Note - ALL times are Mountain Time			
7:30-8:00	Webinar Open		
8:00-8:15	Join Webinar	Trouble shoot	
8:15-8:30	Cut-off for signing in	Pre-recorded video – how this webinar will work (i.e., polls, chats, Q&A) and how CEC submission and Certification of Completion will occur	
8:30-9:30	CORE - Laws & Regulations / Label Cognition  Environmental Hazards on Labels including PULAs  Sandra McDonald, Mountain West PEST	Safe and legal use of pesticides requires that the entire label be followed. This presentation will emphasize the Environmental Hazards section of the label. Emphasis will be placed on drift minimization, pollinator protection, ground and surface water advisories and the expansion of Pesticide Use Limitation Areas via Endangered Species Bulletins. The second half of the presentation will focus on Pesticide Use Limitation Areas (PULAs) and applicator responsibilities when the label directs them to the Bulletins Live Two! Website	
9:30-9:35	BREAK	A countdown clock will be used to allow participants to know how much "break time" is remaining.	
9:40-10:40	CORE - Applicator Safety / Public Safety  Think Ahead, Be Prepared  Tara Steinke, Soapweed Solutions	Preparation is the key to using pesticides safely whether it is from the applicator's perspective or the public's. Be prepared. The more prepared an applicator is to handle an emergency, the faster they can react and reduce impacts on human and animal health and reduce impacts to the environment. Pesticide fire, spill, and exposure response will be detailed.	
10:40-10:50	BREAK	A countdown clock will be used to allow participants to know how much "break time" is remaining.	

10:50-11:50	CORE - Use of Pesticides  Fundamentals of Sprayer Calibration & Maintenance  Jerome Otto, Corteva	This presentation will review the fundamentals of sprayer calibration, with both theories and practical examples for backpack sprayers as well as nozzle sprayer calibration. We will then examine the successful strategies for conducting a spray operation, with focus on important topics to consider before, during, and after an application. We will then discuss the principles of drift vs. volatility and address ways to minimize off target spray applications involving both drift and volatility. Finally, we will discuss the maintenance of sprayers, involving key principles to keep in mind at the beginning of the spray season, during the spray season, and finally, end of season maintenance.
11:50-12:00	Questions & Discussion	facilitated by Sandra McDonald
12:00	LUNCH BREAK	A voiced "call-back" will occur at 5 minutes, then a countdown clock will be used to allow participants to know how much "break time" is remaining.
1:00-2:00	CORE - Environmental Protection / Pesticides & Their Families  Herbicide Modes-of-Action in RoW and Their Environmental Impacts  George Beck, Alligare	This presentation will focus on the ALS inhibitors, Auxin Mimics, the PPO inhibitors, and the PSII inhibitors. Especially the intricacies of these modes-of-action (MOA) with regard to environment – i.e., potential drift, leaching, and residual activity. Resistance management concerns with these MOAs will also be addressed.
2:00-2:10	BREAK	A countdown clock will be used to allow participants to know how much "break time" is remaining.

2:10-3:10	PEST MANAGEMENT  Bareground  Scott Nissen, retired Colorado State University	Bareground weed control is also know as total vegetation management. This approach is unique because the goal is to provide vegetation control for an entire growing season. Bareground weed control is an essential management practice to eliminate all vegetation for the purpose of protecting infrastructure, people, or natural resources on sites where vegetation poses major fire, visibility, and infrastructure risks. Bareground is implemented on sites such as railroads, power substations, airports, roadsides, and oil and gas facilities. This is not a one-treatment-fits-all approach, applicators need to consider tank-mix combinations based on the weeds present at a specific site.
3:10-3:20	BREAK	A countdown clock will be used to allow participants to know how much "break time" is remaining.
3:20-4:20	PEST MANAGEMENT  Broadleaf Invasive Weed Management  Shannon Clark, Envu	This presentation will focus on choosing the best chemistry, application timing, and applications technique to manage broadleaf invasives. The importance of choosing the best chemistry because sulfonyl urea and auxin herbicides are more effective on different species. The different types of auxins and why recognizing that matters will be discussed. Precautions that need to be taken when using different chemistry will be covered.
4:20 - 4:30	Questions & Wrap-up	Facilitated by Sandra McDonald
4:30-5:00	Test for California and Nevada credits	This will be a 10 question test (questions will be randomized). The pass score is 70%. Can retake until they pass.

Note – Zoom polls and chats will be used during each 5 minute interval to verify participation. Poll questions can be provided. A participation report can be provided upon request.

#### SPEAKER BIOGRAPHIES

**George Beck** was a Weed Science professor at Colorado State University, now retired. His research focused on the biology of invasive or noxious weeds that are important in the western United States and developing successional weed management systems for key invasive weed species. He currently works as a Technical Service Representative for Alligare.

**Shannon Clark** is a Stewardship and Development Manager for Envu while also continuing to collaborate with Colorado State University Weed Science as a faculty affiliate. Shannon received her PhD in Weed Science from Colorado State University. She continued her research there as a post-doctoral researcher focusing on evaluating herbicides for invasive weed management in natural areas and rangeland. Her research also involved assessing herbicides for industrial vegetation management and rights-of-way.

**Sandra McDonald** founded Mountain West PEST (Pesticide Education & Safety Training) in 2009. Prior to establishing Mountain West PEST, Sandra was the Environmental and Pesticide Education Specialist at Colorado State University. She worked for 13 years at Colorado State University where she was involved in specialty crop pesticide research in addition to her role as a pesticide safety educator. Sandra also has extensive teaching experiences in pesticide safety, pesticide applicator exposure, pest management and pesticides in the environment.

**Scott Nissen** is a Professor Emeritus at Colorado State University. His responsibilities included research (applied and basic), outreach (Cooperative Extension) and some teaching. His research focused on invasive species management and adaptive strategies to establish desirable plant communities. The goal of this research was to establish sustainable plant communities that can resist re-invasion. Herbicides are an important management tool, so he also focused on herbicide fate in the environment and non-target impacts.

**Jerome Otto** grew up on a dairy farm in Minnesota. He graduated from the University of Minnesota in 1986 with a double major in Agricultural Economic and Animal Science. In 1987, Jerome joined Dow Chemical, now Corteva Agriscience, and has held various sales and marketing development roles since then. He is currently the market development specialist for the Pasture and Land Management business for the western half of the United States.

**Tara Steinke** is a safety officer and trainer for the oil and gas industry. Tara is an authorized OSHA outreach instructor for General Industry. She was part of the Colorado State University Environmental and Pesticide Education Program for 8 years; she focused on private applicators and worker protection.