

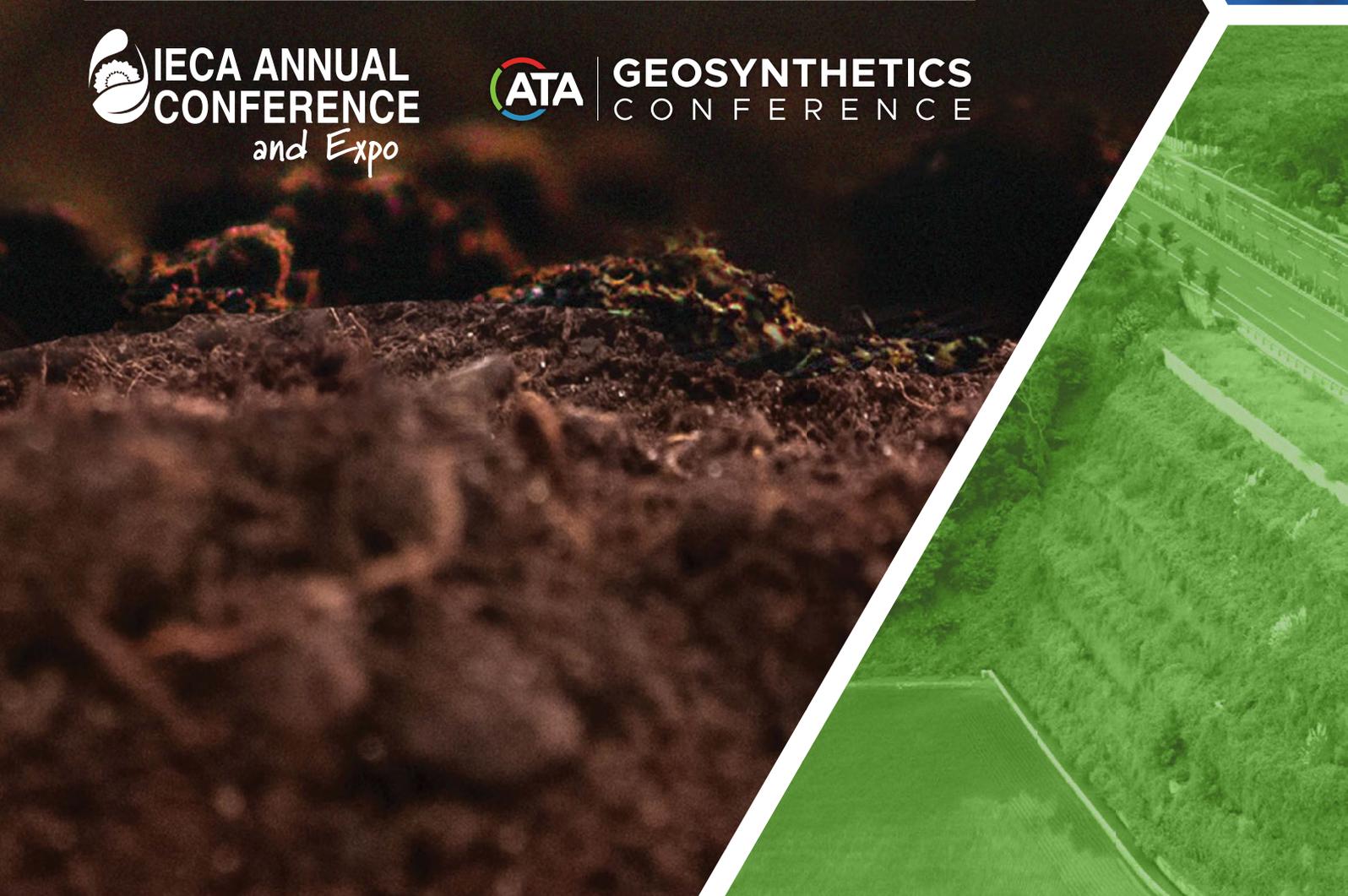
# EVENT GUIDE

February 5–8, 2023

A CO-LOCATED EVENT

 **IECA ANNUAL  
CONFERENCE**  
*and Expo*

 **GEOSYNTHETICS  
CONFERENCE**



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## EVENT GUIDE

February 5–8, 2023 | Kansas City, MO USA

A CO-LOCATED EVENT



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The International Erosion Control Association (IECA) is a nonprofit, professional organization providing education, networking and research for engineers, government, consultants, construction and related professionals, for the purpose of establishing standards of practice and expertise in the fields of erosion control, sediment control and stormwater management.

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**IECA MEMBERSHIP**  
Professional membership starts at \$200 USD.  
Call 800.220.3153 or 303.640.7554 or visit [ieca.org](http://ieca.org) for more information.

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[Textiles.org](http://Textiles.org)

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# WELCOME

## Welcome to the IECA Annual Conference!

We are overjoyed to be able to co-locate this year's conference with the Geosynthetics Conference once again. Combining the conferences has allowed us to provide you with a larger exhibitor area, more industry professionals to connect with and access to Geosynthetics training sessions here in Kansas City.



Nicky Araujo, P.E.,  
IECA President

I hope you've had the opportunity to build your itinerary from the 100+ sessions and networking sessions, mapped out exhibitors to visit in the Expo Hall and have begun to network with fellow attendees on our mobile app. A few sessions to note if you haven't already added to your schedule include the Opening Keynote Presentation on the Kansas City

Levees Project on Monday at 8:00 a.m., the Awards Luncheon also on Monday at 12:00 p.m. and the IECA Annual Meeting on Tuesday at 3:15 p.m.

And, the Expo Hall will not only feature an expanded footprint, but also IECA Learning Zone, Geosynthetic Learning Zone, Coffee Lounge, University Partner Poster Presentations and dedicated networking areas for your convenience to network and relax.

We have a lot to offer you at the conference this year. I encourage you to take advantage of meeting new peers to build your network, ask questions in training sessions and learn more about a product that could help you on a project now and in the future. And, if you have any questions, our great staff is available for assistance.

Welcome to Kansas City! This conference is going to be outstanding!

Nicky Araujo, P.E., IECA President

## Welcome to Geosynthetics 2023

The technical sessions, educational programs and exhibition have been carefully crafted to bring together civil engineers, contractors, architects, environmental and geotechnical consultants, manufacturers and suppliers, academics and students, and regulatory agencies from around the world. As an attendee at Geosynthetics 2023, you have an impressive array of exhibits, four workshops, eight special sessions, six short courses, 75 technical papers, and student research posters to explore.



Jie Han, Ph.D., PE,  
The University of Kansas,  
Geosynthetics 2023  
Conference Chair

Geosynthetics 2023 is the second time the geosynthetics industry's premier conference is co-located with the International Erosion Control Association's (IECA) Annual Conference. Attendees from both conferences have equal access to all technical

sessions and exhibits, based on their registration. When you look through the schedule and select the event you wish to attend, be sure to look through both programs and take advantage of this great opportunity to expand your educational options.

Both conferences kick off on Monday morning at 8 a.m. with the Welcome Keynote featuring Scott Mensing, PE, PMP, and Col. Travis Rayfield, PE, PMP, Army Corp of Engineers – Kansas City District. They will discuss the Kansas City Levees Project. Join us Tuesday at 8 a.m. for the fourth Robert M. Koerner Award and Lecture presented live from France by industry icon JP Giroud, ECP, Ph.D., Past President, International Geosynthetics Society.

Wrap up your Monday afternoon on the Show Floor where we will celebrate opening the exhibits with a fun reception starting at 4:30 p.m. Enjoy cocktails and appetizers while exploring the exhibits and getting to know attendees from both industries.

Again, welcome to Geosynthetics 2023!

Jie Han, Ph.D., PE, The University of Kansas,  
Geosynthetics 2023 Conference Chair



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# GENERAL INFORMATION

## Conference Mobile Apps

Map your **IECA Annual Conference** schedule and download conference materials from the conference mobile app and/or conference website ([www.ieca.org/annual23](http://www.ieca.org/annual23)). As a registered attendee you have unique login details to access conference materials, connect with attendees and map out your conference participation. If you have login issues, stop by the registration desk at the Kansas City Convention Center.

Download the **Geosynthetics Conference 2023** mobile app to find everything you're looking for, search exhibiting companies and create a custom schedule to make the most out of your conference. To download, search "Geo 2023" in the Apple Store or Google Play or go to [bit.ly/Geo23App](http://bit.ly/Geo23App).

## On-Demand – IECA Annual Virtual Conference

Full Conference and Young Professional Full Conference pass holders will receive complimentary access to the **IECA 2023 Virtual Annual Conference** which opens on March 1, 2023. The education program includes select on-demand recordings. Review the complete schedule at [www.ieca.org/virtualannual23](http://www.ieca.org/virtualannual23).

## On-Site Speaker Resources

The **IECA Annual Conference** Speaker Lounge located in Room 2212 will be available to speakers throughout the conference. Stop by for a cup of coffee and prepare for your presentation in a peaceful space. This room will not be constantly staffed by IECA so if you have questions, please stop by registration.

The **Geosynthetics Conference** Speaker Ready Room is located in 2214. This room is available to Speakers, Instructors and Session Chairs throughout the conference. Please stop by to check in, pick up your speaker ribbons and prepare for your presentation as needed. This room will be staffed throughout the event.

## Wireless Internet Access

Wireless internet is available complimentary in public spaces within the Kansas City Convention Center. Upgraded internet access is available with purchase.

## Technical Education Program Session Types

- **Case Study:** Learn from projects, programs and experiences as industry professionals present innovative solutions to field issues. Take recommendations from industry experts and apply them to your situation.
- **Roundtable Discussions:** Don't miss the chance to network and exchange knowledge with attendees.
- **Technical Paper:** Listen to individuals who have applied scientific methodology to their research into specific issues within our industry and have drawn well-founded conclusions.

- **Workshop:** Apply real world applications and techniques to planning, design, construction and maintenance of your projects. Build a basic understanding, learn key concepts and practice new skills.
- **Panel Discussion:** Get involved in the conversation and learn from a panel of experts as they discuss specific industry topics.
- **Product Case Study:** Join select companies to present attendees with the latest products and services. Attendees wanting an in-depth look at cutting edge products shouldn't miss these sessions.
- **Short Course:** These four hour in-depth classes on a variety of geosynthetics related topics are available on Sunday without any additional registration.
- **Special Sessions:** These sessions are organized and presented by Geosynthetics Conference Supporting Organizations.

## Professional Development Certificates

Claim Your Professional Development Hours for the **IECA Annual Conference:**

1. Log in to [www.ieca.org/annual23](http://www.ieca.org/annual23) or IECA 2023 Conference App.
2. Select Claim Credit from the navigation bar.
3. When you attend a class, the moderator will provide you with an unlock code to access the classroom survey.
4. Upon completion and submission of the survey you will be awarded your credit.
5. The portal will store all your claimed credits throughout the conference—take surveys after each class or at the end of the day, and download all credits when you return home.
6. Any questions on claiming credit, please stop by registration or contact Joanna Fetherolf – Managing Director, Conference & Education at [joanna@ieca.org](mailto:joanna@ieca.org).

Claim Your Professional Development Hours for the **Geosynthetics Conference:**

1. Self claim credit forms are available at the Geosynthetics Conference registration and in education classrooms.
2. Fill out forms and drop off at Geosynthetics Conference registration or scan and email to Megan Firl, Technical Program Manager, at [megan.firl@textiles.org](mailto:megan.firl@textiles.org).

## Education Session Capacities

Certain education sessions have capacity limits. Arrive early to secure your space, especially for roundtable discussions. We have done our best to anticipate session size and interest levels and will monitor rooms closely should we near capacity.

**Publication Bins**

Stop by the publication bins located in front of the Expo Hall to pick up the latest issue of the following magazines:

- *Environmental Connection Magazine*
- *Geosynthetics Magazine*
- *Informed Infrastructure Magazine*
- *Stormwater Solutions Magazine*

**Explore the Expo Hall**

Take advantage of the combined Geosynthetics and IECA show floor to connect with hundreds of exhibiting companies, special programming, and networking opportunities with food and drinks.

**Visit the IECA and Geosynthetics Coffee Lounge  
(Sponsored by Gripple, Inc and HUESKER Inc)**

Stop by the Coffee Lounge sponsored by Gripple, Inc and HUESKER Inc booth #535 for a cup of coffee and to learn more about IECA and ATA.

**Social Media**

Connect real time on social media using the **IECA Annual Conference** hashtag #IECAConnect2023. Or, post photos online on Facebook or Instagram and tag IECA.

Share your **Geosynthetics Conference** experience and spread the word using #GeoConference23 on social media.

**In Case of Emergency**

The Kansas City Convention Center is committed to your safety and is staffed 24/7 to provide surveillance, safety response, and emergency and non-emergency communication services. In the event of an emergency, please contact Main Building Security at 816-513-5111. We will immediately communicate with 911 to direct first responders exactly where they are needed. You may also contact Kansas City Convention Center Building Security through uniformed security officers and security staff.

**Lost and Found**

Please turn in any lost and found items to the IECA or Geosynthetics registration desk.

**Discover Kansas City**

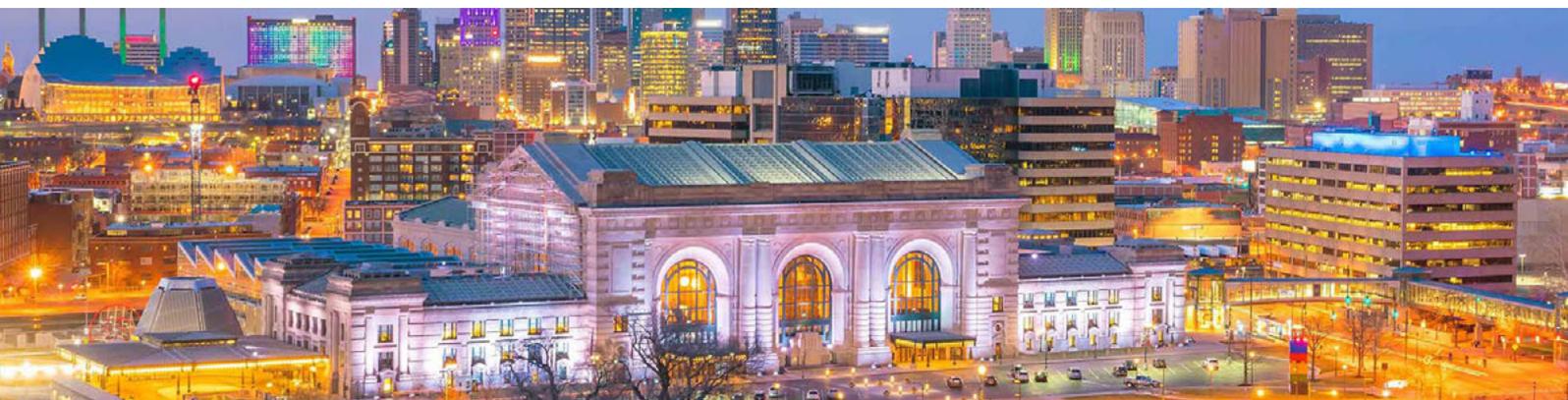
Welcome to Kansas City—Heart of America, City of Fountains and the proud home of the IECA Annual Conference & Expo and the Geosynthetics Conference. We hope you'll spend your time here discovering everything Kansas City has to offer, from famous favorites (barbecue, anyone?) to deeply significant cultural institutions (you'll find the Negro Leagues Baseball Museum and the American Jazz Museum under one roof) and hidden hangs that are guaranteed to dazzle (add Swordfish Tom's to your list).

Go for a stroll or grab a RideKC Bike just outside the doors from your hotel. You'll find everything from locally-roasted coffee to nightly live music and award-winning restaurants.

Thanks to the KC Streetcar, you're minutes away from the River Market, the Crossroads Arts District, Union Station and Crown Center, as well as the National WWI Museum and Memorial. It's free to ride and doesn't require a ticket—just step aboard and you'll be on your way. (Tip: For the closest access point, head to the Metro Center stop at 12th & Main. It's three blocks east of the Kansas City Convention Center.)

From award-winning pies and some of the city's finest patio spaces to upscale venues and barbecue mainstays, there are plenty of ways to savor Kansas City's flavors just steps from your hotel.

Keep your time in KC affordable with a series of exclusive discounts and savings opportunities, available to visitors and convention attendees only through KC Savings. For list of area things to do and discounts visit [www.visitkc.com/IECA](http://www.visitkc.com/IECA).



# BOARD OF DIRECTORS



**RAFAEL (NICKY) ARAUJO**  
**President, Term Expires 2024**  
Committee Volunteer Activities:

- International Regional Council
- Save Our International Land (SOIL Fund)
- Professional Development Committee
- Educational Tracks Committee



**JERRY B. SANDERS, CPESC**  
**Committee VP, Term Expires 2024**  
Committee Volunteer Activities:

- IECA Faculty - Instructor



**JONATHAN KOEPKE, CPESC, LEED-AP**  
**Governance VP, Term Expires 2024**  
Committee Volunteer Activities:

- IECA Faculty - Instructor
- Executive Committee
- Chapter Officer



**OLIVER NORTON**  
**Marketing VP, Term Expires 2025**



**CRAIG S. BENSON**  
**Secretary, Term Expires 2023**  
Committee Volunteer Activities:

- Executive Committee



**GUSTAVO O. SALERNO, CPESC, PE**  
**Global Development VP, Term Expires 2025**  
Committee Volunteer Activities:

- Chapter Officer



**DON THIEMAN, CPESC, LEED-GA**  
**Treasurer, Term Expires 2023**  
Committee Volunteer Activities:

- IECA Exhibits
- Executive Committee
- Finance Committee - Chair
- Exhibitor Council Member



**ANDREW MACLEOD**  
**Membership VP, Term Expires 2026**



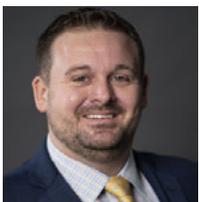
**WESLEY C. ZECH, PH.D.**  
**Education VP, Term Expires 2023**  
Committee Volunteer Activities:

- Education Committee
- Professional Development Committee
- Standards and Practices Committee



**KELLYN CAMPBELL, CPESC**  
**Member-At-Large, Term Expires 2025**  
Committee Volunteer Activities:

- Chapter Officer



**ADAM DIBBLE, CPESC, CESSWI**  
**Past-President, Term Expires 2023**  
Committee Volunteer Activities:

- Executive Committee
- Chapter Officer
- Save Our International Land (SOIL Fund)
- Exhibitor Council Member



**SAMANTHA A. ROE, IOM**  
**IECA CEO**



## IECA Resource Library Design Standards Now Available

The Standards and Practices (S&P) Committee has developed standards for the construction stormwater industry. While there are regional and local differences, the committee is promoting the standardization of design and terminology based upon sound science, testing criteria for sediment controls, monitoring recommendations to provide feedback to site operators that greatly advance the stormwater industry. Visit the library to learn more about standards, terms and IECA webinars dedicated to promoting the standards.



Visit the Library at:  
[ieca-standards.knowledgeowl.com](https://ieca-standards.knowledgeowl.com)

# SPONSORS



## SUPPORTING PARTNERS

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**STORMWATER SOLUTIONS MAGAZINE**  
**LAND IMPROVEMENT CONTRACTORS OF AMERICA**  
**INFORMED INFRASTRUCTURE MAGAZINE**

*As of Jan. 12, 2023*

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# ABOUT IECA

**International Erosion Control Association**  
 3033 S Parker Rd, Suite 410  
 Aurora, CO 80014 USA  
 303-640-7554 | 800-220-3153  
 www.ieca.org

## IECA Chapters

### **Australasia Chapter**

**President:** Shonelle Gleeson-Willey

### **Canada Chapter**

**President:** Harry Reinders

### **Great Lakes Chapter**

**President:** Matt Welch

### **Great Rivers Chapter**

**President:** Paul Mueller

### **Iberoamerica Chapter**

**President:** Francisco X. Urueta, PE, CPESC

### **Mid-Atlantic Chapter**

**President:** Gerald M. Hammel, CPESC

### **Mountain States Chapter**

**President:** Lucille Snowden

### **Northeast Chapter**

**President:** Eric S. Steinhauer, PE, CPESC, CPSWQ

### **Pacific Northwest Chapter**

**President:** Dave Jenkins

### **South Central Chapter**

**President:** Jeff King

### **Southeast Chapter**

**President:** J.P. Johns, PE

### **Western Chapter**

**President:** Melanie Sotelo

## IECA Online Community

**IECA Connect**

## IECA Online Training/Education Resources

**IECA eHub**

**IECA Design Standards Library**

**IECA Resource Library**

**Environmental Connection Magazine**

**IECA News Center**

**IECA Buyers Guide**



International Erosion Control Association

**Protecting Soil and Water Resources**

**International Erosion Control Association (IECA)**

**W**e are the leading association for the stormwater, erosion and sediment control industry. We help professionals develop their skills and further their careers by providing access to unique and relevant content and exclusive member services. Our members represent more than 30 countries and 22 fields of professional practice. IECA's diverse membership supplies a unique network of specialists who are capable of solving a broad range of problems caused by soil erosion and its byproduct—sediment.

Members of IECA receive an assortment of benefits that enhance their career and allow them ability to network with those in the erosion and sediment control industry. They have access to our national network of members and the local chapters. IECA offer a variety of memberships and dues rates to meet the needs of any individual or organization.

### **Mission**

IECA advances the standards of practice and connect the erosion control and stormwater management community.

### **Vision**

The global alliance enhancing soil and water resources.

### **IECA Pillars**

- Connect
- Learn
- Lead
- Promote

### **IECA Chapters**

IECA and its Chapters form a strong partnership comprised of individuals who are all dedicated to minimizing accelerated soil erosion. Chapters represent all US states, all Canadian provinces and several other countries. IECA currently has nine US-based chapters and three chapters abroad. Members are also working diligently to add chapters in Europe and Asia in the near future.

### **Interested in Membership?**

IECA offer a variety of memberships and dues rates to meet the needs of any individual or organization. Visit [ieca.org](http://ieca.org) for membership pricing and types and learn more about our benefits.



**GEOSYNTHETICS 2023  
ORGANIZING COMMITTEE**

**COMMITTEE CHAIR**

Jie Han, Ph.D., University of Kansas

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Stephan Gale, PE, D.GE, F.ASCE, Gale-Tec  
Engineering, Inc.

**SHORT COURSE CHAIR**

Michael Simac, P.E.,  
EARTH Improvement Technologies

**EXHIBIT CHAIR**

Kathryn Grant, Propex

**CONFERENCE ADVISOR – IGS – NORTH AMERICA**

Chris Kelsey, IGS-North America

**APPLICATION EXPERTS**

Barriers: Ed Silva, E2  
Drainage: Daniel Selander, WinFab  
Environmental: Adam Maskal, Solmax Americas  
Erosion Control: Keith Harris, Solmax Americas TC  
Reinforcement: Mike Bernardi, Strata  
Stabilization / Separation (Pavements):  
Jim Penman, L.E. Geosolutions

**GENERAL COMMITTEE MEMBERS**

Robert Lozano, The Reinforced Earth Company  
Kevin Kerfoot, Geosynthetics magazine  
Fred Chuck, Geosynthetic Materials  
Association (GMA)

**TECHNICAL PROGRAM PROJECT MANAGER**

Megan Firl, Advanced Textiles Association

**SECRETARY GENERAL**

Barbara Connett, Advanced Textiles Association



**SUPPORTED BY IGS NORTH AMERICA**

IGS North America is the North American chapter of the International Geosynthetics Society (IGS). IGS-NA has more than 200 individual members from academia, independent testing laboratories, geotechnical consultant firms, federal and state governments agencies, and industry.  
[www.igs-na.org](http://www.igs-na.org)



**GEOSYNTHETIC  
MATERIALS  
ASSOCIATION**

Geosynthetic Materials Association (GMA) provides engineering support, business development opportunities, in-person and online educational programming, government relations expertise, and industry recognitions. GMA influences specification and lobbies on behalf of member companies. GMA targets key U.S. states to expand the geosynthetics market. GMA provides a network to exchange information, solve common problems and develop mutually beneficial relationships.

GMA is a central resource for information on geosynthetics and provides a forum for consistent and accurate information in order to increase acceptance and promote the correct use of geosynthetics.

Since GMA's inception, geosynthetics use has expanded into nearly all areas of civil, geotechnical, environmental, coastal and hydraulic construction. Its industry events provide networking opportunities and exposure to the industry for engineers, specifiers, contractors, government agencies and academics.

[Textiles.org/Geosynthetics](http://Textiles.org/Geosynthetics)



**ADVANCED  
TEXTILES  
ASSOCIATION**

Advanced Textiles Association (ATA) is a not-for-profit trade association serving 1,550 company members involved in the global specialty fabrics marketplace. ATA operates 13 product divisions—including GMA—and three country-specific divisions conducting targeted programs and conferences for specialty fabrics products manufacturers. ATA is headquartered in Roseville, Minn.

ATA supports and augments the geosynthetics industry with these contributions:

- Promotes the Geosynthetic Materials Association (GMA), a central resource for the industry and a forum for the development of specifications and standardization.
- Publishes the industry-leading *Geosynthetics* magazine and other journals.
- Collaborates with the International Geosynthetics Society, IGS North America and the Geosynthetic Institute.

[Textiles.org](http://Textiles.org)

## Association of GeoHazard Professionals (AGHP)

The Association of Geohazard Professionals (AGHP) provides resources and mechanisms to evaluate the state of practice and the reach of the geohazard marketplace. All interested industry participants are invited to join.

The AGHP has 8 active committees: Anchor Testing, Debris Flow and Steep Creek Hazards Mitigation, Education, Geohazard Monitoring & Instrumentation, Marketing, Post Support Systems, Rope Access, and Standards & Specifications.  
<https://geohazardassociation.org/>

## Association for Mechanically Stabilized Earth (AMSE)

AMSE promotes the use of MSE retaining structures engineered and supplied through a single source of responsibility and constructed in accordance with specifications which ensure value, performance, reliability and long-term safety. AMSE members produce complete MSE wall systems that use steel and, in some situations, geosynthetic soil reinforcements.

[www.amsewalls.org](http://www.amsewalls.org)

## ASTM

ASTM International Committee D35 on Geosynthetics develops test methods, specifications, guides, practices and terminology dealing with geosynthetics.  
[www.astm.org](http://www.astm.org)

## European Association of Geosynthetic Product Manufacturers

The European Association of Geosynthetic product Manufacturers (EAGM) is established with the goal to promote the knowledge and the usage of European synthetic products and to underline the sustainable benefits when applying these products.

EAGM believes in establishing free circulation of geosynthetic products within the European Community, in a market where products have to comply with the same criteria and standards in each individual country. EAGM promotes and maintains a high level of quality for geosynthetic products, to be subject to equal and objective parameters, assuring customers that products from EAGM members are of a proven high level of quality.  
<https://www.eagm.eu/>

## Fabricated Geomembrane Institute (FGI)

The Fabricated Geomembrane Institute (FGI) is an industry/academic consortium of organizations interested in, and involved with, fabricated geomembranes. The FGI is located at the University of Illinois at Urbana-Champaign in the Department of Civil and Environmental Engineering. The FGI includes all fabricated geomembranes, i.e., all geomembranes that are seamed and folded in a factory, transported to a site and deployed by unfolding the fabricated panel.

[www.fabricatedgeomembrane.com](http://www.fabricatedgeomembrane.com) | Booth 106

## Federal Highway Administration (FHWA)

The Federal Highway Administration (FHWA) supports State and local governments in the design, construction, and maintenance of the Nation's highway system (Federal Aid Highway Program) and various federally and tribal owned lands (Federal Lands Highway Program). Through financial and technical assistance to State and local governments, FHWA is responsible for ensuring that America's roads and highways continue to be among the safest and most technologically sound in the world.  
[www.fhwa.dot.gov](http://www.fhwa.dot.gov) | Booth 104

## Geo-Institute Kansas City Chapter

[www.kcengineers.org/](http://www.kcengineers.org/)

## Geosynthetic Institute (GSI)

GSI's mission is to develop and transfer knowledge, assess and critique geosynthetics, and provide services to the member organizations.

[www.geosynthetic-institute.org](http://www.geosynthetic-institute.org)

## International Association of Geosynthetic Installers (IAGI)

International Association of Geosynthetic Installers is a dynamic association of geosynthetic professionals created by and for installers. IAGI's mission is to advance installation and construction technologies as well as to provide a central clearinghouse for worldwide industry information.

[www.iagi.org](http://www.iagi.org) | Booth 108

## IGS-North America

IGS-North America is the North American chapter of the International Geosynthetics Society (IGS). IGS-NA has more than 200 individual members from academia, independent testing laboratories, geotechnical consultant firms, federal and state governments agencies, and industry.

[igs-na.org](http://igs-na.org) | Booth 112

## NCMA

[ncma.org](http://ncma.org)

## Transportation Research Board (TRB)

The Transportation Research Board (TRB) is a division of the National Academy of Sciences, Engineering, and Medicine.

<https://www.nationalacademies.org/trb/transportation-research-board>

## University of Kansas – School of Engineering (KU)

[ceae.ku.edu/](http://ceae.ku.edu/)

## US Universities Council for Geotechnical Education and Research (USUCGER)

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Exhibitors as of Jan. 10, 2023

# SCHEDULE AT-A-GLANCE

## Young Professional Event

Monday, February 6  
7:30–9:30 pm

Join us at Sinkers Lounge! Are you 40 or under? Or support young professionals in the industry? Join us for the 2023 IECA and Geosynthetics Conference Young Professional Event hosted at Sinkers Lounge. Sinkers Lounge is the only place in Kansas City where you can enjoy a leisurely round of indoor minigolf paired with a craft cocktail. Includes mini golf, tabletop mini golf, one (1) drink ticket and bar snacks.

*Ticketed event, additional registration required.*

### SUNDAY, FEBRUARY 5, 2023

7 am–5 pm

**Registration Desk Hours (Geosynthetics)**

8 am–5 pm

**Registration Desk Hours (IECA)**

8 am–5 pm

**Short Courses (Geosynthetics)**

12:30–4 pm

**Kansas City BBQ and Brew Tour**

*Ticketed event, additional registration required.*

6–6:30 pm

**International Attendee Meet and Greet at No Other Pub (IECA)**

6:30–9:30 pm

**Welcome Reception hosted by IECA Great Rivers Chapter (IECA)**

*Ticketed event, additional registration required.*

### MONDAY, FEBRUARY 6, 2023

7 am–5 pm

**Registration Desk Hours**

8–9:30 am

**Opening Keynote and Breakfast—Kansas City Levees Project: Reliability and Resilience**

9:30 am–Noon

**Technical Education Sessions**

Noon–1:30 pm

**Awards Luncheon**

1:30–4:30 pm

**Technical Education Sessions**

4:30–6:30 pm

**Expo Hall Opening Reception**

7:30–9:30 pm

**Young Professional Event at Sinkers Lounge**

*Ticketed event, additional registration required.*

## OPENING KEYNOTE

### Kansas City Levees Project: Reliability and Resilience

Monday, February 6, 2023 | 8–9:30 am

Scott Mensing, PE, PMP and Col. Travis Rayfield, PE, PMP, Army Corps of Engineers – Kansas City District



Scott Mensing, PE, PMP



Col. Travis Rayfield, PE, PMP, Army Corps of Engineers – Kansas City District

The \$529 million KC Levees program is one of the largest, most complex, civil works project that the U.S. Army Corps of Engineers – Kansas City District has delivered. The program will improve the reliability and resiliency of 17 miles of levees and floodwalls located along the Kansas River in the Kansas City metropolitan area. This collaborative effort between the USACE and three non-federal partners – the Kaw Valley Drainage District of Wyandotte County, Kan.; the Unified Government of Wyandotte County and Kansas City, Kan.; and the City of Kansas City, Mo. – will reduce the risk of flooding by approximately 200% for 30,000 people, over \$10 billion of investments, and a nationally critical warehousing, distribution and railroad hub. This presentation will highlight USACE’s mission to reduce flood risk along our nation’s waterways, present why and how USACE is further reducing flood risk to Kansas City, and provide insight into techniques utilized to ensure successful delivery of this critical project to the community.

## TUESDAY, FEBRUARY 7, 2023

7 am–5 pm

**Registration Desk Hours**

8–9:30 am

**Robert M. Koerner Award and Lecture (Geosynthetics)**

8–11:30 am

**Technical Education Sessions (IECA)**

9 am–5:00 pm

**Expo Hall Open**

9:30–11:30 am

**Technical Education Sessions (Geosynthetics)**

10:30 am–1:50 pm

**Learning Zone Programming**

11:30 am–1:30 pm

**Lunch in Expo Hall**

1:30–5 pm

**Technical Education Sessions**

3:15–3:45 pm

**Annual Meeting (IECA)**

4–5 pm

**Chapter Meetings (IECA)**

## WEDNESDAY, FEBRUARY 8, 2023

7:30 am–2 pm

**Registration Desk Hours**

8–11:30 am

**Technical Education Sessions**

9–2 pm

**Exhibit Hall Hours**

9:30–11:20 am

**Learning Zone Programming**

11:30–1:30 pm

**Taste of Kansas City  
Closing Lunch in Expo Hall**

1–3 or 4 pm

**Industry Field Tours (IECA)***Ticketed event, additional registration required.*

## GEOSYNTHETICS KEYNOTE SESSION

**Robert M. Koerner Award and Lecture:  
From Zero Leak at End of Geomembrane  
Installation to Zero Leakage in Service***Tuesday, February 7, 2023 | 8–9 am**J.P. Giroud, ECP, Ph.D., Past President International Geosynthetics Society**Dr. Giroud will join us live from France with a lecture followed by a Q&A session.*

J.P. Giroud, ECP,  
Ph.D., Past President  
International  
Geosynthetics Society

Zero leak at end of geomembrane installation may be nearly achieved when electrical leak location surveys are performed by first-class operators working under ideal conditions; and nearly zero leakage in service is a legitimate goal under ideal conditions. However, there are still too many instances of failures of geomembrane-lined containment facilities, often as a consequence of improper design, and generally resulting in significant leakage. The lecture will present mechanisms of failure, with actual examples whenever possible, and will recommend design measures to avoid each specific failure mechanism. The conclusion of the lecture will point out that the use of geomembranes in containment facilities is essential for the protection of the environment, not only by preventing migration of containments into the ground but also by reducing water waste. Indeed, saving water will be a major economic and environmental challenge for the coming decades.

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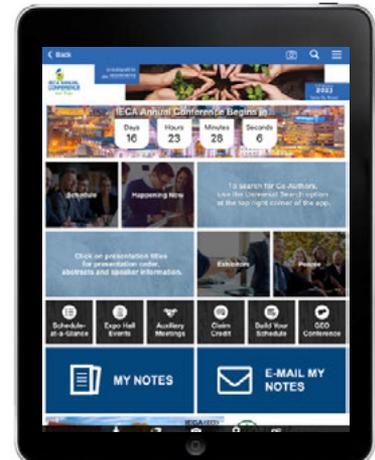


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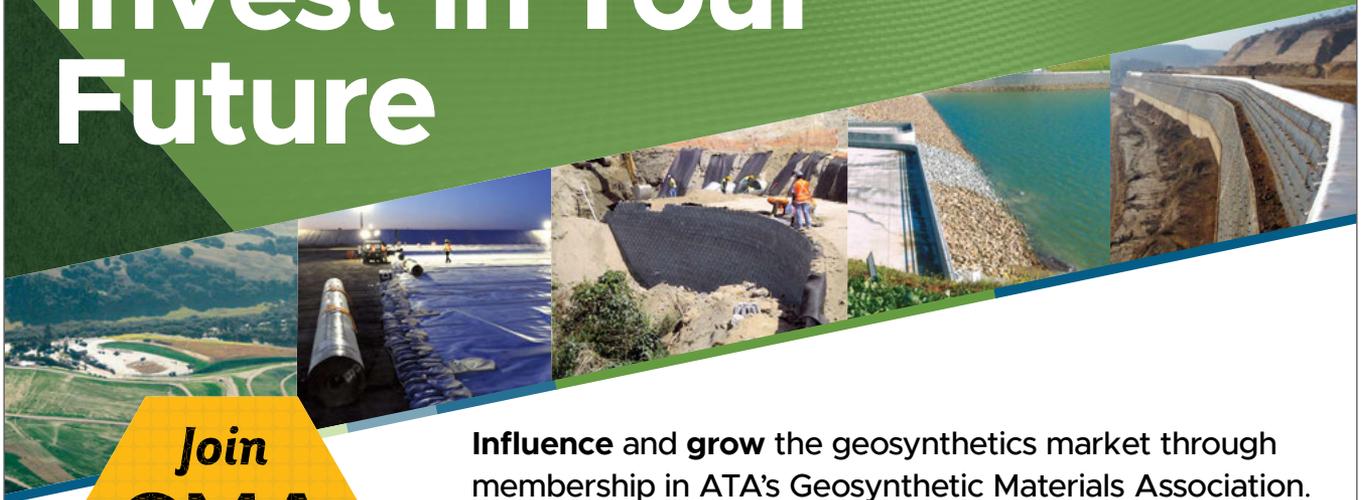
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## Sunday, February 5

### SHORT COURSES SCHEDULE

Room	2207	2208	2209	2210
8 am–Noon	<b>SHORT COURSE</b> <b>Marketing in the Geosynthetics Industry</b>	<b>SHORT COURSE</b> <b>Fundamentals of Geosynthetics: Types, Functions, Selection and Performance Pt. 1—Materials</b>	<b>SHORT COURSE</b> <b>Geosynthetics in Erosion and Sediment Control and Erosion-Resistant Hydraulic Structures</b>	<b>SHORT COURSE</b> <b>Landslide Remediation with Geosynthetics-Evaluation Methods and Construction Techniques</b>
1–5 pm	<b>SHORT COURSE</b> <b>AASHTO 2020 Design Methods of Geosynthetic-Reinforced Walls</b>	<b>SHORT COURSE</b> <b>Fundamentals of Geosynthetics: Types, Functions, Selection and Performance Pt. 2—Applications</b>	<b>SHORT COURSE</b> <b>Construction on Soft Soil Using Geosynthetics</b>	<b>SHORT COURSE</b> <b>Designing for a Zero-Leak Containment Facility</b>

### SHORT COURSES DESCRIPTIONS

Short courses are available for all full registrants. Each provides 4 PDH credit hours

#### 8 am–Noon

#### Fundamentals of Geosynthetics: Types, Functions, Selection and Performance Pt. 1—Materials

*Kerry Petrasic, Gannett Fleming*

ROOM: 2208

This short course provides an overview of geosynthetics materials. The course is independent of the Part 2 course offered in the PM session, but is complementary. The course is intended for individuals with a desire to explore the use of geosynthetic materials in design and construction applications, and those having a need to gain a broad fundamental knowledge of the various geosynthetic types, materials and functions. The course provides a basic definition of geosynthetics, explores the various geosynthetic material types, the polymers used in manufacturing, strengths and weaknesses of the common polymers, and the physical structure of the various types of geosynthetics. The prominent roles of polymer type and material physical structure are emphasized in the effective selection and optimal performance of geosynthetics for a specific function. Geosynthetic materials discussed include geotextiles, geogrids, geocell, geomembranes and geofoam. Importance is placed upon desired function(s) in the selection of geosynthetic material class and type.

#### Geosynthetics in Erosion and Sediment Control and Erosion-Resistant Hydraulic Structures

*Joel Sprague, TRI Environmental; Nathalia Castro, Solmax*

ROOM: 2209

Geosynthetic-enhanced erosion and sediment control systems are now used routinely in temporary construction site applications, as well as in steep slope stabilization and shoreline and coastal erosion protection. On the construction site, geosynthetic-enhanced rolled erosion control products (RECPs) and sediment retention devices (SRDs) have become essential to pollution prevention plans. In permanent applications, geosynthetic solutions now include specially designed geotextile filters beneath hard armor

systems, and deploying advanced erosion protection technologies such as anchored geotextiles, geocellular containment systems, fabric-formed concrete revetments, and sand-filled geosynthetic mattresses, tubes, and other containers. This short course will provide a detailed look at all these emerging technologies and how they are being used to cost-effectively protect against erosion from rainfall, runoff, stream flow, and shoreline wave action.

#### Landslide Remediation with Geosynthetics-Evaluation Methods and Construction Techniques

*Stephan Gale and Nathan Lichty, Gale-Tec Engineering*

ROOM: 2210

Increased rainfall amounts and intensities, along with prolonged wet periods have created slope instabilities along our roadway embankments and rivers/streams channel sideslopes. The exact causes of these vary, but the threat to public safety is a constant. This short course will assess the causes, discuss the evaluation of alternate solutions and present construction case histories which include a wide range of resilient landslide remediation solutions for each of the unique challenges presented with each project.

This course will highlight recent projects that balance geotechnical needs, hydraulics, local and federal permitting requirements, wetland impacts, special river designations, costs, unique site constraints and aesthetic goals to arrive at cost-effective solutions. Through a series of case histories, we will review design and construct solutions ranging from hard armored riprap and gabion walls to vegetation-faced geosynthetic reinforced soil slopes with various erosion resistant faces as well as shallow soil anchors or grouted hollow bar reinforcement installed on a reconstructed slope face.

#### Marketing in the Geosynthetics Industry

*Sam Allen, President, International Geosynthetics Society (IGS) and TRI Environmental; Tamara Tuttle, Atlas International Consulting*

ROOM: 2207

While the global geosynthetics industry is relatively small (an international geosynthetics conference may attract at most 2,500

people), it is uniquely intense with many companies providing services ranging from geosynthetic products, geosynthetic installations, and expertise related to geosynthetic design, application, and testing.

The geosynthetic industry involves many with disparate educations ranging from classic geotechnical, civil and environmental engineering to technical backgrounds in chemistry, polymer engineering and materials science. Still others in our industry are solely trained based on multi-year experience with geosynthetic manufacturing, handling, installation, and testing.

From a marketing and sales communication perspective, this dynamic industry poses an especially challenging environment to establish meaningful communication with our collective customers. Indeed, navigating the multiple geosynthetic-related associations and non-profits, and their cultures and contributions can be daunting. Yet, these same organizations play a strategic role in standardizing and promoting geosynthetic technologies and applications – a key benefit to geosynthetic sales professionals. They stand as platforms for collective education and community held expertise as compared with company-specific messaging promoting the unique attributes of a product or service.

So, how is one to sell products or services in such a dynamic and competitive industry?

This half-day course is appropriate for business development and sales professionals working in the geosynthetics industry. It is appropriate for new hires, young starters, and seasoned professionals. Students will explore the different geosynthetic industry sales environments and how general and broad appreciation for the industry and its organizations can greatly enhance the success of sales efforts. Narratives commonly heard about geosynthetic types and features and their relative performance will be explored and evaluated in a non-competitive, safe environment. Healthy and positive sales techniques will be discussed and rehearsed.

1–5 pm

## AASHTO 2020 Design Methods of Geosynthetic-Reinforced Walls

*Dov Leshchinsky, University of Delaware and ADAMA Engineering;  
Daniel Alzamora, FHWA Resource Center*

ROOM: 2207

This short course provides an overview of the AASHTO 2020 methods for the design of geosynthetic-reinforced walls. Discussed are the Stiffness Method, the Limit Equilibrium Method, and the Simplified Method. While the main focus will be on internal stability, aspects such as complex geometries, surcharge loads, external stability and seismic design will be discussed as well. Instructive examples will be used to demonstrate the fine points of each method while showing the differences in the design outcomes. To expand the number of comparative cases, both programs MSEW+ and ReSSA+ will be used.

### Ancillary Meeting OPEN TO THE PUBLIC

**Fabricated Geomembrane Institute (FGI) Annual Meeting**

7–8:30 pm | Room 2208

## Construction on Soft Soil Using Geosynthetics

*Lilma Schimmel, AECOM and Alex Potter-Weight, Menard USA*

ROOM: 2209

This course will on focus the use of geosynthetics to address the challenges of construction on poor soil conditions. Commonly used and innovative techniques will be discussed at an introductory level including Geosynthetic Encased Columns (GECs), Prefabricated Vertical Drains (PVDs), High Strength Basal Reinforcement and Load Transfer Platforms. Technical information about specification parameters and design using geosynthetics will also be introduced.

## Designing for a Zero-Leak Containment Facility

*Abigail Gilson MS, PE, TRI Environmental and Jeff Blum, Weaver Consultants Group*

ROOM: 2210

The old adage that “all liners leak” does not have to be a foregone conclusion. All leaks in lining systems have a direct cause including accidents, installation issues, poor craftsmanship, inadequate material testing, and poor design decisions. A holistic approach to leakage is taken in this course to address both short-term and long-term sources of leakage. Using state-of-the-art Electrical Leak Location (ELL) technologies, leaks can be remedied before a containment facility is put into service. Employing best practices for Construction Quality Assurance (CQA) can eliminate leaks that develop over time due to poor installation practices. In short, the reduction or even elimination of leakage starts in the design phase with good project specifications. This course provides engineers with the tools they need to write better specifications aimed at reducing or even eliminating leakage, as well as providing practical tools for designing for a target leakage rate.

Course Outline:

- The physics of ELL testing methods and how to maximize method effectiveness (Gilson-Beck)
- Fundamentals of Electrical Leak Location
- Available methods
- Bare geomembrane methods

## Fundamentals of Geosynthetics: Types, Functions, Selection and Performance Pt. 2—Applications

*Kerry Petrasic, Gannett Fleming*

ROOM: 2208

This short course provides an overview of geosynthetics material applications. The course is independent of the Part 1 course offered in the AM session but is complementary. The course is intended for individuals with a desire or need to gain a broad fundamental knowledge of the various applications of geosynthetic materials. Functions explored include separation, drainage, stabilization, reinforcement, impervious barriers and containment, erosion control and lightweight fill. Emphasis is placed on how polymer type, material structure, compatible function and cost combine to serve a variety of specific applications efficiently and effectively for the broad range of products available. Applications are explored for a range of geosynthetic materials including geotextiles, geogrids, geocell, geomembranes, geofoam and a variety of erosion control and turf reinforcement products.

# TECHNICAL SESSIONS SCHEDULE

## Monday, February 6, 2023

ROOM	2201	2202	2203	2204
8-9:30 am				
9:40-10:40 am	Proper Selection, Installation, and Benefits of Turf Reinforcement Mats (TRMs)	Part 1   Designing and Modifying Stormwater Measures for Wildlife Friendly Development	Permeable Pavement and Underground Detention	Balancing Roadways with Vegetated Systems: Seeking Resilient Stormwater Management in a Linear Environment to meet MS4 Requirements
10:50-11:50 am	Construction and Calibration of Large-Scale Rainfall Simulators	Part 2   Designing and Modifying Stormwater Measures for Wildlife Friendly Development	Optimization of Sediment Basin Configurations	Save Money AND Fast-track NOT?! How it Was Done at a 700-acre Solar Site
12:00-1:30 pm				
1:30-2:30 pm	Design and Implementation of Resource Protection Measures for Culvert Installation Utilizing the SWPPP Process, Wildlife Passage and Flood Resiliency	Coir Geo Synthetics for Erosion Control and Soil Stabilization	ABC's of Silt Fence Installation and Efficacy	When it's Not Just the General Permit: Let's Talk Local Stormwater Ordinances
2:40-3:10 pm	Reefton's Globe Pit Remediation using the 5 Fundamentals of Successful Rehabilitation	Pre-vegetated Blankets: Providing Erosion Control while Preserving the Integrity, Stability & Beauty of the Native Plant Community	Building Resiliency by Implementing BMPs in Municipal Parkst	"It Ain't Raining!": Effective Strategies to Avoid Communication Breakdowns
3:20-4:20 pm	Employing a Large Scale Field Study to Assess Establishment of Native and Pollinator Seed Mixes for Solar Site Applications	The Ability of Erosion Control Products to Enhance Vegetation Germination and Growth	Flocculant Fundamentals: Setting up Flocculant Applications Correctly in the Field	Largely Unchanged 1990s Sediment Treatment Design in the Context of a Changing Climate and an Ever-Changing Landscape of Compliance Conditions
4:30-6:30 pm				

2205	2206	2211	2215C	OTHER
				<b>ROOM 2501A</b> Basic Considerations Opening Keynote Breakfast: Kansas City Levees Project: Reliability and Resilience
	Let's Settle It: What does it Take for an In-channel Sediment Basin to be Effective?	Lessons From Both Sides of the Regulatory Silt Fence	<b>KNOWLEDGE EXCHANGE</b> More than the Water: Considering Social and Environmental Factors in Stormwater Infrastructure	<b>ROOM 2213</b> Finance Committee Meeting
<b>PRODUCT CASE STUDY</b> Composite Bentonite Aggregate for Civil/ Geotechnical Sealing Applications <i>Sponsored by AquaBlok</i>	Evaluating the Effectiveness of Inlet Protection Measures		<b>KNOWLEDGE EXCHANGE</b> Enforcement Roundtable	<b>ROOM 2213</b> IECA Committee Chair Meeting
				<b>ROOM 2501A</b> IECA and ATA Awards Luncheon
<b>PRODUCT CASE STUDY</b> Curlex® SiltTRAP™: An Unconventional Sediment Control BMP <i>Sponsored by American Excelsior</i>	Improving the Design and Performance of Double Row Sediment Barriers	Ethics: Workplace Strategies for Ethical Challenges	<b>KNOWLEDGE EXCHANGE</b> Erosion & Sediment Control Plan	<b>ROOM 2213</b> Chapter Presidents Council Meeting
<b>PRODUCT CASE STUDY</b> Profile Products Case Study - Flexterra HP-FGM <i>Sponsored by Profile Products</i>	Monitoring Water Quality In and Out of Sediment Basins During Highway Construction	What if I Had No Discharge From My Outfall this Quarter? A Discussion of Common Questions about Industrial Stormwater Compliance	ESC Auditing in British Columbia, Canada	<b>ROOM 2213</b> Editorial Committee Meeting
<b>PRODUCT CASE STUDY</b> Sox Erosion Control Products Case Study <i>Sponsored by Sox Erosion Control</i>	Best Hacks and Pro Tips for Successful Site Inspectors	Calling All Stormwater Personnel: Let's Get Qualified!	<b>KNOWLEDGE EXCHANGE</b> Journey to Capturing Sites under the Common Plan of Development - Updated	<b>ROOM 2213</b> Nomination Committee Meeting
				<b>EXPO HALL D</b> Expo Hall Opening Reception

# TECHNICAL SESSIONS DESCRIPTIONS

## MONDAY, FEBRUARY 6

8–9:30 am (Sponsored by Ecopliant Environmental (CISEC))

### Opening Keynote Breakfast: Kansas City Levees Project: Reliability and Resilience

Scott Mensing, PE; Travis Rayfield, PE, PMP

**TRACK | TYPE:** Wetland, Stream Bank, & Shoreline Restoration | Keynote & Networking  
**ROOM:** 2501A  
**PDH:** 1

9:40–10:40 am

### Balancing Roadways with Vegetated Systems: Seeking Resilient Stormwater Management in a Linear Environment to Meet MS4 Requirements

Brenda Macke, PE, PMP, CFM; Kylie Clark, MUP, AICP, ENV SP

**TRACK | TYPE:** MS4 Management | Case Study  
**ROOM:** 2204  
**PDH:** 1

### Part 1 | Designing and Modifying Stormwater Measures for Wildlife Friendly Development

Randall J. Shuey, CPESC, CWS, CSS

**TRACK | TYPE:** Stormwater Management | Workshop  
**ROOM:** 2202  
**PDH:** 1

### Finance Committee Meeting

**TYPE:** Committee Meeting  
**ROOM:** 2213

### Knowledge Exchange - More Than the Water: Considering Social and Environmental Factors in Stormwater Infrastructure

Ryan Eaves, PE, CFM, CPESC; Richard Washington, Jr., PE, CFM

**TRACK | TYPE:** Stormwater Management | Roundtable Discussion  
**ROOM:** 2215C  
**PDH:** 1

### Lessons from Both Sides of the Regulatory Silt Fence

Lyle Cowles, CESSWI, KDOT CIT

**TRACK | TYPE:** Regulations/Compliance | Workshop  
**ROOM:** 2211  
**PDH:** 1

### Let's Settle It: What Does It Take for an In-channel Sediment Basin to Be Effective?

Jaime Schussler, Ph.D., CPESC IT, EIT

**TRACK | TYPE:** Erosion and Sediment Control | Technical Paper  
**ROOM:** 2206  
**PDH:** 1

### Permeable Pavement and Underground Detention

Bill Murphy, PE; Karen Quackenbush, PE

**TRACK | TYPE:** Stormwater Management | Workshop  
**ROOM:** 2203  
**PDH:** 1

### TRMs – Proper Selection, Installation, and Benefits of Turf Reinforcement Mats (TRMs)

Craig A. Shultz

**TRACK | TYPE:** Erosion and Sediment Control | Case Study  
**ROOM:** 2201  
**PDH:** 1

10:50–11:50 am

### Composite Bentonite Aggregate for Civil/Geotechnical Sealing Applications

Andy Durham, PE

**TRACK | TYPE:** Stormwater Management | Product Case Study  
**ROOM:** 2205  
**PDH:** 1

### Construction and Calibration of Large-Scale Rainfall Simulators

Jacob Etheridge, BSCE

**TRACK | TYPE:** Erosion and Sediment Control | Technical Paper  
**ROOM:** 2201  
**PDH:** 1

### Part 2 | Designing and Modifying Stormwater Measures for Wildlife Friendly Development

Randall J. Shuey, CPESC, CWS, CSS

**TRACK | TYPE:** Stormwater Management | Workshop  
**ROOM:** 2202  
**PDH:** 1

### Evaluating the Effectiveness of Inlet Protection Measures

Jerald S. Fifield, Ph.D., CISEC

**TRACK | TYPE:** Erosion and Sediment Control | Technical Paper  
**ROOM:** 2206  
**PDH:** 1

### IECA Committee Chair Meeting

**TYPE:** Committee Meeting  
**ROOM:** 2213

### Knowledge Exchange: Enforcement Roundtable

Julie Coco, PE; Karyn Pageau, EI, CPESC; Kristi C. Anspach, CPESC; Ariel Leclerc, CESSWI, QCIS, QSWPPP; Danielle T. Rudisill, CPESC

**TRACK | TYPE:** Erosion and Sediment Control | Case Study  
**ROOM:** 2215C  
**PDH:** 1

### Optimization of Sediment Basin Configurations

Megan Armstrong

**TRACK | TYPE:** Stormwater Management | Technical Paper  
**ROOM:** 2203  
**PDH:** 1

### Save Money and Fast-track NOT?! Steps to Success on a 700-acre Solar Site

Alex Knicker, PE; Aaron Mlynek, CPESC, CESSWI, CISEC, QSDP; Joseph Ridley

**TRACK | TYPE:** Erosion and Sediment Control | Case Study  
**ROOM:** 2204  
**PDH:** 1

12–1:30 pm

### IECA and GEO Awards Luncheon

**TYPE:** Lunch and Networking  
**ROOM:** 2501A



## 2023 IECA Regional Events

IECA offers a variety of events throughout the year in conjunction with our chapters. IECA Chapters Regional Events and Conferences that are in the works for 2023 include:

- IECA Spokane Regional Event: Stabilizing the Arid West | April 5
- Lake County Field Day | April 25-26
- 2023 MS4 Conference | May 1-3
- Auburn University Erosion and Sediment Control Installer Training | May 16-17
- Auburn University Erosion and Sediment Control Field Day | May 18
- MAC-IECA Regional Conference | September
- Texas Regional Event | October
- Australasia Annual Conference | October
- Mountain States Regional Conference | November
- Northeast Regional Conference | November

**Learn more and register at  
[www.ieca.org](http://www.ieca.org)**

**IECA**   
International Erosion Control Association®  
**Protecting Soil and Water Resources**

# TECHNICAL SESSIONS DESCRIPTIONS

1:30–2:30 pm

## ABC's of Silt Fence Installation and Efficacy

Thomas Carpenter, CPESC

**TRACK | TYPE:** Erosion and Sediment Control | Workshop

**ROOM:** 2203

**PDH:** 1

## Chapter Presidents Meeting

**TYPE:** Committee Meeting

**ROOM:** 2213

## Coir Geo Synthetics for Erosion Control and Soil Stabilization

Gowthamsivan Sivagnanam, MS; Ram Mohan Kumar Selvaraj

**TRACK | TYPE:** Erosion and Sediment Control | Technical Paper

**ROOM:** 2202

**PDH:** 1

## Curlex® SiltTRAP™: An Unconventional Sediment Control BMP

Jeff King

**TRACK | TYPE:** Erosion and Sediment Control | Product Case Study

**ROOM:** 2205

**PDH:** 1

## Design and Implementation of Resource Protection Measures for Culvert Installation Utilizing the SWPPP Process, Wildlife Passage, and Flood Resiliency

Dwayne L. Stenlund, CPESC

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2201

**PDH:** 1

## Ethics: Workplace Strategies for Ethical Challenges

David T. Williams, Ph.D., PE, PH, CPESC, CFM

**TRACK | TYPE:** Regulations/Compliance | Workshop

**ROOM:** 2211

**PDH:** 1

## Improving the Design and Performance of Double Row Sediment Barriers

Jarrell B. Whitman, Ph.D., PE, CPESC

**TRACK | TYPE:** Erosion and Sediment Control | Technical Paper

**ROOM:** 2206

**PDH:** 1

## Knowledge Exchange: Erosion & Sediment Control Plan

Barney R. Blackburn, PE, CPESC, CPSWQ; Karyn Pageau, EI, CPESC; Danielle T. Rudisill, CPESC

**TRACK | TYPE:** Erosion and Sediment Control | Roundtable Discussion

**ROOM:** 2215C

**PDH:** 1

## When It's Not Just the General Permit: Let's Talk Local Stormwater Ordinances

Nelson Arias, CESSWI

**TRACK | TYPE:** MS4 Management | Workshop

**ROOM:** 2204

**PDH:** 1

2:40–3:10 pm

## "It Ain't Raining!": Effective Strategies to Avoid Communication Breakdowns

Matt Klaser, CESSWI, CPESC

**TRACK | TYPE:** Other | Workshop

**ROOM:** 2204

**PDH:** 0.5

## Building Resiliency by Implementing BMPs in Municipal Parks

J.P. Johns, PE

**TRACK | TYPE:** Stormwater Management | Case Study

**ROOM:** 2203

**PDH:** 0.5

## Editorial Committee Meeting

**TYPE:** Committee Meeting

**ROOM:** 2213

## Erosion and Sediment Control Auditing in British Columbia, Canada

Tom Hicks

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2215C

**PDH:** 0.5

## Monitoring Water Quality in and out of Sediment Basins During Highway Construction

Christina Kranz, Ph.D.; Richard A. McLaughlin

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2206

**PDH:** 0.5

## Pre-vegetated Blankets: Providing Erosion Control While Preserving the Integrity, Stability & Beauty of the Native Plant Community

Robert Livingston

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2202

**PDH:** 0.5

## Profile Products Case Study - Flexterra HP-FGM

Rachel Higgins, CPESC, CESSWI

**TRACK | TYPE:** Erosion and Sediment Control | Product Case Study

**ROOM:** 2205

**PDH:** 0.5

## Reefton's Globe Pit Holistic Remediation Using the 5 Fundamentals of Successful Rehabilitation

Joe Johnson

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2201

**PDH:** 0.5

## What If I Had No Discharge from My Outfall This Quarter? A Discussion of Common Questions About Industrial Stormwater Compliance

Nathan T. Collier, CPESC, CESSWI

**TRACK | TYPE:** Case Regulations/Compliance | Case Study

**ROOM:** 2211

**PDH:** 0.5

3:20–4:20 pm

## Best Hacks and Pro Tips for Successful Site Inspectors

Alex Zimmerman, CPESC, CISEC, CESSWI, AK-BC-MT-WA-CESCL, QSP

**TRACK | TYPE:** Erosion and Sediment Control | Workshop

**ROOM:** 2206

**PDH:** 1

## Calling All Stormwater Personnel: Let's Get Qualified!

Juliana Morelli, PG, REM, CPESC, CESSWI

**TRACK | TYPE:** Erosion and Sediment Control | Workshop

**ROOM:** 2211

**PDH:** 1

**Employing a Large Scale Field Study to Assess Establishment of Native and Pollinator Seed Mixes for Solar Site Applications**

*Matthew M. Welch, CPESC, CESSWI; Marc S. Theisen, M.Sc., CPESC, CPSWQ, CESSWI*

**TRACK | TYPE:** Erosion and Sediment Control | Workshop  
**ROOM:** 2201  
**PDH:** 1

**Flocculant Fundamentals: Setting up Flocculant Applications Correctly in the Field**

*Seva Iwinski Bray, GA*

**TRACK | TYPE:** Stormwater Management | Workshop  
**ROOM:** 2203  
**PDH:** 1

**Knowledge Exchange: Journey to Capturing Sites Under the Common Plan of Development – Updated**

*Ariel Leclerc, CESSWI, QCIS, QSWPPP; Julie Coco, PE; Kristi C. Anspach, CPESC*

**TRACK | TYPE:** Erosion and Sediment Control | Roundtable Discussion  
**ROOM:** 2215C  
**PDH:** 1

**Largely Unchanged 1990s Sediment Treatment Design in the Context of a Changing Climate and an Ever-changing Landscape of Construction Related Compliance Conditions**

*Simon N. Cathcart, MSc, CEnvP, CPESC*

**TRACK | TYPE:** Erosion and Sediment Control | Case Study  
**ROOM:** 2204  
**PDH:** 1

**Nomination Committee Meeting**

**TYPE:** Committee Meeting  
**ROOM:** 2213

**SOX Erosion Control Case Study**

*George Deussen*

**TRACK | TYPE:** Erosion and Sediment Control | Product Case Study  
**ROOM:** 2205  
**PDH:** 1

**The Ability of Erosion Control Products to Enhance Vegetation Germination and Growth**

*James E. Sprague, CPESC*

**TRACK | TYPE:** Erosion and Sediment Control | Technical Paper  
**ROOM:** 2202  
**PDH:** 1

4:30–6:30 pm (Sponsored by Core & Main and Profile Products)

**Expo Hall Opening Reception**

**TYPE:** Reception | Networking  
**ROOM:** Exhibit Hall D

7:30–9:30 pm (Sponsored by Ecopliant Environmental (CISEC))

**IECA and GEO Young Professional Event**

**TYPE:** Young Professionals | Networking  
**LOCATION:** Sinkers Lounge

**Save the Date!**



**IECA Annual Conference and Expo**



**2024  
 February 25-28  
 Spokane, WA**

# TECHNICAL SESSIONS SCHEDULE

## Tuesday, February 7, 2023

ROOM	2201	2202	2203	2204
8-9:00 am	Using PAM for Sediment, Erosion, And Turbidity Control During Construction	The Importance of Investing in Quality Forecasting Software for ESC Performance on Large Earthworks Sites	Infiltration – The Key Nature Based Solution, Reversing Urban Hydrology	Erosion and Sediment Control Principles in New Zealand with Case Study: Turitea Windfarm
9:10-10:20 am				
10:30-11:30 am	What Specifications and Soil Tests are Really Telling You	Evaluation of Agitation and Mixing Requirements of Flocculants for Construction Stormwater Treatment	Stormwater Management for Ground Mounted Solar Arrays in the Real World	Vegetating Extreme Slopes Do's & Don'ts
11:30 am-1:30 pm				
1:30-2:00 pm	Use of GeoCell Technology to Stabilize a Recreational Trail, Slope Erosion Control and Surficial Slope Stability at the Hood Pond Dam in Derry, New Hampshire	The Benefits of Natives and Pollinators on Erosion Control Projects	Common Mistakes We Make When Writing Stormwater Pollution Prevention Plans	Stormwater Management and Environmental Justice
2:10-3:10 pm	Biotic Soil Amendment (BSA) Benefits for in Highway Project Revegetation	Using Skimmers in Sediment Basins to Reduce Sediment Discharges and Improve Water Quality	Chemical Treatment of Sediment Retention Ponds in an Ever-Changing Climate Landscape	Flocculant Dosing Workshop
3:15-3:45 pm				
4:00-5:00 pm	South Central Chapter	Western Chapter	Mid-Atlantic Chapter	Mountain States Chapter

2205	2206	2211	2215C	OTHER
		How to Locate Your Facility's Receiving Waters During the SWPPP Development Process? A Discussion on Methodologically Locating a Receiving Water	Exhibitor Council Meeting	<b>ROOM 2213</b> Standards and Practice Committee Meeting
			<b>PANEL DISCUSSION</b> Hemp Fiber for Use in Erosion Control Solutions	<b>ROOM 2503AB</b> <b>PANEL DISCUSSION</b> The Solution is Greater than the Sum of It's Parts: Combining EC Measures to Solve Complex Problems  <b>ROOM 2505AB</b> <b>PANEL DISCUSSION</b> Native Vegetation  <b>ROOM 2213</b> Young Professional Committee Meeting  <b>EXPO HALL D</b> Contractors Corner
<b>PRODUCT CASE STUDY</b> How to Specify and Install a Faircloth Skimmer Floating Surface Drain in Sediment Traps and Basins <i>Sponsored by JW Faircloth</i>	Artificial Sandy Island Protection Against Coastal Erosion	The Green Rush: Marijuana Cultivation Impacts and Opportunities in Northern California's "Emerald Triangle"	<b>PANEL DISCUSSION</b> Mass Grading: Controlling Site Runoff on the Ground Through: Big Berms, Big Holes, and Groundcover	<b>EXPO HALL D</b> <b>PRODUCT CASE STUDY</b> Building Fast & Effective Custom Erosion Control & Revegetation Specifications <i>Sponsored by Profile Products</i> 10:30 - 10:50 am
				<b>EXPO HALL D</b> Lunch in Expo Hall  <b>EXPO HALL D</b> <b>PRODUCT CASE STUDY</b> Applied Polymer Vendor Showcase <i>Sponsored by Applied Polymer</i> 12:00 - 1:30 pm  <b>EXPO HALL D</b> Poster Presentations 12:00 - 1:30 pm
<b>PRODUCT CASE STUDY</b> Creating Resilient Shorelines: How Envirolok Can Preserve and Restore Slopes, Waterways & Living Shorelines <i>Sponsored by Envirolok</i>	Rethinking Diversity Equity and Inclusion	Seed-Spec: A Native Seed Blend Development Tool	<b>PANEL DISCUSSION</b> Shining The Light on Temporary Stream Crossings: The Southeast Version	<b>ROOM 2213</b> Awards Committee Meeting  <b>EXPO HALL D</b> Exploring the Myths of Erosion & Sediment Control 1:30 - 2:00 am
	Risk-based Erosion Control Design- Port of Seattle 16 Center Runway Removal and Reconstruction	Understanding & Improving the Hydraulic Performance of Wattles for Erosion and Sediment Control	Assuring Our Erosion and Sediment Control Products and Materials Are Wildlife Friendly	<b>ROOM 2213</b> Professional Development Committee Meeting
				<b>ROOM 2505AB</b> IECA Annual Meeting
Northeast Chapter	Australasia Chapter Meeting	Great Lakes Chapter	Canada Chapter	<b>ROOM 2213</b> Iberoamerican Chapter  <b>ROOM 2503AB</b> Great Rivers Chapter  <b>ROOM 2505AB</b> Pacific Northwest Chapter  <b>OFFSITE</b> Southeast Chapter

# TECHNICAL SESSIONS DESCRIPTIONS

**TUESDAY, FEBRUARY 7, 2023**
**8–9 am**

## Erosion and Sediment Control Principles in New Zealand with Case Study: Turitea Windfarm

*Megan Dredge*
**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2204

**PDH:** 1

## Exhibitor Council Meeting

**TYPE:** Committee Meeting

**ROOM:** 2215C

## How to Locate Your Facility's Receiving Waters During the SWPPP Development Process? A Discussion on Methodologically Locating a Receiving Water

*Melissa Allen, CESSWI*
**TRACK | TYPE:** Other | Workshop

**ROOM:** 2211

**PDH:** 1

## Infiltration – The Key Nature Based Solution, Reversing Urban Hydrology

*Chris Estes*
**TRACK | TYPE:** Stormwater Management | Case Study

**ROOM:** 2203

**PDH:** 1

## Standards and Practices Committee Meeting

**TYPE:** Committee Meeting

**ROOM:** 2213

## The Importance of Investing in Quality Forecasting Software for ESC Performance on Large Earthworks Sites

*Stephanie E. Kirk*
**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2202

**PDH:** 1

## Using PAM for Sediment, Erosion, and Turbidity Control During Construction

*Eddie Snell*
**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2201

**PDH:** 1

**9 am–5 pm**

## Expo Hall Open

**ROOM:** Exhibit Hall D

**9:10–10:20 am**

## Featured Panel Discussion: Contractor Corner

*Jonathan Koepke, MBA, MA*
**TRACK | TYPE:** Contractor Corner | Featured Panel

**ROOM:** Expo Hall IECA Learning Zone

**PDH:** 1

## Featured Panel Discussion: Hemp Fiber for Use in Erosion Control Solutions

*Trey Riddle, PhD; Bill Murphy, MBA; Dwyane Stenlund, CPESC; Riley Gordon, PE*
**TRACK | TYPE:** Erosion and Sediment Control | Featured Panel

**ROOM:** 2215C

**PDH:** 1

## Featured Panel Discussion: Native Vegetation

*Matthew Welch, CPESC, CESSWI*
**TRACK | TYPE:** Erosion and Sediment Control | Featured Panel

**ROOM:** 2505AB

**PDH:** 1

## Featured Panel Discussion: The Solution Is Greater Than the Sum of It's Parts: Combining Erosion Control Measures to Solve Complex Problems

*David Batts, LEED AP; John Moss; Joel Kennedy, BMusA*
**TRACK | TYPE:** Erosion and Sediment Control | Featured Panel

**ROOM:** 2503AB

**PDH:** 1

## Young Professionals Committee Meeting

**TYPE:** Committee Meeting

**ROOM:** 2213

**10:30–10:50 am (Vendor Showcase)**

## Profile Products – Building Fast and Effective Custom Erosion Control and Revegetation Specifications

*Lauren Deem, MS, CESSWI*
**TRACK | TYPE:** Erosion and Sediment Control | Vendor Showcase

**ROOM:** Expo Hall IECA Learning Zone

**PDH:** 0.5

**10:30–11:30 am**

## How to Specify and Install a Faircloth Skimmer Floating Surface Drain in Sediment Traps and Basins

*Brian M. Free, CPESC, CPSWQ, CIESC, CESCL, CCA; Warren Faircloth, BS*
**TRACK | TYPE:** Stormwater Management | Product Case Study

**ROOM:** 2205

**PDH:** 1

## Artificial Sandy Island Protection Against Coastal Erosion

*Angel Menendez, Ph.D.; Gustavo O. Salerno, CPESC*
**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2206

**PDH:** 1

## Evaluation of Agitation and Mixing Requirements of Flocculants for Construction Stormwater Treatment

*Billur Kazaz, Ph.D.*
**TRACK | TYPE:** Erosion and Sediment Control | Technical Paper

**ROOM:** 2202

**PDH:** 1

## Mass Grading: Controlling Site Runoff on the Ground

*Donald R. Pearson, Jr., CPESC, EI; Karyn Pageau, EI, CPESC; Nash Hardy*
**TRACK | TYPE:** Erosion and Sediment Control | Panel

**ROOM:** 2215C

**PDH:** 1

## Stormwater Management for Ground Mounted Solar Arrays in the Real World

*Steven D. Trinkaus, PE*
**TRACK | TYPE:** Stormwater Management | Case Study

**ROOM:** 2203

**PDH:** 1

## The Green Rush: Marijuana Cultivation Impacts and Opportunities in Northern California's "Emerald Triangle"

*Craig S. Benson, MS, CWS*
**TRACK | TYPE:** Other | Case Study

**ROOM:** 2211

**PDH:** 1

## Learn How IECA Membership Can Make a Difference in Your Career...

IECA provides a global network of opportunities, continuing education and industry insights to allow professionals to reach their full potential.

### Networking and Local IECA Chapters

IECA provides you with the ability to connect to a vibrant, active community of leaders who interact through local chapters and events.

### Professional Training and Development

Learn from thought leaders on today's most relevant challenges through onsite training, as well as live and on-demand IECA webinars on the IECA eHub. As a member you can register for IECA-sponsored conferences and events at a discount. Plus, most webinars are offered free to Professional Plus members!

### Member Resources and Tools

IECA hosts an online global community, career center, buyers' guide and member directory. Members can also take advantage of individual and group insurance products and credit union membership featuring high-yield accounts, mortgage financing and an IECA-branded VISA.

### Industry-specific Publications

IECA provides industry news and updates through the *Environmental Connection* quarterly magazine and our twice weekly snapshot of industry news from leading sources.

**Invest in Your Future! Visit [IECA.org](http://IECA.org) to Join.**

# TECHNICAL SESSIONS DESCRIPTIONS

## Vegetating Extreme Slopes Do's & Don'ts

Michael Everhart

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2204

**PDH:** 1

## What Specifications and Soil Tests Are Really Telling You

Lauren C. Alaniz

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2201

**PDH:** 1

11:30–11:50 am (Vendor Showcase)

## Applied Polymer Vendor Showcase

Seva Iwinski Bray, GA

**TRACK | TYPE:** Erosion and Sediment Control | Vendor Showcase

**ROOM:** Expo Hall IECA Learning Zone

**PDH:** 0.5

11:30 am–1:30 pm (Sponsored by LSC Environmental Products)

## Lunch in the Expo Hall

**TYPE:** Lunch and Networking

**ROOM:** Exhibit Hall D

12–1:30 pm

## IECA University Partner Poster Presentations

**TYPE:** Poster Presentation | IECA Learning Zone

**ROOM:** Exhibit Hall D

1:30–2:00 pm

## Awards Committee Meeting

**TYPE:** Committee Meeting

**ROOM:** 2213

## Common Mistakes We Make When Writing Stormwater Pollution Prevention Plans

Susannah Duly, MSc PG CPG CPESC

**TRACK | TYPE:** Regulations/Compliance | Workshop

**ROOM:** 2203

**PDH:** 0.5

## Creating Resilient Shorelines – How Envirolok Can Preserve and Restore Slopes, Waterways and Living Shorelines

Eric Seidl, LEED-AP

**TRACK | TYPE:** Erosion and Sediment Control | Product Case Study

**ROOM:** 2205

**PDH:** 0.5

## Exploring the Myths of Erosion and Sediment Control

**TYPE:** Erosion and Sediment Control | Workshop

**ROOM:** Exhibit Hall D (IECA Learning Zone)

**PDH:** 0.5

## Rethinking Diversity Equity and Inclusion

Sonny Johns, REP, CPESC, CISEC, CESSWI, CESC, EP

**TRACK | TYPE:** Business | Workshop

**ROOM:** 2206

**PDH:** 0.5

## Seed-Spec: A Native Seed Blend Development Tool

Nicholas Demel, MBA

**TRACK | TYPE:** Erosion and Sediment Control | Workshop

**ROOM:** 2211

**PDH:** 0.5

## Shining the Light on Temporary Stream Crossings: The Southeast Version

Karyn Pageau, EI, CPESC; Kristi C. Anspach, CPESC; Nash Hardy; Donald R. Pearson, Jr., CPESC, EI; Josh Nelson

**TRACK | TYPE:** Erosion and Sediment Control | Panel

**ROOM:** 2215C

**PDH:** 0.5

## Stormwater Management and Environmental Justice

Carrie Deitz

**TRACK | TYPE:** MS4 Management | Case Study

**ROOM:** 2204

**PDH:** 0.5

## The Benefits of Natives and Pollinators on Erosion Control Projects

Lauren M. Deem, MS, CESSWI

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2202

**PDH:** 0.5

## The Use of GeoCell Technology to Stabilize a Recreational Trail, Slope Erosion Control and Surficial Slope Stability at the Hood Pond Dam in Derry, New Hampshire

Keith C. Brooks, P.E., PE; Hannah Crooker, PE

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2201

**PDH:** 0.5

2:10–3:10 pm

## Assuring Our Erosion and Sediment Control Products and Materials Are Wildlife Friendly

Marc Theisen, M.Sc., CPESC, CPSWQ, CESSWI

**TRACK | TYPE:** Erosion and Sediment Control | Workshop

**ROOM:** 2215C

**PDH:** 1

## Biotic Soil Amendment (BSA) Benefits for in Highway Project Revegetation

Rene Barrientos; Lauren C. Alaniz

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2201

**PDH:** 1

## Chemical Treatment of Sediment Retention Ponds in an Ever-Changing Climate Landscape

Chris Wilcox, Ph.D.

**TRACK | TYPE:** Stormwater Management | Case Study

**ROOM:** 2203

**PDH:** 1

## Flocculant Dosing Workshop

Kyla J. Iwinski-Wood, Ph.D.

**TRACK | TYPE:** Erosion and Sediment Control | Workshop

**ROOM:** 2204

**PDH:** 1

## Professional Development Committee Meeting

**TYPE:** Committee Meeting

**ROOM:** 2213

## Risk-based Erosion Control Design-Port of Seattle 16 Center Runway Removal and Reconstruction

Dave Jenkins, CPESC, CESCL

**TRACK | TYPE:** Erosion and Sediment Control | Case Study

**ROOM:** 2206

**PDH:** 1

**Understanding and Improving the Hydraulic Performance of Wattles for Erosion and Sediment Control**

*Jannell E. Clampitt, EIT, CPESC-IT*

**TRACK | TYPE:** Erosion and Sediment Control | Technical Paper  
**ROOM:** 2211  
**PDH:** 1

**Using Skimmers in Sediment Basins to Reduce Sediment Discharges and Improve Water Quality**

*Brian M. Free, CPESC, CPSWQ, CIESC, CESCL, CCA; Warren Faircloth, BS*

**TRACK | TYPE:** Erosion and Sediment Control | Workshop  
**ROOM:** 2202  
**PDH:** 1

3:15-3:45 pm

**IECA Annual Meeting**

**TYPE:** Annual Meeting | Networking  
**ROOM:** 2505AB

4-5 pm

**Australasia Chapter Meeting**

**Room:** 2206

**Canada Chapter Meeting**

**Room:** 2215C

**Great Lakes Chapter Meeting**

**Room:** 2211

**Great Rivers Chapter Meeting**

**Room:** 2503AB

**Iberoamerica Chapter Meeting**

**Room:** 2213

**Mid-Atlantic Chapter Meeting**

**Room:** 2203

**Mountain States Chapter Meeting**

**Room:** 2204

**Northeast Chapter Meeting**

**Room:** 2205

**Pacific Northwest Chapter Meeting**

**Room:** 2205AB

**South Central Chapter Meeting**

**Room:** 2201

**Southeast Chapter Meeting**

**Room:** Off-Site at The Kill Devil Club

**Western Chapter Meeting**

**Room:** 2202



**All Natural and Biodegradable Products**

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• A primary application for Aspen Excelsior is in erosion control effects. It was one of the first wood by-products used for this purpose. The unique interlocking structure of excelsior allows it to bond with the soil when wet. Once locking-in, the excelsior protects the soil surface while encouraging quick vegetation regrowth. Excelsior erosion control products are extremely durable and have a long lifespan. An all-natural, 100% biodegradable material, they will eventually compost leaving no residue behind.

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# TECHNICAL SESSIONS SCHEDULE

## Wednesday, February 8, 2023

ROOM	2201	2202	2203	2204
8:30-9:40 am				
9:50-10:20 am	Vegetated Reinforced Soil Slope to Protect Wastewater Treatment Plant	Hydrostatic Pressure on Georgia Approved Silt Fences - An Update	Stormwater and Erosion and Sediment Control - One and the Same	The Other Side of Safety
10:30-11:30 am		Modeling Vegetated Buffer Sediment Load Reduction using RUSLE2	Monitoring Construction Site Runoff for BMP Performance	Considerations when Permitting Construction Projects at Existing Facilities
11:30 am-1:30 pm				
1-3 pm				
1-4 pm				

2205	2206	2211	2215C	OTHER
			<b>PANEL DISCUSSION</b> <b>Bioretention Design and Maintenance</b>	<b>ROOM 2503AB</b> <b>PANEL DISCUSSION</b> <b>Getting to Net Zero - Geosynthetics and Sustainability</b>  <b>2505AB</b> <b>PANEL DISCUSSION</b> <b>Flocculant Use on Construction Sites Discussion</b>  <b>EXPO HALL D</b> <b>IECA Sediment Basin Standard</b> <b>9:30 - 9:50 am</b>
<b>PRODUCT CASE STUDY</b> <b>Applied Polymer Case Study</b> <i>Sponsored by Applied Polymer</i>	<b>Evaluation of Rolled Erosion Control Product Fibers</b>	<b>Investigations for Non-Stormwater Discharge: Regulatory Requirements &amp; Evaluation Plans</b>		<b>ROOM 2213</b> <b>Education Committee Meeting</b>  <b>EXPO HALL D</b> <b>IECA Sediment Barrier Standard</b> <b>10:00 - 10:20 am</b>
	<b>The People's Park – Restoring Coastal Prairie at Houston's Memorial Park</b>	<b>Ecological Restoration in a Changing Climate</b>		<b>EXPO HALL D</b> <b>Porous Pavements</b> <b>10:30 - 10:50 am</b>
				<b>EXPO HALL D</b> <b>Taste of Kansas City - Closing Lunch</b>
				<b>FIELD TOUR</b> <b>Berkley Riverfront Development Tour</b>  <b>FIELD TOUR</b> <b>RideKC Streetcar Construction Tour</b>
				<b>FIELD TOUR</b> <b>Kansas City Smart Sewer System</b>

# TECHNICAL SESSIONS DESCRIPTIONS

WEDNESDAY, FEBRUARY 8, 2023

8:30–9:40 am

## Featured Panel Discussion: Bioretention Design and Maintenance

*Bill D. Murphy, PE*

**TRACK | TYPE:** MS4 Management |  
Featured Panel

**ROOM:** 2215C

**PDH:** 1

## Featured Panel Discussion: Getting to Net Zero – Geosynthetics and Sustainability

*Mike Callewaert; Dylan Armour*

**TRACK | TYPE:** Other | Featured Panel

**ROOM:** 2503AB

**PDH:** 1

## Featured Panel Discussion: Flocculant Use on Construction Sites Discussion

*Richard A. McLaughlin*

**TRACK | TYPE:** Stormwater Management  
| Featured Panel

**ROOM:** 2505AB

**PDH:** 1

9 am–2 pm

## Expo Hall Open

**ROOM:** Expo Hall D

9:30–9:50 am

## IECA Sediment Basin Standard

*Jaime C. Schussler, Ph.D., CPESC IT, EIT*

**ROOM:** Expo Hall D (IECA Learning Zone)

9:50–10:20 am

## Applied Polymer Product Case Study

*Seva Iwinski Bray, GA*

**TRACK | TYPE:** Erosion and Sediment  
Control | Product Case Study

**ROOM:** 2205

**PDH:** 1

## Education Committee Meeting

**TYPE:** Committee Meeting

**ROOM:** 2213

## Evaluation of Rolled Erosion Control Product Fibers

*Kevin Boyce, CPESC-IT*

**TRACK | TYPE:** Erosion and Sediment  
Control | Workshop

**ROOM:** 2206

**PDH:** 1

## Hydrostatic Pressure on Georgia Approved Silt Fences – An Update

*Gary L. Hawkins, Ph.D.; Ernest W. Tollner, PE*

**TRACK | TYPE:** Erosion and Sediment  
Control | Case Study

**ROOM:** 2202

**PDH:** 1

## Investigations for Non-Stormwater Discharge: Regulatory Requirements & Evaluation Plans

*Jimmy Greene*

**TRACK | TYPE:** Regulations/Compliance  
| Case Study

**ROOM:** 2211

**PDH:** 1

## Stormwater and Erosion and Sediment Control – One and the Same

*Anna Griggs*

**TRACK | TYPE:** Stormwater Management  
| Workshop

**ROOM:** 2203

**PDH:** 1

## The Other Side of Safety

*LaRhonda Julien*

**TRACK | TYPE:** MS4 Management |  
Workshop

**ROOM:** 2204

**PDH:** 1

## Vegetated Reinforced Soil Slope to Protect Wastewater Treatment Plant

*Stefano Rignanes, M. Sc.*

**TRACK | TYPE:** Erosion and Sediment  
Control | Case Study

**ROOM:** 2201

**PDH:** 1

10–10:20 am

## IECA Sediment Barrier Standard

*Jarrell B. Whitman, Ph.D., PE, CPESC*

**ROOM:** Expo Hall D (IECA Learning Zone)

10:30–10:50 am

## Porous Pavements

*Chris Estes*

**ROOM:** Expo Hall D (IECA Learning Zone)

10:30–11:30 am

## Considerations When Permitting Construction Projects at Existing Facilities

*Kenneth A. Gouvion, MS Biology, CISEC, CPESC*

**TRACK | TYPE:** Stormwater Management  
| Case Study

**ROOM:** 2204

**PDH:** 1

## Ecological Restoration in a Changing Climate

*Craig S. Benson, MS, CWS*

**TRACK | TYPE:** Other | Workshop

**ROOM:** 2211

**PDH:** 1

## Modeling Vegetated Buffer Sediment Load Reduction Using RUSLE2

*Brian G. Roche, EI*

**TRACK | TYPE:** Erosion and Sediment  
Control | Technical Paper

**ROOM:** 2202

**PDH:** 1

## Monitoring Construction Site Runoff for BMP Performance

*Richard A. McLaughlin*

**TRACK | TYPE:** Erosion and Sediment  
Control | Workshop

**ROOM:** 2203

**PDH:** 1

## The People's Park – Restoring Coastal Prairie at Houston's Memorial Park

*Matt Skinner, MBA, CPESC, CESCL; John Moss*

**TRACK | TYPE:** Erosion and Sediment  
Control | Case Study

**ROOM:** 2206

**PDH:** 1

11:30 am–1:30 pm (Sponsored by CMS Environmental,  
Ecoplant Environmental (CISEC) and Profile Products)

## Taste of Kansas City - Closing Lunch

**TYPE:** Lunch and Networking

**ROOM:** Exhibit Hall D

1–3 pm

## Field Tour: Berkley Riverfront Development

*Joe Perry*

**PDH:** 2

## Field Tour: RideKC Streetcar Construction

*Margaret Green*

**PDH:** 2

1–4 pm

## Field Tour: Berkley Riverfront Development

*Jeff Doudrick, PE; Kyle Tonjes, PE; Madison Gilber, PE*

**PDH:** 3

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## Monday, February 6

### TECHNICAL SESSIONS SCHEDULE

ROOM	2207	2208	2209	2210	2215B	2501A
8-9:30 am						<b>OPENING PLENARY</b> Kansas City Levees Project: Reliability and Resilience
9:45-11:45 am	<b>WORKSHOP</b> Geosynthetic Reinforced Embankments on Soft Foundations	<b>WORKSHOP</b> Geosynthetic Stabilization of Granular Layers in Paved Roads		<b>WORKSHOP</b> 30 Years of Lessons Learned on Geomembrane Installation Quality	<b>WORKSHOP</b> Learn The Concept of The Dewatering Tube System Through Experience	
Noon-1:30 pm						Awards Luncheon
1:30-3 pm	<b>PANEL DISCUSSION</b> Best Practices for the Inspection of Segmental Retaining Walls	<b>SPECIAL SESSION</b> Alternative Backfill Materials Applicable to MSE Structures	Geosynthetic Properties and Laboratory Testing		<b>ROUNDTABLE DISCUSSION</b> Women in Geosynthetics	
3:15-4:30 pm	Hydraulic and Coastal Applications Pt. 1	<b>SPECIAL SESSION</b> Applications of Fabricated Geosynthetics	Electric Leak Location	Walls, Slopes and Embankments		

### TECHNICAL SESSIONS DESCRIPTIONS

9:45-11:45 am | Room: 2207

#### WORKSHOP

##### Geosynthetic Reinforced Embankments on Soft Foundations

*Instructor: Bob Holtz, University of Washington*

The design and construction of embankments on very soft foundations is one of most challenging geotechnical problems. Without some type of foundation soil improvement, failures are common especially on very soft sites. Soil reinforcement with geosynthetics is often the only economical solution, and some projects could not be constructed without geosynthetics. The lecture begins with a brief overview of conventional treatments for soft ground construction. Early case histories, mostly failures, are described that provided valuable lessons and concepts that we use today for design and construction. Analysis and design procedures are then outlined, along with the selection of the required properties for the geosynthetics and embankment soils. Sample specifications, cost considerations, as well as inspection and instrumentation, are also described. Because proper construction is so critically important for success of these projects, a detailed discussion of construction procedures completes the course. Detailed lecture notes and copies of the course slides will be available.

9:45-11:45 am | Room: 2208

#### WORKSHOP

##### Geosynthetic Stabilization of Granular Layers in Paved Roads

*Instructors: Erol Tutumluer, University of Illinois at Urbana-Champaign; Jorge Zornberg, University of Texas at Austin*

Geosynthetic stabilization is often associated with a paved road when an aggregate base/subbase is constructed over a subgrade having CBR ranging from 3 to 8 (FHWA, 2008). The main benefits of unbound aggregate layer stabilization include (1) decreasing time-dependent rutting by providing an increased modulus of unbound aggregates at the time of construction and added confinement from compaction-induced geosynthetic tension and (2) minimizing degradation of the modulus of unbound aggregates over time by proper control of lateral displacements in unbound aggregates and maintaining initial confinement of unbound aggregates. The identified mechanism is the development of lateral restraint through tension and shear transfer to minimize the lateral displacement of unbound aggregates. Both friction and interlocking between aggregates and geosynthetics contribute to the base stabilization. Modern design procedures are needed for establishing more common use

of geosynthetics for base stabilization within the framework of a mechanistic-empirical pavement design approach. This workshop is intended to present, review and discuss the latest developments in the quantification of aggregate layer stiffness characteristics of the geosynthetic-aggregate geocomposite, aka, the mechanically stabilized layer.

9:45-11:45 am | Room: 2215B

#### WORKSHOP

##### Learn the Concept of the Geotextile Dewatering Tube System Through Experience

*Instructors: Ike Chen, ACE Geosynthetics Inc.; Zoe Lin, ACE Geosynthetics Inc.; Marco A. Sanchez, ML Ingenieria; Seva Iwinski Bray and Eddie Snell, Applied Polymer Systems, Inc.; Carlos Moreno, Pavco Wavin Geosynthetics (Columbia)*

Geotextile tube is proven to be a cost-effective solution for some hydraulic and civil engineering applications. In addition to this, geotextile tube is also recognized as a good approach for some dewatering needs. There are many factors that can affect the dewatering performance of a geotextile tube besides the characteristics of it. This workshop will focus on understanding how the selection of geotextile and polymer's dosing ratio affect the dewatering performance of geotextile tube by practical experiment.

9:45–11:45 am | Room: 2210

### WORKSHOP

#### 30 Years of Lessons Learned on Geomembrane Installation Quality

Instructor: Glen W. Toepfer, CQA Solutions, LTD

Geomembranes are a vital and primary barrier to prevent environmental contamination. Given the critical role of geosynthetics in environmental containment systems, correctly executing field construction is imperative to successful projects. So where do you go to learn correct construction processes, quality control, quality assurance and common pitfalls? The answer for most is you don't. As a word-of-mouth trade there has been a significant lack of formalization of field processes. This workshop is here to share lessons learned from over 30-years of field CQA throughout the United States. We will share lessons learned from all project phases – from conception through operations, as each phase is critical to long-term performance of the geomembrane barrier. Issues that should have been caught are often missed or overlooked, leading to potential catastrophic long-term impacts on the ability of a geomembrane to meet its designed/required containment objectives. Lack of knowledge is a key reason things get missed during construction. Attendees will examine physical samples from the field, view numerous photographs and/or video while given a detailed discussion of key visual indicators, consequences, preventative measures, and proper resolution of issues. Discussions will also include proven best practices that are often overlooked or not used. Topics will include tips for identifying potentially suspect/inferior materials before shipment to site, discussion of common and not so common pitfalls in geomembrane containment system installations which compromise quality objectives, and the often-misunderstood limitations of new/developing technologies. Two hours may not make you an expert of geosynthetics, but it can revolutionize how your field construction is executed to ensure better projects and a better environment.

1:30–3 pm | Room: 2215B

### ROUND TABLE DISCUSSION

#### Women in Geosynthetics Round Table Discussion

Organized by Fabricated Geomembrane Institute (FGI)



Moderator: Jordan Wiechmann, Intertape Polymer Group

Panelist: Kristin Sample-Lord, Villanova University; Roxalana Dobransky, Layfield Geosynthetics; Maya Innis, International Cover Systems; Tina Oliver, Seaman Corp.

The Fabricated Geomembrane Institute at the University of Illinois has created a group titled, "Women in Geosynthetics (WIG)" in order to promote the advancement of women in the geosynthetic industry through education, networking and mentoring opportunities. Women in Geosynthetics will host a panel/round table discussion that includes, but not be limited to, the following points of interest:

- Maintaining a work/life balance
- Maximizing the benefits of social media
- Opportunities for women in the geosynthetics industry
- Recruiting women into the geosynthetics industry
- Professional and collegiate mentorship opportunities
- Partnering women professionals with female graduate and undergraduate students

1:30–3 pm | Room: 2207

### PANEL DISCUSSION

#### Best Practices for the Inspection of Segmental Retaining Walls

Moderator: Gabriela Mariscal, Interlocking Concrete Pavement Institute and the National Concrete Masonry Association

Panelists: Glenn Herold, Brampton Brick Limited; Don Armstrong, Oldcastle Architectural Products Group; Scott Miller, Scott Miller Design Build Consulting Services LLC

This panel discussion introduces the best practices for the inspection of gravity and reinforced soil segmental retaining walls (SRWs). This panel will discuss the industry recommendations for design, detailing, materials, construction sequence, and testing necessary at every step when completing earth retaining segmental retaining wall projects. The topics cover commercial and municipal projects but can easily apply to any other type of project regardless of the design method.

1:30–3 pm | Room: 2209

#### Geosynthetic Properties and Laboratory Testing

Chairs: S. Mustapha Rahmaninezhad, Thang Pham and Thuy Vu, University of Texas Rio Grande Valley

#### Long-term Hydraulic Conductivity of Bentonite-Polymer Geosynthetic Clay Liner to Coal Combustion Product Leachates

Hanrui Zhao, Dong Li and Kuo Tian, George Mason University

#### An Evaluation of Soil-Geogrid Interaction Models

David Marx and Jorge Zornberg, University of Texas at Austin

#### Quantification of Suction-driven Flow of Enhanced Lateral Drainage Geotextiles

Gino Sicha Flores, University of Texas at Austin; Kangwei Chen, Tongji University; Jorge Zornberg, University of Texas at Austin

#### Hydraulic Conductivity of Lighter Bentonite-Polymer Geosynthetic Clay Liners

Dong Li and Kuo Tian, George Mason University; Reza Gorakhki, and Michael Donovan, Minerals Technologies Inc.

#### Experimental Investigation on the Effect of Fines Content on the Drainage Performance of Wicking and Non-wicking Geotextiles

Javad Galinmoghdam, Xiong Zhang and Mahtab Delfanzari, Missouri University of Science and Technology

#### White Polyethylene Geomembrane: Forensic and Laboratory Evidence for Superior Durability

Boyd Ramsey, Boyd Ramsey Consulting LLC; Adam Maskal, Solmax Geosynthetics

Session Sponsored by Multi-Flow



## Monday, February 6 | TECHNICAL SESSIONS DESCRIPTIONS

1:30–3 pm | Room: 2208

### SPECIAL SESSION

#### Alternative Backfill Materials Applicable to MSE Structures

Organized by Association for Mechanically Stabilized Earth (AMSE)



Moderator: Robert A Gladstone, Association for Mechanically Stabilized Earth (AMSE)

Mechanically stabilized earth (MSE) structures depend on frictional interaction between reinforcements and reinforced backfill for their internal stability. Therefore, the physical, mechanical and electrochemical properties of the chosen backfill are critical to designing safe structures which will provide a long service life. At sites having weak foundation soils, backfill unit weight may negatively affect external stability. For any project, if naturally occurring backfill satisfying both internal and external stability requirements is not available on site or from an economical haul distance, there are alternative backfill materials which may be considered.

Alternative backfills for MSE structures are typically manmade or reprocessed/recycled from manmade materials. Examples of such materials include low density cellular concrete, foamed glass aggregate, vitrified shale, clay and slate, and recycled concrete. This special session will educate attendees about these four alternative MSE backfills, including their physical, mechanical and electrochemical properties, their cost implications, and any special considerations when used to construct MSE structures. Example MSE projects may be mentioned in this session but, for case history presentations, conference attendees should plan to attend the companion Special Session, MSE Structure Case Histories Using Alternative Backfill Materials.

#### Relevant Physical Properties of Rotary Kiln Produced Expanded Shale, Clay, and Slate Lightweight Aggregate for MSE Applications

Jack Moore, Arcosa Lightweight

#### Design and Construction Considerations for MSE Systems with Foamed Glass Aggregate Backfill

Theresa Andrejack Loux, AeroAggregates of North America

#### Low Density Cellular Concrete as MSE Backfill

Nico Suttmoller, Aerix Industries

#### Are We Ready to Construct MSE Walls with RCA as Backfill?

Burak Tanyu, George Mason University

3:15–4:30 pm | Room: 2207

#### Hydraulic and Coastal Applications Pt. 1

Chair: Nathalia De Castro

#### Dredging Works and Geotextile Tube Applications for The Construction of Deep C Industrial Zones, Vietnam

Lum Kong Lim, TenCate Geosynthetics Asia Sdn Bhd; Soon Hoe Chew, National University of Singapore; Jasper Verstreep, Independent Professional; Jun Yuen Tan, TenCate Geosynthetics Asia Sdn Bhd

#### Investigation of Geotextile Integrity Subjected to Vertical Drains Installation

Jun Ming Soh and Soon Hoe Chew, National University of Singapore; Yeow Chong Tan, Audrey Yim Hor Mun, Abel Quek, Dao Jing Lim and Shanyin Kee, Housing & Development Board

#### Use of Treated Soft Soil as Infill Material in Geotextile Tubes

Soon Hoe Chew and Jun Ming Soh, National University of Singapore; Yeow Chong Tan, Audrey Yim Hor Mun, Abel Quek Jia Wei, Dao Jing Lim and Shanyin Kee, Housing & Development Board

#### 25m3 Geotextile Bags and Geotextile Tubes Used to Protect a 42" Pipeline Against Scouring, 30M Deep on the Seabed, Covenas, Colombia, S.a

Nicolas Ruiz R, Solmax; Mauricio Rendón G, Geosoluciones de Ingenieria SAS

3:15–4:30 pm | Room: 2209

#### Electric Leak Location

Chairs: Shawn-Milan Calendine, hydroGEOPHYSICS Inc.; Abigail Gilson-Beck, TRI Environmental, Inc.; Jimmy Youngblood, Solmax

#### Increasing the Sensitivity of the Dipole Method: A Case Study

Abigail Gilson-Beck, TRI Environmental, Inc.; Richard Thiel, Thiel Engineering, Inc.

#### Comparative Analysis of Electrical Leak Location Methods on Exposed Geomembranes

Carl Charpentier, Groupe Alphard; Abigail Gilson-Beck, TRI Environmental, Inc.; Matthew Kemnitz, Leak Location Services, Inc.

#### The Effect of Cover Material Conductivity on Dipole Method Testing

Abigail Gilson-Beck, TRI Environmental, Inc.; Tyler Corby, TRI Environmental, Inc.

#### Development of a Conductive Textile and Its Uses in Electrical Leak Location (ELL) Survey of Geosynthetic Containment Systems

Rohit Sati, Layfield

Session sponsored by Layfield



3:15–4:30 pm | Room: 2208

### SPECIAL SESSION

#### Applications of Fabricated Geosynthetics

Organized by Fabricated Geomembrane Institute (FGI)



Chair: Timothy Stark, University of Illinois at Urbana-Champaign

#### PVC Geomembranes in Agricultural Uses

Adolpho Meldau and Jucieli Duarte, Cipatex Group Cerquilho

#### Carbon Footprint Calculator

Timothy D. Stark, University of Illinois at Urbana-Champaign

#### Payment Bases in Liner Projects

Duff Simbeck, Simbeck and Associates, Inc.

#### Performance Comparison of Evapotranspiration and Engineered Turf Covers

Md Jobair Bin Alam, Maalvika Aggarwal, Ram Ray, Prairie View A&M University

#### Protection of Geofoam using High Strength, Chemically Resistant Geomembranes

William D. Shehane and Tina Oliver, Seaman Corporation; Felon R. Wilson, Consultant

#### Case Study: Lake Forest Reservoir Relining and Floating Cover

Brian Fraser, Layfield Canada; Douglas Hilts, Hilts Consulting Group; Robert Emmons, Layfield USA

Session sponsored by Megaplast



3:15–4:30 pm | Room: 2210

**Walls, Slopes, and Embankments**

*Chair: Boyd Ramsey, Boyd Ramsey Consulting*

**Impact of Primary Geogrids Spacing and Secondary Geogrids on Geosynthetic Reinforced Soil-Integrated Bridge Systems (GRS-IBS) and Lateral Earth Pressure**

*Bahia EL Refai and Dr. Patrick Naughton, Atlantic Technological University Sligo*

**Design of True Abutments of Mechanically Stabilized Soil Walls Under High Seismicity in Guatemala City**

*Alberto José Pérez Zarco, Ingnova Guatemala*

**Applications of Geosynthetics for Building Passive Protective Structures against Rockfall, Debris Flows and Snow Avalanches**

*Stéphane Lambert, INRAE; Maddalena Marchelli, Politecnico di Torino; Reza Mohamadi, Engineered Asset Upkeep Ltd.; Ragavendra Pavan, Strata Geosystems (India) Pvt. Ltd.; Pietro Rimoldi, Eng. Pietro Rimoldi*

**Embankment Reinforcement Using the World's Strongest Geogrid—Florianopolis Ring Road, Brazil**

*Emilia Andrade, HUESKER Ltda.; Carlos Rodriguez and Vona Ojaruega, HUESKER Inc.; Cássio Carmo and Leonardo Santana, HUESKER Ltda.*



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## Tuesday, February 7

### TECHNICAL SESSIONS SCHEDULE

ROOM	2207	2208	2209	2210	2215A	LEARNING ZONE (EXHIBIT HALL)
8–9:30 am					<b>ROBERT M. KOERNER AWARD AND LECTURE</b> <b>From Zero Leak at end of Geomembrane Installation to Zero Leakage in Service</b>	
9:45–11:15 am	<b>PANEL DISCUSSION</b> <b>Chin Wagging with Esteemed Geosyntheticans</b>	<b>SPECIAL SESSION</b> <b>MSE Structure Case Histories Using Alternative Backfill Materials</b>	Case Histories			
11:30 am–1:30 pm						<b>Student Research Showcase</b> <small>SEE PAGE 47 FOR DETAILS</small>
1:30–3 pm	<b>SPECIAL SESSION</b> <b>Panel Discussion: How to Write a Good Geomembrane Spec</b>		Innovative Solutions Pt. 1	Geosynthetics in Roadways		
3:15–4:45 pm	<b>SPECIAL SESSION</b> <b>Panel Discussion: Improved Pavement Design—A Different Conversation</b>	<b>SPECIAL SESSION</b> <b>Recent Advances in MSE Walls Analysis, Design and Performance</b>	Hydraulic and Coastal Applications Pt. 2	<b>SPECIAL SESSION</b> <b>Exposed Geosynthetic Performance</b>		

### KEYNOTE SESSION

**Robert M. Koerner Award and Lecture:  
From Zero Leak at End of Geomembrane  
Installation to Zero Leakage in Service**

*Tuesday, February 7, 2023 | 8–9 am*

*J.P. Giroud, ECP, Ph.D., Past President  
International Geosynthetics Society*

*Dr. Giroud will join us live from France with  
a lecture followed by a Q&A session.*

Zero leak at end of geomembrane installation may be nearly achieved when electrical leak location surveys are performed by first-class operators working under ideal conditions; and nearly zero leakage in service is a legitimate goal under ideal conditions. However, there are still too many instances of failures of geomembrane-lined containment facilities, often as a consequence of improper design, and generally resulting in significant leakage. The lecture will present mechanisms of failure, with actual examples whenever possible, and will recommend design measures to avoid each specific failure mechanism. The conclusion of the lecture will point out that the use of geomembranes in containment facilities is essential for the protection of the environment, not only by preventing migration of containments into the ground but also by reducing water waste. Indeed, saving water will be a major economic and environmental challenge for the coming decades.

## TECHNICAL SESSIONS DESCRIPTIONS

9:45–11:15 am | Room: 2209

### Case Histories

*Chairs: John Lostumbo, Solmax; C. Joel Sprague, TRI Environmental, Inc.*

### Lessons Learned From Three Failures

*Robert Holtz, University of Washington*

### Reinforced Soil Embankment for Rockfall Protection - Case History

*Marianna Ferrara and Stefano Rignanese, Officine Maccaferri S.p.A*

### Mitigation of Cracks in Flexible Pavements With Expansive Subgrade Using Geosynthetics: A Case Study in Austin, Texas

*Natalia Correia, Federal University of Sao Carlos; V. Vinay Kumar and Jorge Zornberg, University of Texas at Austin*

### Lining a Highly Irregular Vertical Wall with Polyurea/Conductive Geotextile Geomembrane

*David Martin, Quantum Technical Services Ltd.; Rohit Sati, Layfield Group*

### The Use of Geotextile Tubes as the Containment Dyke for the Construction of Davao Coastal Highway, Philippines

*Tolentino Renato and Lum Kong Lim, TenCate Geosynthetics Asia; Laguitao Kenneth, Arizona Geosynthetics Inc.; Mun Hon Woo, TenCate Geosynthetics Asia*

### Five Geotextile Tube Projects Review for Survivability and Performance After Decades in Challenging Environments

*Thomas Stephens and Nathalia Castro, Solmax*

9:45–11:15 am | Room: 2208

### SPECIAL SESSION

#### MSE Structure Case Histories Using Alternative Backfill Materials

*Organized by Association for Mechanically Stabilized Earth (AMSE)*



*Moderator: Robert A Gladstone, Association for Mechanically Stabilized Earth*

Numerous MSE structures have been built using manmade or reprocessed/recycled materials such as low density cellular concrete, foamed glass aggregate, vitrified shale, clay and slate, and some industrial waste products. These materials are often selected because of their lower unit weights compared to naturally occurring backfills. Reduced unit weight can help address design challenges caused by settlement-prone or otherwise poor foundation soils, but the selected backfill must also have the properties necessary for MSE structure stability and long-term performance. Presenters

in this special session will provide case histories of geosynthetic-reinforced (and one or two steel-reinforced) MSE structures constructed with alternative backfills, including referencing project conditions driving backfill selection and any special construction practices related to use of that backfill. Conference attendees should plan to attend the companion special session, Alternative Backfill Materials Applicable to MSE Structures, for more detailed information on several alternative MSE backfills.

#### Reinforcing Alternative Backfills with Tensar Geogrids

*Robert Johnson, Tensar International Corporation*

#### Reinforced Earth Company Experience with Alternative Backfill Materials

*Robert Lozano, P.E., The Reinforced Earth Company*

#### Alternative Backfills for MSE Structures

*John M. Lostumbo, Solmax,*

9:45–11:15 am | Room: 2207

### PANEL DISCUSSION

#### Chin-Wagging with Esteemed Geosyntheticans

*Moderator: Eli Cuelho, TRI Environmental, Inc.*

*Panelists: Melissa Holbrook, Solmax; Daniel Selander, WINFab USA, GMA; Michael Simac, Earth Improvement Technologies, Inc.; Han Wang, University of Illinois at Champaign-Urbana; Jorge Zornberg, University of Texas at Austin*

Panelists will participate in a moderated open discussion to talk about how they found themselves working in the geosynthetics field, what influences helped shape their path in geosynthetics, what motivates them on a day-to-day basis, what makes a good geosynthetican, what they see for the future of geosynthetics, how to inspire the next generation of geosyntheticans, and more. Discussion will be spontaneous and not include any formal presentations.

1:30–3 pm | Room: 2210

#### Geosynthetics in Roadways

*Chairs: Dr. V Vinay Kumar, University of Texas at Austin; Dr. Danial Mirzaiyanrajeh, Solmax*

#### Effect of Tensile Strength Development in Stabilisation Geogrids on Bearing Capacity in Pavements and Railway Application

*K. Zamara, Tensar International Ltd.; J. Kawalec, Silesian University of Technology; P. Mazurowski, Tensar Polska Sp. z o.o.; G. Fowmes, Warwick University*

#### Role of High-Modulus Geogrids in Improving Base Layer Properties

*Krishneswar Ramineni, Anand J. Puppala, Md Ashrafuzzaman Khan, Nripoyoti Biswas and Prince Kumar, Texas A&M University*

#### Local Stiffness Enhancement by Multi-Axial Geogrid Stabilization Evaluated Through Shear Wave Measurement

*Mingu Kang, Han Wang, Issam I.A. Qamhia and Erol Tutumluer, University of Illinois at Urbana-Champaign; Mark H. Wayne, Tensar International Corp.*

#### Evaluation of Geosynthetic-reinforced Asphalt Milling Characteristics and Suitability as Pavement Base Course

*Ashray Saxena, University of Texas at Austin; Natalia S. Correia, Federal University of Sao Carlos; V. Vinay Kumar and Jorge Zornberg, University of Texas at Austin*

#### Role of Geosynthetics in Improving Freeze-Thaw Resistance of Bases—A Literature Survey

*Jiming Liu, Cheng Lin, and Mian Huang, University of Victoria; Sanat Pokharel, Stratum Logics*

1:30–3 pm | Room: 2209

#### Innovative Solutions Pt. 1

*Chairs: Joseph Scalia IV, Colorado State University; Laura Spencer, Solmax*

#### Polymeric Alloy Geocell Reinforced Design for a Heavily Loaded Gravel Pad with Restricted Fill Thickness

*Arghya Chatterjee and Sanat Pokharel, Stratum Logics; Marc Breault, Paradox Access Solutions*

#### Emerging Uses of Geosynthetic Floating Covers in the Energy Sector

*Alex Gersch, Layfield Australia*

#### Feasibility Evaluation of Lightweight Aggregate to Improve Performance of Load Transfer Platforms in Geosynthetic-Reinforced Embankments

*Yu-qiu Ye and Jie Han, University of Kansas; Rui Rui, Wuhan University of Technology*

#### Geogrid-Reinforced Timber Pile Supported Modular Block Retaining Wall

*Mickey Snider, Wang Engineering, Inc.*

## Tuesday, February 7 | TECHNICAL SESSIONS DESCRIPTIONS

1:30–3 pm | Room: 2207

### SPECIAL SESSION

#### Panel Discussion: How to Write a Good Geomembrane Spec

Organized by Fabricated Geomembrane Institute (FGI)



Moderator: Timothy Stark, University of Illinois at Urbana-Champaign

Panelists: Edward Silva, e Squared Technical Textiles; Ray Peebles, Cooley Group; Neil Nowak; Patrick Elliott, Vialflex

This panel discussion will assemble industry leaders to discuss the importance of writing a good geomembrane specification and not using an old specification that may or may not be for the type of geomembrane intended for the current project. In particular, the panelists will discuss the most important parameters of a geomembrane specification for a particular application, such as functionality, longevity, and constructability. Some of the important parameters to consider when preparing a specification may include chemical resistance, ability to accommodate differential settlement, dimensional stability to control wrinkles, ability to factory fabricate large panels to reduce field time and exposure, and seam strengths, but properties should be keyed to the application of the geomembrane. For example, if there are concerns about subgrade compaction, specifying a material with higher multiaxial elongation properties may be desirable. It is also important that engineers understand that most material types can have very different properties and it is important that designers select an appropriate geomembrane to meet project requirements. This will help avoid confusion or blended specifications. Finally, the importance of specifying relevant and consistent properties, e.g., long-term durability in terms of plasticizer retention instead of OIT values for a PVC geomembrane. Afterwards, the panelists will answer attendees questions about writing a good geomembrane specification.

3:15–4:45 pm | Room: 2208

### SPECIAL SESSION

#### Recent Advances in MSE Walls Analysis, Design and Performance

Chairs: Richard J. Bathurst, Royal Military College Of Canada; Patrick J. Fox, Pennsylvania State University

#### Effect of Spread Footing Loads on Stability of Geosynthetic-Reinforced Retaining Walls

S. Mustapha Rahmaninezhad, University of Texas Rio Grande Valley, Terracon Consulting Inc.; Thang Pham and Thuy Vu, University of Texas Rio Grande Valley; Ashley Alanis and Alfonso A. Soto, Terracon Consulting Inc.

#### Migrating From the Simplified Method to the Stiffness Method for Internal Stability Design of MSE Walls

Richard J. Bathurst, Royal Military College of Canada; Tony M. Allen, WSDOT (retired)

#### New Closed-Form Analytical Solutions for Total Reinforcement Force in a GRS Retaining Wall at the Limit State

Patrick J. Fox, Pennsylvania State University

3:15–4:45 pm | Room: 2210

### SPECIAL SESSION

#### Exposed Geosynthetic Performance

Organized by Geosynthetic Institute (GSI)



Chair: George R. Koerner, Geosynthetic Institute (GSI)

#### Evaluation of the UV Exposure of Polymeric Geomembranes Using Geographic and Climate Data

David Beaumier and Ali Fazli, SAGEOS-CTT Group

#### Engineered Turf Landfill Closure: How Long Will It Last?

Bryan Scholl and Ming Zhu, Watershed Geosynthetics; Zehong Yuan, SGI Testing Services

#### Exposed NPNW GT Exposed Npnw GT Performance at a Large Surface Impoundment For Nearly One Year

Stephan Fourmont, Afitex-Textel Geosynthetics Inc.; Silda Rivas, Alkegen; George R. Koerner, Geosynthetic Institute (GSI)

#### Exposed Geomembrane Cover Performance at Polk County Landfill in Florida

George A. Reinhart, III, Jones Edmunds & Associates, Inc.; George R. Koerner, Geosynthetic Institute (GSI)

3:15–4:45 pm | Room: 2209

### Hydraulic and Coastal Applications Pt. 2

Chair: Nathalia De Castro

#### Installation of Geotextile Tubes as Perimeter Bund in Mega-Reclamation Project at Penang, Malaysia

Soon Hoe Chew and Jun Ming Soh, National University of Singapore; Lum Kong Lim, Jun Yuen Tan and Kok Hau Siew, TenCate Geosynthetics Asia; Albert Ang Cheng Poh, Gateway Structure Sdn Bhd

#### Hydraulic Roughness Testing of Geosynthetics

C. Joel Sprague and James E. Sprague, TRI Environmental

#### Effectively Utilizing a Nature-Based HPTRM Solution for Municipal Drainage Channels

Drew Loizeaux, Jared Hill and Matt Patton, Propex

#### Shoreline Protection in Kerala Coastline (India) And Use of Geosynthetics

Antony Balan Thadicionar, Karunya University, Coimbatore, India/Central Water Commission, India

3:15–4:45 pm | Room: 2207

### SPECIAL SESSION

#### Panel Discussion: Improved Pavement Design—A Different Conversation

Organized by Federal Highway Administration (FHWA)



Moderator: Silas C. Nichols, DOT | FHWA | Office of Bridges and Structures

Panelists: John Donahue, Missouri Department of Transportation; Jennifer Albert, Federal Highway Administration; Raul Velesquez, Minnesota Department of Transportation

This panel of pavements engineers will discuss the current state of pavement design and construction from their perspectives in state departments of transportation (DOT) and the Federal Highway Administration (FHWA) and will address common barriers and opportunities for increased use of geosynthetics in pavements.

### Ancillary Meetings

OPEN TO THE PUBLIC

#### Geosynthetic Institute (GSI) Annual Meeting

4:45–5:15 pm | Room 2210

#### International Association of Geosynthetic Installers (IAGI) Geogames Reception

5:30–7:30 pm | Room 2215A

#### IGS North America General Meeting

6–6:45 pm | Room 2208

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## Wednesday, February 8

### TECHNICAL SESSIONS SCHEDULE

ROOM	2207	2208	2209	2210	LEARNING ZONE (EXHIBIT HALL)
8–9:30 am	<b>Mining Applications</b>	<b>SPECIAL SESSION</b> <b>Fabricated Geosynthetics for Water Retention Projects</b>	<b>Innovative Solutions Pt. 2</b>	<b>SPECIAL SESSION</b> <b>GMA Annual Meeting and Invited IGS Presentation</b>	
9:30–11:20 am					<b>Exhibitor Showcase</b> <i>SEE PAGE 47 FOR DETAILS</i>
9:45–11:15 am		<b>SPECIAL SESSION</b> <b>Importance of Operation and Maintenance Manuals</b>	<b>Landfill Covers and Liner Systems</b>	<b>Geosynthetic Wettability and Performance</b>	

### TECHNICAL SESSIONS DESCRIPTIONS

8–9:30 am | Room: 2208

**SPECIAL SESSION**

**Fabricated Geosynthetics for Water Retention Projects**

Organized by Fabricated Geomembrane Institute (FGI)



Chair: Timothy Stark, University of Illinois at Urbana-Champaign

**Best Practices for Design and Installation of Geosynthetic Floating Covers**

Brian Fraser, Layfield USA; Douglas Hilts, Hilts Consulting Group

**Operation and Maintenance Guideline for Water Reservoirs**

Duff Simbeck, Simbeck and Associates; Ronald Frobel, R.K. Frobel & Associates Consulting Engineers; Timothy Stark, University of Illinois at Urbana-Champaign; Prabeen Joshi, Arcadis Canada; Matthew Kemnitz, Leak Location Services, Inc.

**Chambers Dam Reservoir Remediation: Case Study**

Patrick Elliott, Viaflex

**New Developments in PVC-EIAs for Potable Water Containment Applications**

J.P. Lens, Lance Reed and Ray Peebles, Cooley Group

**Netherlands Motorway Underpass Case Study**

Dick van Regteren and Charlie Angenant, Genap

Session sponsored by Layfield



8–9:30 am | Room: 2207

**Mining Applications**

Chairs: Prabeen Joshi, Arcadis Canada; Mark Simpson, Layfield Group

**Initial Stress Condition and the Hydraulic Conductivity of BPC Geosynthetic Clay Liners for Acidic Heap Leach Solutions**

Craig Benson and Yu Tan, University of Wisconsin-Madison; Jimmy Youngblood, Solmax Inc.; Sabrina Bradshaw, University of Wisconsin-Madison

**High Performance Geomembranes in Aggressive Mining Applications**

Alex Gersch, Layfield Australia

**Sustainable Practices with Geosynthetics in Mining: Review of Select Case Studies**

José Pablo George and Michael Dickey, Presto Geosystems

8–9:30 am | Room: 2209

**Innovative Solutions Pt. 2**

Chairs: Joseph Scalia IV, Colorado State University; Laura Spencer, Solmax

**Evolution in Geosynthetics Starts with Utilizing Data Technology**

Greg Pignataro and Evan Bao, COMANCO

**Decentralized Stormwater Runoff Treatment with Active Geocomposites**

Trevor Walker, HUESKER Inc.; Stefan Niewerth, HUESKER Synthetic GmbH

**New Geotextile Quarry By-Product Geocomposite System for Permanent Road Foundation**

Syed Faizan Husain, Taeyun Kong and Erol Tutumluer, University of Illinois at Urbana-Champaign; Mark Marienfeld, TreadMark Inc.; Issam I.A. Qamhia, University of Illinois at Urbana-Champaign

**Simplified Model for Analysis of Piled Embankment Considering Multi-Interaction Arching and Subsoil Consolidation**

Tuan A. Pham, Heriot-Watt University, University of Tokyo; Daniel Dias, Grenoble Alpes University, AFITEXINOV Group

8 – 9:30 am | Room: 2210

### SPECIAL SESSION

#### GMA Annual Meeting and Invited IGS Presentation



Geosynthetic Materials Association (GMA) will hold its biennial General Membership meeting at Geo'23 on Wednesday, February 8 from 8-9:30 am. The GMA Executive Council leadership will highlight the current technical, educational, and legislative activities with a detailed update on the Federal, State and Local lobby efforts. Additionally, GMA, as part of an effort to enhance cooperation with the various geosynthetic organizations, has invited Sam Allen, the president of the International Geosynthetic Society (IGS), to provide an update on the current endeavors of the IGS committees. His presentation is summarized here;

#### Bringing Geosynthetic Contributions to Life!

In his invited remarks, the President of the IGS, Sam Allen, will describe the work of the IGS in defining and promoting the benefits of using geosynthetics in modern day engineering. He will present how the IGS is defining how their every day use in water management and transportation related construction is essential to achieving lower carbon footprint targets and more sustainable infrastructure projects.

9:45-11:15 am | Room: 2208

### SPECIAL SESSION

#### Panel Discussion: Importance of Operation and Maintenance Manuals

Organized by Fabricated Geomembrane Institute (FGI)



Panelists: Duff Simbeck, Simbeck Liners; Ron Frobel, R.K. Frobel & Associates; Glen Toepfer, CQA Solutions; Matthew Kernitz, Leak Location Services, Inc.

This panel discussion will assemble four industry leaders to discuss the advantages and disadvantages of giving owners and operators an Operation and Maintenance (O&M) manual for their installed geosynthetics. The panel discussion will commence with a description and discussion of the first FGI O&M Manual for water reservoirs and the checklist included to facilitate periodic inspection. The second FGI O&M Manual for a floating cover system over water reservoirs is under preparation and will be outlined. The FGI thinks an O&M plan should be standard practice for each project to obtain longer service life and meet project expectations. The panelists will discuss the many significant problems that can be avoided by periodic inspections and minor maintenance, e.g., removal of vegetation on or under the geosynthetics and careful use of equipment around the geosynthetics, such as lawnmowers. As an exposed liner ages, sample coupons of geomembranes can also

be removed for testing purposes to help owners determine the remaining life of the geomembrane. Afterwards, the panelists will answer attendees questions about O&M activities and discuss the benefits of including sample coupons that can be removed for testing to assist owners with determining remaining service of the geomembrane.

9:45-11:15 am | Room: 2209

#### Landfill Covers and Liner Systems

Chairs: Ming Zhu and Rutuparna Joshi, Watershed Geosynthetics

#### Remediation of a Former Quarry and Permanent Containment of Buried Toxic Materials

Stephan Fourmont, Afitex-Textel; Louise Chaput, WSP; Kevin Randall, Sanexen Services Environnementaux inc.

#### Hydraulic Conductivity of Bentonite-Polymer Composite Geosynthetic Clay Liners Under Elevated Temperature and Extreme pH

Sarah Gustitus-Graham, Geosyntec Consultants, Inc.; Craig Benson, University of Wisconsin-Madison

#### Environmental, Social, and Governance (ESG) Offerings of an Engineered Turf Final Cover System

Rutuparna Joshi, Watershed Geosynthetics, LLC

#### Practical Aspects of Exposed Geomembrane Cap (EGC) Design and Construction

James Walker, Tetra Tech

Session sponsored by Agru



9:45-11:15 am | Room: 2210

#### Geosynthetic Wettability and Performance

Chairs: Xiong Zhang, Missouri University of Science & Technology; Guoping Zhang, University of Massachusetts Amherst

#### Hydrophobizing Treatment in Saline Soil: Conditions and Mechanisms

Gege Huang and Hongjie Lin, Sun Yat-sen University

#### Efficacy of Nonwoven Based Geosynthetic Drainage Product for Pore Pressure Reduction in Moderately Fine Soils or Tailings

Ian Fleming and Michael G. Andree, University of Saskatchewan; Stephan Fourmont, Afitex-Textel Geosynthetics

#### Investigation of Moisture Reduction in Sandy Soil Using Geotextiles

Md. Wasif Zaman and Jie Han, University of Kansas



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The IECA Learning Zone is located on the Expo Hall Floor. Content presented in this room is available to all attendees. Sessions in this area include contractor corner, vendor show cases and poster sessions from university partner students.

Posters will be available for all registered attendees to view. A combination of industry professional posters and University Partner student posters will make up the gallery. In keeping with the mission of the organization, the IECA Poster Gallery promotes the exchange of scientific and technical information. Poster presentations are based on scientific methods and merit which are included in the display/presentation. Each poster will be available for viewing along with a five-minute recording from the presenter discussing the poster. An opportunity to ask questions will also be available.

#### **Participating IECA University Partners**

- Auburn University
- Cranfield University
- New Mexico State University
- North Carolina State University
- Oklahoma State University
- San Diego State University
- University of Georgia
- West Virginia University

#### **TUESDAY, FEBRUARY 7**

9:10–10:20 am

#### **Featured Panel Discussion: Contractor Corner**

*Jonathan Koepke, MBA, MA*

10:30–10:50 am

#### **Profile Products – Building Fast and Effective Custom Erosion Control and Revegetation Specifications**

*Lauren M. Deem, MS, CESSWI*

11:30–11:50 am

#### **Applied Polymer Vendor Showcase**

*Seva Iwinski Bray, GA*

12–1:30 pm (Poster Presentations)

#### **Compost Incorporation into Post-Construction Urban Soils Improves Vegetation Cover Establishment and Stormwater Infiltration with Additional Benefits**

*Md Mahfuz Islam, North Carolina State University*

#### **Construction and Calibration of Large-Scale Rainfall Simulators**

*Jacob Etheridge, Auburn University*

#### **Cost Assessment of Erosion and Sediment Controls Used by DOTs**

*Cheyenne Mata, Oklahoma State University*

#### **Designing and Evaluating Infiltration Swales for Retaining and Infiltrating Roadway Stormwater Runoff**

*Parker Austin, Auburn University*

#### **Efficacy of Undisturbed Vegetated Buffers in Capturing Suspended Sediment Through RUSLE2 Modeling**

*Brian Roche, Auburn University*

#### **Efficiency of Buffer Zones Around Land Application Systems to Remove PFAS**

*Bailey Williams, University of Georgia*

#### **Evaluating Engineered Media for Infiltration Swales**

*Diego Ramirez Florez, Auburn University*

#### **Field Scaling of EICP Treatment for Erosion Control in Sloping Ground**

*Noah Madrigal, New Mexico State University*

#### **Impact of Surfactants on Runoff and Soil Erosion – A Review**

*Deniz Arslan, Cranfield University, United Kingdom*

#### **Materials Matter for Wattle Hydrologic Performance**

*Jannell Clampitt, Auburn University*

#### **Optimization of Sediment Basin Configurations**

*Megan Armstrong, Auburn University*

#### **Patterson Creek Impact Analysis**

*Ian Bird, West Virginia University*

#### **Predicting Streamflow and Water Quality After Wildfires in California**

*Evan Kolb, San Diego State University*

#### **Small-scale Rainfall Simulation to Quantify the Effects of Drought on Runoff**

*Wyatt Barrier, Oklahoma State University*

#### **Use of Sediment Basins for Separation of Diamond Grinding Slurries and Potential for Sediment Fraction Recycling in North Carolina**

*Karina Lenko, North Carolina State University*

#### **Utilizing Remote Sensing Products to Assess Vegetation Conditions After Disturbance**

*Kathryn Tippett, San Diego State University*

1:30–2:00 pm

#### **Exploring the Myths of Erosion and Sediment Control**

*Barney R. Blackburn, PE, CPESC, CPSWQ*

#### **TUESDAY, FEBRUARY 7**

9:30–9:50 am

#### **IECA Sediment Basin Standard**

*Jaime C. Schussler, PhD, CPESC IT, EIT*

10:00–10:20 am

#### **IECA Sediment Barrier Standard - Silt Fence**

*Jarrell B. Whitman, PhD, PE, CPESC*

10:30–10:50 am

#### **Porous Pavements**

*Chris Estes*

## Geosynthetics Learning Zone Sessions

Join us in Booth 435 on Tuesday and Wednesday for this special programming, open to ALL attendees regardless of registration type.

### Student Research Showcase

Tuesday, February 7 | Noon–1 pm

Students are the future of the industry! Visit the Learning Zone (Booth 435) and show your support.

This poster competition highlights the work of students in geosynthetics giving them an opportunity to show off what they are working on. Posters and presentations will be judged onsite and prizes awarded.

#### An Evaluation of Soil-Geogrid Interaction Models

David Marx; Jorge G. Zornberg, *The University of Texas at Austin, Department of Civil Architectural and Environmental Engineering*

#### Effectiveness of Geogrid Stabilization of Airfield Pavements Investigated using Embedded Sensors

Mingu Kang, Issam I.A. Qamhia, Erol Tutumluer and Paul F. Kent, *University of Illinois at Urbana-Champaign and Navneet Garg, National Airport Pavement & Materials Research Center (NAPMRC)*

#### Effectiveness of Geosynthetics in Aggregate Stabilization—Evaluation using Bender Element Sensor Technology

Han Wang, *Department, University of Illinois at Urbana-Champaign*

#### Evaluation of Geosynthetic-reinforced Asphalt Milling Characteristics and Suitability as Pavement Base Course

Ashray Saxena, V. Vinay Kumar and Jorge G. Zornberg, *University of Texas at Austin; Natalia S. Correia, Federal University of Sao Carlos*

#### Experimental Investigation of Geocell Reinforcement in Mitigating Freeze-Thaw Damages to Roads

Jiming Liu, Cheng Lin and Mian Huang, *University of Victoria*

#### Feasibility Evaluation of Lightweight Aggregate to Improve Performance of Load Transfer Platforms in Geosynthetic-reinforced Embankments

Yuqiu Ye and Jie Han, *the University of Kansas; Rui Rui, School of Civil Engineering and Architecture, Wuhan University of Technology*

#### Hydraulic Conductivity of Bentonite-Polymer Geosynthetic Clay Liners to Aggressive Coal Combustion Product Leachates

Dong Li and Kuo Tian, *George Mason University*

#### Investigation of Moisture Reduction in Unsaturated Soils using Geotextiles

Md Wasif Zaman and Jie Han, *The University of Kansas.*

#### New Geotextile Quarry By-Product Geocomposite System for Permanent Road Foundation

Syed Faizan Husain, Taeyun Kong, Erol Tutumluer and Issam I.A. Qamhia, *University of Illinois at Urbana-Champaign; Mark Marienfeld, TreadMark*

#### Quantification of Suction-driven in-plane Flow of Enhanced Lateral Drainage Geotextiles

Gino Sicha Flores, Kangwei Chen and Jorge G Zornberg, *The University of Texas at Austin*

### Exhibitor Showcase

Wednesday, February 8

Stop by the Learning Zone (Booth 435) to learn more about these featured exhibitors and products.

9:30–9:50 am

#### Designing Retaining Walls with the GEOWEB® System

Michael Dickey, P.E., *Director, Presto Geosystems*

10–10:20 am

#### Automated Geosynthetics Packaging—100% Waterproof

Johnnie Erichsen, *Senior Sales Manager, Tentoma*

10:30–10:50 am

#### Achieving More Together with Berry

Blake Downey, *Account Manager, Typar Geosynthetics*

11–11:20 am

#### Extreme Strength Geosynthetics Made in America

Vona Ojaruega, *Geo-Applications Engineer and Shandie Zimmerman, National Distribution Manager, HUESKER, Inc.*

# SHOW FLOOR MAP

## SHOW FLOOR HOURS

**MONDAY, FEBRUARY 6**  
4:30–6:30 pm  
(Opening Reception)

**TUESDAY, FEBRUARY 7**  
9 am–5 pm

**WEDNESDAY, FEBRUARY 8**  
9 am–2 pm

## SHOW FLOOR EVENTS

### Ribbon Cutting

Monday, February 6 | 4:30 pm

### Expo Hall Opening Reception

Monday, February 6 | 4:30–6:40 pm  
*Sponsored by Core & Main, Profile, Agru and Ferguson Waterworks*

### Lunch

Tuesday, February 7 | 11:30 am–1:30 pm  
Expo Hall  
*Sponsored by LSC Environmental*

Wednesday, February 8 | 11:30 am–1:30 pm  
Taste of Kansas City Closing Lunch in Expo Hall  
*Sponsored by Profile, Ecopliant Environmental and CMS Environmental*

### IECA Learning Zone Education

Tuesday, February 7 | 10:30 am–1:50 pm  
Booth 635  
Wednesday, February 8 | 9:30–10:50 am  
Booth 635  
*See page 46 for more information.*

### Geosynthetics Conference Student Research Showcase

Tuesday, February 7 | Noon–1 pm  
Booth 435  
*See page 47 for more information.*

### Geosynthetics Conference Exhibitor Showcase

Wednesday, February 8  
Booth 435  
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## FOOD AND BEVERAGE

Geosynthetics Learning Zone	Coffee Lounge <i>Sponsored by HUESKER and Gripple</i>	IECA Learning Zone
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### ENTRANCE

#### Taste of Kansas City Stations

- ① KC Barbecue
- ② West Side Street Tacos
- ③ Boulevard Stout Chili
- ④ Little Italy
- ⑤ Right Side Salad
- ⑥ Dessert Shooters

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For the most up-to-date exhibitor information, download the Geosynthetics and IECA event mobile apps.

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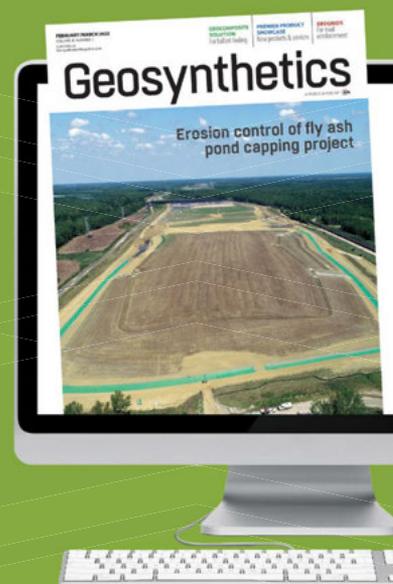
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**Advanced Drainage Systems****BOOTH 1027**

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+1 614 658 0153  
www.adspipe.com

Headquartered in Hilliard Ohio, Advanced Drainage Systems, Inc (ADS) is the leading manufacturer of high performance thermoplastic corrugated pipe, providing a comprehensive suite of water management products and drainage solutions. Our innovative products and superior drainage solutions are used across a broad range of end markets and applications, including residential, non-residential, agriculture and infrastructure applications.

**Aer-Flo Environmental** ■**BOOTH 735**

Bradenton, FL, United States  
+1 941 747-4151  
www.aerfloenv.com

Founded in 1981, Aer-Flo has grown steadily by entering new markets with high-quality products. In 1990, the company began manufacturing its Tough Guy™ Turbidity Barriers, an erosion and sediment containment product. Aer-Flo is now the world's largest producer of turbidity barriers, all of which are sold through a network of the world's best construction supply distributors. This assures that every Aer-Flo barrier user gets attentive customer service on a local, face-to-face basis.

**Afitex-Textel** ♦ GMA**BOOTH 222**

Ste Marie, QC, Canada  
+1 418 929 3139  
www.afitextel.com

Afitex-Textel strives for excellence in the design, development, manufacture and marketing of high quality specialized synthetic materials – such as DRAINTUBE™ – primarily used/destined for drainage markets in civil engineering, mining, sports and environment.

**AGRU America Inc.** ♦ GMA

COVER 4  
**BOOTH 311**

Georgetown, SC, United States  
+1 843 546 0600  
www.agruamerica.com

AGRU America is the world's leading manufacturer of flat die extrusion geomembranes, geocomposites, geotextiles, geo clay liners and fittings. Part of the worldwide AGRU Group, an Austrian family-owned business since 1948, the company has production facilities in Austria, the U.S., Germany and China.

**AIRE Environmental** ■**BOOTH 835**

Meridian, ID, United States  
800 247 3846  
www.aireenvironmental.com

AIRE Environmental manufactures industrial products for secondary containment, water storage, flood protection, and erosion control. Popular products include containment berms, bladders, water tubes, culvert socks, and dewatering bags. Manufacturing in Meridian, ID, our capabilities include precision CNC cutting, radio-frequency welding, hot air welding, and industrial sewing. We also offer custom and OEM manufacturing. Let our technical support staff assist you with compliance, emergency orders, and custom projects.

**Akshaya Chemicals****BOOTH 1100**

Erode, India  
+91 904 336 6166

Akshaya Chemicals are committed to provide customized products as per its customer requirement. Its factory is well equipped with 5 kg block making machine and 650 grams block making machines producing good quality of Coco Pith/Peat.

**Alkegen** ♦ GMA**BOOTH 218**

Irving, TX, United States  
+1 716 768 6500  
alkegen.com

Alkegen is an innovation-driven leader focused on battery technologies, filtration media, specialty insulation and more. Our Texel geosynthetics brand is recognized for its high quality specialized synthetic materials in North America since 1976. We offer a full spectrum of geosynthetic solutions.

**American Excelsior Co.** ♦ GMA ♦**BOOTH 619A**

Arlington, TX, United States  
+1 817 385 3500  
www.curlex.com

[GEO] American Excelsior is a manufacturer of erosion and sediment control products with manufacturing locations and distribution partners all across the United States, making products and personal assistance always close to you or your job site. Learn more about the Curlex brand by visiting [www.curlex.com](http://www.curlex.com).

[IECA] American Excelsior is the manufacturer of Curlex® Erosion Control Blankets and other quality erosion and sediment control products. With manufacturing locations and distribution partners all across the U.S., products and personal assistance are always close to you or your job site.

**APEX** ■**BOOTH 1024**

Fairfield, OH, United States  
(513) 642-0147  
www.apexseeder.com

Our team has a combined total of 100 years of global experience in the hydroseed and environmental spray application markets. We've got the experience to understand the challenges you face and the knowledge to provide real world solutions. We are dedicated to the industry. It's what we know and it's what we do.

**Applegate Manufacturing** ■**BOOTH 924**

Webberville, MI, United States  
+1 517 521 3545  
www.applegatemulch.com

Applegate Mulch is the manufacturer of hydraulic erosion control and seeding products. We offer both wood fiber and cellulose hydraulic mulch products along with tackifiers, water absorbent gels, dust control and fertilizer products.

**IECA Member**

- ★ Cornerstone
- ♦ Emerald
- Corporate

**Advanced Textiles Association**

- ♦ ATA member
- GMA Geosynthetic Materials Association member

For the most up-to-date exhibitor information, download the Geosynthetics and IECA event mobile apps.


**Applied Polymer Systems**
**BOOTH 911**

Woodstock, GA, United States  
+1 678 494 5998  
www.siltstop.com

Applied Polymer Systems, Inc. is the originator of Floc Log®, Silt Stop® and Pond Log® products which are innovative blends of non-toxic, anionic polyacrylamide based products used for water clarification, erosion control, soil stabilization, soil thickening, pond/lake management, and inanimate nutrient removal.


**AquaBlok, Ltd.**
**BOOTH 922**

Swanton, OH, United States  
+1 419 825 1325  
www.aquablok.com

AquaBlok® is a bentonite-coated aggregate that, when hydrated, self-compacts and provides a low-permeability seal in an easy to handle and apply package. Click below for a demonstration and to learn about the many benefits that make it better than conventional bentonite. AquaBlok can be used for geotechnical sealing in ponds, basins, and other applications, such as dams, levees, cut-off walls, anti-seep collars, and in a wide range of general water control structure uses.

**Armorform ■**
**BOOTH 630**

Houston, TX, United States  
+1 832 731 0754  
www.armorform.com

[GEO] Armorform® is a highly engineered fabric-formed concrete erosion control and scour prevention systems. Armorform® utilizes double layer woven geotextiles engineered exclusively to serve as forms for casting concrete erosion control revetments and linings for use in all forms of civil construction.

[IECA] ARMORFORM® is a proven product with millions of square feet installed over the past 35+ years. We firmly believe in our products ability to provide a unique and proven solution to permanent hard armor erosion control ARMORFORM® fabric formed concrete revetments continue to set the bar in erosion protection by consistently outperforming traditional concrete slope paving, gabions, precast concrete blocks, and rip rap.

**ASP Enterprises/Quick Supply Co/Bowman Construction Supply/Cascade Geos ◆**
**BOOTH 731**

Fenton, MO, United States  
800 869 9600  
aspent.com

Our companies have been founded to provide engineers and contractors premium solutions in erosion/sediment control, geosynthetics, and storm water management. With full-service branches in 10 major cities, we actively cover 12 states with exceptional service and technical knowledge to be "Your Trusted Site Solution Specialists."

**ATARFIL Geomembranes**
**◆ GMA**
**◆ PAGE 3**
**BOOTH 334**

Suffolk, VA, United States  
+1 757 848 3431  
www.atarfil.com

Founded in 1995, ATARFIL specializes in safe containment solutions based on geomembranes (HDPE-VLDPE-LLDPE-PP) for applications in waste, water and mining. With production plants in the USA, Europe and the Middle East, we pursue the highest performance and the best adapted products to applications and customers.

**Autefa Solutions North America Inc.**
**BOOTH 221**

FORT MILL, SC, United States  
+1 803 547 9024  
www.autefa.com/  
autefa-solutions-group

AUTEFA Solutions is a leading solution provider for turn-key nonwovens lines and machines for carded- crosslapped needlepunching lines, spunlace lines and thermobonding lines. The scope of supply comprises comprehensive engineering services, including start-up and production support.

**Axter Coletanche Inc.**
**BOOTH 527**

Saint-Laurent, QC, Canada  
+1 514 903 1912  
www.axter.eu/coletanche  
www.coletanche.com

[GEO] Bituminous Geomembrane for waterproofing construction and civil engineering works. Coletanche® offers its expertise and provides robust products specially designed for environmental, hydraulic, transport, containment and other construction applications.

[IECA] Axter Coletanche Inc. distributes the Coletanche® bituminous geomembrane. Coletanche® is a composite geomembrane, combining the advantages of a non-woven geotextile reinforced in the structure for mechanical resistance, a glass fleece for dimensional stability and a specifically designed bituminous waterproof binder adapted for use on all types of terrain and environments. Coletanche® is the optimal solution in environmental protection, hydraulics, transportation, and other civil engineering applications.

**AzulPack Filmes e Embalagens Ltda**
**BOOTH 219**

Jacutinga, Minas Gerais, Brazil  
www.techground.com.br

**Bamert Seed Company ■**
**BOOTH 901**

Muleshoe, TX, United States  
800 262 9892  
www.bamertseed.com

Bamert Seed Company was established in 1951 in Muleshoe, Texas. With practice, care, and determination the business is now a leading conservation partner. As an industry leader, Bamert Seed Company provides seed and consultations to landowners and land managers for reclamation, restoration, conservation, and wildlife enhancements. Our dedication to providing the best has allowed us to offer over 400 species of high-quality native grasses, forbs, and legumes.

**Beena Coir Works**
**BOOTH 1130**

Alleppey, India  
+91 984 607 0556  
www.beenacoir.com

Beena Coir is one of the leading Manufacturers and Exporters of all kinds of Natural Floor Covering and Doormats from South India located in Alleppey district. Beena Coir is a family business concern started in the year of 1965. Beena Coir has four decades of experience in the coir industry. Their main markets are Europe, USA, Australia, Far East & Middle East countries.

**Belton Industries Inc. ◆**
**BOOTH 305**

Belton, SC, United States  
800 225 4099  
www.beltonindustries.com

Belton Industries Inc. is domestic specialty weaver of woven PP and PE industrial fabrics and yarns. Our fabrics are used in military, agriculture, civil, furniture, environmental and industrial applications.

**Big Bale Mulcher**
**BOOTH 928**

Sugarloaf, PA, United States  
+1 570 384 2491  
bigbalemulcher.com

Manufacturer of Big Bale Mulchers

EXHIBITOR  
DIRECTORY**Blocksom & Co. and Fiber Bond Operating LLC** ■**BOOTH 1039**

Michigan City, IN, United States  
+1 219 878 4438  
www.blocksom.com  
Eric.Pearman@fiberbond.net

Blocksom Inlet Filter is a cost-conscious, highly effective, and versatile inlet protection BMP for construction-phase NPDES II compliance. Presented by Blocksom & Co., a diversified manufacturer of nonwoven natural fiber products.

**BMP Supplies****BOOTH 808**

Surrey, British Columbia, Canada  
www.bmpsupsplies.com

BMP Supplies is family owned and operated manufacturer of innovative and dependable environmental products for the construction industry. These products include Erosion Control Blankets, Turbidity Curtains, our patented line of Curb Inlet and Catch Basin protection, Dewatering Bags and additional Erosion and Sediment Control products.

**BonTerra Limited****BOOTH 938**

Western Province, Sri Lanka  
+94 765 496 208  
www.bonterraerosion.com

Bonterra Limited is one of the leading manufacturers of natural fiber erosion control products for temporary erosion control solutions. Erosion control Blankets, Coir geotextiles, Coir Logs and Jute Soil Saver products are the main SKUs which Bonterra currently manufacture.

**BOWIE INDUSTRIES, INC****Bowie Industries, Inc.** ⬠**BOOTH 719**📄 **COVER 3**

Bowie, TX, United States  
+1 940 872 1106  
www.bowieindustries.com

Bowie Industries has been manufacturing Hydro-Mulching equipment for over 60 years. All sizes were designed specifically for mixing, pumping and spraying thick slurries of all types of BFM's, FGM's, paper and wood mulches. Sizes from 300 to 3000 gallons. Also, the manufacturer of the Bowie Pump for handling difficult to pump liquids and slurries.

**Burke INDUSTRIES**  
A Mannington Mills Company**Burke Industries** ⬠ **GMA**📄 **PAGE 51****BOOTH 341**

San Jose, CA, United States  
+1 408 297 3500  
www.burkeind.com

Since 1969 Burke Industries has been a leading pioneer in producing CSPE based Geomembranes for use as lining and floating covers for the potable water. Multi-ply constructions and custom colors available and all are NSF-61 and AS/NZ 4020. Knowledge and accountability are cornerstone to our reputation.

**Cabot Corporation****BOOTH 139**

Boston, MA, United States  
+1 617 345 0100  
cabotcorp.com

Cabot Corporation is a global specialty chemicals and performance materials company, and we strive to be our customers' commercial partner of choice. We have been a leading manufacturer of carbon black and other specialty chemicals for more than 140 years. Cabot has over 50 years of experience in making and selling black masterbatch and conductive compounds to the plastics industry.

**Carolina Precision Fibers Inc.****BOOTH 838**

Ronda, NC, United States  
Bruce Harned  
www.carolinafibers.com

Carolina Precision Fibers Inc is a manufacturer of erosion control products located in Ronda North Carolina. The company specializes in the production and distribution of Terrain Lok, an economical BFM designed to satisfy all Type 3 erosion specifications.

**CETCO****BOOTH 339**

Hoffman Estates, IL, United States  
+1 847 851 1800  
www.cetco.com

CETCO is the world's leading supplier of GCLs and has a full range of products to address design challenges such as hydrostatic pressure, shear strength, and chemical compatibility. CETCO engineered solutions provide products that will give performance and value to containment applications.

**Cherokee Manufacturing/  
Kansas Erosion** ■**BOOTH 919**

South Saint Paul, MN, United States  
+1 919 480 5616  
www.cherokeemfg.com

Kansas Erosion manufactures a full line of temporary rolled erosion control products. Specializing in fully biodegradable products made with the highest quality agricultural straw available. Cherokee Manufacturing, founded in 1940, provides a full line of materials for the site work, landscaping, and nursery industries.

**Cipatex Impregnadora de  
Papés e Tecidos Ltda.****BOOTH 338**

Cerquillo, SP, Brazil  
+55 153 284 9039  
www.cipatex.com.br

CIPATEX is a 58 years old Brazilian family owned company based in Cerquillo, São Paulo, Brazil. Leading global supplier and manufacturer of PVC geomembranes, Cipatex produces customizable PVC products, designed to withstand exposure to a variety of environmental conditions and applications.

**City Sewing Machine LLC** ⬠**BOOTH 329**

Dallas, TX, United States  
+1 972 243 3522  
www.citysewingmachine.com

[GEO] Is one of the largest commercial/industrial sewing companies in North America. We have over 125 combined years of experience and three generations in the sewing industry. We are an authorized distributor of Union Special machines and Genuine (OEM) parts. We take pride in servicing our customer needs from sales of new machines, used machines as well as thread, needles and many other types of supplies. We also have technicians on staff to handle warranty and any general mechanical needs. We have a wide variety of inventoried machines in both New and Used condition. Come and visit us, have a cup of coffee and let us know how we can earn your business. We also welcome international business. We have many valued customers outside the US.

[IECA] City Sewing Machine, LLC is one of the largest commercial/industrial sewing companies in North America. We have over 125 combined years of experience and three generations in the sewing industry. We are an authorized distributor of Union Special machines and Genuine (OEM) parts. We take pride in servicing our customer needs from sales of new machines, used machines as well as thread, needles and many other types of supplies.

**CMS Environmental Solutions, LLC** ⬠**BOOTH 737**

Greenwood Village, CO, United States  
+1 720 343 6561  
www.cmsenviro.com

CMS Environmental Solutions is a national leader in stormwater compliance management. CMS has been in business close to 20 years, and we've had tremendous success assisting builders and developers in all industries in complying with local, state, and federal NPDES regulations. We will perform inspections/monitoring, create Stormwater Management Plans, and navigate permitting with regulatory authorities. We utilize a digital management tool to provide instant insight into the statistics of each project.

**IECA Member**

- ⬠ Cornerstone
- ⬠ Emerald
- Corporate

**Advanced Textiles Association**

- ⬠ ATA member
- GMA Geosynthetic Materials Association member

**Cocobi Yarn****BOOTH 1003**

Coimbatore, India  
+91 737 378 5999  
www.cocobi.in

Cocobi Producer Company Limited is the SPV of Negamam Coir Cluster formed by Tamil Nadu Government. The cluster consists of around 25 coir manufacturing units. PVC tufted Coir Mats, Coir Woven mats, Coir Woven Geo textile, Coir Non woven Geo Textile, Coir tufted brushes, Coir Pith 5Kg blocks, Coir grow bags, Coir disc etc are the products manufactured in the cluster. Its export markets include US & Europe. Quality products, competitive pricing, seamless logistics and sustainable relations are the stronger areas which sets them apart from the competitors.

**Coir Board****BOOTH 1006, 1008, 1009, 1010**

Cochin, India  
+91 484 235 1900

A Government of India organization under the Ministry of MSME functioning for the development of Indian coir industry.

**COMANCO Environmental Corporation****BOOTH 211**

Plant City, FL, United States  
+1 813 988 8829  
www.comanco.com

COMANCO is an environmental and civil construction company specializing in the construction of containment facilities for industrial chemical plants, solid waste, power generation, mining, municipalities, and utilities, providing geosynthetic lining and HDPE piping products and services.

**Concrete Canvas US****BOOTH 431**

Houston, TX, United States  
+1 832 864 2946  
www.concretcanvas.us

Created specifically for erosion control, containment and shelter applications, Concrete Canvas® (CC) products are part of a revolutionary class of new, innovative materials called Geosynthetic Cementitious Composite Mats (GCCMs). CC is a flexible, concrete filled geosynthetic which provides a thin and durable concrete layer when hydrated. Typically, 10-times faster to install than conventional concrete solutions; essentially, it's Concrete on a Roll™.

**Cooley Group****BOOTH 440**

Pawtucket, RI, United States  
+1 401 724 9000  
www.cooleygroup.com

Core applications include primary/secondary commercial containment (fuel, chemical, and oil), military inflatable boats, waterproofing (below-grade and tunnels), and water protection/preservation geomembranes (reservoir liners and floating covers) - including potable water-grade coated fabrics.

**Core & Main****BOOTH 815**

St. Louis, MO, United States  
+1 912 534 6071  
coreandmain.com/geosynthetics

Built on the foundation of 80+ legacy companies Core & Main is a leading specialized distributor of water, wastewater, storm drainage and fire protection products, and related services. These products are integral to building, repairing and maintaining water and wastewater systems. They serve as part of basic municipal infrastructure required to support population and economic growth including residential and commercial construction. Our people go behind the scenes, roll up our sleeves and get to it.

**CQA Solutions, Ltd.****BOOTH 109**

Toledo, OH, United States  
+1 419 269 1800  
cqasolutions.co

CQA Solutions, Ltd. specializes in construction quality assurance for containment systems.

**Dandy Products, Inc.****BOOTH 1012**

Powell, OH, United States  
800 591 2284  
dandyproducts.com

We established Dandy Products 26 years ago because we knew there had to be a better way to design, manufacture and deliver sediment control and inlet protection products to the construction industry. It's these differences that set Dandy Products apart back then, and now, as we continue to grow.

**Delta Coirs****BOOTH 1102**

Coimbatore, India  
+91 984 220 6000

Delta Coirs is one of the leading coir fibre and coir pith manufacturing unit in India. It has a full fledged production facility with modern infrastructure with efficient and skilled personnel which ensures the supply quality products to its customers.

**DEMTECH Services Inc.****BOOTH 419**

Diamond Springs, CA, United States  
+1 530 621 3200  
www.demtech.com

[GEO] Our goal is to furnish the most reliable, durable and fastest equipment possible. Powered by Innovation, Demtech equipment leads the industry for quality and affordability. We look forward to servicing your geosynthetics installation equipment needs.

[IECA] Demtech Services Inc. has been dedicated to helping the Geosynthetics Industry succeed with high quality welding and testing equipment for the past 24 years. Our goal is to furnish the industry with the most reliable, durable and fastest equipment and repairs possible. Demtech continues to utilize the latest innovative designs, engineering, and technology to update and improve equipment, services and safety for the Geosynthetics installer.

**DOT-Federal Highway Administration****BOOTH 104**

Tallahassee, FL, United States  
+1 850 553 2207  
www.fhwa.dot.gov/clas/

The FHWA Local Aid Support Team provides training and technical assistance to local government and Tribal agencies through the establishment of 51 Local Technical Assistance Program (LTAP) Centers and 7 Regional Tribal Technical Assistance Program (TTAP) Centers.

**E Squared Technical Textiles****BOOTH 425**

Hillside, NJ, United States  
+1 908 249 4376  
e2techtiles.com

[GEO] Engineered Polymer Technologies' line of XTRM PLY® Geomembranes provides supported and unsupported products in a thickness range of 1.6 mil. to 120 mil and in widths up to 120" (3.05 m). Polymer options include EIA, PVC, LLDPE (smooth and textured surface), TPU, and PP.

[IECA] Geosynthetic Polymer Composite Fabrics and Films for a Wide Variety of Environmental Applications.

**Earth Retention****BOOTH 134**

Woodstock, GA, United States  
+1 678 903 3614  
www.earthretention.com

We strive to be the #1 consulting engineering company, specializing in earth retention projects such as retaining walls and reinforced steep slopes. The second division Earth Retention offers is the made in America products used in these projects, such as geogrids, geotextiles, and wire facing systems.

**Eco Fabriks****BOOTH 925**

Gaithersburg, MD, United States  
877 264 7628  
www.ecofabriks.com

Manufacturer and supplier of 100% biodegradable erosion and sediment control products.

EXHIBITOR  
DIRECTORY**Ecopliant Environmental (CISEC)****BOOTH 940**Parker, CO, United States  
+1 720 235 2783  
www.cisecinc.org

The nationwide CISEC program is the most comprehensive inspector sediment and erosion control training and certification examination available within North America for qualified individuals having at least 2-years of inspection experience. Currently, CISEC, Inc. has more than 2,000 registrants in the United States and over 400 Canadian registrants.

**Ecoturf Midwest, Inc.****BOOTH 903**Elmhurst, IL, United States  
+1 630 350 9500  
www.ecoturfmidwest.com

Ecoturf Midwest is a family-owned company located just west of Chicago. All of its products are produced and sourced in the U.S. including its commercial-grade biodegradable stake line. In 2016, Staple Ease was launched as the revolutionary new staple installation tool for both standard steel staples and Ecoduty biodegradable stakes. We pride ourselves in supplying innovative products to the landscaping, erosion control, irrigation, outdoor lighting, and construction markets.

**Elastizell Corporation of America****BOOTH 438**Ann Arbor, MI, United States  
+1 734 761 6900  
elastizell.com**ELIS Technologies Ltd****BOOTH 238**Dublin, Ireland  
www.elis.tech

ELIS Technologies offers advanced geomembrane leak location services and products. Established by a team of geomembrane leak detection professionals, we offer more than 25 years of leak location experience. We help customers with exposed as well as covered geomembrane liner leaks.

**EnviroCon Systems Inc. ♦ GMA****BOOTH 213**Houston, TX, United States  
+1 281 443 2597  
www.enviroconsystems.com

EnviroCon Systems, Inc. specializes in the installation of geosynthetic liners for tanks, sumps, ponds, ringwall foundations, containment berms, pit liners and floating covers. EnviroCon offers a full service fabrication, pipe and equipment divisions for sales, rental and turnkey applications.

**Envirolok****BOOTH 839**Evansville, WI, United States  
+1 608 226 2573  
www.envirolok.com

Designed for nature . . . Engineered for life. Envirolok is a fully-engineered geobag system designed to permanently stabilize slopes, waterways and shorelines. Envirolok combines the engineered strength of soil with the principles of plant ecology to deliver a sustainable, vegetative solution that will stand the test of time.

**EPI The Liner Company ♦ GMA****BOOTH 321**Traverse City, MI, United States  
800 655 4637  
www.geomembrane.com

For over 35 years EPI has focused on quality products, fair prices, and commitment to service. Originally created in 1980 to serve the oil industry in Michigan, EPI is a full service geosynthetic supplier having fabricated over 500 million square feet of flexible geomembrane liners.

**Erosion Supply Company ■****BOOTH 936**Raleigh, NC, United States  
+1 919 787 0334  
www.erosionsupply.com

Erosion Supply Company is a WBE manufacturer of sediment basin surface drains. We strive for exceptional turnaround and stocking levels. Our shipping rates are the best in the country thanks to volume discounts. Our website has a Skimmer calculator so you can perfectly match you sediment basin to the correct surface drain.

**ERTEC Environmental Systems ■****BOOTH 1117**Alameda, CA, United States  
+1 510 521 0724  
www.ertecsystems.com

ERTEC manufactures revolutionary erosion, sediment and wildlife control systems with twice the performance, half the total cost and ZERO Waste. Compared to traditional solutions such as silt fence and wattles, ERTEC's sediment control technology significantly reduces unlawful sedimentation to global waterways and post-construction waste to landfill.

**ESI****BOOTH 123**Baton Rouge, LA, United States  
+1 225 291 2700  
www.esiliners.com**Fabricated Geomembrane Institute (FGI)****BOOTH 106**Urbana, IL, United States  
+1 217 333 3929  
www.fabricatedgeomembrane.com

Fabricated Geomembrane Institute (FGI) is a industry/academic consortium of organizations interested in, and involved with, fabricated geomembranes. The FGI is located at the University of Illinois at Urbana-Champaign in the Department of Civil and Environmental Engineering.

**Ferguson Waterworks ♦ GMA ⊕****BOOTH 701**Newport News, VA, United States  
+1 804 275 4178  
www.ferguson.com/waterworks

At Ferguson Waterworks, we have a wide range of solutions from the best suppliers and a network of warehouses to deliver them when you want. We offer technical and job site support, and custom products if that's what is needed. Getting the job finished quickly and effectively makes all the difference.

**Fibre Wonders****BOOTH 939**Alappuzha, India  
+91 623 856 6969  
www.fibrewonders.in

Fiber Wonders was formed two decades ago to protect and love nature. Holding the prominent rank in the coir industry, we supply COIR EROSION CONTROL, FLOOR MAT products and Jute products to the whole world. Our COIR 700g, COIR 400g, COIR 500g, COIR 780g, COIR 900g, COIR 980g, COIR 1000, COIR SOIL LIFT 1000, COIR SOIL LIFT 1200, COIR LOG 9, 12,16, 18, 20, COIR WATTLES, JUTE SOIL SAVER, BURLAP, COIR DOOR MATS, RUBBER MATS, JUTE RUGS, RAG RUGS etc are the best sellers.

**IECA Member**

- ⊕ Cornerstone
- ◆ Emerald
- Corporate

**Advanced Textiles Association**

- ◆ ATA member
- GMA Geosynthetic Materials Association member



### FINN Corporation

#### BOOTH 935

Fairfield, OH, United States  
+1 513 642 0136  
www.finncorp.com

Since 1935, Finn Corporation has led the field in innovative equipment in the erosion control space. Finn Hydroseeders, Straw Blowers, and Bark Blowers are the industry standard for increased productivity, greater job opportunities, and material savings to help improve your bottom line. With more than 175 North American dealer and service locations, plus others in Australia, South America, Africa, and Europe, we offer expert support before, during and after the sale.

#### Flex MSE

#### BOOTH 626

Surrey, BC, Canada  
+1 604 787 2883

#### Flexamat

#### BOOTH 619B

Cincinnati, OH, United States  
+1 513 772 6689  
www.flexamat.com

Flexamat® is a permanent erosion control mat utilized for stabilizing slopes, channels, low water crossing, inlet/outlet protection, and shorelines. It consists of concrete blocks (6.5" x 6.5" with a 2.25" profile) locked together and embedded into a high strength geogrid. There is 1.5" spacing between the blocks that gives the mat flexibility and allows for optional vegetation growth. The mat is packaged in rolls, making transporting and installing Flexamat® efficient.

#### Garware Technical Fibres, Lt. ■

#### BOOTH 1107

www.garwarefibres.com  
ghiremath@garwarefibres.com

#### Gator Guard ■

#### BOOTH 803

Boise, ID, United States  
+1 208 371 8456  
www.gatorguard.com

Gator Guard Manufactures 98% Effective Sediment Control Wattles for use in the dirt and NEW Weighted Wattles for hard surfaces, Foam Logs for Containment Berms, Ditch Checks, Check Dams, Channels, Diversions, Tube Steps and Drain Inserts.

#### Geo Products ■

#### BOOTH 529

Houston, TX, United States  
+1 281 820 5493  
www.geoproducts.org

[GEO] For over 30 years, Geo Products has manufactured EnviroGrid Geocell for soil stabilization and erosion control projects worldwide. EnviroGrid makes it possible to construct roads and foundations over soft soils by adding structure to lower quality infill material. EnviroGuard, a product line of Geo Products, supplies high quality HDPE liner, concrete liner, and HDPE Pipe products for containment and erosion control projects. Visit our website for more information [www.geoproducts.org](http://www.geoproducts.org).

[IECA] Geo Products manufactures the EnviroGrid cellular confinement system. Our EnviroGrid geocell is a lightweight, expandable confinement system an economical erosion barrier or structural foundation. The main applications are soil stabilization, slope and channel erosion control and retaining walls.

#### GEOMAS

#### BOOTH 124

Istanbul, Turkey  
www.geomas.com.tr

#### Geo Source

#### BOOTH 122

Ahmedabad, GJ, India

#### GeoBrugg AG

#### BOOTH 801

Romanshorn, Switzerland  
+1 505 771 4080  
www.geobrugg.com

Safety is our nature - true to this guiding principle, we have been developing and manufacturing protection solutions since 1951. High-tensile steel wire nets and matching services monitor and protect against natural hazards such as rockfall, landslides, debris flows, avalanches or coastal erosion. They ensure safety in mining and tunneling as well as on motor sports tracks, in industry and in test facilities.

#### GeoCAAB

#### BOOTH 209

Plant City, FL, United States  
888 401 5196  
geocaab.com

GeoCAAB™ was developed with the field end-user in mind. By digitizing previously hand-written data collection methods and integrating automated quality checks, GeoCAAB™ is able to save time in the field and streamlines data reporting for project submittals on the backend.

#### GEONATPET CO

#### BOOTH 526

Yanbu, Saudi Arabia  
+966 55 519 3100  
www.bonarnatpet.com

#### Geostar Technologies LLC

#### BOOTH 322

Memphis, TN, United States  
www.geostartechnologies.com

#### Geosynthetics Learning Zone

#### BOOTH 435

#### Geo-Synthetics Systems (GSI)

#### BOOTH 236

Duncan, SC, United States  
+1 508 439 0146  
www.geosynthetics.com

As a leading distributor, fabricator, and installer of geosynthetic materials, Geo-Synthetics Systems LLC (GSI) works closely with owners, contractors, and engineers to deliver quality and cost effective solutions in municipal solid waste, mining, energy, construction, and environmental remediation.

#### Geotesting Express

#### BOOTH 136

Acton, MA, United States  
+1 978 635 0012  
www.geocomp.com

GeoTesting Express (GTX) provides rapid laboratory and field testing services of materials below the ground to determine their physical and mechanical properties for site characterization, quality control and performance management.

#### Global Containment Solutions LLC

#### BOOTH 137

Oconomowoc, WI, United States  
+1 262 354 0959  
www.globalcontainmentsolutions.com



#### Granite Seed and Erosion Control ■

#### BOOTH 1026

Lehi, UT, United States  
+1 801 768 4422  
graniteseed.com

For over 30 years, Granite Seed Company has provided quality seed and erosion control products to commercial and government contractors across the United States. Our expertise, facilities, and superior product offering help our customers solve even the most complex land reclamation, restoration, turf, pasture, and range projects.

#### Great Lakes Fastening

#### BOOTH 1025

Knoxville, TN, United States  
877 969 0031  
www.glfast.com

Great Lakes Fastening is a family owned business located in Knoxville, TN. We distribute and manufacture hog rings, staples, nails and tools that surpass industry standards, as well as custom solutions for the fastener industry.

EXHIBITOR  
DIRECTORY**Greenrise Technologies****BOOTH 800**

Murfreesboro, TN, United States  
+1 615 907 7460  
www.greenrisetech.com

Headquartered in Nashville, Tennessee. Greenrise is a national leader in Green Infrastructure, providing full-service Stormwater Compliance Systems and Services to commercial and residential customers in The Carolinas, Georgia, Florida, Alabama, Tennessee, Louisiana and Texas. Additionally, our highly regarded ECOPLUS Valued Partner Program will be expanding to cover all Greenrise markets across the US with best management practices and services customized to meet varying topographic, climate and regulatory realities.

**Gripplle Inc. ♦****BOOTH 629**

Aurora, IL  
United States  
+1 630 406 0600  
www.gripplle.com

**[GEO]** Gripplle is renowned for providing innovative, cost-effective solutions for erosion control and soil stabilization applications. The Terra-Lock® System is designed to provide immediate stabilization, requires no crimping and is accompanied by a range of installation tools.

**[IECA]** Manufacturer of anchoring and bracing solutions for erosion control, slope stability and geomembrane anchoring. Products include: Terra-Lock open-face plate and anchor assemblies for erosion control and soil stabilization applications that promote vegetation regrowth; Terra-Lock plate and anchor assemblies for articulate concrete block (ACB) installations; a self-sealing anchoring system for securing geomembranes; and a high load Terra-Lock pin for turf reinforcement matting, erosion blankets, geotextiles and landscaping fabrics.

**Hallaton Environmental Linings****BOOTH 114**

Sparks, MD, United States  
+1 410 583 7700  
www.hallaton.com

Hallaton Environmental Linings is an industry leading environmental construction geosynthetics installer, with more than 25 years in the industry, Hallaton has earned its reputation as one of the most experienced and respected geosynthetic installation companies in the country.

**Hanes Geo Components****BOOTH 1037**

Winston Salem, NC, United States  
+1 336 747 1600  
www.hanesgeo.com

North American distributor/manufacturer of geosynthetics, erosion and sediment control materials and stormwater management products. 40 large stocking locations serve the industry, often on flatbed trailers. We manufacture: Inlet Pro bags, ScourStop transition mats, substantial variety of silt fences. Technical "know how". Strong service commitment. Let us be "Your Valued Resource".

**Heavyweight Sediment Control Solutions ■****BOOTH 841**

Sacramento, CA, United States  
+1 916 922 9222  
durawattle.com

Heavyweight Sediment Control Solutions manufactures the DuraWattle® - a durable, reusable sediment barrier that replaces straw wattle or silt fence. The DuraWattle® tests at 96.6% sediment retention and 58% turbidity reduction. It is versatile for many applications, whether soil, curb, or hard surfaces. Examples include perimeter control, drain inlet protection, and stockpile management. Additionally, it is created to be driven over by heavy traffic, and still be reusable over multiple jobsites or phases.

**Hercules Eco****BOOTH 741**

Greenwood Village, CO, United States  
+1 720 413 9497  
www.herculeseco.com

Hercules Eco is a revolutionary new sediment control manufactured from upcycled recycled rubber tires. The block installs quickly, holds up on the most rigorous of construction sites, and moves with you to your next job. Watch your compliance increase and your costs plummet when you make the change! Hercules manufactures these blocks for builders, developers, and the many trades that partner with builders and developers on stormwater management.

**HMI, Hamilton Manufacturing Inc. ■****BOOTH 827**

Twin Falls, ID, United States  
+1 208 733 9689  
www.hmi-mfg.com

HMI, Hamilton Manufacturing, Inc. is a family owned and operated manufacturing facility established in 1962. As erosion control and green building specialists, we provide service to projects in over 15 US states and 30 countries world-wide. We work hard to provide quality products and develop new or improved products that can better provide for our customers' continually changing needs and help to protect and enrich the environment and ecosystem around the world.

**Holcim****BOOTH 128**

Nashville, TN, United States  
800 428 4442  
www.holcimbe.com

**HUESKER Inc. ♦ GMA****BOOTH 312**

Charlotte, NC, United States  
+1 704 588 5500  
www.huesker.com

HUESKER is the leading global manufacturer of geosynthetics, agricultural, and industrial textiles. Providing unique engineered solutions for earthworks and foundations, roads and pavements, environmental engineering, hydraulic engineering, industry, mining, and agriculture.

**Hydraway an Intech Company****BOOTH 436**

Caseyville, IL, United States  
+1 618 398 5503  
hydraway.net

**Hydrogeophysics Inc. ♦****BOOTH 234**

Tucson, AZ, United States  
+1 520 647 3315  
hgileakdetection.com

HGI has extensive experience providing leak detection and leak location technology on buried tanks, ponds, dams, and geosynthetics for municipal, mining, industrial, and nuclear facilities. We work successfully on dry or solution filled structures and in resistive or highly conductive solutions.

**IEC | Industrial & Environmental Concepts Inc.****BOOTH 107**

Lakeville, MN, United States  
+1 952 829 0731  
www.ieccovers.com

IEC is a global leader in the design, fabrication, and installation of geomembrane covers and liners for water and wastewater tanks and lagoons. We look at projects of all sizes and in multiple markets such as municipal, industrial, agricultural, and renewable energy (biogas).

**IECA Learning Zone****BOOTH 635**

Aurora, CO, United States  
www.ieca.org

**IECA Town Hall****BOOTH 535**

Aurora, CO, United States  
+1 303 640 7554  
www.ieca.org

Sponsored by Gripplle Inc.

**Indo Foreign Trade Craft LLC****BOOTH 1035**

Middletown, DE, United States  
+1 818 927 2872  
www.iftcglobal.com

Manufacturer and supplier of Coir Erosion Blankets, Coir Erosion Blankets, rugs and fiber products.

**IECA Member**

- ♦ Cornerstone
- ♦ Emerald
- Corporate

**Advanced Textiles Association**

- ♦ ATA member
- GMA Geosynthetic Materials Association member

**Industrial Fabrics Inc. ♦ GMA**  
**BOOTH 113**

Baton Rouge, LA, United States  
800 848 4500  
ind-fab.com

[GEO] Industrial Fabrics, Inc. manufactures the BaseLok® line of geosynthetic products in our Houston location. It is the only manufacturer who produces punched and drawn geogrids, geocells, and laminated geogrid products.

[IECA] Industrial Fabrics, Inc. (IFI) manufactures the BaseLok® line of geosynthetic products at our facility in Houston, TX. IFI is the only manufacturer who produces punched and drawn geogrids, geocells, and laminated geogrid products. This diversity allows our experienced professional engineers to provide valued solutions saving our clients millions of dollars. BaseLok® products are used in numerous applications such as channel and slope erosion protection, laydown yards, base stabilization and retaining walls.

**Informed Infrastructure**  
**BOOTH 1036**

West Allis, WI, United States  
+1 312 771 9818  
informedinfrastructure.com

Informed Infrastructure is the leading media outlet for civil and structural engineers. We reach 40,000 readers via our magazine, weekly eNewsletter, web site, video content, surveys and our industry leading continuing education platform.

**Inland Tarp & Liner Inc. ♦ GMA**  
**BOOTH 422**

Moses Lake, WA, United States  
800 346 7744  
www.inlandtarp.com

[GEO] For three decades Inland Tarp & Liner has grown to emerge as one of the largest U.S. custom fabricators, distributors and installers of premium quality liners and products. With facilities in Washington, Ohio and Texas ITL has over 300,000 sq. ft. of modern fabrication plant and distribution space.

[IECA] Inland Tarp & Liner fabricates premium environmental and energy market liners and products. Inland Tarp & Liner is a recognized leader in geomembrane fabrication and anti-slip geotextile surfaces industry. In 2019, Inland Tarp & Liner introduced the ITL Reinforced Concrete Roll®, a disruptive new technology reinventing concrete.

**International Association of Geosynthetic Installers**

**BOOTH 108**  
Littleton, CO, United States  
+1 720 353 4977  
www.ectc.org

**International Geosynthetics Society - North America**

**BOOTH 112**  
Austin, TX, United States  
+651 398 2626  
www.igs-na.org

The Mission of IGS North America is to provide leadership in advancing geosynthetics education and research to attain their appropriate and widespread use as engineering materials as the Chapter of the International Geosynthetic Society (IGS) for the United States of America and Canada.

**Internationale Geotextil GmbH ■**

**BOOTH 907**  
Twistringen, Niedersachsen, Germany  
+49 4243 9288 18  
www.roessgroup.com

IGG offers erosion control blankets, coir / jute nettings and coir fiber with production plants in Germany and Sri Lanka. In cooperation with company Salix River Wetlands from UK we proudly offer the AquaRockBag. Our affiliated company A.H.Meyer Maschinenfabrik GmbH will also be represented. More than 100 years of experience in special machine construction provide the basis of our family owned company. We manufacture machines for production of erosion control blankets, straw wattles and components.

**Intertape Polymer Group ♦ GMA**

**BOOTH 319**  
Sarasota, FL, United States  
800 565 2000  
www.itape.com

From agricultural irrigation, to industrial applications, AquaMaster Geomembranes are the proven choice for your site requirements. Intertape Polymer Group (IPG) provides sound solutions for water resource management and a wide range of civic and industrial applications.



**J. W. Faircloth & Son, Inc. ■**

**BOOTH 821**  
Hillsborough, NC, United States  
+1 919 732 1244  
www.FairclothSkimmer.com

The Faircloth Skimmer® surface drain floats on the surface of the sediment basin as it fills and drains, releasing the cleanest water near the surface instead of draining muddy water from the bottom of the basin as conventional outlets do. The skimmer drains the basin slowly over several days at a constant rate to maximize settling. The adjustable orifice regulates the filling and drawdown of the basin and improves efficiency. Check out [www.FairclothSkimmer.com](http://www.FairclothSkimmer.com) for information.

**JBC International**  
**BOOTH 1023**

Alleppey, Kerala, India  
+91 478 286 0704  
www.jbcnaturals.com

We are manufacturers of woven and Nonwoven coconut fibre erosion control products which includes Coir mesh, Geotextiles, Coir logs, Coir/straw stitched blankets, coir bags, Coir Geocell, Coir pallets, Coir loop fabrics, Jute Soul Saver, Jute Leno weave fabrics. We ship world wide to the leading suppliers of erosion control products.

**JC Coir International PVT LTD.**  
**BOOTH 1108**

Alappuzha, India  
+91 907 420 4009

The company has more than 26 years of experience in coconut & coir products. Utilizing the best manufacturing facilities, JC Coir International provides a consistent quality in all their products. The primary aim of the company is to provide premium quality products to global customers. They offer different products of superior quality. Prompt response, transparent dealings and commitment to dispatch schedules are their specialties.

**JRM Chemical ■**

**BOOTH 828**  
Cleveland, OH, United States  
+1 216 475 8488  
www.soilmoist.com

Manufacturer of polymers for water management in several grade sizes. Available with and without timed release fertilizer in granules, powders, disks and biodegradable tea bags. Full line of linear anionic polymers that comply and are certified with ANSI/NSF 60. Available in a full range of charge densities and molecular weight. The powders, emulsions and tablets reduce soil erosion, treat turbid water and act as a tackifier in hydroseeding applications. Full line of Mycorrhizal products.

EXHIBITOR  
DIRECTORY**Kangayam Coir Cluster  
Private Limited****BOOTH 1106**  
Tirupur, India  
+91 994 330 4107**King Steel Fasteners****BOOTH 806**  
Oxford, MI, United States  
800 779 3762  
www.hogrings.com

King Steel Fasteners is a family owned USA manufacturer of hog rings and hog ring tools. Our helpful and knowledgeable staff can provide you with the right ring for your fastening needs. Our hog rings and tools are used for wattles, sandbags, silt fence, gabions, rock fall mesh, filter socks, and other types of erosion control.

**Koko Coir World Enterprises****BOOTH 1134**  
Trichy, India  
+91 994 444 9243  
cococoirworld@yahoo.com

“Koko Coir World Enterprises has been in the field of manufacturing and marketing natural/ coco fiber products since 2012. It is one of the leading manufactures and exporters of Coir products in India. The Company’s products include Coir pellets, Coir Disc, Coir Grow bags and Coir Pots etc. Their major export destinations are Europe, Canada and USA.

**Kumaran Coirs****BOOTH 1001**  
Erode, India  
+91 944 330 2346**Layfield Geosynthetics** ♦ GMA**BOOTH 335**  
Lakefield, CA, United States  
800 377 8404  
www.layfieldgroup.com

Layfield Group Ltd. products and services include geomembranes, floating covers, construction products and specialty geosynthetics. We provide you with single-source accountability through our combined abilities to manufacture, fabricate, install and service.

**Leak Location Services Inc.** ♦**BOOTH 326**  
San Antonio, TX, United States  
+1 210 408 1241  
www.llsi.com

Leak Location Services, Inc. (LLSI) Specializes in electrical leak location surveys of geomembranes for a broad spectrum of applications to include frac ponds, landfills, surface impoundments, heap leach pads, etc. for the waste management, energy, mining, and oil and gas industries world wide.

**Leister Technologies LLC**♦ GMA  
PAGE 55  
**BOOTH 306**  
Itasca, IL, United States  
+1 630 760 1000  
www.leisterusa.com

Leister manufactures a full range of equipment suitable for geo installation including a line of extrusion welders, wedge welders, hot air tools and test equipment that are well-suited to the demands of geosynthetics installation and plastic fabrication. Leister’s got it covered.

**LSC Environmental  
Products** ♦**BOOTH 913**  
Apalachin, NY, United States  
+1 607 625 3050  
www.LSCenv.com

Solutions for the Greener Good! LSC is a global manufacturer of products and equipment designed to address the persistent environmental challenges of erosion, odor, land reclamation, waste cover, seeding, and dust. Over 25 years ago, LSC pioneered the use of spray-applied alternate daily cover and solar powered vent flares in the solid waste industry. Since then, we have applied our unparalleled expertise in spray-applied coatings to a variety of new products, industries, and markets.

**Maccaferri Inc.** ♦ GMA**BOOTH 530**  
Williamsport, MD, United States  
+1 301 223 6910  
www.maccaferri.com/us

[GEO] Maccaferri is a global leader of civil and geotechnical engineering applications that helps consultants, agencies and contractors with “Engineering a Better Solution.”

[IECA] Maccaferri is a global leader of civil and geotechnical engineering applications that helps consultants, agencies and contractors. Having invented the gabion and Reno Mattresses 140 years ago, Maccaferri developed a double-twist wire mesh for hydraulic applications, erosion protection and channel lining. We have expanded our expertise to include rockfall mitigation, coastal protection and geosynthetic solutions. We strive to build partnerships through trust and collaboration within our industry community.

**Megaplast USA** ♦ GMA**BOOTH 204**  
Berkeley Heights, NJ, United States  
+1 406 581 7753  
www.megaplast.in

Megaplast is a leading manufacturer of Geomembranes. We are manufacturing 8 meters wide Geomembranes adhering to the highest quality standards. We have a state of art testing facilities which is GAI-LAP certified. We have our product certified for GM13 from TRI. We manufacture black and other colors

**Midwest Canvas Corp.****BOOTH 207**  
Chicago, IL, United States  
+1 605 988 4941  
www.midwestcanvas.com/

Manufacture of polyester string reinforced polyethylene films and extruded non-reinforced films up to 20 mils.

**Miller Weldmaster** ♦ GMA**BOOTH 406**  
Navarre, OH, United States  
+1 330 833 6739  
www.weldmaster.com

Miller Weldmaster manufactures hot air and hot wedge welding systems that are easy to use, versatile and reliable. Our TG3600 efficiently produces any size geomembranes, geosynthetics, geotextiles, liner or cover and is designed to eliminate excessive fabric handling.

**MiniTrencher****BOOTH 1014**  
Vancouver, WA, United States  
+1 360 949 1231  
www.minitrencher.com

MiniTrencher manufactures and distributes GeoRipper® minitrencher and GeoRipper®T/A trenching attachment utilized for silt fencing applications. GeoRipper® digs up to 2” wide and up to 27” deep depending on the model. The GeoRipper®T/A trenching attachment allows you to convert a power cutter into a handheld, portable trencher and back into a concrete saw in less than 5 minutes. The Original GeoRipper® includes an option of 3 popular Makita-based engines. Check out GeoRipper® at IECA booth #1014.

**IECA Member**

- ♦ Cornerstone
- ♦ Emerald
- Corporate

**Advanced Textiles Association**

- ♦ ATA member
- ♦ GMA Geosynthetic Materials Association member

**MKB Company ■****BOOTH 900**

Westerville, OH, United States  
888 578 0777  
www.mkbcompany.com

MKB Company is a leading provider of products and services in the environmental control market, for use in erosion and sediment control, stormwater management, and pollution control. MKB Company recently acquired Filtrex International, another leader in sustainable BMPs. Now together as one industry leader, we manufacture innovative products and solutions that allow contractors and distributors to serve customers looking for better environmental outcomes.

**Modular Gabion Systems ■****BOOTH 628**

Houston, TX, United States  
800 324 8282  
www.gabions.net

Supplying the erosion control industry with latest manufacturing technology for gabions and gabion mattresses for channel linings, streambank stabilization, and earth retention structures. Offering both design and on-site assistance for the geotechnical engineering and civil construction community.

**Multi-Flow LDVS****BOOTH 328**

Prinsburg, MN, United States  
+1 320 978 8007  
www.varicore.com

Varicore Technologies produces a variety of products utilized in the drainage, dewatering, and biogas ventilation industries. With 20+ years experience in residential to infrastructural projects, we pride ourselves on attention to detail and most importantly, to our customers and their projects.

**Mutual Industries****BOOTH 1101**

Philadelphia, PA, United States  
800 523 0888  
mutualindustries.com

Mutual Industries is a manufacturer of silt fence, safety fence, dewatering bags and other construction accessories. We also sell geotextiles and erosion control materials. We have two manufacturing locations, Philadelphia, PA and Fort Myers, FL.

**MVS ACMEI Technologies Private Limited****BOOTH 105**

Boston, MA, United States  
+1 905 902 9071  
www.mvfabrics.com

MVS ACMEI has proven its presence in the industry with its wide range of products and solutions. The first company to successfully market 12 feet wide geomembranes from 10 MIL to 45 MIL with UV Exposure warranty up to 20 years.

**MWI Environmental****BOOTH 1015**

mulchworks@gmail.com

**Naue America ♦ GMA****BOOTH 135**

Atlanta, GA, United States  
+ 1 404 504 6295  
www.naue.com

**NCIF USA Corp.****BOOTH 930**

City of Industry, CA, United States  
(818) 612-4557  
ncifgroup.com

NCIF Group is a world-class manufacturer and trusted supplier of geosynthetics. Manufacturing is done in China. We have a reputation for producing slit film woven fabrics of the highest quality. NCIF processes conform to ISO9001 and CE product standards. We are especially proud of our work in the United States with AASHTO regarding NTPEP testing and reporting of geotextiles. Our product line can be an excellent addition to a private-label or name-brand portfolio.

**Nedia Enterprises ♦ GMA****BOOTH 709**

Ashburn, VA, United States  
+1 571 223 0200  
www.nedia.com

Nedia Enterprises offers a complete line of erosion control, sediment control and bioengineering products made primarily from natural fibers. We provide innovative quality products and service in the erosion control and bioengineering industry. Nedia is committed to the conservation of the environment. We believe that the proper use of our erosion control products will contribute to improved environmental function and encourage widespread use of innovative and vegetation friendly bioengineering techniques.

**NLICA****BOOTH 1136**

Lisle, IL, United States  
+1 630 548 1984  
www.LICANational.org

For over 75 years, The Land Improvement Contractors of America, has encouraged high standards of workmanship in resource management and land improvement practices. This association of contractors, with chapters across the country, brings together people having similar interests and opportunities for improving our natural resources with an adequate profit.

**Olive Promotions****BOOTH 138**

Brookfield, WI, United States  
+1 262 790 9110  
www.olivepromotions.com

Olive Promotions and Apparel is your #1 source for all of your marketing needs. Olive is here to assist your business with all of your needs from bags to mugs, from shirts to accessories. Olive Promotions & Apparel specializes in employee apparel, customer appreciation gifts, and all other premiums.



**PAR Global**  
made by customers

**Par Global Marketing Inc.****♦ GMA****BOOTH 110**

Johns Creek, GA, United States  
www.parglobal.us

Your trusted partner and one-stop solution provider for clientele across the globe including US, Canada, and Australia. We are dedicated to helping our partners in product development, commercial production, and efficient product supply for Geo-Textiles, Packaging Textiles, Erosion Control, Agro-Textiles, and related accessories for decades.

**Pennington Seed****BOOTH 837**

Madison, GA, United States  
+1 434 321 3273  
penningtonseed.com

Pennington is known for its high-quality grass seed, but we can also supply many other commercial products to help complete your project. Pennington aims to deliver quality, convenience and solutions.

**Plastatech Engineering Ltd.****♦ GMA****BOOTH 307**

Saginaw, MI, United States  
800 892 9358  
www.plastatech.com

Plastatech® produces calendered and extruded PVC films, weft-inserted textiles, reinforced and non-reinforced geomembranes, and laminated vinyl fabrics that are used for tension structures, commercial roofing, temporary shelters, agricultural storage, pond liners, and other applications.

EXHIBITOR  
DIRECTORY**Outpak** ■**BOOTH 707**

Boise, ID, United States  
+1 208 376 6967  
www.outpak.com

Outpak Washouts are the original, disposable construction site washouts. They are designed to be a portable solution for harmful industrial concrete sediment, paint, dry wall mud, stucco and mortar. With Outpak Washouts, your job site will be organized, eco-friendly and PMB compliant to avoid costly fines. With five sizes and three different materials, there is an Outpak Washout for all construction needs - mixer, concrete pump truck, wheelbarrows and painting projects.

**Polyweld USA Inc.** ◆ GMA**BOOTH 224**

Houston, TX, United States  
+1 281 821 4156  
www.polyweldusa.com

Polyweld USA was founded in 1984 to address the various challenges encountered during liner installation by the teams working onsite at various project locations. Since then we have become a competitive leader in manufacturing welding equipment for a vast array of Geomembranes and Geosynthetics.

**Premier Concrete Products LLC****BOOTH 113**

Baton Rouge, LA, United States  
+1 318 688 6249

**Presto Geosystems** ◆ GMA**BOOTH 525**

Appleton, WI, United States  
+1 920 738 1342  
www.prestogeo.com

[GEO] Presto Geosystems partners with engineers to solve challenging soil stabilization problems with the world's original, and most complete geocell system-GEOWEB®. The GEOWEB 3D system stabilizes unpaved roads, slopes, channels and creates vegetated MSE retaining walls. Free project evaluations.

[IECA] Presto Geosystems partners with engineers/consultants to solve challenging soil stability problems with the GEOWEB® soil stabilization system. For over 40 years, we have led the geocell technology with innovative, engineered solutions for roadway, slope, shoreline, channel, and vegetated retaining wall applications. The GEOWEB 3D system with its design/construction accessories offers the most complete geocell system in the industry. Presto offers free project evaluation and fast specification-building tools.



*Solutions for your Environment™*

**Profile Products** ◆

**BOOTH 715**  
COVER 2

Buffalo Grove, IL, United States  
+1 303 726 5031  
www.profileevs.com

PROFILE Products LLC offers environmentally sound, site-specific solutions including soil modification, erosion control and plant establishment. As the leading manufacturer of hydraulically-applied mulch, as well as biotic soil technologies, Profile offers on-site solutions and consultation to architects, land planners, contractors, developers and municipalities. Their team of agronomists, engineers and industry experts is supported through a worldwide network of experienced distributors. Solutions for your Environment™

**Rajarani Impex****BOOTH 1118**

Madurai, India  
+91 984 213 9080

Rajarani Impex Private Limited was incepted in the year 1996. Capitalizing the industry experience of nearly two decades, Rajahrani Impex introduces itself as Exporter and Supplier of Agro Products and Chemical Products. Its extensive range of products includes Coir Fibre & Coir Pith Blocks. The company has a national and international network to procure and distribute the finest quality products. The company provides quality products as per the requirements of the clients at the most affordable prices.

**Rantec Corporation****BOOTH 1028**

Ranchester, WY, United States  
+1 307 655 9565  
www.ranteccorp.com

Largest manufacturer and industry leader for erosion control tackifiers. Products include Super Tack, SpecTack, J3000, HF5000, EMTack and others. All products are applied with a hydraulic applicator such as a hydroseeder. These products can be used as stand alone or in combination with paper, wood or cotton mulch. We are the tack experts.

**Re-Gen Enterprises** ◆ GMA**BOOTH 531**

Meridian, ID, United States  
+1 307 696 3747  
re-genenterprises.com

Re-Gen Enterprises is leading the way in innovative, cost effective and extremely efficient geosynthetic liner removal. Cost effective and efficient geosynthetic liner removal. Founded in 2013, Re-Gen Enterprises set course to become the best in the world at one thing, Removing Geosynthetic Containment Liners. From the beginning, our company has held the principle that we can do more with less. Through ingenuity, innovation, and strategic planning we've become a service provider whose goals are employee safety, customer satisfaction, and exceeded project performance (cost and timeliness). Our founders designed and patented a state-of-the-art Roller Attachment that allows us to achieve these goals. This roller, along with our innovative processes and procedures make it possible to remove large quantities of all types of geosynthetic containment materials. Re-Gen has revolutionized the way these materials are removed. However, we didn't stop there. Re-Gen has pioneered and championed the recycling of geomembrane and various geosynthetic materials, thereby diverting millions of pounds of material from landfills across the country. From inception, Re-Gen placed a strong emphasis on building relationships with our customers and vendors. Our desire is to be a solutions-oriented resource for them beyond just liner removal.

**The Reinforced Earth Co.****BOOTH 337**

Reston, VA, United States  
800 446 5700  
www.reinforcedearth.com

Reinforced Earth® MSE walls are economical gravity structures having high strength, a limited footprint, flexibility to distribute loads evenly, and a variety of architectural finishes.

**IECA Member**

- ◆ Cornerstone
- ◆ Emerald
- Corporate

**Advanced Textiles Association**

- ◆ ATA member
- ◆ GMA Geosynthetic Materials Association member

**Renegade Plastics****BOOTH 325**

Golden, CO, United States  
+1 530 220 5615  
renegadeplastics.com/

**Rocky Mountain Bio Products Inc.****BOOTH 830**

Denver, CO, United States  
+1 303 696 8960  
www.wefixdirt.com

Rocky Mountain Bio Products supplies stable organic fertilizers, soil amendments and conditioners that rejuvenate and bring soils back to life a natural way.

We supply Biosol, humates, mycorrhizae and PermaMatrix is a Biotic Soil Amendment, is a topsoil replacement/alternative. All our products are used for reclaiming soils back to their healthy, native conditions supporting healthy soil and plant life. We are naturally and organically fix dirt and growing soil. Visit: [www.wefixdirt.com](http://www.wefixdirt.com) for product information.

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justin@siltworm.com

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SKAPS Industries, a high quality leading manufacturer and supplier of Geosynthetics products. We hold a strong market presence in over 60 countries. Customer satisfaction is of utmost importance to us and we at SKAPS ensure it by providing excellent customer service. Visit our website [www.skaps.com](http://www.skaps.com)

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Achim, Niedersachsen, Germany  
+49 420 276 700  
www.soiltecgeo.com

SOILTEC Germany has been in the erosion control / soil stabilization field for nearly 40 years. Through the development, production and distribution of geotechnical products, SOILTEC has gained the expertise to be the world leader in its field. We pride ourselves in supplying products that are not only effective, but also environmentally conscientious. Our three product categories reflect our geotechnical experience: GREENFIX® Erosion Control Blankets | SoilWeb® Geocells | SkyGarden® Roof Greening Systems

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**[GEO]** With plants in North America, Europe, Asia, and the Middle East, Solmax-GSE is the world's largest geosynthetics manufacturer. Billions of square feet of its engineering products have already been installed in more than 60 countries to protect soils from contamination.

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SOX Erosion Solutions™ designs manufacture and distributes patented bioengineered erosion control systems that immediately halt shoreline and hillside erosion while promoting vegetation. We educate companies on how to spec, bid, sell and install our suite of erosion control systems.

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CITY, PROVINCE, India  
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Sri Ragavendra Coir Factory is an ISO certified company and a National Award Winner focuses on manufacturing and exporting a wide range of coco peat in the brand name "SRI RAGA PEAT" worldwide. The company having its Unit I at Tiruppur and Unit II at Karur, Tamilnadu, India. Established in the year 2010 and today has the capacity of over 12000 MT of Coir Products per annum involved in the Coco Peat based Growing Technologies, Geo-Textile for Erosion Control, Fibre bales and Coir yarn.

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PAGE 53  
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www.synteen.com  
jon@synteen.com

**[GEO]** Synteen is a US owned and operated manufacturer of geogrids and high strength geotextiles for soil reinforcement applications

**[IECA]** Synteen Technical Fabrics, Inc. is the only US owned and operated manufacturer of woven polyester geogrids and high strength geotextiles for soil reinforcement applications. Located in Lancaster SC, we take great pride in our employees, our involvement in our local community and our commitment to manufacturing high quality materials.

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Luther, OK, United States  
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tri-siltdike.com  
jroach@tri-siltdike.com

Made with lightweight and durable materials, Triangular Silt Dike barrier comes in seven foot sections and installs in minutes with U-shaped wire staples. The flexibility of the barrier allows it to be installed on rough and rocky terrain while the protective aprons on both sides of the barrier helps prevent erosion and failure of the structure. We also offer a full line of erosion and sediment control products.

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**[IECA]** WINFAB is a geotextile fabrics manufacturer for civil engineering and environmental applications. Our industrial fabrics are designed to meet today's advanced engineering requirements for Stabilization, Separation, Filtration, Reinforcement and Erosion Control. Using the latest technology in fabric manufacturing provides our customers with quality products unsurpassed in the industry.

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Wind Defender LLC is a full-service geosynthetics distribution company and sole provider of the Wind Defender® ballast system for exposed membrane covers. Direct all inquiries to Elliot Pugh - 570-617-7479 or elliot@wind-defender.com.

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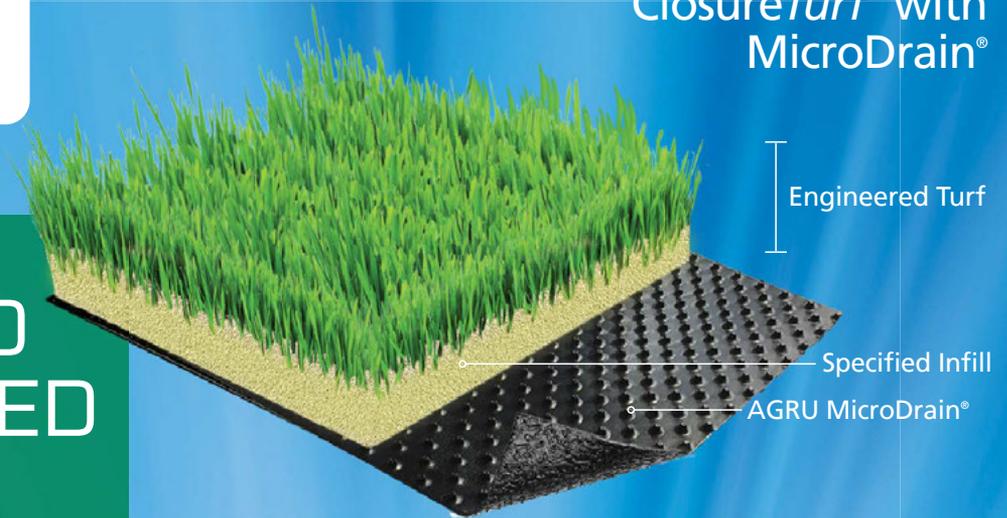
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