



Center for Grassland Studies

203 Keim Hall
P.O. Box 830953
University of Nebraska-Lincoln
Lincoln, NE 68583
(402) 472-4101
Email: grassland@unl.edu
Website: grassland.unl.com

Grazing Livestock Systems | PGA Golf Management | Integrated Beef Systems |
Grassland Ecology and Management

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19th Annual Nebraska Grazing Conference: August 12-14

by Daren Redfearn, Chair, Nebraska Grazing Conference Steering Committee

The 2019 Nebraska Grazing Conference (NGC) is rapidly approaching. Participants attending the August 12 – 14 conference, held at the Ramada by Wyndham Kearney in Kearney, NE, will hear presentations on a variety of topics and have opportunities to visit with industry exhibitors.

Similar to last year, the conference will begin with a pre-conference tour. **Chris Helzer**, The Nature Conservancy, will lead the August 12 plant identification session, which will take place at one of the Nature Conservancy locations. This will be a hands-on event of different plant communities. Those registering for the pre-conference tour will receive dinner and brief presentation by The Nature Conservancy staff.

The overarching theme for the 2019 NGC is rangeland health. **Patrick Shaver**, University of Oregon, and **Dana Larsen**, Broken Heart Livestock, will lay the foundation for the rangeland health session on Tuesday, August 13. A presentation summarizing an 8-year project at the Barta Brothers Ranch in the eastern Sandhills will address another conference topic, grazinglands management, which will include animal, vegetation, insect, and soil responses to different grazing strategies. Other related topics of interest include science of soil health, management for soil health, and soil health applications.

The last day of the conference, Wednesday, August 14, kicks off with a session on the art and science of winter grazing. The session includes a producer panel on leasing and grazing corn residue, as well as a presentation by the 2018 Leopold Award recipient, **Jim O'Rourke**, RuJoDen Ranch. The final conference session addresses rangeland resilience, before an afternoon conference reflection concludes the event. The complete conference schedule and online registration are available at grassland.unl.edu/nebraska-grazing-conference.

Student rates and producer scholarships are available, as well as CEUs for agency professionals. We hope to see you at this year's conference!



Participants on the 2018 NGC Field Tour.

Center for Grassland Studies Policy Advisory Committee

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The Center for Grassland Studies is a unit within the University of Nebraska-Lincoln Institute of Agriculture and Natural Resources. It receives guidance from a Policy Advisory Committee and a Citizens Advisory Council.

Note: Opinions expressed in this newsletter are those of the authors and do not necessarily represent the policy of the Center for Grassland Studies, the Institute of Agriculture and Natural Resources, or the University of Nebraska – Lincoln.

To simplify technical terminology, trade names of products or equipment sometimes are used. No endorsement of products is intended nor is criticism implied of products not mentioned.



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Director's Column by Steven Waller, Interim Director, Center for Grassland Studies

Twenty-five Years of Impact

This is a very special year for the Center for Grassland Studies. The Center is celebrating its Silver Anniversary. Silver is a precious metal chosen for the 25th anniversary to commemorate a quarter century of a lasting commitment. From its beginning on July 16, 1994, the Center has enjoyed success through an innovative and progressive organizational structure in fulfilling its mission and addressing its goals and objectives that honor and preserve Nebraska's grassland heritage for future generations. Programming in all three landgrant mission areas (research, teaching and extension) and responsibility for relevant undergraduate degree programs makes the Center unique among its peer centers.

While the Center is now 25 years old, the vision and emphasis on interdisciplinary, inclusive collaborations that span the full spectrum of disciplines and missions is far from outdated. It remains as relevant now as it was in 1994. Interdisciplinary approaches have evolved to transdisciplinary to embrace the contributions of university-wide disciplines in solving complex, system-level questions. In fact, the complex challenges that our grasslands face today only serve to reinforce the wisdom in creating the Center for Grassland Studies with such breadth and depth in diversity and opportunity to engage scientists across a wide spectrum. In 25 years, the Center has moved from an organizational anomaly to a trend setter as inclusiveness, transdisciplinarity, holism and team approaches to integrating all missions become the norm in a landgrant university.

Join us to celebrate 25 years of the Center for Grassland Studies making a difference at our Open House - July 16, 2019.

You're Invited to CGS Open House

The Center for Grassland Studies invites you to join us on **July 16** between **2:00 - 4:00 PM** in **203 Keim Hall** to celebrate our 25th anniversary. Stop by to meet the staff, tour the office, and have some refreshments. We look forward to seeing you!

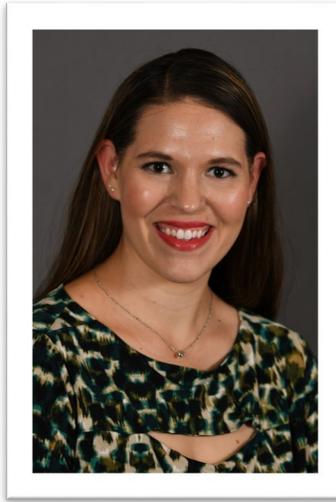
Alumni Update: Chelsea Luthy, Community Development Specialist, Central Nebraska Economic Development District (CNEDD)

Chelsea (Fullerton) Luthy grew up on a farm and ranch three miles south of Cody, NE. Chelsea and her husband Jordon Luthy, parents Jerry and Kate Fullerton, and brother-in-law Cody Luthy all work together to raise predominately cow/calf pairs and a variety of crops including corn, soybeans, alfalfa, and other irrigated forage for hay and grazing. The operation consists of 3,300 acres of rangeland, 1,000 acres of irrigated cropland, and 400 head of commercial black cow/calf pairs.

Since graduating from the University of Nebraska-Lincoln, Chelsea has played a key role in the diversified operation through all aspects of financial management, decisions and implementation of programs and paperwork from financial institutions and agencies – two NRCS CSP contracts for example, and working with rural communities through the Central Nebraska Economic Development District.

Chelsea's favorite part of her job with CNEDD is the ever-changing project load and the agricultural rural community volunteers she interacts with on a regular basis. Chelsea is also a recent graduate of the Nebraska LEAD Program (Class 37) and in January she returned from studying in the Netherlands, Belgium, Germany, and Poland.

Chelsea first learned of the Grazing Livestock Systems (GLS) major at the Society for Range Management's Halsey Range Camp the summer before entering high school from Professor **Walter Schacht**. She knew it would be a perfect fit, and is honored to be a December 2013 GLS alum and a Regents Scholarship recipient, graduating in 3½ years.



Chelsea (Fullerton) Luthy

Chelsea also has a minor in the Engler Agribusiness Entrepreneurship Program. During her time at the University of Nebraska-Lincoln, Chelsea participated in multiple clubs and activities, but Range Club was the top priority and took her from coast to coast. As far as a summary of the curriculum, the animal science courses built on previous knowledge and experience, the range and forage courses were favorites of hers, and the most exciting, and the ag economics courses are currently the most beneficial for her operation.

Apart from coursework, the next beneficial component of a GLS degree was an individualized internship experience the summer before graduation. Chelsea conducted ranch tours throughout the Sandhills including Gracie Creek Ranch, Shovel Dot Ranch, Barta Brothers Ranch, and Gudmundsen Sandhills Laboratory, completed the Nebraska Ranch Practicum, and gained experience working with a full year's bookkeeping system and an accountant. This internship was eye-opening and found a hidden passion for numbers and finance that wasn't there previously. She is a current Farm Credit Magnify subscriber and is thrilled to share she has had success with the program.

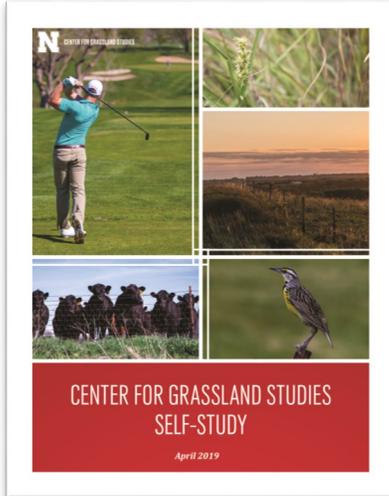
While Grazing Livestock Systems doesn't directly connect to Chelsea's off-farm employment, it is one of the main factors for why Chelsea moved home and is choosing to raise a family with this agricultural lifestyle. Chelsea and Jordon have three children Robert, Kaylee, and Grace and welcomed a new baby in April.

Congratulations Graduates!

The Center for Grassland Studies wishes the following May 2019 graduates much success on their future endeavors.

- ❖ *PGA Golf Management*: **Jacob Barnard** (Minneapolis, MN); **Michael Grof** (Omaha, NE); **Kramer Samuelson** (Clarinda, IA); **Alexander Sheehy** (Hastings, NE); **Adam Speck** (Gothenburg, NE).
- ❖ *Grazing Livestock Systems*: **Alexa Johnson** (Edgar, NE); **Scott Gates** (Broken Bow, NE); **Katelin Oborny** (Seward, NE); **Alexander Hays** (Linwood, NE).
- ❖ *Grassland Ecology and Management*: **Evan Laible** (Stuart, NE).

Your Input Needed for CGS Comprehensive Review



Centers within the Nebraska University system are reviewed periodically to ensure they continue to fulfill the intent and programmatic needs they were established to address. This fall, the Center for Grassland Studies will have its first comprehensive programmatic review conducted by an external review team. The President of the University of Nebraska is required to periodically review centers based, in part, on function, justification, relevance to the University's strategic plans, and evidence that the multi-departmental center will more effectively achieve stated academic objectives than traditional departmental, school, or college structures.

The review is intended to be a self-examination that will contribute to a strategic plan for the future. The primary goal of the review is to improve the program's effectiveness and quality. The objectives of the review are to provide a clear assessment of the program's strengths and weaknesses and to develop a guide for the program's future direction. This is a wonderful opportunity to reflect on the accomplishments of 25 years and, more importantly, to dream about a future of impact, relevance and making a difference through the scholarship of teaching, discovery, integration, and application.

A review should also specifically explore if: 1) there is a future need/value for the Center (review the Center's mission); 2) the Center structure allows it to more effectively achieve stated academic objectives than traditional departmental, school, or college structures; and 3) the Center status should be retained. We look forward to the insights and recommendations of the Review Team to inform our strategic planning. We also embrace this opportunity to validate the wisdom of creating the Center in 1994 and articulating its role in addressing the grand challenges of our shared future in the review process.

Your input is essential to inform the review process. We encourage you to send your assessments about the Center's strengths, weaknesses, threats, and opportunities. We invite you to share your comments by submitting them online at form.jotform.com/91224508040143.

Proposed Name Change for Grazing Livestock Systems

Since the inception of the holistic, systems-based Grazing Livestock Systems (GLS) major (1998), the elective course offerings and the experiential learning opportunities have been diversified and expanded, allowing students to individualize the flexible GLS program beyond its original career scope.

The degree program now has the flexibility to also be foundational with thoughtful student planning and engaged academic advising for career development in conservation and biologist positions in the private sector and other public sector agencies, including environmental consulting, grassland/prairie management and restoration, and wildlife habitat management. The tripartite, interdisciplinary curriculum created as a collaboration among the Departments of Agronomy and Horticulture, Animal Science and Agricultural Economics continues to meet the unique academic needs of a ranch management career, which was the original purpose.

The grassland studies faculty teaching in the undergraduate curriculum recently proposed a name change for the Grazing Livestock Systems degree program as a result of the growth and expansion of career pathways coupled with student placement success. In order to better serve our students and provide more career transparency, the degree program would become the Bachelor of Science in Grassland Systems, if approved. This name change will better identify the potential breadth and diversity of content within the degree program as well as career opportunities, which should attract students outside the program's traditional base.

The first step in the change process occurred when the College of Agricultural Sciences and Natural Resources Curriculum Committee recommended the proposal for approval on April 26, 2019.

Integrated Beef Systems Update

by Daren Redfearn, Associate Professor, Agronomy & Horticulture,
University of Nebraska-Lincoln

The first year of data collection for the Beef Systems Initiative (BSI) is complete. This initiative, funded by the Institute of Agriculture and Natural Resources at the University of Nebraska, is a faculty-driven, interdisciplinary project that began in January 2015. It included faculty from several disciplinary groups in Agronomy and Horticulture, Animal Science, and Agricultural Economics with interests in integrated production systems. From these early discussions, a long-term systems project was developed and administered by the Center for Grassland Studies. Research began in late-2017.

Two recent publications demonstrate the importance of perennial grasslands and integrated crop-livestock systems. Cumming et al. (2019) examined the cattle grazing capacity of Nebraska rangelands and estimated an \$875 million direct impact to the state for use of perennial grasslands. Redfearn et al. (2019) established the value of grazed corn residue as a forage resource to the state of Nebraska. They estimated a current value of grazed corn residue of \$75 million returned to the crop sector with the gross value for grazed corn residue of \$153 million for the beef cattle sector. It is important to highlight this since these gross values for perennial grasslands and corn residue recur annually.

Like many ranchers this last year, a BSI research project evaluating fall calving systems with and without perennial forages had a number of management challenges because of the wet fall coupled with the cold, wet winter. Calves in the system without perennial forages had greater death loss and lower calf weaning weights than calves in the traditional system with perennial forages. This is only the first year of data to be collected in the six-year study and it is important not to draw definitive conclusions at this point, but the experiences of this first year demonstrate some of the various risks involved with different production systems.



The baseline grain yields from a replicated plot study in the BSI were very good in 2018 with wheat yields at 80 bushels/acre, corn yields near 240 bushels/acre, and soybean yields about 70 bushels/acre. Oats was planted following the wheat crop and grazed this winter along with the corn residue under less than ideal grazing conditions. In 2019, we will collect yields from grazed and non-grazed plots to determine cattle effects on grain yield and soil samples to characterize indicators of soil health.

Another BSI project objective began with the development of case studies to model factors that improve beef production efficiencies. A portion of this data was collected from focus groups that provided feedback about integrated crop-livestock systems. The next stages of participatory research includes continued focus group meetings in each region to examine the potential to increase cow/calf production from perennial grasslands and the associated profit potential.

The initial work to create an integrated crop-livestock systems model as a part of the BSI began with the development of a simulation with a simple cereal rye growth model that can be used for simulating spring grazing management decisions. This model will continue to be expanded and refined over the next three years.

Evaluation of harvest efficiencies of ranches in the Nebraska Sandhills will begin this summer as a part of the BSI. Several graduate students will begin work this summer and fall to collect data and grazing management information to support objectives of the project. Because this is a systems project, our interests are to evaluate these systems over a period of five to six years.

*The BSI project team consists of **Dr. Mitchell Stephenson, Dr. Jay Parsons, Dr. Daren Redfearn, Dr. Harvey Freetly, Dr. Mary Drewnoski, and Dr. James MacDonald.***

References

Cumming, K., J. Parsons, W. Schacht, and B. Baskerville. (2019). Examining the capacity of Nebraska rangelands for cattle production. *Western Economics Forum*, 17(1):46-61.

Redfearn, D., J. Parsons, M. Drewnoski, M. Schmer, R. Mitchell, J. MacDonald, J. Farney, and A. Smart. (2019). Assessing the value of grazed corn residue for crop and cattle producers. *Agricultural and Environmental Letters*, 4:180066 (2019) doi:10.2134/ael2018.12.0066.

PGA Golf Management Alum Takes Win

by Brad Goetsch, PGA, Professor of Practice,
PGA Golf Management Program, University of Nebraska-Lincoln



Alex Beach poses with the Walter Hagen Cup during the Awards Ceremony for the 52nd PGA Professional National Championship (Photo courtesy of PGA of America/Darren Carroll).

Alex Beach, 2012 graduate of the PGA Golf Management Program, has captured victory at the 2019 PGA Professional National Championship held at Belfair in Bluffton, SC. Alex will lead 19 other top finishers from the event to the 101st PGA Championship at Bethpage Black, May 13-19. Alex is an Assistant Golf Professional at Westchester Country Club in Rye, NY.

The PGA Professional National Championship is considered to be the pinnacle of competitive golf for those who have a primary focus on working within the golf industry. Some 29,000 men and women serve the industry as PGA Professionals running golf courses or in any number of other capacities within the industry. Many of these PGA Professionals also have a strong desire to play competitive golf and do so at events held through the PGA of America though section events.

Each of the 41 sections hosts an annual championship with the top finishers earning berths in the PGA Professional National Championship. Top finishers in these section events receive spots in the Professional National Championship. The field of 312 players comes from this elite group.

The top 20 finishers in the Professional National Championship earn spots in the PGA Championship each year. Tiger Woods held a spot, and was a favorite after the emotional win at Augusta in April. Alongside Tiger in the field were all the other players one might expect, including Alex and the 19 others earning berths via the Professional National Championship.

CGS Awards 2019-2020 Scholarships and Fellowships

The Center for Grassland Studies has several funds available to provide Academic and Professional Development scholarships for eligible undergraduate students pursuing degrees in grassland management and stewardship (e.g. Bachelor of Science degree in Grazing Livestock Systems, Bachelor of Science degree in Grassland Ecology and Management, and related degrees).

Additionally, the Arthur W. Sampson Fellowship Fund supports graduate students with a special interest in pasture and/or range management in the state of Nebraska. Arthur W. Sampson, considered to be the “Father of Range Management,” established the fund in 1947 through the University of Nebraska Foundation.

The Center and our students are very fortunate to have donors passionate about the Nebraska grasslands and committed to the education of our future professionals and grassland stewards. To learn more about CGS scholarships, go to grassland.unl.edu/grazing-livestock-scholarships. Award recipients for the 2019-2020 academic year include:

- ❖ *Arthur W Sampson Fellowship*: **Danielle Berger**, Marshfield, WI; **Dillon Fogarty**, Lincoln, NE; **Ethan Freese**, Lincoln, NE; **Tara Harms**, Yutan, NE; **Elnazadat Hosseiniaghdam**, Tabriz, Iran; **Anastosios Mazis**, Arta, Greece; and **Elizabeth Widder**, Sheboygan Falls, WI.
- ❖ *Sandhills Task Force Scholarship*: **Caden Billings**, Valentine, NE.
- ❖ *Dr. Kenneth C. Stout Grassland Studies Scholarship*: **Kyle Griger**, Papillion, NE; **Asha Scheideler**, Scotia, NE; **Sam Steffen**, Beatrice, NE; **Katie Steffen**, Beatrice, NE; **Nicole Strand**, Wauneta, NE; and **Brentyn Wetovick**, Fullerton, NE.
- ❖ *Stock Seed Farms—Dr. Laurence C. Newell Scholarship*: **Michaela Cunningham**, Fullerton, NE; and **Samuel Florell**, Kearney, NE.
- ❖ *Center for Grassland Studies*: **Caden Billings**, Valentine, NE; **Magdalene O’Brien**, Blair, NE; **Nicolas Sanders**, Dwight, NE; and **Jessilyn Sayers**, Clarkson, NE.
- ❖ *Joseph O. Young Scholarship*: **Luke Ausdemore**, Persia, IA; **Colton Bergt**, Amherst, NE; **Alex Heier**, Kenesaw, NE; **Kate Krebs**, Monticello, WI; **Tate Lueth**, Curtis, NE; and **Miranda Mueller**, Wahoo, NE.

Nebraska Sandhills Focus of Fall Seminar Series

The Center for Grassland Studies' Fall Seminar Series features guest lecturers from on and off campus who speak on topics related to the Center's mission. Seminars, which are free and open to the public, take place on Mondays during the fall semester from 3:00 to 4:00 PM at the Nebraska East Union. Those unable to attend in person will find videos of the presentations uploaded to the Center's website at grassland.unl.edu/fall-seminars-leu-lectures.

Students wishing to take the series for academic credit are encouraged to contact the Center for Grassland Studies at (402) 472-4101. The 2019 presentation schedule is:

- ❖ September 9: "*Geologic History of the Nebraska Sandhills*" by **David Loope**, Earth & Atmospheric Sciences, University of Nebraska-Lincoln.
- ❖ September 16: "*A Prairie University and its Impact on Range and Forage Science*" by **Cheryl Dunn**, Agronomy & Horticulture, University of Nebraska-Lincoln. *NOTE: The location for this seminar is 150 Keim Hall, East Campus.*
- ❖ September 30: "*Groundwater: Primary Source of Sandhills Streamflow*" by **Troy Gilmore**, School of Natural Resources, University of Nebraska-Lincoln.
- ❖ October 7: "*A 25-year Review of the Center for Grassland Studies*" by **Martin Massengale**, Emeriti, University of Nebraska-Lincoln.
- ❖ October 14: "*Research and Communication Opportunities for the Nebraska Sandhills*" by **Mary Harner**, Communication, University of Nebraska at Kearney.
- ❖ October 29: "*Long-term Vegetation Research Plot Arrays in the Nebraska Sandhills*" by **Tom Bragg**, Department of Biology, University of Nebraska-Omaha.
- ❖ November 4: "*Sandsage Prairie: Ecology and Biodiversity of the 'Cinderella Sandhills'*" by **Jim Locklear**, Lauritzen Gardens.
- ❖ November 11: "*Forewarned is Forearmed: Seeking Early Warnings of Ecological Upheavals*" by **Caleb Roberts**, Agronomy & Horticulture, University of Nebraska-Lincoln, and "*Characterizing Patterns and Outcomes of Large Wildfire in Great Plains*" by **Victoria Donovan**, Agronomy & Horticulture, University of Nebraska-Lincoln.
- ❖ November 18: "*Birds in the Sandhills: history, habitat, and conservation in the heart of the Great Plains*" by **Larkin Powell**, School of Natural Resources, University of Nebraska-Lincoln.
- ❖ December 9: "*Climate Change and Landscape Evolution in the Nebraska Sandhills*" by **Paul Hanson**, School of Natural Resources, University of Nebraska-Lincoln.

Grazing Livestock Systems and Range Clubs Host Banquet

Awards and recognitions were part of the Grazing Livestock Systems (GLS) Club and Range Management Club Joint Banquet and Recognition held Friday, April 12 in the Nebraska East Union. Additionally, the 50 students, family, and faculty in attendance heard **Dr. Dennis Brink**, Kermit Wagner Distinguished Professor Emeritus in Animal Science, speak on "Why Grazing Livestock Systems?"

Grazing Livestock System alumni **Clayton Chihasz** (2009) and **Cory Peters** (2016), and Rangeland Ecosystems alumnas **Jessica Milby** (2008) were also on hand. Clayton said, "The GLS program played a huge role in my life and career; it is what brought me to Nebraska and is why I am still here. Sponsorship by Great Plains Beef/Certified Piedmontese/Lone Creek Cattle Company was a way to give back to a program that hugely impacted my life. Networking with students to let them know what we can potentially offer them as a business (internships/employment) is important. We have two alums working for the organization now."



Dr. Dennis Brink addresses banquet audience.

The clubs would like to thank the following organizations for their sponsorship: **Certified Piedmontese by Great Plains Beef; Green Cover Seed; the College of Agricultural Sciences and Natural Resources; and the Center for Grassland Studies.**

The University of Nebraska does not discriminate based upon any protected status.
Please see go.unl.edu/nondiscrimination.

2019 Nebraska Grazing Conference ... Register Now!

Registration for the 2019 Nebraska Grazing Conference is now open. The conference schedule and online registration are available at grassland.unl.edu/nebraska-grazing-conference.

August 12: *Pre-conference Plant Identification Tour* provided by **Chris Helzer**, The Nature Conservancy.

August 13: *Rangeland Health Session* with **Patrick Shaver, Dana Larsen, and Daren Redfearn**. *Grazinglands Management Session* with **Virginia Jin, Walt Schacht, Jerry Volesky, Jeff Bradshaw, Martha Mamo, Jacob Miller, and Andrea Basche**.

August 14: *Art and Science of Winter Grazing Session* with **Lon Larsen, John Maddux, Logan Pribbeno, and Bruce Anderson**. *2018 Leopold Award Recipient* with **Jim O'Rourke**. *Rangeland Resilience Session* with **Jack Arterburn, Sarah Sortum, and Craig Allen**. *Conference Reflection* with **Bruce Anderson**.

NGC Registration Scholarship Fund Available

The Nebraska Grazing Conference (NGC) Registration Scholarship Fund provides registration for producers who are first-time attendees of the NGC. Producers will be nominated by producers who have attended the most recent NGC, as well as by agency personnel (Extension, NRCS, etc.) working closely with their clientele. The goal of the fund is to encourage new, beginning or progressive farmers and ranchers to attend the NGC. This program will enrich and add value to the NGC dialogue and planning, and provide new participants valuable information and networking opportunities. Nominators may email the following information to grassland@unl.edu by July 31: Nominee name, address, city, state, zip code, phone, and email. Nominees will need to register online to attend the conference.