



## **Preconference Workshop: Optimizing BMPs for Compost Facility Planning and Management**

In this workshop we will present a scientific perspective for understanding and optimizing the active composting process which is intended to provide a framework for facility design and operation. This approach is built on the published results of researchers in Nordic Europe who's work led to the establishment of design and operational standards that solved the persistent odor issues that had plagued their composting industry. While the compost science presented gives insights into any scale of operation, the design standards presented focus on forced aeration methods at facilities that need to control their air emissions while optimizing throughput.

This is an advanced workshop; attendees should have some industry experience and/or academic training related to composting. The discussion will involve biology, chemistry, thermodynamics and aeration system design.

**Instructors:** Tim O'Neill and Geoff Hill, Engineered Compost Systems

**Time:** 8:30 AM to 4:30 PM with one hour for lunch (not included)

**Fee:** \$310 for USCC members, \$385 for nonmembers

**CCOM™/CCP™ PDHs:** 7

### **Topics covered**

The first part of the workshop focuses on how composting biology responds to process conditions inside the pile, and what designers / operators can do to improve the process conditions, speed the reactions, and reduce the generation of odor, VOC, and NH<sub>3</sub> emissions. This will include a semi-technical discussion of research findings and mechanisms. We'll then review what is meant by BMP compliance, and how the range of BMP compliance impacts the biology. This will include actual data from operating composting facilities. We'll then talk about how operations and facility design contribute to BMP compliance, and will propose a framework for aeration design standards. Finally we'll look at the economics of BMP compliance and discuss how to determine the right level of BMP compliance for specific composting facilities.

### **About this Workshop**

Tim O'Neill has taught these subjects at operator training courses for both the Washington Organics Recycling Council's and the US Compost Council's. We have done the research, collected the data, presented papers and talks, and/or implemented operationally the agenda items above. To date we not presented all the above information in a single workshop format

**About the Instructors:**

**Tim O'Neill**, ECS President.

Tim is president and founder of ECS. He has worked as an entrepreneur providing technology and consulting to the compost industry since 1993. He enjoys the broad range of challenges and never-ending opportunities to learn that industry provides. He is a recognized expert in compost aeration and control, regulatory compliance, process control and monitoring technology, odor control, feedstock preparation and material handling.

**Geoff Hill**, PhD, ECS Director of Technical Services

Geoff leads the development and delivery of ECS technical service offerings. Geoff has worked with ECS since 2015. His prior work included GM for Harvest Power in Vancouver and independent waste consulting. His PhD work focused on pathogens and compost inhibition.



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