



Science Advisory Panel Assessing the Invasiveness of Species

May 5-6, 2025
Missoula, MT

Goal: Explore current assessment tools and legal language for invasive species determination to understand preparedness in climate or regional changes in capacity to manage invasive species effectively.

Expected Outcomes:

- A. Determine if the definition of “invasive” currently used by the Montana Invasive Species Council captures target species or potentially misses economically, culturally, and/or ecologically important species.
- B. Review existing models and current work being done in North America to assess the risk of a species being invasive based on that definition.
- C. Develop series of steps for Montana to follow to assess the risk of introduction and establishment of an invasive species to Montana.
- D. Identify steps to assess the potential economic, ecological, cultural impact of the highest risk species if introduced to Montana.

Panelists:

Dr. Eva Colberg ~ Northwest Climate Adaptation Science Center, University of Washington

Dr. Alisha Davidson ~ Great Lakes Commission

Dr. Deah Lieurance ~ Invasive Species Biology and Management, Penn State University

Dr. Elliott Parsons ~ Pacific Region Invasive Species and Climate Management Network, University of Hawaii

Panelist Biographies

Dr. Eva Colberg is a research scientist at the Northwest Climate Adaptation Science Center (CASC), where her work revolves around connecting research with practice to inform and advance the management of climate risks in Northwest ecosystems. As part of this work, Eva coordinates the Northwest Regional Invasive Species and Climate Change (RISCC) Network, which is a partnership of regional agencies and organizations dedicated to helping practitioners address the nexus of climate change and invasive species in the region. Prior to joining the NW CASC, Eva was a Northeast CASC-funded postdoctoral researcher at Cornell University and the interim director of the New York Invasive Species Research Institute, where she worked with members of the Northeast RISCC Network to develop guidelines for climate-smart invasive species management. Her scientific training encompasses community ecology, restoration ecology and social science, with specific interests in the ecology and management of climate change, invasive species and fire.

Dr. Alisha Davidson works as a contractor for the Great Lakes Commission and The Nature Conservancy. Focus areas include risk assessment, regional regulation of organisms in trade, surveillance lists of aquatic invasive species, and most recently, control options for invasive aquatic plants and animals. While she currently works in the Great Lakes, her original training is within the biosecurity field in Australia.

Dr. Deah Lieurance is an Assistant Professor of Invasive Species Biology and Management at Penn State where she works on improving invasive species prevention and management through horizon scanning, risk assessment, and pathway analysis. Other research areas include investigating how rising temperatures and increased CO₂ levels affect invasive plants in forests.

Dr. Elliott Parsons is a specialist with the Pacific Regional Invasive Species and Climate Change (Pacific RISCC) Management Network through the Pacific Islands Climate Adaptation Science Center at the University of Hawai'i at Mānoa. Elliott holds a Ph.D. in Fish & Wildlife Biology from the University of Montana, and he has almost 15 years of experience working with invasive species in conservation, management and research projects in Hawai'i. Before his current position with Pacific RISCC which he started in 2022, Elliott most recently led the Nāpu'u Conservation Project (NCP) at Pu'uwa'awa'a State Forest Reserve on Hawai'i Island for 12 years for the Hawai'i Department of Land and Natural Resources. This work included preventing, managing, controlling, and researching invasive species across almost 40,000 acres of state lands in leeward Hawai'i that included native dryland forest, rare and endangered species, public hiking and historical trails, and cattle ranching.

May 5

Balsamroot Conference Room, Missoula County Department of Ecology Building

Welcome		
8:30 – 8:40 am	Welcome from the Montana Invasive Species Council	Liz Lodman, MISC Administrator Steve Wanderaas, MISC Chair
8:40 – 8:50 am	Defining the Need for A Science Advisory Panel on Assessing Invasiveness	Bryce Christiaens, Missoula County Department of Ecology
8:50 – 9:00 am	Overview of Goal and Outcomes Panelist Introductions	Leah Elwell, Conservation Collaborations
Topic One: Defining Invasive		
9:10 – 9:50 am	<i>National and International Perspectives for Defining Invasive Species</i>	Elliott Parsons
9:50 – 10:10 am	Break	
10:10 -12:00 pm	Discussion on the Nuance of Invasive and Native <u>Question Review Topics</u> <ul style="list-style-type: none"> • Historic Native Range • Habitat Thresholds • Species Movement and Distribution • Factors to Quantify Risk 	Panelists
12:00 – 1:00 pm	Lunch On-Site	
		Provided by MISC
Topic Two: Risk Assessment Tools		
1:00 – 1:30 pm	<i>Montana’s Invasive Species Data Resources and NatureServe’s Assessment Protocol</i>	Bryce Maxell, MT Natural Heritage Program
1:30 – 2:00 pm	<i>GLANSIS Risk and Impact Assessment Frameworks</i>	Alisha Davidson
2:00 – 2:30 pm	<i>Assessing the Threat: Tools for Invasion Risk, Status and Impact</i>	Deah Lieurance
2:30 – 3:00 pm	Discussion	
3:00 – 3:10 pm	Break	
3:10 – 4:00 pm	Discussion of Risk Assessment Tools and Recommendations	Panelists
4:00 – 4:45 pm	Exploring Proposed Assessment Elements with Montana Relevant Species <ul style="list-style-type: none"> • Ventenata • Bullfrog 	Panelists
4:45 pm	Review Day 1 and Day 2 Preview	Leah Elwell
5:00 pm	Adjourn	
6:00 pm	No-Host Reception at Cranky Sam Public House, 233 W Main St, Missoula	

May 6

Balsamroot Conference Room, Missoula County Department of Ecology

8:30 – 8:45 am	Welcome // Day 1 Highlights	Leah Elwell
Risk Assessment Considerations of Climate, Economics and Culture		
8:45 – 9:15 am	Consideration of Climate	Eva Colberg
9:15 – 9:45 am	Consideration of Economics	Nanette Nelson, Flathead Lake Biological Station
9:45 – 10:30 am	<i>Cultural Impacts of Invasive Species in Montana: Stakeholders, Values at Risk and Management Strategies</i>	Fernando Sanchez, University of Montana, Cobell Land and Culture Institute
10:30 – 10:45 am	Break	
10:45 – 12:00 pm	Discussion <u>Question Areas</u> <ul style="list-style-type: none"> • Incorporating climate resiliency benefits, economic benefits, and cultural impacts • Data collection needs and acquisition to assess impacts • Data scale and resolution needs 	Panelists
12:00 – 1:00 pm	Lunch On-Site	
1:00 – 1:30 pm	Panelist Closing Remarks	Panelists
1:30 – 2:00 pm	Public Comments Recommendation Review Next Steps and Wrap Up	Leah Elwell
2:00 pm	Adjourn	

Invasive Species Definitions

State of Montana

Montana Invasive Species Council

MCA 80-7-1203 “Invasive Species” means plants, animals and pathogens that are nonnative to Montana’s ecosystem and cause harm to natural and cultural resources, the economy, and human health.

Montana Aquatic Invasive Species Act

MCA 80-7-1003 “Invasive Species” means upon mutual agreement of the directors of the departments, a nonnative aquatic species that has caused, is causing, or is likely to cause harm to the economy, environment, recreational opportunities, or human health.

County Weed Act

MCA 7-22-2101 “Noxious Weeds” means any exotic plant species established or that may be introduced into the state that may render land unfit for agriculture, forestry, livestock, wildlife or other beneficial uses or that may harm native plant communities and that is designated as a statewide noxious weed by rule of the department.

County Vertebrate Pest Management

MCA 7-22-2501 “Vertebrate Pests” means jackrabbits, prairie dogs, ground squirrels, pocket gophers, rats, mice, skunks, raccoons, bats and the following depredatory and nuisance birds: blackbirds, cowbirds, starlings, house sparrows and feral pigeons, when such animals and birds are injurious to agriculture, and other industries, or the public.

Exotic Wildlife

ARM 12.6.2201 “Exotic Wildlife” means a wildlife species that is not native to Montana: foreign or introduced. “Prohibited Species” means live, exotic wildlife species, subspecies, or hybrid of that species, including viable embryos or gametes, that may not be possessed, sold, purchased, exchanged, or transported in Montana.

Feral Swine

MCA 81-28-101 “Feral swine” means a hog, boar, or pig that appears to be untamed, undomesticated, or in a wild state, or appears to be contained for commercial hunting or trapping.

Federal

Executive Order 13751 (2016) – “Invasive species” – means with regard to a particular ecosystem, a non-native organism whose introduction causes or is likely to cause economic or environmental harm or harm to human, animal or plant health. “Non-native species” or “alien species” means with respect to a particular ecosystem, an organism, including its seeds, eggs, spores or other biological material capable of propagating that species, that occurs outside of its natural range. “Pathway” means the mechanisms and processes by which non-native species are moved, intentionally or unintentionally, into a new ecosystem.

Executive Order 13112 (1999) – Invasive Species – “alien species” means, with respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species that is not native to that ecosystem.

Nonindigenous Aquatic Nuisance Prevention and Control Act (1990) – “aquatic nuisance species” means any non-indigenous species that threatens the diversity of abundance of native species of the ecological stability of infested waters, or commercial, agricultural, aquacultural or recreational activities dependent on such waters.