



ALTERNATIVE COVERS FOR LANDFILLS:

THEORY, DESIGN, AND PRACTICE

MARCH 30 - April 1, 2010

THE PICKLE COMMONS CENTER AT UNIVERSITY OF TEXAS
AUSTIN, TEXAS

Instructors

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University of Wisconsin, Madison

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Desert Research Institute

Steve Rock
U.S. Environmental Protection Agency

Richard Carmichael
Texas Commission on Environmental Quality



To register or for more information, visit: www.phytosociety.org

Who Should Attend?

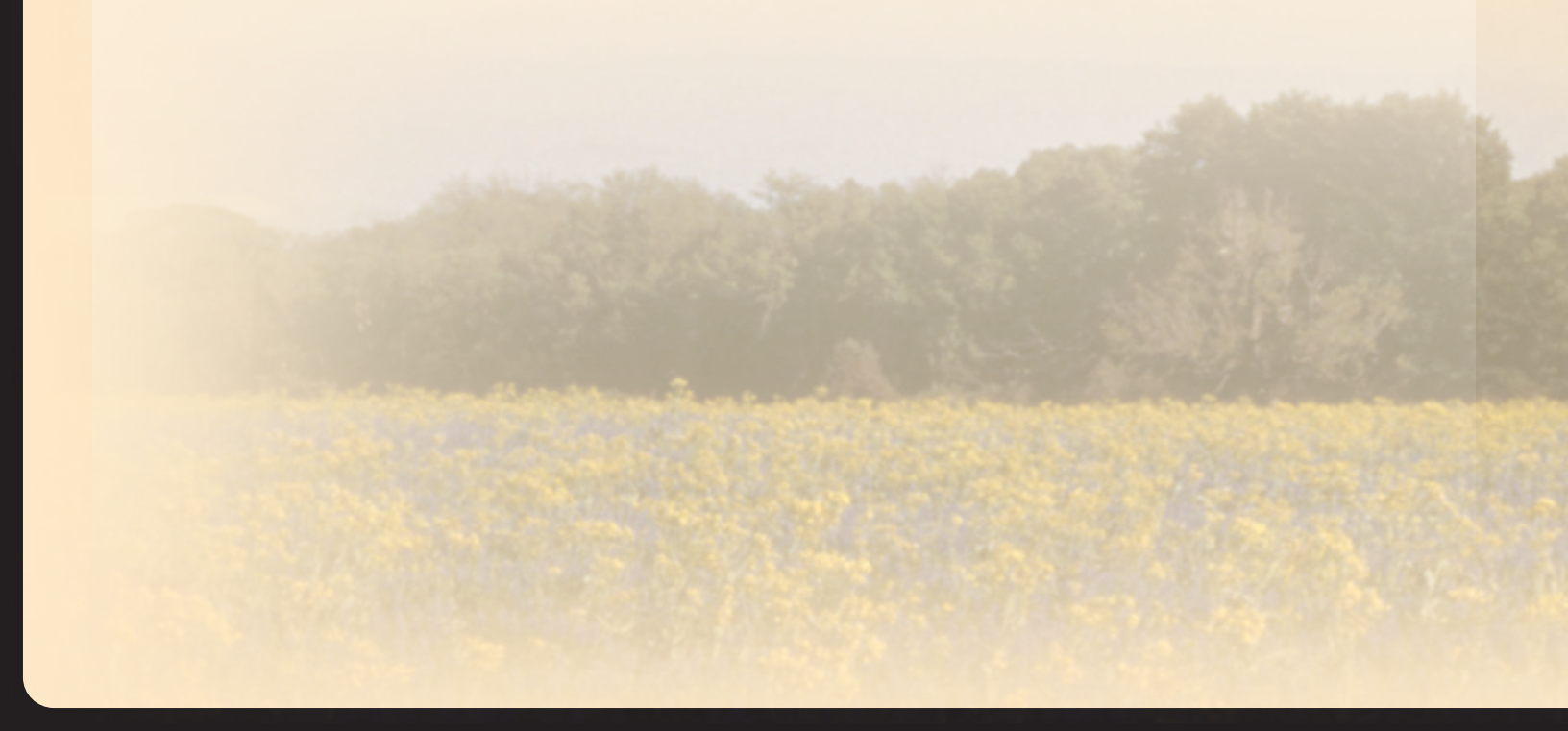
Site owners, consulting engineers, regulators, and scientists involved in design, permitting, operation, and monitoring of landfill and waste containment systems. Continuing education credits will be offered.

Description

This 3 day combined workshop and conference is intended to teach consultants and engineers how to design and submit quality proposals for ET covers, and to teach regulators how to evaluate those proposals. Participants will get an understanding of the hydraulic properties of these covers, how to optimize designs with models, and how to ensure that the final product is environmentally protective. The most current research on field performance, monitoring, economics and construction techniques will be presented. Topics will include alternative cover design, construction, operation, and monitoring, including discussions of regulatory issues, soil physics, plant-soil-water relations, hydraulic balance, saturated/unsaturated water movement, and computer modeling. Regional case studies will be emphasized. Results and lessons learned from the USEPA Alternative Covers Assessment Program (ACAP) will be highlighted.

Workshop AND Conference Outline

The general workshop itinerary follows. The workshop format will include slide-shows, discussions, and local case studies. Lunch is served to participants in the meeting room, and a lunchtime speaker each day will present a case study of local interest.



Day 1—Introduction to ET Covers

Introduction to alternative covers

8:30 a.m.-5:30 p.m.

- Design concepts
- Overview of regulations
- Design selection and validation
- A local panel discussion
- Soil physics basics
- Water balance components
- Hydraulic conductivity
- Soil water retention
- Soil sampling, parameter measurement
- Soil structure and hydraulic properties
- Preliminary design
 - Climate
 - Precipitation
 - Evapotranspiration
- Modeling landfill covers
 - Why model?
 - Which model?

Poster sessions and refreshments

Day 2—Advanced ET Cover

Regional case studies

8:30 a.m.-5:00 p.m.

Using what we covered on day one, we will examine case studies in detail. Using data and specifications from actual sites and covers applications to determine if they are suitable from an engineering perspective for an ET cover, legally and environmentally acceptable, and what more information might be needed to make a regulatory determination.

This day will include whole and small group discussions, calculations and modeling, further explanations of the topics by the course instructors.

Poster sessions and refreshments

Day 3—Conference Topics

From submitted abstracts

8:30 a.m.-4:00 p.m.

- Bioreactors, gas, and energy issues
- Field site results
- Hybrid covers
- Waste site land uses

AUSTIN THREE DAY ET COVERS WORKSHOP AND CONFERENCE

Mail-in REGISTRATION FORM

(ONLINE REGISTRATION AT www.PhytoSociety.org)

One Registration Form Per Participant

Name: _____

Organization: _____

Address: _____

City/State/Zip: _____

Telephone: _____ Fax: _____

Email: _____

Registration Includes: Workshop, Course Notes, Resource CD, 3 Breakfasts and 3 Lunches

Continuing Education Credit available via University of Wisconsin

___ Public Sector \$100

___ Private Sector \$350

___ Student scholarships available

\$50 Late Fee for Registration Received after March 23.

Cancellations after March 15, 2010, a 50% refund will be granted.

Total \$ _____

Payment Methods:

Check # _____ Payable to **International Phytotechnology Society (Phyto Society)**

Visa or MasterCard # _____ Expiration _____

Cardholder _____

Signature _____

Billing Address (if different than above) _____

Send Registration & Payment to:

Phyto Society, Attn: Steve Rock
5995 Center Hill Ave., Cincinnati, OH 45224
Phone: (513) 569-7149 Fax: (513) 569-7879