, and Dr. Wayne Smith, UF/IFAS, met on the second Wednesday of every month and generally held their meetings at the SCSWF. FORCE Project Manager, Dennis McConnell; FORCE Research Manager, Gladis Zinati; SCSWF Manager, Terry Hurst; and Sumter County subcontractor, Kessler Consulting, also attended these monthly planning meetings.

With the new project team members on Board from the University, McConnell and Spalvins, a Year 1 review meeting was held on May 6<sup>th</sup> by Kessler Consulting, Inc. with the new University staff to review the DEP contract and contract requirements. On July 17<sup>th</sup> a co-director's planning meeting took place in Sumter County.

A meeting was held by the County and Kessler Consulting, Inc., early in Year 2, to discuss the FORCE project and composting issues in the State of Florida with DEP staff in Tallahassee.

As the year continued, the co-directors, Garry Breeden, Sumter County, and Dr. Wayne Smith, UF/IFAS, had several meetings to discuss the subcontractor issues as stated in the previous sections. The meetings were held at various locations, including the University of Florida in Gainesville, the Sumter County Solid Waste Facility, and the Sumter County Public Works office.

In order to assist the UF/IFAS staff better manage and plan research and demonstration work, a Project Approval Form was designed and put into use. The form greatly improves the decision making process because it summarizes, on two pages, all aspects of the project including resources needed, funding sources, a description of the project, deliverables to meet FORCE goals, and the expected value/benefit to FORCE.

Sumter County's Contract Administrator (KCI) expended excessive time and additional budget resources assisting UF staff with coordination and continual training of its project administration and management responsibilities.

Sumter County issued both a written and verbal stop work order to UF/IFAS on July 31, 2002 with a letter from Co-Director Breeden to Co-Director Smith, and a meeting at the University on August 12, 2002 with the Co-Directors and a representative from Kessler Consulting in attendance. As of that time UF/IFAS staff were only approved to work and bill for a few research and demonstration projects, as well as basic maintenance activities at the FORCE lab/office/demo farm. The County decided to require the UF/IFAS to stop all work-in-progress until the project approval form and procedures for obtaining project approval were put in place, as well as the University bringing current its accounting and invoicing procedures. In addition, Sumter County met with DEP staff in August to discuss the reasons for the stop

work order and other future project activities.

Co-Director Wayne Smith submitted a letter to DEP, copying the TAG and the SAC, stating his desire to withdraw himself from the project. Numerous discussions followed with UF/IFAS personnel, notably with Dr. Richard Jones of the Office of the Dean for Research, Dr. Christine Waddill, Office of Dean for Extension, and Julie Cole, Office of IFAS Sponsored Programs. Many conference calls and planning meetings were held between DEP, Sumter County, KCI, and the university to determine a new structure for the university's future involvement with the project.

After discussions with Dean Jones and Dean Waddill of UF/IFAS it was agreed that existing UF/IFAS contract would be terminated as of December 31, 2002. The official letter of termination was transmitted from the County to the University in early January 2003. A new working relationship is currently being established with UF/IFAS through Dean Jones and Waddill and the invoicing and reporting issues are being revised through Julie Cole of UF/IFAS. This new relationship is anticipated to be completed in the first quarter of Year 3. As of December 31, 2002, Dean Waddill is the new FORCE contact. Dennis McConnell, along with Julie Cole of UF/IFAS, will continue to resolve outstanding invoicing, project deliverables, contact and educational information, reporting documentation, research, and any other items to Sumter County to meet its outstanding obligations.

A FORCE Project Manager job description has been drafted in order to solicit candidates in the first quarter of Year 3. Sumter County is currently reviewing creating a Superintendent position for a department called FORCE under the Public Works Department. This position will report directly to the Sumter County Public Works Director, Garry Breeden.

Late in Year 2, the Contract Administrator met with UF/IFAS staff at the FORCE site for the purpose of conducting an inventory of the contents of the office, lab, and irrigation equipment. An outline of this meeting was prepared and items documented by KCI and distributed to all parties for review and to be used for transitional staffing, when appropriate.

FORCE continues to evaluate potential equipment opportunities and funding resources, including, but not limited to: an Interlocal Agreement between Alachua and Sumter County to donate Alachua's Environmental Composting system to FORCE; pursuit of an innovative grant project for erosion and sediment control to create specifications for organic feedstock and technology; and continued legislative and private sector funding attempts; searching various Federal websites for new grant funding opportunities.