

Short Course:

# Sustainable Land Application of Residuals



Soil and Water Science Department

May 13-16, 2013

## Who Should Attend?

Agricultural consultants, agency and operator personnel tasked with successful land application programs, environmental engineers and consultants, agricultural engineers, farmers, soil, water, plant scientists, and others dedicated to sustainable land application.



## Introduction:

Residuals of society's activities have been land applied for eons, usually with beneficial effects, but sometimes with unintentional negative effects on human, environmental, and soil health. This short-course provides the basis for sustainable land application by considering the assimilative capacity of soils to accept residuals, regulatory issues, and residual characteristics. Residuals include biosolids, animal manures, reclaimed waters, composts, and various non-hazardous industrial by-products. Successful course attendees will learn how to match the characteristics of various residuals with soil assimilative capacities (residual loading rates and management) to optimize beneficial effects, minimize negative effects, and to meet regulatory requirements.

The course format includes lectures by the instructors that describe fundamental residual-soil processes and reactions, guest lectures by regulators and individuals involved in land application operations, and various experiential activities (e.g., data interpretations, practical calculations, self-directed activities). A Certificate of Completion will be presented upon completion of the course.



## Instructors

### Dr. G. A. O'Connor and Dr. H. A. Elliott



Dr. O'Connor is Professor of Environmental Soil Chemistry in the Soil and Water Science Department at the University of Florida. He has researched and taught about the fate, transport, and risks of numerous wastes and waste constituents following land application for over 25 years.



Dr. Elliott is Professor of Agricultural and Biological Engineering at Penn State University. For 30 years, he has been involved in teaching, research, and consulting in the areas of fate and transport of pollutants in aquatic and soil systems, and the evaluation and design of land-based waste disposal systems.

## Benefits

Upon completion of the course, you will be able to:

- Identify residual characteristics critical to sustainable land application,
- Identify soil characteristics and management practices critical to sustainable land application,
- Calculate residual application rates consistent with sustainable land application based on residual and soil characteristics and regulatory guidance,
- Recognize and understand the bases for successful land application programs,
- Understand the bases for “non-traditional” benefits of land application of residuals (e.g., carbon credits, contaminate mitigation, remediation, urban gardening, etc.),
- Understand the bases for “contaminants of concern” that could impact land application programs.

## Registration

Advanced registration is required by May 1. Register early to secure a seat and to save \$100. Enrollment limited to 25 participants. Registration fees will not be refunded after the cancellation deadline.

### Course Fee

**Early Registration April 1, 2013** **\$500.00**

**Late Registration April 2—May 1 2013)** **\$600.00**

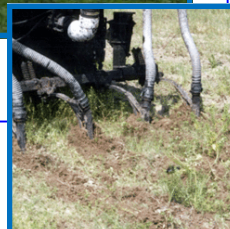
### **Cancellation Deadline May 1, 2013**

The course fee includes a notebook containing lecture notes, Power Point slides (pdf), sample exercises, selected journal articles (pdf), references, pertinent websites/links, and agency/other contacts.

Refreshments will be provided. Housing and all meals are the responsibility of the attendees

### **For More Information, Contact:**

**Dr. George A. O'Connor**  
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**University of Florida**  
**Gainesville, FL 32611-0290**  
**[gao@ufl.edu](mailto:gao@ufl.edu)**



## Course Agenda

Monday May 13

01:00 pm - 5:00 pm

Tuesday – Wednesday May 14-15

08:00 am – 5:00 pm

Thursday May 16

08:00 – 12:00 pm

## Training Location:

Classroom location, TBA

## Course Instructors:

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