

Florida Organics Recycling Center for Excellence – FORCE

Year Four Operating Plan

The Florida Organics Recycling Center for Excellence (FORCE) represents a cooperative effort involving the Florida Department of Environmental Protection (FDEP), Sumter County, and the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS). Organics represents a highly recyclable portion of the state's waste stream. The need for environmentally sound, economically feasible methods, and practical and applicable solutions for recycling and utilizing organics, and agricultural wastes throughout Florida will be addressed through this project. FORCE will execute numerous organics research projects, and the partnership with UF/IFAS and TAG industry representatives, as well as other appropriate organic industries, institutions, and organizations, will offer an ideal combination of practical experience, research capability, and public education resources.

Year One and Two presented challenges for the County especially concerning its subcontractor UF/IFAS. The UF/IFAS management and administration team did not meet the expectations of the County. Therefore, the original sub-contract with UF/IFAS was terminated. Although the existing contract was terminated, the County believes a new relationship with a new research structure and new UF/IFAS leadership placed this public-institutional partnership back on track in Year Three. The time anticipated by the county to bring closure to outstanding invoice and reporting items has taken longer than expected and been costly to the County.

In addition, although the County obtained a *construction permit* and completed the construction of the FORCE in-vessel digester in Year One, the *operating permit* is currently outstanding. The delay in obtaining this permit has had to do with various permitting issues as discussed with the DEP Tallahassee and Tampa staff. In one of the County RAI documents to the DEP, the County requested that the DEP Tampa office review the county's compost test results from Thornton Labs in order to begin discussion for a two-day digester retention time and to provide data that disinfection occurs within 24 hours. The County does anticipate obtaining authorization from the DEP Tampa office to operate the digester through a Model Consent Order process by contract end of Year Three.

The following outline represents the PROPOSED tasks for Year Four and the contributions by the program partners listed in the attached project budget.

1. Design

- 1.1. Engineering, planning, construction and inspection for in-vessel digester
 - 1.1.1. Maintain and modify digester as needed.
- 1.2. Plan certification and permitting for in-vessel digester
 - 1.2.1. Prepare necessary certification and permitting documents for the digester.

2. Construction

2.1. Office space/laboratory

- 2.1.1. Purchase any necessary office furniture or supplies as appropriate.
- 2.1.2. Occupy and utilize trailer as appropriate.

2.2. Demonstration farm site preparation

- 2.2.1. Complete existing and expand farm plot area as necessary based on research and demonstration projects to be funded.

2.3. Installation of digester

- 2.3.1. Maintain appropriate construction and operating permitting documents with DEP.
- 2.3.2. Procure any additional digester or facility ancillary equipment/construction to enhance research and demonstration activities as needed.

2.4. Laboratory

- 2.4.1. No additional construction is anticipated for the laboratory at this time.

2.5. Irrigation system

- 2.5.1. Provide necessary expansion for 40 acre demonstration farm as needed.
- 2.5.2. Maintain irrigation system for proper operation.

3. Operation

3.1. Process technology procurement and testing

- 3.1.1. Review vendor information and technology data gathered in Year One, Two and Three.
- 3.1.2. Perform follow-up with interested vendors responding to request for technology information in Years Two and Three.
- 3.1.3. Update Technology Database on the FORCE Website as necessary.
- 3.1.4. Ongoing posting of technology vendor contact information on Website.
- 3.1.5. Revise technology evaluation criteria form as necessary and perform follow-up calls on technology for placement at FORCE and use in future research projects.
- 3.1.6. Prepare an Organics Technology Library at FORCE for research use by the private and public sector.
- 3.1.7. If appropriate, purchase equipment for technology testing and identify public or private principal investigators to test equipment through RFP process, for example:
 - 3.1.7.1.1. Smaller in-vessel systems.
 - 3.1.7.1.2. Windrow ancillary equipment & technology.
 - 3.1.7.1.3. Ancillary equipment such as screens, grinders, and spreaders.
- 3.1.8. Seek research partner to utilize in-kind equipment donated in Year 3.
 - 3.1.8.1. WEMI In-vessel system donated by Alachua County.
- 3.1.9. Identify in-kind equipment and transfer to FORCE site, including, but not limited to the following potential equipment:
 - 3.1.9.1.1. Earth tub from Sumter County innovative grant prison project.

3.1.10. If appropriate, test technology and provide results for publication, presentation, training, and FORCE website posting.

3.2. Feedstock procurement and processing

3.2.1. Maintain appropriate permitting documents with DEP.

3.2.2. Identify available organics feedstock or end-use markets from TAG industry representatives.

3.2.3. Operate the FORCE in-vessel digester, as appropriate, for research projects, demonstration, and feedstock testing.

3.2.4. Utilize various Florida feedstocks for research and demonstration, including, but not limited to the following agricultural, municipal, and construction feedstock:

3.2.4.1.1. Animal Manure

3.2.4.1.2. Dead Animal Remains

3.2.4.1.3. Biosolids

3.2.4.1.4. Retail & Restaurant Food Waste

3.2.4.1.5. Municipal Solid Waste

3.2.4.1.6. Scallop Viscera/Seafood Waste

3.2.4.1.7. Wood Waste

3.2.4.1.8. Yard Waste

3.2.4.1.9. Others

3.2.5. Maintain and monitor digester during usage for FORCE projects.

3.2.6. Manage *first-year* R&D organics research projects and budget awards.

3.2.6.1. UF/IFAS - Sumter County Compost for Forest Crops: \$24,999.45.

3.2.6.2. Waste Reduction Technologies - Biomass Utilization Project: \$25,000.00.

3.2.6.3. RKB Enterprises - Odor Control for Biosolids Tipping Floors and MSW Transfer Stations: \$25,000.00.

3.2.6.4. Organics Matters - Double S Ranch Food Recovery Project - \$25,000.00.

3.2.6.5. Advanced Reduction Technologies - Reduction of Organic Matter in Municipal Solid Waste and Agricultural Waste: \$25,000.00.

3.2.6.6. UF/IFAS - Training in Production and Utilization of Composts in Florida: \$21,656.00.

3.2.6.7. Todd Farms - Intensive Production System for Turf Grass, Utilizing Solid Waste Compost Over Ground Cover: \$24,520.00

3.2.7. Prepare and release *second* research RFP to include requested and advised projects recommended by TAG, including but not limited to the use of feedstock sources such as: dead chicken remains, biosolids, yard waste, etc.

3.2.8. RFP review committee to consist of the following representatives:

3.2.8.1.1. FORCE Director, Bernard Dew

3.2.8.1.2. FORCE Superintendent, Joan Bradshaw

3.2.8.1.3. Sumter County FORCE Digester Facility Superintendent, Chuck Jett

3.2.8.1.4. UF/IFAS Sumter County Extension Agent, Ed Jennings

3.2.8.1.5. Representative from Kessler Consulting, Inc.

3.2.9. Convene RFP selection committee to review proposals.

3.2.10. Identify and select Year 4 research and demonstration projects.

3.2.11. Award Year 4 projects.

3.2.12. Continue to identify feedstock sources and transportation sources.

- 3.2.13. Identify and determine processing requirements for projects.
- 3.2.14. Initiate acquisition as appropriate for both in-kind and purchased feedstock.

3.3. Administrative costs, supplies, and travel

- 3.3.1. Attend conferences, workshops, training, and meetings.
 - 3.3.1.1. Recycle Florida Today Organics Committee Conferences & Meetings.
 - 3.3.1.2. United States Composting Council Conferences & Meetings.
 - 3.3.1.3. Other organic/industry training workshops and conferences as appropriate
- 3.3.2. Purchase appropriate administrative supplies.

4. Market Development, Education, and Training

4.1. Educational analysis, outreach and website

- 4.1.1. Prepare education and outreach plan.
- 4.1.2. Continue to identify and document composting education sources and outlets in the state and nationally.
- 4.1.3. Identify types of education material necessary for industry usage and integration.
- 4.1.4. Review and approve appropriate TAG education materials to assist end-user marketing promotion and increase usage of organic products.
 - 4.1.4.1. Develop Organics BMP manual(s) for appropriate agricultural industries.
- 4.1.5. Identify distribution channels in Florida for disseminating educational material to appropriate target audiences (e.g. TAG industry represented markets such as the Florida Nurserymen and Growers Association & the Florida Poultry Federation).
- 4.1.6. Ongoing development and marketing of education material.
- 4.1.7. Provide bibliography for and continue maintenance of FORCE Website and update appropriately.
- 4.1.8. Organize and conduct appropriate field days, workshops, or training programs as educational channels are developed for respective industry sectors.
- 4.1.9. Maintain partnerships to leverage education, marketing and training events with industry organizations such as:
 - 4.1.9.1.1. Technical Advisory Group (TAG)
 - 4.1.9.1.2. RecycleFlorida Today Organics Committee (RFT)
 - 4.1.9.1.3. United States Composting Council (USCC)
 - 4.1.9.1.4. Solid Waste Association of North America (SWANA)

4.2. Technical Advisory Group (TAG)

- 4.2.1. Conduct TAG meeting(s).
- 4.2.2. Evaluate TAG participation and TAG categories.
- 4.2.3. Notify TAG of FORCE activities as appropriate .
- 4.2.4. Request and receive recommendations from TAG members on appropriate project activities, industry marketing efforts and education needs, in their field of expertise.
 - 4.2.4.1.1. Agriculture
 - 4.2.4.1.2. Citrus
 - 4.2.4.1.3. Construction
 - 4.2.4.1.4. Food Service
 - 4.2.4.1.5. Golf

- 4.2.4.1.6. Horticultural
 - 4.2.4.1.7. Institutional
 - 4.2.4.1.8. Landscape
 - 4.2.4.1.9. Municipal
 - 4.2.4.1.10. Transportation
 - 4.2.5. Distribute appropriate project documents to TAG members.
- 4.3. Market Development
- 4.3.1. Identify and document market opportunities with TAG Industry Representatives.
 - 4.3.2. Target and document specific industry composting opportunities to expand Florida's organic markets.
 - 4.3.3. Partner with industry organizations and other appropriate entities (RFT, USCC, SWANA) to develop markets.
- 4.4. Conferences and meetings
- 4.4.1. Present the FORCE project at conference(s) such as RFT, USCC, SWANA, Biocycle, & NRC.
 - 4.4.2. Participate in organizational association meetings to promote FORCE.
 - 4.4.3. Identify appropriate organizations to target and prepare a marketing plan for a FORCE presence at these industry events, including but not limited to, the citrus, golf, nurseryman, foliage, farmers, and poultry industries.
- 4.5. Demonstration farm operations
- 4.5.1. Identify appropriate demonstrations for 40 acre demonstration site relative to RFP R&D grant awards.
 - 4.5.2. Prepare Phase-in plan for demonstration site.
 - 4.5.3. Engage industry partners to provide in-kind donation of farm plot materials, irrigation, seeds, plantings, and equipment.
 - 4.5.4. Assess appropriate staffing needs.
 - 4.5.5. Install and monitor demonstrations as appropriate.

5. Evaluation, Monitoring and Testing

- 5.1. SAC protocol development
- 5.1.1. Revise SAC protocol and purpose as appropriate.
 - 5.1.2. If appropriate, convene SAC meeting (s) or conference call(s) with committee members:
 - 5.1.2.1.1. Lewis Carr, Ph.D., University of Maryland
 - 5.1.2.1.2. Rufus Chaney, Ph.D., USDA, Maryland
 - 5.1.2.1.3. George Fries, Ph.D., Independent Consultant, Maryland
- 5.2. Feedstock and products testing
- 5.2.1. Implement and develop research protocol as necessary.
 - 5.2.2. Utilize the laboratory as appropriate or if applicable for research analysis.
- 5.3. Environmental monitoring

- 5.3.1. Review monitoring protocol developed by UF/IFAS and prescribed by SAC for researchers because of new relationship with UF/IFAS research department.
- 5.3.2. Implement monitoring protocol

6. Project Management

6.1. Personnel

- 6.1.1. Evaluate FORCE staffing in Year 4.
- 6.1.2. New FORCE superintendent will develop and implement funding, education, training, and outreach plans for the FORCE project.

6.2. Administration Fees

- 6.2.1. Indirect Costs, as billed.

6.3. Annual work plans and budgets

- 6.3.1. Prepare quarterly reports, appropriate forms, and reimbursement requests
- 6.3.2. Develop annual workplans and budgets.
 - Prepare all necessary annual reports and appropriate deliverable attachments for previous year.

6.4. Manage *first-year* R&D organics research projects and budget awards that are spread over several tasks (e.g. 1.0, 2.0, 3.0, 4.0, 5.0 and 6.0).

6.5. Project Coordination and Contract Administration by County Consultant

- 6.5.1. County Consultant performs project management Co-director duties as requested by FORCE Director.
- 6.5.2. Act as Contract Administrator and Project Coordinator for FORCE Director and Grantee, Sumter County.
- 6.5.3. Perform contract administration and project coordination functions in conjunction with the FORCE Director and Sumter County staff.
- 6.5.4. Assist FORCE Director with management of FORCE staff, research and demonstration projects, DEP, technology evaluation, marketing, education, and operations, etc.
- 6.5.5. Perform Technology Evaluation and ongoing management of county engineer.
- 6.5.6. Interface with FORCE superintendent, the County's solid waste, recycling, and composting facility superintendent, and the County's engineer as requested by FORCE Director.
- 6.5.7. Maintain FORCE website and FORCE 1-800-#, until transition to FORCE Superintendent.
- 6.5.8. Coordinate and manage project meetings, deliverables and project tasks.
- 6.5.9. Facilitate project communication with TAG, SAC, private and public sector, industry organizations as requested by FORCE Director.
- 6.5.10. Prepare and distribute all necessary project reporting and invoicing documents.
- 6.5.11. Any additional project assistance as requested by FORCE Director.