

WRMC



WILDERNESS RISK MANAGEMENT CONFERENCE



SALT LAKE CITY, UTAH

23RD ANNUAL CONFERENCE **OCTOBER 12-14, 2016**



Welcome to the 2016 Wilderness Risk Management Conference

in Salt Lake City!

It's an honor and a pleasure to welcome you into this community. While many of us come from programs or organizations that compete with each other for revenue, students, or staff, safety is one area where we should not compete, but rather, collaborate. The spirit of this conference is that by sharing ideas and experiences, we can all come away stronger and better equipped to manage risks effectively.

We have designed the conference to challenge your assumptions and quench your thirst for information, hopefully providing you with connections for your own professional development and the evolution of risk management in your program. We believe that taking risks adds fundamental value to wilderness experiences, but that these risks need to be accurately assessed and appropriately mitigated—and there is no better place to learn fundamental concepts and share learning with your peers than here at the WRMC. While we have a great team of returning speakers and core topics, we also have quite a few new speakers and new topics, keeping this year's conference fresh and current. We hope you enjoy and learn from the blend of new and returning speakers.

We encourage you to engage, ask questions, absorb as much as possible, make a list of action steps, prioritize that list, and create a reasonable timeline so that you can make progress applying the learning from this conference when you return home.

The WRMC Co-Sponsors and Steering Committee are here to make sure you have a positive, educational experience. Please let us know how we can help make your WRMC experience as rewarding as possible.

Sincerely,



Steve Smith, WRMC Steering Committee Chair

2016 WRMC Steering Committee

Todd Duncan
Program Safety Manager
Sierra Club

Amberleigh Hammond
Risk Mitigation Systems Manager
SCA

Catherine Hansen-Stamp
Attorney at Law
Recreation and Adventure

Drew Leemon
Director of Risk Management
NOLS

Katie Baum Mettenbrink
Senior Risk Management Consultant
NOLS

Jay Satz
Director of Partnerships and Innovation
Northwest Youth Corps

Jeannette Stawski
Executive Director
AORE

Mark T. Vermeal
Vice President of Safety
Outward Bound

Steering Committee Chair
Steve Smith
Outdoor Program Consultant

Purpose Statement

The purpose of the Wilderness Risk Management Conference (WRMC) is to provide a forum to learn and share common practices in wilderness risk management, and to contribute to a culture of open dialogue among educators, leaders, administrators, students, and other members of the outdoor industry. The WRMC is a gathering of knowledgeable professionals who want to help each other understand and manage risks in wilderness programming.

Goals

The primary goals of the WRMC are to:

- Share practices in wilderness risk management and openly discuss learning from past experiences.
- Influence industry-wide risk management norms and increase collective competence.
- Provide a forum and networking opportunity for wilderness practitioners and today's leaders in the field.

Tenets

The WRMC steering committee evaluates and selects educational content based on our shared risk management philosophy. We believe:

- Wilderness and outdoor experiences create unique opportunities for personal growth and skill development.
- There is value to taking risks, and those risks need to be thoughtfully assessed and managed.
- We have a responsibility to share learning in order to promote collaboration and improved risk management practices across the industry.
- Each organization should define its own risk management goals and practices, while also striving to learn from the practices and experiences of others.
- Managing the risks to our participants and staff helps us manage the risks to our organizations.
- We can and should enlist our participants as partners in managing the risks inherent in our programs.
- Cultural competence supports risk management and is essential in creating inclusive programs.
- Transparency with participants and their families is valuable and appropriate, including in times of crisis.
- Timely reporting and debriefing of risk management incidents is key to promoting learning and improving practices over time.
- Prudent legal strategies are grounded in running quality programs that thoughtfully manage risk and prioritize the health and well-being of those involved.

WRMC Co-Sponsors

Drew Leemon
Director of Risk Management
NOLS

Steve Neal
Risk Management Officer
Outward Bound

Mike Pigg
Associate Director of Safety
Outward Bound

Steve Smith
Outdoor Program Consultant
formerly SCA

Lead Co-Sponsor
Katie Baum Mettenbrink
Senior Risk Management Consultant
NOLS

Important Information

Grand Ballroom • Exhibit Hall • The Heart of the WRMC

From the opening event to closing remarks, you will want to spend your non-classroom time in the Grand Ballroom, which is located on the second floor. This space is the hub of the conference, where you can mingle with exhibitors to learn about their services and products, network with peers through formal and informal channels, and re-energize with coffee and snacks.

Exhibitor Reception

Start off the WRMC with a trip around the Exhibit Hall for the chance to meet this year's exhibitors. Join us Wednesday from 5:00 p.m.–6:30 p.m. in the Grand Ballroom for light appetizers, prize giveaways, and more.

New Job Networking

Throughout the conference, in the exhibitor hall, a booth will be dedicated to job networking. Post job announcements, drop off your resume, or use this space to meet with potential employers and employees.

Keynote Dinner and Address

Wrap up the conference in style on Friday evening with a social cocktail hour at 5:00 p.m. followed by dinner at 6:30 p.m. The final WRMC presentation will feature Grant Statham, telling a story of risk, tragedy, resilience, and change surrounding Canada's deadliest avalanche season on record.

Movie Night

Join us on Thursday night at 8 p.m. in the Seminar Theater to watch *An American Ascent*, a feature documentary about the first all African American expedition to tackle North America's highest peak, Denali.

Jim Ratz Memorial Scholarship

Jim Ratz (1952-2005) was a passionate mountaineer, father, and husband dedicated to outdoor education and the preservation of wilderness. As NOLS Executive Director (1984-1995), Ratz was instrumental in the creation and vision of the inaugural Wilderness Risk Management Conference.

Thank you to the following donors for providing 2016 Jim Ratz Memorial scholarships!



Welcome Committee

If this is your first conference, visit with WRMC Steering Committee members on opening night at their welcome table in the Exhibit Hall. Ask them questions and learn how to get the most out of your WRMC experience.

Award Ceremony

Wednesday at 6:30 p.m., grab a chair for welcoming remarks and the Reb Gregg Wilderness Risk Management Award presentation to this year's recipient, Jay A. Satz.

Survey Participation

Help us improve the conference, and support the educational growth of our speakers, by participating in the online survey at the end of each day. Your opinion is highly valued, and prizes will be given away at random to survey-takers.

Presentation Tracks

Emergency Planning & Crisis Response
Field Practices
Legal Considerations
Program Administration
Staff Training & Decision Making

Core Workshop

Look for this symbol to identify workshops that provide a fundamental introduction to risk management and mitigation strategies. If you are new to the WRMC, we strongly encourage you to attend the core workshops.

Pre-Conference Schedule

*Find a map of conference rooms on page 18

Tuesday, October 11, 2016

7:00 a.m.–8:00 a.m.	Pre-Conference Check-In <i>Registration Office</i>
8:00 a.m.–5:00 p.m.	Effective Outdoor Program Design and Management Paul Nicolazzo, Joel Reid <i>Topaz</i>
	Navigating Health, Safety, and Security Abroad Bill Frederick <i>Canyon A</i>
	NOLS Administrative Risk Management Training Kate Koons, Brendan Madden <i>Alpine East</i>
	WFR Recertification Gates Richards, Liam Downey <i>Granite</i>

Wednesday, October 12, 2016

7:00 a.m.–8:00 a.m.	Pre-Conference Check-In <i>Registration Office</i>
8:00 a.m.–5:00 p.m.	Effective Outdoor Program Design and Management, cont. Paul Nicolazzo, Joel Reid <i>Topaz</i>
	Navigating Health, Safety, and Security Abroad, cont. Bill Frederick <i>Canyon A</i>
	NOLS Administrative Risk Management Training, cont. Kate Koons, Brendan Madden <i>Alpine East</i>
	WFR Recertification, cont. Gates Richards, Liam Downey <i>Granite</i>
8:00am–12:00pm	Communicating Through Crisis: A Holistic Approach Skip King, Will Marling <i>Canyon C</i>
	Root Cause Analysis: A Technique for Incident Investigation Mark Vermeal, Mike Pigg <i>Canyon B</i>
1:00 p.m.–5:00 p.m.	Parent Phone Call Lab Jamie O'Donnell <i>Salon 1</i>
	And the Winner Is... (?) Hot Issues, Hot Cases Catherine Hansen-Stamp, Reb Gregg <i>Salon 1</i>
	Performing Under Pressure Deb Ajango <i>Canyon B</i>

Conference Opening

Wednesday, October 12, 2016

5:00 p.m.–6:00 p.m.	Conference Check-In <i>Grand Ballroom</i>
5:00 p.m.–6:30 p.m.	Poster Session <i>Grand Ballroom</i>
5:00 p.m.–6:30 p.m.	Exhibitor Reception Giveaways, Appetizers, and Cash Bar <i>Grand Ballroom</i>
6:30 p.m.–7:00 p.m.	Opening Remarks <i>Grand Ballroom</i>
7:00 p.m.–7:30 p.m.	Reb Gregg Wilderness Risk Management Award Ceremony 2016 Recipient Jay A. Satz <i>Grand Ballroom</i>

Conference Schedule

Thursday, October 13, 2016		
8:00 a.m.–5:00 p.m.	Exhibitor Showroom <i>Grand Ballroom</i>	
	EMERGENCY PLANNING & CRISIS RESPONSE	FIELD PRACTICES
8:30 a.m.–10:00 a.m.	Core Workshop Crisis Management: A Preplan in Action Drew Leemon <i>Canyon BC</i>	The Frontier of American Belaying: Changing a Folkcraft to a Science Ron Funderburke <i>Topaz</i>
10:00 a.m.–10:30 a.m.	Exhibitor Showcase and Break <i>Grand Ballroom</i>	
10:30 a.m.–12:00 p.m.	Core Workshop Crisis Communication in the Digital Age: The Basics Still Matter Bruce Palmer <i>Alpine East</i>	I Can't Believe They're Doing That! Lessons from the Intersections of Guiding and Outdoor Adventure Education Joshua Cole, Erika Halm <i>Alpine West</i>
12:00 p.m.–1:30 p.m.	Exhibitor Showcase and Break <i>Grand Ballroom</i>	
1:30 p.m.–2:30 p.m.	Blindspot: Near Miss Trauma Brendan Madden <i>Alpine East</i>	Administration of Epinephrine in the Backcountry: Evolving Legal Considerations Nadia Kimmel, Leah Corrigan <i>Canyon A</i>
2:30 p.m.–3:00 p.m.	Exhibitor Showcase and Break <i>Grand Ballroom</i>	
3:00 p.m.–4:30 p.m.	Media Masters: Crisis Training for the Spotlight Travis Taylor, Karmina Zafiro <i>Alpine East</i>	Core Workshop Supporting Struggling Participants: Managing Behavioral and Mental Health Issues Katie Baum Mettenbrink, Emily Ledingham <i>Canyon BC</i>
4:45 p.m.–6:15 p.m.	Structured Networking <i>Grand Ballroom</i>	
8:00 p.m.–9:00 p.m.	Movie Night (See ad on page 27) <i>Seminar Theater</i>	
Friday, October 14, 2016		
8:00 a.m.–3:30 p.m.	Exhibitor Showroom <i>Grand Ballroom</i>	
8:30 a.m.–10:00 a.m.	Core Workshop Risk Management: The Traumatic Aftermath Will Marling <i>Canyon BC</i>	Advanced Foot Entrapment Techniques Nate Ostis <i>Canyon A</i>
10:00 a.m.–10:30 a.m.	Exhibitor Showcase and Break <i>Grand Ballroom</i>	
10:30 a.m.–12:00 p.m.	Complexities in Intercultural Emergency Response Tim Hare <i>Topaz</i>	The Developing Adolescent Brain with Respect to Education and Safety Management Steve Creech <i>Canyon A</i>
12:00 p.m.–1:30 p.m.	Exhibitor Showcase and Break <i>Grand Ballroom</i>	
1:30 p.m.–3:00 p.m.	Small Organization Emergency Response Plans: Where Do I Start? John Kelley <i>Canyon A</i>	Tools for Behavioral Crisis in the Remote Setting Laura McGladrey, Will Marling <i>Alpine East</i>
3:00 p.m.–3:30 p.m.	Exhibitor Showcase and Break <i>Grand Ballroom</i>	
3:30 p.m.–5:00 p.m.	Risk Management and Crisis Response: A Case Study Catherine Hansen-Stamp, Doug Stevens <i>Topaz</i>	Wilderness Medicine Panel Tod Schimelpfenig, Greg Moore, David McEvoy, Shana Tarter <i>Canyon A</i>
5:00 p.m.–7:30 p.m.	Social Hour and Keynote Dinner <i>Grand Ballroom</i>	
7:30 p.m.–9:00 p.m.	Keynote Address and Closing Remarks <i>Grand Ballroom</i> Tipping Point 2003: A Canadian Story of Risk, Tragedy, Resilience, and Change Grant Statham	

LEGAL CONSIDERATIONS	PROGRAM ADMINISTRATION	STAFF TRAINING & DECISION MAKING
Risk Management Primer Tracey Knutson <i>Alpine East</i>	Making Good Programming Decisions in the Face of Media Hype Chad Olcott <i>Canyon A</i>	Checklist Manifesto for Outdoor Programs Al Wright <i>Alpine West</i>
Staffing and Compensation Issues James Pearson <i>Topaz</i>	More Than People, Equipment, and Environment: The Design of a Risk Assessment Method Clare Dallat <i>Canyon A</i>	Decision Making: Errors of Perception Gates Richards <i>Canyon BC</i>
Lawsuits, Legal Issues, and Lessons for the Outdoor Industry Wilma Gray, Jill Penwarden <i>Topaz</i>	Supporting Students in Programs Designed to Diversify Conservation Rob Terry, Millie Jimenez, Megan Kohli <i>Alpine East</i>	You Know Too Much! Understanding and Mitigating Your Expert Blind Spot Emily Abell <i>Alpine West</i>
Medical Screening: Options and Answers Frances Mock, Seth Hawkins <i>Alpine West</i>	Incident Tracking Database: Improving Safety through Advanced Data Analytics Rick Curts <i>Canyon A</i>	High Impact Training Practices: Tools for Socializing Your Training and Leveraging Relationships in Learning Micah Leinbach <i>Topaz</i>

Core Workshop Working with Minors: Legal Issues Catherine Hansen-Stamp <i>Alpine East</i>	When the Tail Wags the Dog: Recognizing and Avoiding Mission Creep Steve Smith <i>Topaz</i>	Rejecting the Binary: Managing Risk for the Queer and Trans Communities Elyse Rylander, Kira McGieson <i>Alpine West</i>
Exploring the Exculpatories Reb Gregg <i>Alpine East</i>	Safety Culture: Management Levers that Drive Safety Performance Jeff Jackson <i>Canyon BC</i>	Core Workshop Training Your Staff to Be Risk Managers Kate Koons <i>Alpine West</i>
		Off Site Climbing Gear Testing: Facts, Myths, & Breakin' Stuff Garth Tino, Russell Slaugh <i>Black Diamond (pre-registration required)</i>
Have You Got It Covered? Exposures That Could Lead to an Organizational and Financial Meltdown Steve Neal, Sam Daume <i>Topaz</i>	State of the Field: Using Comparative Risk Management Data to Benchmark Your Program Jim Sibthorp, Lisa Meerts-Brandsma, Shannon Rochelle, Drew Leemon <i>Canyon BC</i>	Building Intuition for Low Frequency/High Consequence Events Clinton Culp <i>Alpine West</i>
Big Decisions in the Field (and their Legal Implications) Leslie Arutunian, Reb Gregg <i>Canyon BC</i>	Core Workshop Updates and Overview: Navigating Health, Safety, and Security Abroad Bill Frederick <i>Alpine East</i>	Inclusion Practicum Sydney Clark, Anne Peick, Emily Ledingham <i>Alpine West</i>

PRE-CONFERENCE WORKSHOPS

Tuesday–Wednesday, October 11–12, two days

8:00 a.m.–5:00 p.m.

Effective Outdoor Program Design and Management

Paul Nicolazzo, Joel Reid

Topaz

This workshop will examine the complex relationships surrounding outdoor program design and management from the field instructor, staff trainer, and program administration perspectives using PowerPoint, interactive lecture, video, and small group activities. It is guaranteed to have a positive impact on how you administer and deliver your programs and courses and train your staff. Tuition includes our *Effective Outdoor Program Design and Management* textbook and small group exercise manual (sent as PDF file prior to conference).

Navigating Health, Safety, and Security Abroad

Bill Frederick

Canyon A

What do international trip leaders need to be able to do and what skills, understanding, and informational access do they need? This training will look at the international hazard landscape and the risk management strategies available, including data, standards, best practices, information acquisition, vetting strategies, cross cultural implications for safety, and emergency response. The format consists of small group work on scenarios interspersed with content lectures. Participants will receive reading packets prior to the training.

NOLS Administrative Risk Management Training

Kate Koons, Brendan Madden

Alpine East

Using lecture, discussion, exercises, and hands-on scenarios, this two-day training will provide a structured approach and the necessary tools to build a risk management plan appropriate for your organization. You will walk away with a detailed action plan designed to improve your curriculum, administrative process, staff hiring, field support services, and crisis planning.

WFR Recertification

Gates Richards, Liam Downey

Granite

Are your wilderness medicine protocols on the tip of your tongue or in the bottom of your pack? Join NOLS Wilderness Medicine for a two-day, scenario-based course to review evacuation and decision-making guidelines. This new WFR Recertification course includes an online component. Prior to arriving at the course site, you will need to go through materials (readings and videos) and complete the written WFR Recertification test online. Once in the classroom, our dynamic, experienced instructors will refresh you on current techniques, protocols, and controversies in the wilderness medicine field. You will have opportunities to ask questions and participate in challenging practice scenarios and case

studies. The Wilderness First Responder Recertification course includes NOLS Adult and Child CPR and Airway Management certification. This course is the most popular recertification program in wilderness medicine and is ideal for current Wilderness First Responders and Wilderness EMTs. The WFR Recertification course is pre-approved for 18 hours of EMT Continuing Education Units by CECBEMS.

Wednesday, October 12, full day

8:00 a.m.–5:00 p.m.

Communicating Through Crisis: A Holistic Approach

Skip King, Will Marling

Canyon C

Something bad has happened, and there's no way it won't be a big story. Do you know what to say to individuals and their families who have gone through this traumatic incident, and how to respond to their emotional reactions? Meantime, the public and reporters are clamoring for all the gory details. But how do you answer all the questions consistently, while remaining respectful of both family privacy and the public's right to know? This informative and entertaining session provides skills-based protocols for understanding victim language and culture in the aftermath of a critical incident—and tools to use with public communications efforts.

Wednesday, October 12, half day

8:00 a.m.–12:00 p.m.

Parent Phone Call Practice Lab

Jamie O'Donnell

Salon 1

Test your conflict communication skills in this interactive parent phone call lab. Spend three hours preparing for and practicing challenging phone call scenarios and hone your skills by serving as both caller and coach. After each call, the “parent,” an experienced program administrator, will offer feedback to help you develop your skills. We will review successes and persistent challenges, and you will leave with strategies for applying lessons learned to your own program.

Root Cause Analysis: A Technique for Incident Investigation

Mark Vermeal, Mike Pigg

Canyon B

Root Cause Analysis (RCA) is a structured process designed to help identify not only what and how an event occurred, but also why it happened. The RCA process enables investigators to identify and address the origin of a problem (the “root cause”) as opposed to just symptoms of the problem. Only when investigators are able to determine why an incident occurred will they be able to specify corrective measures that prevent similar future incidents.

Wednesday, October 12, half day

1:00p.m.–5:00 p.m.

And the Winner Is...(?) Hot Issues, Hot Cases

Catherine Hansen-Stamp, Reb Gregg

Salon 1

In this interactive session, we will ask attendees to consider several 2014-15 court opinions addressing significant legal issues in the industry. Participants will consider—and attack or defend—conflicting arguments pertaining to, among other issues: negligence and the duty of care owed to participants, including minors, inherent risks and assumption of risks, the legal impact of a “release,” disclosures and screening, the relevance of standards or practices (your own or those in the industry), use of independent contractors or volunteers, and other issues.

Performing Under Pressure

Deb Ajango

Canyon B

Research has shown that people often do not perform well under pressure. This workshop will help audience members understand why people react as they do, both cognitively and behaviorally, in stressful situations. By using case studies and current research, the presenter will explore how modified staff trainings can influence one's response. The presenter will also offer suggestions on how one might modify his or her organizational emergency action plan so that desired behaviors are more likely. The second half of this workshop will be used to help audience members learn how to create realistic, stressful scenarios for staff trainings. Time will be allotted for participants to write scenarios that can be used within their organizations.

WRMC

Wilderness Risk Management Conference

During the WRMC

1 JOIN THE WRMC COMMUNITY

Participate in structured networking, social hours, and special events. Connect with others during meals and between sessions.

2 LEARN FROM PEERS

Discover the challenges and solutions other programs face. Use the color code on your name tag to meet people who work in similar program types.

3 ATTEND CORE WORKSHOPS

“Core” workshops provide fundamental material and are highly recommended for new participants.

4 CAPTURE ACTION STEPS

Each presentation includes action steps—visit the WRMC website for a complete list.

5 ASK QUESTIONS

Please ask questions of WRMC staff, steering committee members, and co-sponsors. We are here to help you! Look for identifying ribbons on name tags.

After the WRMC

1 PROVIDE FEEDBACK

Provide feedback so we can improve the WRMC in the future—online surveys will be distributed each day of the conference.

2 MAKE A PRIORITIZED PLAN

Synthesize the action steps into your own prioritized plan for your program. Remember to fine tune and adapt concepts—a technique or policy that works for one program might not work for another.

3 BOOKMARK THE WRMC RESOURCE CENTER

Visit the WRMC Resource Center online for workshop proceedings, videos, and attendee list.

4 CONSIDER PRESENTING NEXT YEAR

Have an idea for a workshop? Look for our call for proposals in January. New speakers add value to the conference!

EDUCATIONAL ENRICHMENT

Poster Session

Wednesday, October 12

5:00 p.m.–6:30 p.m.
Grand Ballroom

Poster presenters will be available alongside their posters to interact with conference goers and answer questions. Posters will continue to be accessible for the duration of the conference as stand-alone presentations.

From the Gecko to the Stag: How to Prioritize and Optimize Your Organization's Insurance Program

Don Pachner

Most outdoor organizations purchase insurance based on recommendations from a board member or third party insurance agent or consultant. This presentation will help you analyze, prioritize, and optimize your organization's insurance program and policies from the standpoint of your board and administrator priorities.

New Preparing Administrative Staff to Manage Programs in the Field: A Team Approach

Kate Farthing, Lindsay Venable

Broadreach manages over 1,000 students yearly in 39 different countries with 22 full time staff at headquarters. In an industry where office staff have diverse roles and responsibilities that change constantly, our goal is to consider the subtle and overt processes for solidifying a team at headquarters that can manage a variety of scenarios in the field.

New Search and Rescue Victims: Who Are They and What We Can Do to Reduce the Risk

Daniel Hadley

Requiring assistance from Search and Rescue (SAR) is an undesirable outcome of a wilderness outing. Review the latest research about SAR victims and how we can create better messaging from it—does solo wilderness travel increase risk for backcountry accidents?

New What Does the Law Require of Me? How to Determine Your Legal Duties

Michael Blasie

Wilderness activities involve an inherent amount of risk and lack of control over the environment. But what does the law require of you? Using the law of negligence as a case study, this presentation explains where your legal duties come from, how you can understand them, and preventative steps you can take to best ensure you comply.

Structured Networking

Thursday, October 13

4:45 p.m.–6:15 p.m.
Grand Ballroom

Join your peers for some engaging and informal conversations and hear how like organizations manage similar challenges. We will provide topics and facilitate the formation of small discussion groups. The goal is to provide a venue for participants to connect with others who experience similar challenges and to share ideas that will help attendees improve their programs. Find a list of this year's topics at the registration table marked "WRMC Resources."

Action Steps

The true value of attending the WRMC is in the resulting action you take upon returning to your organization. Each presenter has contributed three action steps from their workshops. Action steps are measurable tasks or ideas you should be able to do or implement in your program within a reasonably short timeframe. They are not meant as large sweeping changes, rather as small steps to move you forward in your risk management strategy. In some cases the action steps parallel the main take-home points of the workshop; in other cases the action steps are examples of a multitude of possible follow-up action. This year's action steps can be found on the WRMC online resource page.

PRESENTATION DESCRIPTIONS

Workshop descriptions are organized under their appropriate tracks. Track headings are ordered alphabetically and workshops are in chronological order.

Keynote Address

Friday, October 14

following Keynote dinner

Tipping Point 2003: A Canadian Story of Risk, Tragedy, Resilience, and Change

Grant Statham

Grand Ballroom

The Canadian backcountry has changed dramatically over the past 25 years, shaped by popular trends in recreation, the mainstream influence of high risk behavior and a proliferation of internet and media exposure. Through the 1990s, the skyrocketing backcountry use corresponded with a rising trend in avalanche fatalities that peaked in 2003 when two separate avalanche accidents killed 14 people within the span of two weeks, including seven tenth grade students on an outdoor education field trip. By the end of that winter, 29 people had been killed in avalanches.

What followed was an intense public scrutiny of the systems used for managing winter alpine recreation and outdoor education in Canada. Grant Statham tells his story of being thrust into the eye of this storm, sprung from a career in mountain guiding to the center of developing public warning systems and risk policy for the federal government. Today, 13 years later, Canada is regarded as a world leader in public avalanche safety and many of the systems developed following 2003 are now used worldwide.

Emergency Planning & Crisis Response

Thursday, October 13

Core Workshop Crisis Management: A Preplan in Action

8:30 a.m.–10:00 a.m.

Drew Leemon

Canyon BC

Responding to a crisis, such as a participant fatality, presents a complex situation that demands a thoughtful and reasoned response. This workshop will provide attendees with an overview of the five elements of successful crisis management and begin to delve into the complexities of responding to crisis situations through the presenter's personal and professional experience, while providing a forum for exchanging ideas and sharing experiences of the audience. Additionally, this workshop will provide a starting point for creating a crisis management plan.

Core Workshop Crisis Communication in the Digital Age:

The Basics Still Matter

10:30 a.m.–12:00 p.m.

Bruce Palmer

Alpine East

Learn from NOLS Marketing and Admission Director Bruce Palmer about how to monitor and utilize electronic communication, including the use of blogs, Facebook, Twitter, and other networks. Expect to walk away with an increased understanding of the basics of crisis communication, and how to use the networks to their fullest potential.

Blindspot: Near-Miss Trauma

1:30 p.m.–2:30 p.m.

Brendan Madden

Alpine East

A cultural blindspot in our industry is the "Near-Critical Incident:" a category of serious near-miss where staff or participant(s) come close to a fatal accident. Experience has shown that these incidents can be traumatic for those involved, yet, because no serious incident occurred, there is often little support offered. This presentation will attempt to address that void by showing techniques for identifying the near-critical incident, structuring an effective debrief, and providing guidance for longer term healing and support.

Media Masters: Crisis Training for the Spotlight

3:00 p.m.–4:30 p.m.

Travis Taylor, Karmina Zafiro

Alpine East

Wilderness crises, such as a fatality or serious injury, can quickly spiral out of control and badly damage your organization's good name. Unfortunately, responders are often left unprepared for the intense glare of the media spotlight. This workshop will provide you with expert insight and proven techniques to respond to media demands and rush to assess accountability. You will learn how and why your outdoors expertise and experience must be reinforced by a heads-up approach.

Friday, October 14

Core Workshop Risk Management: The Traumatic Aftermath

8:30 a.m.–10:00 a.m.

Will Marling
Canyon BC

This workshop is an introduction to processes and protocols for addressing the traumatic impact on clients, staff and responders in the aftermath of a traumatic critical incident. It is based upon 40 years of field-tested, evidence-informed preferred practices in the area of trauma mitigation and education.

Complexities in Intercultural Emergency Response

10:30 a.m.–12:00 p.m.

Tim Hare
Topaz

As many programs move into international settings, both in wilderness education and otherwise, increased attention should be given to the complex variables present when operating abroad. While many lessons from wilderness risk management transfer, many others must be learned. This session will use case studies from an international program to highlight lessons related to unreliable communication, variable medical infrastructure, local hazards, diseases, mental health concerns, and competing stakeholder demands.

Small Organization Emergency Response Plans: Where Do I Start?

1:30 p.m.–3:00 p.m.

John Kelley
Canyon A

Through the lens of a small independent school, this presentation will reflect upon the creation of an in-house risk management plan. This presentation will provide others with the tools and resources needed to begin the process of creating a current and user-friendly emergency response plan for their institution.

New Risk Management and Crisis Response: A Case Study

3:30 p.m.–5:00 p.m.

Catherine Hansen-Stamp, Doug Stevens
Topaz

This is a unique opportunity to review a valuable case study involving the death of a minor student and serious injury to another during an adventure travel trip. We will engage the audience in discussing pre and post-incident issues including information exchange, risk and hazard assessment, contractor vetting, and interaction between company staff and subcontractors. Post-incident issues include emergency response, e-media, documentation, communication with subcontractors and students' families, and the cultural challenges of operating in a distant region. We will also discuss the resulting litigation.

Field Practices

Thursday, October 13

New The Frontier of American Belaying: Changing a Folkcraft to a Science

8:30 a.m.–10:00 a.m.

Ron Funderburke
Topaz

The American Alpine Club will demonstrate the history of belaying as a risk management practice in all climbing contexts (recreational, professional, and institutional) using interactive props and discussion. Historically, claims about belay standards and best practices have often been contradictory, and that makes risk management difficult. Instead, attendees will learn to use the Universal Fundamentals of Belaying as a tool to re-evaluate what we think we know about the seminal risk management tool in American climbing.

New I Can't Believe They're Doing That! Lessons from the Intersections of Guiding and Outdoor Adventure Education

10:30 a.m.–12:00 p.m.

Joshua Cole, Erika Halm
Alpine West

While there is an enormous overlap in the activities of commercial guiding and outdoor adventure education, there is very little exchange of risk management practices between the two worlds. We will present selected practices and standards from each sphere within the context of varied missions, risk tolerances, and client profiles. We believe that there is much that these intertwined parts of our industry can learn from one another and will utilize the expertise of our audience to begin the process of integrating these practices into our own programs.

Administration of Epinephrine in the Backcountry: Evolving Legal Considerations

1:30 p.m.–2:30 p.m.

Nadia Kimmell, Leah Corrigan
Canyon A

Many states have recently passed laws limiting liability for administering epinephrine to an individual reasonably believed to be suffering from anaphylaxis. These laws will ease restrictions on the use of epinephrine by backcountry field staff, which has been widely believed to expose outdoor professionals (and their employers) to liability. The presenters will discuss the status of the law in the western states and the practical considerations in implementing a protocol for epinephrine administration.

Core Workshop Supporting Struggling Participants: Managing Behavioral and Mental Health Issues

3:00 p.m.–4:30 p.m.

Katie Baum Mettenbrink, Emily Ledingham
Canyon BC

Managing behavior and mental health issues, and deciding who should stay or leave the field, can be intimidating and draining for field staff and administrators alike. This workshop aims to help you more effectively support struggling participants who can stay on your program, and identify those who should leave. We will explore continuums of behavior through scenarios, and provide a framework to define thresholds of acceptable behavior and corresponding management tools that match your program. This workshop is targeted towards field staff and administrators in non-therapeutic programs.

Friday, October 14

New Advanced Foot Entrapment Techniques

8:30 a.m.–10:00 a.m.

Nate Ostis
Canyon A

Is your river team ready? Sure you've got throw bags, carabiners, and pulleys in your kit. But is your team ready for a fast and effective response to the life threatening scenario of foot entrapment? There is no time to waste in these scenarios. Successful outcomes are a combination of effective preparation and a boatload of good luck. Is your team leaning too heavily on luck? Come and see the latest techniques for stabilizing an airway and extricating a patient. Distinguish between a heads-up rescue vs. a heads-down recovery. Throw ropes and gain confidence.

New The Developing Adolescent Brain with Respect to Education and Safety Management

10:30 a.m.–12:00 p.m.

Steve Creech
Canyon A

Are you sometimes dumbfounded why an adolescent did something that seemed so obviously risky? In an ever-evolving world of education and neuroscience research, this presentation focuses on understanding developing brains and implications for educators and safety managers. We will explore competing levels of maturity in the brain. By examining research, we will focus on transferring knowledge and scientific research into intentional educational and empowering strategies to create learning opportunities and improved safety management.

New Climbing Gear Testing: Facts, Myths, and Breakin' Stuff

10:30 p.m.–12:00 p.m.

Garth Tino, Russell Slaugh

Off site at Black Diamond Testing Facility (pre-registration required)

Do you have questions about climbing equipment uses, failures, proper vs. improper use? Do you ever wonder about specific scenarios you have encountered in climbing and wondered about the results that could happen? This session will be an interactive presentation on the laws of physics and how they interact with and affect climbing gear. This session will be held at the Black Diamond testing center, on their drop-test tower, where we will

create scenarios that push equipment to the limit and beyond, showing failures and how to avoid these issues. We will show how and why equipment fails or can fail, and how to mitigate these failures. We will be joined by members of the Black Diamond Quality Control team to answer a multitude of scenarios.

Tools for Behavioral Crisis in the Remote Setting

1:30 p.m.–3:00 p.m.

Laura McGladrey, Will Marling
Alpine East

What would you do if you're in the backcountry and one of your program participants is demonstrating extreme behaviors? This workshop is designed to build capacity to distinguish between common and extreme behaviors in order to mitigate risk and manage evacuations when necessary. You'll explore meaningful and evidence-based interventions as well as learning techniques for supporting staff. This is a practical and scenario-based learning opportunity to gain tangible skills for managing challenging behaviors.

Wilderness Medicine Panel

3:30 p.m.–5:00 p.m.

Tod Schimelpfenig, Greg Moore, David McEvoy, Shana Tarter
Canyon A

Panelists will offer updates on new topics and trends in wilderness medicine including mosquito-borne diseases, changes in spinal injury management, and psychological first aid. Attendees may submit questions to the panelists for response during the session, or for follow-up by email post-session.

Legal Considerations

Thursday, October 13

New Risk Management Primer

8:30 a.m.–10:00 a.m.

Tracey Knutson
Alpine East

Go from wading to swimming in the big risk management primer pool. This will be a session where we set up your knowledge base by working on some of the key concepts (yup—all in the same session) and then we will take those concepts and start you off wading and eventually get you swimming (normal attire OK). You'll apply these concepts to designing a risk management program, understanding what a case structure will look like (so you understand what to collect after an incident that will help you defend your operation), giving thought to your emergency response plans and protocols, understanding the standards that will apply to what you are doing in your program and how they will affect a post-incident inquiry, and dealing with outside media inquiries. We'll put a lot of language on the table, try various skill sets, and demonstrate that all language and skill sets in risk management create a unified field if you can get it all in your brain at once. We are going to cover some distance here so if you are looking for a mellow snooze session, this is not your class!

New **Staffing and Compensation Issues**

10:30 a.m.–12:00 p.m.

James Pearson

Topaz

This workshop will focus on (1) recent changes in wage and hour regulations and laws; (2) classification of employees vs. independent contractors; (3) employment issues such as interviewing, hiring and terminating employees; and (4) issues relating to volunteers and interns as opposed to paid staff.

New **Lawsuits, Legal Issues, and Lessons for the Outdoor Industry**

1:30 p.m.–2:30 p.m.

Wilma Gray, Jill Penwarden

Topaz

Wilma and Jill will explore how litigation works. Legal theories and issues to be discussed include: who is sued, causes of action, defenses, releases, third party contractors, insurance, jurisdiction, staffing, safety, post incident actions, reasonable care standards, social media, and documents. Lawsuits to be studied include wilderness programs (rafting), international programs (Mount Kilimanjaro), school groups (Urban Pioneer), and challenge courses (Tough Mudder). Participants will play an active role by reviewing and analyzing important considerations for the defense of the wilderness organization.

Medical Screening: Options and Answers

3:00 p.m.–4:30 p.m.

Frances Mock, Seth Hawkins

Alpine West

This presentation by an attorney and a practicing emergency room physician will address three different approaches to medical screening; legal issues, including what questions you are allowed to ask under the Americans with Disabilities Act and what statements you should include; general strategies for assessing medical risks; specific high risk or common medical conditions; implications on management of medical conditions in the field; and interfacing with healthcare providers during decision making.

Friday, October 14

Core Workshop **Working with Minors: Legal Issues**

8:30 a.m.–10:00 a.m.

Catherine Hansen-Stamp

Alpine East

What is “in loco parentis” and the duty of care owed to a minor regarding supervision and instruction? What about free or unstructured time and a child’s personal responsibility? What are an organization’s responsibilities considering an evolving “child”? How important is information exchange with the participating minor and his or her parent? Can a child release a program from liability, or assume certain risks? Is your program addressing the reality of potential sexual abuse issues? Share your thoughts in this interactive session as Cathy presents these and other issues in the context of current legal cases.

New **Exploring the Exculpatories**

10:30 a.m.–12:00 p.m.

Reb Gregg

Alpine East

Spoiler alert. This is not a tropical island tour. We will explore, instead, those aspects of the law which relieve you of culpability—blame—for things that go wrong in your operations. Included in our discussions will be your legal duty of care, how it relates to claims of negligence, a relaxing of your duty in certain sports and recreation activities, and avoiding blame, and liability, in your agreements with staff, clients and vendors.

Have You Got it Covered? Exposures That Could Lead to an Organizational and Financial Meltdown

1:30 p.m.–3:00 p.m.

Steve Neal, Sam Daume

Topaz

Sexual misconduct, vehicle accidents, medical malpractice, crisis response—what do all of these exposures have in common? If not managed properly an occurrence involving any of these can quickly lead an organization into a deep financial and legal quagmire. Are you covered? Is having an insurance policy enough? Having an understanding of when an incident (occurrence) may necessitate pulling the policy off the shelf to put it to work is critical. Also critical is understanding what is required of you, the insured. During this session, a series of scenarios and guided discussion will explore the complexities of managing exposures and incident response through the lens of an insurance policy.

New **Big Decisions in the Field (and Their Legal Implications)**

3:30 p.m.–5:00 p.m.

Leslie Arutunian, Reb Gregg

Canyon BC

An earthquake in Nepal, an alleged sexual assault in Panama, suicide ideation in Thailand, a puma encounter in Costa Rica, and an ankle injury in Chile. This isn’t a wilderness program nightmare but a bundle of emerging industry challenges faced recently by Wildlands Studies, a program which instructs backcountry undergraduate courses worldwide. Leslie Arutunian, Director, and Reb Gregg, legal counsel, will discuss operations and legal issues around these incidents—including preparation, management, and their outcomes. Wildlands Studies’ learning can become yours.

Program Administration

Thursday, October 13

New **Making Good Programming Decisions in the Face of Media Hype**

8:30 a.m.–10:00 a.m.

Chad Olcott

Canyon A

You’ve spent the last six months researching, scouting, and marketing your new trip to Costa Rica. Everything’s looking great and enrollment is solid—until the headlines are taken over by Zika. Infectious diseases, terrorism, wildfires and flooding—they aren’t just headlines to programs that operate around the

country. Should you cancel your trip? Should you push ahead? In short, how do you make rational, defensible programming decisions in the face of dramatic headlines?

New **More than People, Equipment and Environment: The Design of a Risk Assessment Method**

10:30 a.m.–12:00 p.m.

Clare Dallat

Canyon A

Workshop participants will receive a new structured approach for identifying the network of risks/hazards related to activity program design and delivery. The method, called NO-HARMS, is theoretically underpinned by a systems-based model and understanding of accident causation (Rasmussen, 1997). It considers hazards and actors beyond those associated solely with the immediate context of the activity. A key advantage offered by NO-HARMS is the ability to identify risks and hazards outside of the activity itself, such as risks related to program design, communications with schools/parents, and activity planning and preparation.

New **Supporting Students in Programs Designed to Diversify Conservation**

1:30 p.m.–2:30 p.m.

Rob Terry, Millie Jimenez, Megan Kohli

Alpine East

This session will examine how the National Park Service Academy, a collaborative program between the National Park Service (NPS) and the Student Conservation Association (SCA), has developed a spectrum of program elements and interventions designed to support members from a host of backgrounds currently underrepresented in NPS as they come together to diversify the agency’s workforce.

New **Incident Tracking Database: Improving Safety Through Advanced Data Analytics**

Rick Curtis

Canyon A

Incident data tracking is a critical part of any program’s risk management plan. To effectively manage risk you need to track incidents in a database and uncover trends by utilizing new advances in Business Intelligence (BI) data analytics. Learn how to capture incident data as illustrated by the International Incident Database System and how to implement data analytics with user-friendly tools right from your computer. You’ll learn powerful new approaches to incident data collection and best practices for data analytics..

Friday, October 14

When the Tail Wags The Dog: Recognizing and Avoiding Mission Creep

8:30 a.m.–10:00 a.m.

Steve Smith

Topaz

Is your program’s mission clearly identified, understood, and referred to by staff at all levels? Does your field staff know

and understand your mission more than the people designing programs, writing grants, or sitting on the board? When a new program model is identified, is there a clear process by which that model is vetted against existing mission, safety, and training filters? This presentation will explore the common risk management challenges programs face to innovate new programs without drifting away from their actual mission.

New **Safety Culture: Management Levers that Drive Safety Performance**

10:30 a.m.–12:00 p.m.

Jeff Jackson

Canyon BC

Safety culture is a large and well established organizational model of safety performance. Research in this field identifies management levers that influence individual safety performance. This presentation looks at the research as it applies to wilderness programs, and isolates findings that can inform management practice and risk management systems. Attendees walk away with a thorough understanding of the factors that influence safety motivation and identify the levers with which to drive safety performance.

New **State of the Field: Using Comparative Risk Management Data to Benchmark Your Program**

1:30 p.m.–3:00 p.m.

Jim Sibthorp, Lisa Meerts-Brandsma, Shannon Rochelle,

Drew Leemon

Canyon BC

Does your organization approach risk management with the same strategies as the rest of the industry? Small groups will discuss how they view risk management for 12 common field hazards and will compare their assumptions with findings from a 2016 industry-wide risk management benchmarking survey conducted by the University of Utah and NOLS. We will discuss the most pressing risk management concerns for 2016, identify changes since 2003, and discuss broader implications for the field.

Core Workshop **Updates and Overview: Navigating Health, Safety, and Security Abroad**

3:30 p.m.–5:00 p.m.

Bill Frederick

Alpine East

The international hazard landscape and the approaches and tools for managing risk are evolving at an ever-increasing pace. This workshop will identify fundamental program components on a continuum in order to tailor risk management strategies to the particulars of a given program. We will also look at hazard hot topics and the new strategies emerging to address them to include prevention, avoidance, and response.

Thursday, October 13

Checklist Manifesto for Outdoor Programs

8:30 a.m.–10:00 a.m.

Al Wright

Alpine West

The Checklist Manifesto: How to Get Things Right is a New York Times Bestseller written by Atul Gawande. Dr. Gawande brought the concept of research based protocols combined with operational “checklists” to surgical practice. Implementation of simple checklists had a dramatic decrease in surgical complications and death rates. Explore the application of Gawande’s simple principles garnered from the fields of medicine, construction, and aviation to operational ‘checklists’ in common adventure activities.

Decision Making: Errors of Perception

10:30 a.m.–12:00 p.m.

Gates Richards

Canyon BC

In this session, we will explore the neurobiological factors of perception that contribute to human errors in decision making. Using video, activities, and magic, we will experience and discuss errors of attention, errors of pattern recognition, and priming errors. Though we cannot eliminate these hazards from our decision-making process, we can recognize their effects, account for their presence, and minimize the chances of significant fallout from the traps they set. By increasing our awareness of how the brain processes information, we can take steps toward being more deliberate in our decision-making awareness, and perhaps make more consistently good decisions.

New You Know Too Much! Understanding and Mitigating Your Expert BlindSpot

1:30 p.m.–2:30 p.m.

Emily Abell

Alpine West

Staff know much more about the outdoors than their participants. Directors know much more about risk management than their staff. While this knowledge gap keeps you employed, it can also be a liability. In this interactive session, you’ll hear how your expert blindspot can lead you astray, and learn specific design thinking techniques to help you stay on track. In the closing exercise you’ll have a chance to practice locating and busting blindspots yourself.

New High Impact Training Practices: Tools for Socializing Your Training and Leveraging Relationships in Learning

3:00 p.m.–4:30 p.m.

Micah Leinbach

Topaz

Drawing from recent research in high-impact training, we will highlight successful ways your programs can use social training techniques to enhance engagement in and retention of

training materials for staff. With an emphasis on integrating training into the broader operations of your organization, we hope to support programs in reducing the emphasis on singular “training weeks,” instead making training an ongoing—and more effective—process.

Friday, October 14

Rejecting the Binary: Managing Risk for the Queer and Trans Communities

8:30 a.m.–10:00 a.m.

Elyse Rylander, Kira McGieson

Alpine West

Facilitators from OUT There Adventures will draw from their experience as one of a very small number of programs who lead wilderness expeditions specifically for queer and trans participants. Participants will explore challenges that might face their organization as more queer and trans individuals enter outdoor programs. The workshop will cover risks for the queer and trans communities that your organization may currently be taking and how to manage these risks. In a safe and learning-focused environment, participants will be able to ask questions about how to better support an underserved community in outdoor programming.

Core Workshop Training Your Staff to Be Risk Managers

10:30 a.m.–12:00 p.m.

Kate Koons

Alpine West

Learn how to use the limited amount of time you have for staff training to maximize your staff’s alignment with organizational values and make them competent field-based risk managers. Learn how to influence organizational culture and build risk management knowledge specific to your program. We will address the needs of small and large programs.

New Building Intuition for Low Frequency/High Consequence Events

1:30 p.m.–3:00 p.m.

Clinton Culp

Alpine West

Most of our decisions are, at least initially, made intuitively and typically serve us well when dealing with high frequency events. However, there is a problem: intuitions typically do not work well in low frequency/high consequence, non-discretionary time-to-task events. We will look at several traits that may give the expert decision maker an advantage over the novice. Along the way we will design and practice deliberate training techniques that are intended to develop good intuition.

Inclusion Practicum

3:30 p.m.–5:00 p.m.

Sydney Clark, Anne Peick, Emily Ledingham

Alpine West

We want our programs to reflect the diversity of the world around us, but are we ready to manage the emotional risks that come with this diversity? Oftentimes behavior that may

result from not feeling included is chalked up to bad behavior or lack of motivation, leaving unaddressed a non-inclusive atmosphere that presents an emotional risk. This scenario-based workshop will present the technical skill and build confidence to manage inclusion incidents and engage teams in inclusion work. You will participate in a formation activity to break down stereotypes and start conversations around diversity. Through scenario work we will practice how to recognize and interrupt microaggressions, and when to deploy allyship action to maintain inclusive course culture.



RISK MANAGEMENT SERVICES



Build a risk management plan or assess and improve your practices. We empower your organization to reach its full potential.

- ☐ Risk Management Consulting
- ☐ Administrative Risk Management Training
- ☐ Customized Staff Training
- ☐ Wilderness Risk Management Conference

For more information visit www.nols.edu/riskmanagement

You Create The EXPERIENCE



We Reduce the Legal Risks



Doug Stevens

- Litigation
- Employment
- Education Issues
- Risk Management
- Liability Protection
- Succession Planning
- General Business Services



www.celaw.com
303-443-8010
Boulder, Colorado

Hilton Salt Lake City Center Hotel Floor Plan



SPEAKER BIOGRAPHIES

Emily Abell is an experienced designer, hiker, safety geek, and former outdoor tour company staffer. In 2014, she completed the Masters of Design program at Carnegie Mellon University. Her thesis, entitled *Park Visitor as Known Hazard: Designing for Imperfect Humans to Combat 'Human Error,'* explored creative approaches to understanding and reducing day hiker incidents at Grand Canyon National Park. In between weekends, Emily works at Athenahealth San Francisco designing software that helps doctors work smarter.

Deb Ajango has presented nationally and internationally on the topic of risk management, emergency action planning, and wilderness medicine at a wide variety of conferences across the United States and abroad. She has provided risk management consulting throughout Alaska, the United States, and around the world. Deb has been an instructor for Wilderness Medical Associates for more than 20 years.

Leslie Arutunian, after 16 years in higher education, became director/owner of Wildlands Studies in 2008. Operating in 16 countries, with 42 faculty and 230 students, Wildlands Studies' enrollment has increased by 200% with above industry standards in risk management, academic accountability, faculty hiring standards, and insurance coverage. The result of living abroad and traveling to 40 countries, Leslie's personal interests lie in experiential education with a focus on the outdoors as a medium for personal empowerment.

Michael Blasie is a graduate of NYU Law School and seasoned litigation attorney. After over five years of civil and criminal cases at the Manhattan office of the international law firm of Cooley LLP, he moved to Colorado where he currently serves as law clerk to the honorable David Richman of the Colorado Court of Appeals. During his transition to Colorado he completed the NOLS Wilderness Medicine and Rescue semester, earned his WEMT and WFR certifications, and learned rescue skills in mountain, rock, and swift water environments.

Sydney Clark hails from the Midwest, where she earned a BA in Sociology and Political Science and played Division I volleyball at Southern Illinois University-Carbondale. She subsequently spent two years in nonprofit coalition building and grassroots community development with Public Allies Chicago. From 2013 to 2015, Sydney served as a Peace Corps volunteer in Kyrgyzstan where she led a variety of education projects and explored the Tian Shan mountains. Sydney is currently the diversity and inclusion manager at NOLS where she is primarily developing initiatives to increase accessibility to the outdoors.

Joshua Cole is an owner and guide at North Cascades Mountain Guides and has more than 15 years of experience working in the outdoor education and guiding industries. He has given trainings and presentations on wilderness risk management to

numerous organizations. Josh served as Washington program director for Northwest Outward Bound School for eight years, is a lead instructor for Wilderness Medicine Training Center, and has worked as a professional ski patroller. Josh is an AMGA certified ski guide, single-pitch instructor, and is working towards his AMGA certification in the rock and alpine disciplines.

Leah Corrigan is a lawyer who advises and defends outdoor recreation businesses on liability and risk management issues. She is the founder of Western Recreation Law Center, based out of Jackson, Wyoming, and represents a wide variety of outdoor professionals throughout the intermountain west. Leah spent 10 years as a wilderness river guide before becoming a lawyer, and is an avid skier, mountain biker, and river-runner. She is passionate about helping her clients run a professional recreation business, while keeping the adventure in their operations.

Steve Creech loves learning and loves inspiring others with what he has learned. He gets to teach staff and students about the wilderness, education, leadership, and development of strong character in his role as an associate program director of course quality and safety for the Colorado Outward Bound School in Moab, Utah.

Dr. Clinton Culp is a retired U.S. Marine with several combat deployments. He has spent time as the Officer in Charge of the USMC's Mountain Leaders course at Bridgeport, California, a Company Commander in the infantry, and Naval ROTC instructor. He is an avid climber, mountaineer, backcountry skier, and educator. He has taught Adventure Leadership at the University of Idaho and is currently teaching Outdoor Adventure Leadership at Montana State University in Billings.

Rick Curtis has been director of the Outdoor Action Program at Princeton University for 34 years, running one of the largest college outdoor orientation programs in the US. He is the founder of OutdoorEd.com, the premiere website for outdoor professionals and the author of *The Backpacker's Field Manual*. A software and database developer, he is the architect of the International Incident Database System, a standard for incident data collection in the outdoor industry.

Clare Dallat is a PhD candidate at the Centre for Human Factors and Sociotechnical Systems at the University of the Sunshine Coast, Australia. For 13 years, Clare held the position of director of risk management at The Outdoor Education Group (OEG), an organization with 40,000 participants and 400 staff participating annually on multi-day programs. She now leads Risk Resolve, an OEG risk management consultancy service. Clare spends her time working with organizations and schools throughout Australia, assisting them to develop, test, and improve their systems. She has responded in field and leadership roles, to critical incidents, has served in an expert witness capacity, and is familiar with the inside of a courtroom.

Sam Daume has been in the insurance industry since 1986 and has worked with educational institutions since 1989. He joined the Fred C. Church Education team as an account executive in January of 2009. His experience includes 26 years as an account executive with three insurance brokers assuming various leadership positions including New England Education Practice Leader for Marsh USA. Sam has provided risk management advice and insurance brokerage service to independent schools and colleges and universities of all shapes and sizes as well as several well known outdoor educational institutions. Married 27 years with 2 kids, Sam loves the outdoors and traveling with his family. His highlights include climbing and hiking in national parks, flyfishing for salmon in Quebec, and a family trip to South Africa. He is an active member of Massachusetts Audubon, Appalachian Mountain Club, Trustees of the Reservation, and Sierra Club.

Liam Downey divides his time between practicing austere medicine as a remote paramedic and teaching wilderness medicine and survival. He has worked as an emergency care provider in the rugged deserts of southeast Utah and west Texas, the Navajo and Hopi tribal reservations of northern Arizona, Black Rock City of Nevada, Yellowstone National Park, and beyond. Downey is a senior lead instructor for NOLS Wilderness Medicine, and an instructor and subject matter expert in desert survival for US Army Special Operations, BORSTAR, US Marshals Service, and others. He has worked as a river guide in the American southwest and India, and still takes every opportunity he can to row boats.

Todd Duncan has managed and directed adventure, research, and education programs on five continents. He specializes in developing new programs, and has been creating and running programs in Hawaii and Belize for 10 years, where he also served with the Wildlife Conservation Society as manager for Glover's Reef Marine Research Station. After two years as the director of safety and student life for the School for Field Studies (SFS), he now helps administer operations as program safety manager for the Sierra Club. Todd serves on the WRMC Steering Committee.

Kate Farthing is in her ninth year at Broadreach and currently acts as the director of Field Operations, which includes overseeing both general and program specific risk management practices. Her perspective ranges from being a field instructor for many years to coordinating scouting programs to her current position overseeing the team of program coordinators at Broadreach. Kate has attended the WRMC numerous times.

Bill Frederick is the founder of Lodestone Safety International, specializing in health, safety, and security for educational and service organizations operating abroad. Prior to that he served as director of safety at The School for Field Studies for 8 years and as an instructor and program director at Outward Bound for 16 years. He is a faculty committee member for Wilderness Medical Associates International. He holds an M.Ed from Harvard University and a CTH from the International Society of Travel Medicine.

Ron Funderburke is the education manager at the American Alpine Club where he has been working hard to educate all climbers and climbing instructors about Universal Belay Standards. Ron is an AMGA certified rock guide, is the discipline coordinator of the AMGA SPI program, and serves on the AMGA Board of Directors. Ron has published a handful of climbing related titles through FalconGuides. He lives in Golden, Colorado with his wife and sons.

Wilma Gray, born in Ontario, Canada, received her BA degree from Queen's University in 1984 and JD in Law from New College of California in 1996. Wilma has been practicing law since being admitted to the California Bar in 1997, joined the McNamara Law Firm in 1998, and became a partner in 2005. She is a member of the State Bar of California, American Board of Trial Advocates, International Society of Barristers, American Bar Association, Contra Costa County Bar Association, and Association of Defense Counsel of Northern California. When not in trial or depositions, Wilma loves to get outdoors to enjoy hiking, canoeing, biking, skiing (cross-country and downhill), and snowshoeing. Wintertime is spent volunteering at Achieve Tahoe, a ski school for the disabled at Alpine Meadow and Squaw Valley.

Reb Gregg is a Houston, Texas attorney specializing in outdoor adventure and education law. He is on the the Board of the Independent Schools Experiential Education Network and on the Risk Management Committee of Outward Bound International. Reb serves as legal counsel to the Association for Challenge Course Technology and to a number of adventure programs including summer camps, college and secondary school outdoor programs, and challenge course and zip line operators and builders. He is a frequent lecturer and writer, and honoree of the Charles (Reb) Gregg Wilderness Risk Management Award.

Daniel Hadley has been on the Salt Lake County Search and Rescue team for five years. He studied wilderness rescue during his undergraduate and graduate degrees at the University of Utah.

Erika Halm is the Washington program director at the Northwest Outward Bound School. She has worked in adventure and outdoor education for more than eight years in a variety of settings, from independent schools and wilderness medicine to expeditionary outdoor education. Erika is a lead instructor for the Wilderness Medicine Training Center.

Amberleigh Hammond is a program quality manager and functions as the national medical screener for the Student Conservation Association (SCA). Her primary focus is screening, leader training, incident response, and compliance with field standards. Prior to the SCA, Amberleigh was at Outward Bound for six years as the national senior medical screener for OBUSA. Amberleigh teaches wilderness medicine courses and is an EMT and ski patroller. This will be her second year serving as a WRMC Steering Committee member.

Catherine Hansen-Stamp is an attorney in Golden, Colorado and a current member of the WMRC Steering Committee. She advises recreation and adventure providers on law, liability and risk management issues. She speaks and writes on these issues both regionally and nationally, and has presented at the WRMC since its inception in 1994. Cathy provides legal counsel to a variety of organizations, including recreation, adventure and sport program providers, camps, schools, outfitters, and guides. She is a member of the Wyoming and Colorado Bar Associations, and co-authors for ACA Campline with Reb Gregg.

Tim Hare has worked as a field staff and administrator in outdoor and international settings since 1999, with Outward Bound from 2001-2013 and with Where There Be Dragons since 2005. He has given professional trainings to Outward Bound and Dragons instructors, school faculty, and to conference attendees. He has a keen interest in advocating for engaging risk as growth as well as training to the nuances in managing risk in international settings. An accomplished rock climber and alpinist, he has climbed, instructed, and guided throughout the US West, Alaska, and the Andes. Tim believes that healthy risk taking is essential for living an inspired and full life.

Seth Hawkins is an experienced outdoor program medical advisor. Board certified in both Emergency Medicine and EMS, he is also the first physician to be designated a Master Fellow by the Academy of Wilderness Medicine. He serves as medical advisor for North Carolina Outward Bound School, Landmark Learning, and REI. Seth is an assistant professor at Wake Forest University and maintains a full-time clinical emergency medicine practice.

Jeff Jackson is a professor and coordinator of Algonquin College's Outdoor Adventure guide training diploma programs, overseeing 10,000 student field days per year. He is actively involved with adventure and action sports industry development. Jeff has presented at WRMC many times over the years, introducing alternative models of safety performance such as sensemaking, non-normal, and training to failure. The safety culture work at this year's conference is based upon his PhD research.

Millie Jimenez is currently the Outreach and Volunteer Coordinator for Grand Teton National Park. She is new to the National Park Service (NPS) and the outdoor industry. She was introduced to the park service in 2012 as a junior at the State University of New York at Albany through the Student Conservation Association. She immediately fell in love with the park service and has been working with the NPS since then. Millie primarily works to help bridge the gap between the National Park Service and underserved and underrepresented communities through programs such as the National Park Service Academy and Pura Vida.

John Kelley has worked in outdoor and experiential education for the last 15 years. He is currently the dean of students at the Fountain Valley School of Colorado. He has been an instructor at a number of therapeutic wilderness programs, international

schools, collegiate outdoor programs, and adventure travel organizations. In addition to his work at Fountain Valley, John teaches periodically at Prescott College and works as a climbing guide in a variety of locations.

Nadia Kimmel founded Desert Mountain Medicine (DMM) in 1998. As executive director, she teaches wilderness medicine, trains instructors, develops course curriculum, and consults with outdoor recreation organizations concerning wilderness risk management. Nadia has 22 years of experience as an outdoor educator for Colorado Mountain College and Colorado Outward Bound. In addition to being an outdoor professional, she continues to stay current in the field of emergency medicine as an ER nurse.

Skip King began working in emergency medical services before graduating high school. He worked EMS in Boston during college, then became a professional ski patroller and later a patrol director and mountain operations manager. He shifted to communications in 1990, and has since handled many of the ski industry's most visible incidents. This mix of hands-on communications and operational experience makes him a rarity in the crisis management field. In private practice since 2002, he serves a variety of clients in the active outdoors industry, including Outward Bound.

Tracey Knutson graduated from Montana State University with a BS in Sociology in 1983, and from the University of Minnesota Law School (JD granted by University of Montana) in 1989. Tracey served in the United States Peace Corps between her undergraduate and graduate training. During and following law school, Tracey worked in the Missoula, Montana County Attorney's office, in private law offices, and as a law clerk in the Alaska Court System before joining DeLisio, Moran, Geraghty & Zobel in 1992 where she became a partner. In 1998 Tracey joined Rod Sisson as a partner in Sisson & Knutson where she continued her extensive trial practice. In 2004 Tracey began the firm of Knutson and Associates and has oriented the firm's focus practice on recreation and adventure sports defense. Tracey has had a rich background of insurance defense litigation, defending oil field companies, native housing authorities, insurers, outdoor recreation and adventure or sports entities, and a variety of other clients. She has tried numerous tort litigation-style cases and regularly participates in appellate level practice. Tracey has an extensive history of charitable, community and volunteer oriented activities; she held an elected position within the Municipality of Anchorage from 2003-2007 on the Girdwood Board of Supervisors.

Megan Kohli, Director of Education and Outreach at Grand Teton National Park, just celebrated 10 years with the National Park Service (NPS). Previously at Grand Canyon National Park, she started the field school program there, designing and guiding backcountry service learning programs for youth and the accompanying risk management practices. Her passion is for bringing new voices to the conservation table and she has lead numerous initiatives to provide meaningful outdoor experiences for Native American, Chinese, inner city and other youth who are

under-represented in parks. Kohli also does international work and served as a National Park Service ambassador and instructor in China for Beijing Normal University, Henan Polytechnic University, and Yun Tai Shan National Park.

Kate Koons has worked in the field of outdoor education since 1995. She has 20 years of experience leading expeditions around the world, guiding and teaching a variety of students and clients. She is a senior field instructor for NOLS with 270 weeks of field experience. Currently, Kate still works for NOLS in a number of capacities: she works as a program supervisor in the winter and summer backpacking programs at NOLS Teton Valley, as well as for NOLS Custom Education as a lead instructor on both expeditions and classroom trainings. Kate also continues to work for other organizations when not working at NOLS. She works as a backcountry ski guide in the winter in her home range, the Tetons, and occasionally travels south to Antarctica to assist science groups on remote scientific research expeditions. She has also spent many years cumulatively living and working in the Himalaya, a place she likes to call her second home. Kate lives in Victor, Idaho with her husband and two dogs where she can be found in her garden, running, or backcountry skiing.

Emily Ledingham is a senior NOLS field instructor and administrator. She has accumulated over 150 weeks of experience instructing hiking, mountaineering, whitewater, and backcountry ski courses. Emily currently supervises faculty and risk management as a program supervisor at NOLS Rocky Mountain and NOLS Yukon.

Drew Leemon, Director of Risk Management at NOLS, began his career in outdoor education in 1979 and has held his current position since 1996. He is a past chairman of the Wilderness Risk Managers Committee and is on the Steering Committee for the Wilderness Risk Management Conference. He has published papers on wilderness injury and incident data and is co-editor of the *Manual of Accreditation Standards for Adventure Programming* and co-author of *Risk Management for Outdoor Leaders*.

Micah Leinbach has been the director of Crystalline Adventures for four years, every year sending college-aged summer employees on drives that can last up to 12 hours. His experience stems from effectively training short-term staff in a short amount of time, and he has conducted research in using social approaches to motivate successful training.

Brendan Madden is director of operations and national safety officer at Outward Bound Canada. He has been active in the expedition-based adventure education field for over 20 years, mostly as a program director and senior instructor at both Outward Bound and NOLS. Brendan has also been a risk management trainer and consultant at NOLS. He was once the director of Hulbert Outdoor Centre in Vermont. Brendan continues to be fascinated by the confluence of systems thinking and human-factor elements in outdoor risk management.

Dr. Will Marling earned his undergraduate (1986), graduate (1989), and post-graduate (1997) degrees in a variety of disciplines. Trained in crisis intervention, trauma mitigation and

education, and responding to hundreds of incidents over 25 years, his praxis has been informed by a variety of national and international events from violent crimes to natural disasters. In his season as a chief executive of a national victim assistance organization, he knows the challenges of leading an organization whose job is to engage and respond to crises.

David McEvoy began volunteering for the Student Conservation Association in 1983 and has worked for Student Conservation Association, the National Park Service, US Forest Service, and other outdoor and land management organizations since that time. He has worked as a paramedic since 1990 and founded Aerie in 1995. With Aerie, Dave trains his staff to teach wilderness medicine courses to outdoor organizations and the US military throughout the US, in addition to teaching courses in Central America, Africa, and Asia.

Kira McGieson is a Northwest native and spends her time in, on, and around the beautiful water of the Seattle area. She is a Wilderness First Responder and an ACA Certified Level III coastal kayak instructor with five years guiding and teaching experience. In addition to paddling, Kira is passionate about youth work and currently combines her love for kayaking, youth, and queer and social justice with OUT There Adventures as their program director and a lead instructor.

Laura McGladrey has instructed for NOLS for the past 15 years and is a nurse practitioner with dual board certification, practicing both emergency medicine and child and adolescent psychiatry. She currently works as a psychiatric prescriber at Tennyson Center for Children with a focus on behavioral emergencies and trauma. She has a background in international work and continues to teach wilderness medicine to providers and lectures nationally on psychological first aid.

Lisa Meerts-Brandtsma is a doctoral student in the Department of Parks, Recreation and Tourism at the University of Utah. Prior to her graduate work, she worked as a guide for a variety of companies in the outdoor industry. She also holds an MFA in Writing from the University of New Hampshire.

Katie Baum Mettenbrink has worked in outdoor education since 1999, primarily at NOLS. She currently leads NOLS Risk Services, which provides risk management consulting and education for organizations around the world. She is also a senior field instructor at NOLS, with 140 weeks of experience on wilderness expeditions. Before landing in her current role, she worked at a university outdoor program, taught environmental education, was the program manager at NOLS Alaska, and then oversaw staffing for NOLS Custom Education. She serves on the WRMC Steering Committee and lives in Lander, Wyoming with her husband.

Frances Mock is an attorney specializing in advising outdoor education and recreation programs. She is counsel to NOLS, Outward Bound, L.L. Bean Outdoor Discovery School, and other clients providing advice about responding to serious incidents, claims, and lawsuits, as well as other matters such as ADA compliance, liability release forms, contracts, and general risk

management. Frances worked as a Class V whitewater rafting guide, volunteer cross country skiing instructor for special needs populations, and in other adventure-based industries for ten years before becoming an attorney.

Dr. Greg Moore is a leader in Montana's emergency medical and wilderness medical fields. He completed medical school at Ohio State University and did a dual residency in emergency medicine and family practice. He has practiced as a Board certified emergency room physician for over 30 years. He directs Barrett Hospital's emergency department and serves as medical director for Saint Patrick Hospital's rural outreach. Greg is very active in EMS, serving as medical director for Missoula Emergency Services Ambulance, Missoula County Airport Authority, Powell County QRU, Beaverhead EMS, and Wisdom Ambulance. Greg's passion, however, is wilderness medicine. He serves as medical director for Aerie School of Backcountry Medicine, Beaverhead County Search and Rescue, Northwest Connections, and the Student Conservation Association. Greg is actively involved in teaching and instructing all levels of medical professionals, and loves to hike, hunt, ski, snow machine, raft, fish, scuba dive, and travel.

Steve Neal, Risk Management Officer for Outward Bound USA and WRMC Co-sponsor member, has been a risk management and safety professional for 40 years. After an early career as a paramedic, he developed a keen understanding of the importance of proactive loss prevention. His career spans his current position with Outward Bound; 9 years as risk manager for the city of Portland, Maine; 20 years in the ski industry focusing on insurance, safety, and risk management; and 6 years as an insurance professional providing insurance, loss control, and claim services to the outdoor recreation industry. A native Mainer or "Maniac," Steve enjoys all the seasons and outdoor activities New England has to offer.

Paul Nicolazzo is an outdoor professional with over 35 years of experience leading trips, training staff, and designing and managing outdoor programs, including 22 years with Outward Bound as an instructor, staff trainer, climbing specialist, white water specialist, and program director. He has authored numerous books, field manuals, and articles on wilderness medicine and outdoor program risk management. Paul has extensive technical and field expertise in general mountaineering, ski mountaineering, rock climbing, canyoneering, and all inland whitewater and expedition paddle and rowing sports.

Jamie O'Donnell has worked as an educator in numerous capacities since the early 90s: as an outdoor educator, a high school biology teacher, and university biology lab instructor. He currently manages curriculum for NOLS as the field curriculum manager. Jamie instructs field and wilderness medicine courses for NOLS, has an MS in Environmental Education, an MA in Teaching, and is a current Wilderness EMT. His passion for teaching, experiential education, and wilderness medicine fuels his enthusiasm as a NOLS instructor.

Chad Olcott is a director at Apogee Adventures, a program that specializes in small-group adventure travel in the United States,

Europe, and Caribbean. Before joining Apogee, he spent six years practicing law, first as a JAG with the US Navy in San Diego, California and Sardinia, Italy, before joining a law firm in Portland, Maine. In 2009, Chad left the active practice of law to join Apogee as a full-time director.

Nate Ostis is a Rescue 3 Swiftwater Rescue instructor and a Level 5 Advanced Swiftwater Rescue instructor trainer for the American Canoe Association. He is a firefighter, WEMT-B, a NSDS open water diver, and an ice rescue technician. Additionally, Nate instructs field and wilderness medicine courses for NOLS, and for the department of emergency programs at University of Utah. He is the author of the NOLS *River Rescue Guide* which recently won the National Outdoor Book Award for Best Instruction. He founded Wilderness Rescue International in 2002 and teaches approximately 20 river rescue courses a year.

Don Pachner turned his outdoor organization and environmental organization volunteer work into specialty insurance brokerage firm Pachner & Associates, LLC in 2003 to serve the wilderness recreation, nature and outdoor education, environmental conservation, and research communities. He is on the America Outdoors Association Insurance committee, the National Park Service Advisory committee sub-group on insurance requirements, and has regularly taught insurance courses for AMGA mountaineering guides and guide services.

Bruce Palmer is the admission and marketing director at NOLS, a position he has held since 1990. Educating nearly 24,000 students annually NOLS is the world's largest, most comprehensive wilderness educator. As NOLS' primary media coordinator and spokesperson, Bruce has handled communications with written, radio, and television press on positive stories and in times of crisis. Web, blog, and social media are all employed by NOLS as part of its crisis communication arsenal.

James Pearson has 30 years experience in business law, management, and consulting. He has received a Martindale-Hubbell top AV rating for attorneys and is president of Pearson & Paris, P.C., a Denver, Colorado law firm which emphasizes commercial transactions and litigation, real estate, insurance, and recreation law. Jim has an extensive background in business transactions and litigation and he routinely advises on matters related to both. He founded the RiverReach Youth Initiative (now known as cityWILD), an organization that helps young people gain a sense of responsibility to their community and environment, rewarding participating youth with recreational outings. He holds BS and Juris Doctorate degrees and lectures frequently in the areas of business and related liability issues, including recreational liability.

Anne Peick is a senior NOLS field instructor and administrator. She has over 200 weeks of experience instructing hiking, mountaineering, whitewater, climbing, and backcountry ski courses. Anne currently works in the staffing office and has also supervised staff as a program supervisor at NOLS Rocky Mountain. Prior to her work with NOLS she was an instructor for Outward Bound. She is working towards AMGA certification in the rock discipline.

Jill Penwarden, a partner in Rimon's Litigation group, has nearly two decades of experience representing and defending sports and recreation providers in high-stakes litigation. She has a JD from the University of California, Berkeley's Boalt Hall and is a member of the California Bar Association, Association of Ski Defense Attorneys, and is the former president of the Tahoe Truckee Bar Association. She volunteers her time as pro bono legal counsel for nonprofits including an Expeditionary Learning public charter school, an outdoor education program for at-risk youth, and an arts enrichment program for children. She also volunteers as a Judge Pro Tem for the California Superior Courts. In her spare time, she enjoys skiing, mountain and road biking, paddle boarding, and open-water swimming.

Mike Pigg has been involved in the experiential education industry for over 12 years as an educator, trainer, and administrator. He has a long history with Outward Bound Australia where he served for several years as the safety director, and then general manager. In addition, his experience in Australia includes extensive work within the tertiary/vocational training sector responsible for training outdoor leaders. Today Mike is the associate director of safety at Outward Bound USA, and a member of the WRMC Co-sponsor Committee.

Joel Reid is a course director and staff trainer with the Northwest Outward Bound School, lead instructor and trainer with the Wilderness Medicine Training Center, and owner of Cascade Outdoor Education which offers wilderness medicine courses in the Seattle area. He usually lives and plays in the small town of Mazama, WA.

Gates Richards is a senior instructor for NOLS Wilderness Medicine. Gates has been involved in outdoor education and EMS since the early '90s. Over the years he has worked in outdoor programming throughout the Rocky Mountains, Pacific Northwest, and Alaska. He's worked urban EMS in Washington, DC; Seattle, Washington; Gunnison County, Colorado; and is an Intermediate EMT in Lander, Wyoming. Gates began teaching for NOLS Wilderness Medicine in 1998 and now bears the title of special programs manager. He oversees NOLS Wilderness Medicine WEMT and instructor training programs and is a Fellow of the Academy of Wilderness Medicine.

Shannon Rochelle, Research Manager and Senior Field Instructor at NOLS, began her career in outdoor education in 1990. She has held a variety of positions at NOLS including Alaska program manager, training manager, and field staffing coordinator, and has taught NOLS students in seven states and three countries. As research manager, she plays a key role in all research studies done at or by NOLS.

Elyse Rylander has spent the last decade working in the outdoor industry. From teaching canoeing and kayaking, to facilitating on a challenge course and guiding kayaking, camping and glacier hikes in Alaska, Elyse believes passionately in the power of connecting people to nature. She has turned this passion into

advocacy for the queer community by co-founding OUT There Adventures, providing consulting and training for outdoor organizations, and publishing pieces in mainstream publications and academia.

Jay A. Satz is the senior director of Partnerships and Innovation for the Northwest Youth Corps (NYC), where he is responsible for developing new conservation service program models, managing relationships with NYC's key partners, and supporting programs in the field. Jay is an award winning conservationist with an over 30 year career of connecting youth to conservation, creating and running effective backcountry conservation service programs, and developing and promulgating effective risk management practices for NYC, SCA, National Park Service, YMCA, and other organizations. In addition to his work with NYC, Jay serves on the boards for Aerie Backcountry Medicine, the YMCA of Greater Seattle Camping and Outdoor Leadership Branch, Washington's National Park Fund, and has been a standing member of the WRMC Steering Committee since 1995.

Tod Schimelpfenig has been a NOLS instructor since 1973. He is a volunteer SAR WEMT and is currently the curriculum director of NOLS Wilderness Medicine. Tod was the NOLS risk management director for eight years and the NOLS Rocky Mountain director for six years. He served on the board of the Wilderness Medical Society for three years and founded the Wilderness Risk Manager's Committee. Tod authored *NOLS Wilderness Medicine* and co-authored *Risk Management for Outdoor Leaders*. He was the recipient of the 2010 Charles (Reb) Gregg Wilderness Risk Management Award.

Jim Sibthorp is a professor at the University of Utah in the Department of Parks, Recreation, and Tourism. Jim's current research focuses on youth development through outdoor and adventure programming. Through his work with both NOLS and the American Camp Association, Jim continues to design, implement, and translate studies that bridge research and practice. Jim is the coordinator of the Adventure and Outdoor Programs Emphasis at the University of Utah and is a NOLS faculty member.

Russell Slaugh has been an avid climber and skier the majority of his life. After serving in the US Navy as an EOD Special Operations diver he earned a Master's of Science degree from Utah State University in Exercise Science and Biomechanics, presenting research related to rock climbing at both the American and International Society of Biomechanics. He then went on to become a tenured professor and department head at Olympic College in Bremerton, WA, teaching exercise science and outdoor recreation. During that time he also coached the Vertical World climbing team, sending athletes to both the national and world championships. Since 2005 Russell has managed professional and government sales for Black Diamond Equipment.

Steve Smith is an outdoor program consultant specializing in risk management. He spent five years as vice president of program quality for the Student Conservation Association, where he led a team responsible for risk management, training, program evaluation, and continuous program improvement. He has been associated with Outward Bound since 1998, first as a mountaineering instructor, then staffing manager, and is currently a board member for the Northwest Outward Bound School, where he also serves on the school's safety committee. After founding an outdoor program consulting company, he has written emergency response plans, training manuals, field manuals, implemented crisis response scenarios at a wide variety of organizations, conducted safety audits, presented at over 30 professional conferences, and published articles in outdoor magazines and journals. He has presented at WRMC every year since 2010, been a Steering Committee member since 2011, and has served as the Chair of the WRMC Steering Committee since 2014. He lives in Seattle and loves to explore and photograph the wildlife, mountains, and coastlines of the Pacific Northwest.

Grant Statham got his start in the mountains as an ice climber and a ski patroller in Banff in 1986. Soon after, he began pursuing professional certifications in avalanche forecasting and mountain guiding and became an IFMGA mountain guide in 1993. Grant spent many years leading climbing, skiing and international expeditions along with avalanche consulting for industry and public recreation. In 2003, Grant joined Parks Canada as their Avalanche Risk Specialist and spent the next 10 years developing avalanche safety systems, several of which are now used worldwide. In 2005 he received a Canadian Public Service Award of Excellence for his work in avalanche safety, and in 2014 he received an Avalanche Canada service award for "exceptional contributions to avalanche safety in Canada." Grant lives with his family in Canmore, Alberta, and still works with Parks Canada's visitor safety program as well as independently as an avalanche and risk consultant.

Jeannette Stawski serves as executive director for the Association of Outdoor Recreation and Education (AORE). She has worked as an LNT Master Educator, NOLS instructor, wilderness medicine instructor for the Wilderness Medicine Training Center, and EMT. Jeannette has a bachelor's degree in resource policy and behavior from the University of Michigan and is a Certified Association Executive (CAE). Jeannette completed 11 years as the director of Outdoor Adventures at the University of Michigan. Prior to working for U of M, Jeannette worked for five summers as a professional outdoor guide. Jeannette serves on the WRMC Steering Committee.

Doug Stevens is a Boulder, Colorado attorney who has provided legal services to outdoor recreational providers for many years. He has defended serious and high-profile personal injury and wrongful death lawsuits. Doug frequently prepares liability releases and acknowledgment of risk agreements for his clients, in addition to handling their other contractual needs. He also provides employment, risk management, and emergency

response advice. Doug has presented to outdoor professional groups on various legal issues and is licensed in both Colorado and Wyoming.

Shana Tarter is the assistant director of NOLS Wilderness Medicine. In addition to 25 years experience in wilderness medicine and outdoor education, she chaired the Wilderness Risk Management Conference Steering Committee for five years. She serves as a reviewer for the Wilderness Medical Society's Fellowship in the Academy of Wilderness Medicine. She is an active wilderness medicine instructor, risk management educator, and frequent conference presenter.

Travis Taylor specializes in executive-level strategic consulting and communications services. His record of proven results rests on his extensive experience in corporate communications, media relations and training, crisis communications, community relations and public affairs, coupled with his deep commitment to building trust and reputation for clients. Travis helps clients prepare for and manage volatile situations, including natural disasters, wilderness crises, labor negotiations, activist demonstrations, product recalls, workplace accidents, land use issues, and legal actions.

Rob Terry is the vice president of national programming at the Student Conservation Association. An educator by training, he holds an MEd from New England College. His career in the outdoors has included teaching with a number of experiential programs, including St. Albans Schools' Voyageur program, Dartmouth College's Outing Club, and the American Canoe Association. Coming to his work with SCA from a position leading public school reform initiatives in major urban districts has affirmed Rob's desire to help organizations, and the conservation movement in general, realign principles and practices to be more inclusive of, and ultimately relevant to, developing conservationists from all backgrounds.

Garth Tino is the risk manager and an instructor for the Utah Valley University Outdoor Recreation Management degree program where he has been for 14 years. He has been climbing personally and professionally for 25 years, and manages policy, procedure, and equipment for his program. He has undergraduate and master's degrees in Outdoor and Adventure Education from the University of New Hampshire and Prescott College respectively.

Lindsay Venable has worked in experiential education and the outdoor industry for 13 years. This is her fourth year with Broadreach as an International Education coordinator and summer office director. Her responsibilities include developing and implementing programs for students, providing support from afar and on the ground to field staff, and mentoring full-time office staff throughout the year in preparation for managing programs in the field.

Mark Vermeal, Vice President of Safety for Outward Bound, USA, is responsible for the oversight of safety management systems for all Outward Bound Charters in the US. Mark has almost 20 years of experience managing staff at organizations like the Student Conservation Association and White Mountain School. As a Wilderness EMT Mark managed emergent situations, and has been a wilderness medicine instructor and classroom teacher in anatomy and physiology. With rock, ice, and alpine guiding experience, he is a certified AMGA rock instructor and single pitch instructor provider who co-owns and guides for Mountain Sense. Mark currently serves on the Steering Committee for the WRMC and has presented at the WRMC since 2007.

Dr. Al Wright is a professor and outdoor coordinator for the Recreation and Tourism Management department at California State University Northridge where he teaches courses in leadership and outdoor education. He has worked with risk management and safety management issues for outdoor programs throughout his professional career. Al supervises both land-based and water-based outdoor programs that serve over 8,000 participants a year.

Karmina Zafiro specializes in crisis communications, issues management and consumer PR. She has worked with educational institutions facing critical issues and crises related to town-gown relations, accidents, injury and death, litigation, activist action, labor negotiations and organizational restructuring/layoffs. She has worked with outdoor education clients including NOLS, HMI and Overland, and managed crises for universities including UC Hastings College of the Law and UC Santa Cruz. Karmina also leads the analytics division at Fineman PR.

OutdoorEd.com

The Professional's Resource

OutdoorEd.com is the premiere outdoor education Web resource. Our mission is to provide the best collection of online resources for outdoor education professionals. Whether you are presenting your company or school, offering trainings, looking for a job, developing a new program or looking for risk management resources, when people want information about outdoor education, they turn to OutdoorEd.com. We are excited to announce the opening of our new website with a full array of new features.

Company & School Profiles and Job Postings are the best way to find new staff and Training Listings let you promote your program activities. With rich outdoor education curriculum, blogs from industry experts, articles, online media and shared documents, OutdoorEd is your portal to a better program.

The Recreation Law Center at OutdoorEd.com is the online legal resource that provides subscribers with analysis of important legal cases that can impact your organization's safety. When the conference is over, you can continue your learning and sharing at OutdoorEd.com.

AN AMERICAN ASCENT

Thursday, October 13th
8-9pm | Seminar Theater



Photo: Madhu Chikkaraju

A feature documentary about the first all African American expedition to tackle North America's highest peak, Denali.

SUPPORTERS AND EXHIBITORS

Featured Sponsors



GLOBAL+rescue



Founded by Hans Deuter in 1898, we are one of the oldest backpack manufacturers in the world. We make sure that our products are functional and durably reliable companions for active people. That is why we invest a great deal of time and effort in the development, production, testing and repairs service of our backpacks, bags and sleeping bags.

For over a decade, Global Rescue has provided individuals, families, enterprises and governments with the critical medical, security, information and intelligence needed to avoid and respond to crises. Since our founding in 2004 in partnership with Johns Hopkins Medicine, Global Rescue has grown to become the recognized leader in travel risk, crisis management and response services. We are the only fully integrated provider of medical, security, intelligence and communication.

Pachner & Associates, LLC insurance brokers & consultants are leaders in insurance for outdoor recreation, nature and outdoor education, environmental conservation, scientific research/media, trail associations, and outdoor clubs. Members of The Conservation Alliance.

Exhibitors



The American Mountain Guides Association (AMGA) is a 501(c)(3) educational nonprofit that is dedicated to supporting the American mountain guiding and climbing instructor community. As the leading organization of America's most vibrant, inspiring community of climbers and skiers, the AMGA offers you cutting edge knowledge and hundreds of years of collective experience that you won't get from any other climbing organization. AMGA guides and staff are the experts in the business of being a guide. We spent 30 years setting standards for American guiding instruction, protecting the guiding environment, and organizing a powerful, unified community of guides and clients. And we will spend the next 30 supporting you as you pursue your passion.



The Association for Experiential Education (AEE) is a nonprofit, professional membership association dedicated to experiential education and the students, educators, and practitioners who utilize its philosophy.



Here at Black Diamond it's all about climbing and skiing. We share the same experiences that you do on rock, ice and snow and these experiences push us to make the best gear possible for our worldwide family of climbers and skiers.



Send and receive text messages via satellite with DeLorme inReach SE. Plus: GPS tracking, SOS, and satellite coverage anywhere on earth. Features a color screen and virtual keyboard with predictive text. inReach pairs with smartphones to access maps and NOAA charts.



Founded by Hans Deuter in 1898, we are one of the oldest backpack manufacturers in the world. We make sure that our products are functional and durably reliable companions for active people. That is why we invest a great deal of time and effort in the development, production, testing and repairs service of our backpacks, bags and sleeping bags.



Our goal at the American Alpine club is to support our shared passion for climbing and respect for the places we climb. Authoritative climbing information, knowledge and resources benefit and inspire us and future generations. Advocacy and leadership advance our climbing interests and promote conservation. Community and competency strengthen and embolden us to push our limits.

GLOBAL+rescue For over a decade, Global Rescue has provided individuals, families, enterprises and governments with the critical medical, security, information and intelligence needed to avoid and respond to crises. Since our founding in 2004 in partnership with Johns Hopkins Medicine, Global Rescue has grown to become the recognized leader in travel risk, crisis management and response services. We are the only fully integrated provider of medical, security, intelligence and communication.



We believe in making it easier for organizations to work and grow on an international scale. We can help you achieve your goals by preparing your employees for travel and supporting them whilst they are in unfamiliar and remote locations. We help to keep them healthy and safe, so you can focus on your core business activities.



LifeStraw® is the award-winning line of lightweight, portable water filters and purifiers that transform microbiologically contaminated water into safe, clean drinking water, ideal for a variety of users outside of the home, from hikers and campers to people displaced by natural disasters.



Over the last 20 years, our independence and willingness to do things differently has driven innovation in outdoor apparel and equipment. You'll see more Mountain Hardwear expedition tents on 8,000 meter peaks than any other brand. From the first taped soft shell jacket to the first tent with 180° views, our products combine cutting edge materials technology with unconventional design solutions.



Mountain Hub is the first real-time social and information network for the mountains, a "Waze for the outdoors." Mountain Hub's mission is to inspire safe exploration and a culture of contribution in the outdoors and is used across 50 countries around the world.



NOLS is a global wilderness school that supports thousands of students each year who seek to develop the skills and experience to reach their potential as leaders. We teach wilderness and leadership skills to individuals and organizations, both on expeditions and in classrooms. We believe that anyone can be a leader; it's our role to provide the environment and training to help each person uncover that potential for themselves.



the Escalante program-specific series.

Osprey packs provide innovative design and exceptional fit, making them a leader in gear-carrying equipment. For over 35 years, Osprey has been actively involved in outdoor education programs. We continue this effort in the evolution of



OutdoorEd.com is the premiere outdoor education Web resource. Our mission is to provide the best collection of online resources for outdoor education professionals. Whether you are presenting your company or school, offering trainings, looking for a job, developing a new program or looking for risk management resources, when people want information about outdoor education, they turn to OutdoorEd.com. We are excited to announce the opening of our new Web site with a full array of new features.



Outdoor ProLink provides an online platform for qualified outdoor professionals to purchase equipment at pro-deal prices from over 90 high-quality brands. Some of the current brands on the site are Outdoor Research, Petzl, Mountain Hardwear, La Sportiva, MSR, Scarpa, Thermarest, Jetboil, Pearl Izumi, Backcountry Access, Diamond Back and many more! Join over 60,000 approved and authenticated pros getting the deals they deserve!



Outdoor Safety Institute (OSI) provides outdoor education and recreation providers with safety, liability, and program management solutions. OSI provides global safety management support to organizations of all types operating in remote environments.



Outward Bound delivers challenging learning expeditions that inspire character development, leadership, and service. Outward Bound helps its students realize their full potential, for themselves, and for a better world.



"The Natural Choice for Insurance," Pachner & Associates Insurance Brokers and Consultants specializes in the non-motorized outdoor recreation industry, trail associations and outdoor clubs, nature education, environmental conservation, and environmental research organizations.



We know rope - both the technical side of how it's made and the application side of how it's used. We enjoy using that knowledge to help you find just the right product for your needs. We sell our rope at some of the best prices you'll find anywhere. QUALITY, VALUE, & SERVICE - it's what we expect of ourselves, and it's what you can expect from us.



Satmodo is a satellite phone store based out of San Diego, California. We offer satellite phones and mobile internet solutions nationwide, for purchase or rentals. At Satmodo we are committed to helping you find the perfect telecom solution by providing you with friendly support, expert guidance, and only the very best satcom equipment.



Solid Rock Outdoor Ministries (SRM) is a premier Christian outdoor leadership education and wilderness adventure ministry. Our programming activities include backpacking, rock climbing, mountaineering, backcountry cooking, alpine and backcountry living, orienteering, and community building. SRM programming occurs in the heart of the Rocky Mountains and desert southwest with courses and trips conducted in Wyoming, Colorado, and Arizona in locations such as Rocky Mountain National Park, Wind River Wilderness, and Grand Canyon National Park. SRM is the only wilderness ministry accredited by the Association for Experiential Education.



The Student Conservation Association (SCA) is America's conservation corps. Our members protect and restore national parks, forests, marine sanctuaries, cultural landmarks and community green spaces in all 50 states. Each year over 4000 SCA members provide more than 1.6 million hours of direct conservation service and positively impact millions of visitors to America's public lands and waterways.



Wilderness & Expedition Medical Specialists originated from a relationship with NOLS Wilderness Medicine and the University of Utah Division of Emergency Medicine. Based within the Division of Emergency Medicine, WEMS provides medical direction and on-call emergency services to wilderness organizations in the US and throughout the world.



Wilderness Medicine Training Center provides practical courses in wilderness medicine and outdoor program risk management. Hybrid courses require home study using animated lectures (DVD), texts, and online testing before attending a practical session.



Klean Kanteen collaborates with and supports dozens of organizations working to protect people and our planet. Our network of friends stretches across the country and around the globe, and includes everything from tiny hometown environmental education programs to nationally acclaimed leaders in advocacy for health and environmental stewardship, music festivals, and private companies known worldwide for their conscientious approach to doing business.



For over three decades, McNett and its family of brands, Gear Aid™, Outgo™, MEssentials™, Aquamira®, and Camo Form, have provided quality, innovative products for the outdoor, sporting goods, dive, and military markets. With its unique blend of reliable products and personality, McNett enhances the lives of people working and playing outside. For more information, please visit www.McNett.com.



Rugged. Authentic. Reliable. Timeless. What started as a casual conversation at the Shady Lady Saloon in Jackson Hole, Wyo. has become a top-performing mountain-inspired lifestyle apparel brand. Established in 2003, Mountain Khakis quickly became a staple in the wardrobe of everyone from ranch hands to golf pros, those who travel by jet, as well as those who travel by thumb. The Mountain Khakis brand story continues to resonate as it connects to the enthusiast who believes that freedom and rugged adventure is a way of life. Mountain Khakis "Built for the Mountain Life."



Nemo Equipment, manufacturers of sleeping pads, sleeping bags and tents, designs products to improve the experience of adventure. NEMO believes meaningful adventures are possible for everyone, anywhere. Possible, that is, if you bring the will, the imagination, and the right gear.



Point6 derives from 98.6 F, the optimum body temperature. Our goal is to take the merino revolution to the next level and produce the best wool socks ever. We use compact spun merino wool offering the best durability and comfort. Our socks are designed for performance and are backed by a 100% guarantee.



At Recreational Equipment, Inc. (REI), we love to get outside and play, and we know first-hand the importance of quality outdoor gear. We stand behind all our products with a 100% satisfaction guarantee, and we design our own line of award-winning REI brand gear and clothing. Whether you're new to outdoor adventure or a seasoned pro, we gladly share our enthusiasm for our products - and the trails, slopes and waterways where we play.

Additional Supporters



Being self-sufficient in the outdoors is essential, especially during an emergency when assistance from rescue teams may be hours away. Adventure Medical Kits is dedicated to bringing you the most innovative products, which will keep you safe in the outdoors.



Most companies have one bottom line. At Clif Bar & Company, we are a private, family and employee-owned company guided by five "bottom lines" or what we call our Five Aspirations: Sustaining our Business, Brands, People, Community and the Planet. These aspirations help us consider decisions from multiple perspectives that we value, and we choose the word "aspiration" in recognition that we're on a journey and can always do more in each of these areas.



In the backcountry, having the right shelter is crucial. For over 40 years, Hilleberg has specialized in making that "right shelter" by building the highest quality all season tents that offer the ideal balance of low weight, extraordinary strength and remarkable comfort.



Cleanwaste has been providing solutions for "when plumbing's not available" for over 12 years. We are the manufacturers of the Original WAG Bag and produce quality solutions such as the GO Anywhere Portable Toilet, the GO Anywhere Toilet Kit, Pee Wee Unisex Urine Bag and the Toilet in a Bag.



Experience matters.
For 45 years, Hilleberg has been making
the highest quality, most dependable
backcountry tents available.

The all-season Nammåtj is an outstanding choice for adventure in any terrain or weather. It's very strong and remarkably lightweight, and is available in 2, 3 and 4 person versions. Seen here near Mt Kenya.

Lars Södergran

YOUR BACKCOUNTRY ADVENTURE DEPENDS ON YOUR EQUIPMENT. Choose wisely, and trust tents that have been rigorously tested and constantly proven, in all conditions, on all continents. Hilleberg tents are conceived and developed in northern Sweden and made in our own factory in Europe, and they offer the ideal balance of low weight, strength, and comfort. To learn more about our tents and about us, visit our website, hilleberg.com.

Order a FREE catalog online at HILLEBERG.COM
 or call toll free 1-866-848-8368
 follow us on facebook.com/HillebergTheTentmaker



Hilton Salt Lake City Center

Internet

Complimentary high-speed wireless internet is available throughout the hotel and in guest rooms. Please contact the hotel front desk if you need assistance.

Sustainability

The WRMC is committed to developing sustainable event practices. The Hilton Salt Lake City's 2016 GREEN initiatives include recycling, waste minimization, energy and water conservation, and responsible purchasing. To help with sustainability efforts, we suggest you bring your own coffee mug and water bottle for beverages.

Stay Active

Amenities at the Hilton include a pool and fitness center, and there's no shortage of hiking and biking trails in the Salt Lake area. The hotel front desk can provide you with a map of hiking trails and information on bike rentals.

GREENbike Program

There are currently 20 bike stations around the downtown Salt Lake City area. You can view them online at greenbikeslc.org. Download the free mobile app that shows how many bikes and docks are available at every station in real time.

Getting Around

Passengers may ride the light rail or bus for free within the boundaries of the Free Fare Zone.



Meals and Dining

Your registration fee includes appetizers at the exhibitor reception, coffee and snacks during morning and afternoon breaks, and a meal at the keynote dinner.

Community Dining

We'll have community tables and grab-n-go breakfast and lunch items for sale in the exhibitor hall on Thursday and Friday.

Keynote Dinner

Dinner prior to Grant Statham's keynote address on Friday, October 14 is included in your WRMC registration and will commence at about 6:30 p.m. following a social hour and remarks from steering committee members.

Vegetarian, vegan, and gluten-free options are available. Just let your server know your dietary needs.

Other Dining Options

- There are many restaurants within walking distance of the hotel.
- Each room at the Hilton comes equipped with a mini fridge.

Dining Options at the Hilton

- Trofi Restaurant offers regional breakfast options and a modern bistro menu for lunch.
- Spencer's, one of Salt Lake's oldest steakhouses, offers contemporary dishes and an extensive wine list.
- Starbucks offers pastries and breakfast sandwiches.

WRMC Year-Round Community

WRMC Social Media

Join the WRMC Facebook page or follow us on Twitter to get updates surrounding the conference. Look for comments and photos from this year's conference, news on next year's WRMC, or use it to share information with your colleagues and keep in touch with your fellow WRMC attendees. Use #WRMC.

 **Wilderness Risk Management Conference** on Facebook

 **WildrnsRiskMgmtConf** on Twitter

Engage with us all year long at nols.edu/wrmc

WRMC Online Resource Center

The learning doesn't stop when the conference ends! Articles, workshop outlines, and take-home action steps from this and past WRMCs are available to the public for your continuing education needs.

Charles (Reb) Gregg Wilderness Risk Management Award

This award recognizes individuals who have made significant contributions in risk management to the outdoor adventure education profession. The award's namesake, Reb Gregg, is a practicing attorney who specializes in outdoor adventure and education law. He has been instrumental in the development of the WRMC. The award is presented annually at the WRMC. Visit the WRMC website to nominate someone for this prestigious award.

History of the WRMC

In 1992, representatives from Outward Bound, Alpine Towers, Wilderness Medical Society, Wilderness Education Association, Exum Mountain Guides, Association for Experiential Education, International Safety Network, National Association of Search and Rescue, American Mountain Guides Association, American Alpine Club, Outdoor Network/Outdoor Recreation Coalition of America, the National Park Service, and NOLS met in Lander, Wyoming, to form the original Wilderness Risk Managers Committee. The group set an agenda that involved an examination of current issues within the industry and each organization. The committee wanted to serve as an informal think tank, providing better understanding and coordination in the outdoor education arena.

After meeting for a second time in 1993, the committee sponsored the inaugural Wilderness Risk Management Conference (WRMC) at NOLS Pacific Northwest in Conway, Washington, in 1994. Since that time, the conference has served as a venue for sharing experiences and aligning practices in wilderness risk management. The conference is known for its high quality workshops and spirit of collegiality and openness.

Over time, multiple groups have influenced the WRMC. The WRMC Steering Committee has included outdoor schools, guide services, organizations, and land managers who have helped to develop the conference agenda and to attract high-quality presenters. NOLS, the lead conference sponsor, along with co-sponsors Outward Bound and the Student Conservation Association, continue to enhance the professionalism of the conference and extend its reach within the industry.

The WRMC continues to evolve under the guidance of the co-sponsors and remains an excellent educational opportunity for those providers new to the field and the premier venue for established professionals in the adventure education industry.



COVER PHOTOS: OUTWARD BOUND/MARK MOODY, OUTWARD BOUND/JUDITH ROBERTSON, SCA/DAN ELDRIDGE, NOLS/KELSEY WICKS, OUTWARD BOUND. BACK PHOTOS: NOLS/LINDSAY NOHL, SCA/DAN ELDRIDGE, OUTWARD BOUND

WRMIC

WILDERNESS RISK MANAGEMENT CONFERENCE



PRACTICAL SOLUTIONS FOR CHALLENGING ISSUES | SALT LAKE CITY, UTAH | OCT 12-14, 2016

