



ICOET 2025

INTERNATIONAL CONFERENCE ON
ECOLOGY AND TRANSPORTATION



DENVER, CO | MAY 11-15, 2025

PROGRAM LAST UPDATED 1/22/25
PROGRAM IS NOT FINAL AND WILL BE UPDATED PERIODICALLY
AS WE WE GET CLOSER TO THE EVENT



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OUTSIDE

Colorado Welcomes You to ICOET 2025



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DUDEK

SERVICES

Transportation Ecology

- Advance Planning for Transportation Projects
- Wildlife Studies (Camera, eDNA, Connectivity, Survey)
- Wildlife Crossing Planning and Design
- Light & Noise Studies, Statistical/Geospatial Analytics

AI Wildlife Image Processing

- Image Processing through Pattern Recognition
- Customized Image Management
- Automated Actionable Data Outputs

Turn-key Environmental

- NEPA/CEQA, Permitting, Cultural, Habitat Restoration

CONFERENCE TIMES & TIME ZONES

Thanks for joining ICOET from your time zone. Because the conference includes an in-person component, all times in the program are expressed relative to local time in Denver, Colorado (Mountain Daylight Time, MDT). If you are participating virtually, you can find your time relative to MDT based on your location, using this website:

<https://greenwichmeantime.com/time-gadgets/time-zone-converter/>. We have

also put major time zones at the beginning of the program.

For example, Denver is -6:00 hours relative to GMT, so 9 am MDT in the program = 8 AM in California and 5 pm in Johannesburg, South Africa.



MESSAGE FROM THE CHAIR

Chris Slesar, ICOET Conference Chair
Vermont Agency of Transportation

On behalf of the ICOET Steering Committee, it is my pleasure to welcome you to the fourteenth biennial International Conference on Ecology and Transportation in beautiful Denver, Colorado. ICOET is more than a conference, it is a community of transportation and environmental planners, practitioners, and academics working at the nexus of linear infrastructure and ecology. Again, this is a hybrid conference expanding our reach far beyond the walls of the conference rooms via virtual participation. New to ICOET in 2025 are a series of training sessions on relevant topics ranging from equity and community involvement to managing and monitoring bats in transportation projects.

We have a robust and exciting program consisting of 4 trainings, 270 presentations (Podium, Lightning, and Multi-media/Poster), from 18 countries and 35 US states. We are honored to have award-winning independent conservation journalist, author of *Crossings: How Road Ecology is Shaping the Future of Our Planet*, Ben Goldfarb as our keynote speaker.

The conference theme for 2025 is Bridging Divides Through Collaboration. Collaboration is critical to success on all scales. Collaborative partnerships overlap and interact in dynamic ways to create and maintain a healthy planet. There are collaborations that are exclusive to the work we are doing in our own jurisdictions. And there are collaborations that capture broad landscapes and multiple political jurisdictions across the globe.

The magic of ICOET is rooted in multifaceted collaborations. ICOET is fueled by the interaction of many individuals representing many diverse organizations, working at different scales, from global to local - together producing a combined effect greater than the sum of their separate parts. This interdisciplinary conference flourishes on the relationships among participants, and their relationships in the contexts in which they are working.

Colorado's magnificent landscape of arid desert, river canyons, and rugged snow-covered Rocky Mountains provides the backdrop for this meeting. It is within this setting that we will undertake a four-day dialog that will inform and inspire participants to return to their respective jurisdictions and continue to bring our work to the next level. Conference participants will be steeped in the most current research and practices as represented by the foremost minds (both newcomers' and veterans') in transportation ecology research, academics, policy, and practice.

ICOET 2025 will be highly engaging and interactive and will delve into a diversity of relevant topic areas that root transportation decision-making in science and sound policy. We enthusiastically and warmly welcome newcomers to ICOET and look forward to embracing them in the camaraderie of the ICOET community. Please take every opportunity to network with old and new colleagues, collaborators, and friends. We look forward to your active engagement in ICOET 2025.

Welcome to Denver and enjoy the conference!

MESSAGE FROM THE ORGANIZER



Fraser Shilling, PhD

Road Ecology Center Director and ICOET Lead Organizer

Every two years, ICOET brings you, a large, diverse and international crowd together to examine how transportation systems impact nature and what we can do to reduce those impacts. Your knowledge and enthusiasm are what makes ICOET successful and allowed it to persist for over two decades now. This year's conference celebrates and focuses on partnership as an important part of mitigating the impacts of transportation. Thanks to our sponsors, to the universities supporting the next generation of transportation ecologists, to the local, state and federal agencies encouraging their staff's participation, and to the private organizations and individuals providing their expertise.

One of the founding and still most common type of presentation at ICOET is "wildlife crossings", which bridge the roads that divide nature. In many ways, wildlife crossings are analogous to partnerships that bridge political divides and probably take as much time to get built. With today's political division, coming together around re-connecting nature provides a needed respite from damaging conflict. The question for nature, as it is in politics, is whether or not we will build enough bridges to save what we value in time to preserve it.

Partnership is at the core of this year's conference theme and many of the abstracts you submitted for presentation. It's also assumed to underlie successful conservation and environmental protection. However, it's often adversity and conflict that drives advancement and innovation, not collaboration. The world's environmental protection laws, civil rights legislation, the gradual recognition of indigenous peoples' sovereignty, women's right to vote, the end of slavery, and even the creation of many national forests and parks arose from different types of adversity. In a time of conflict it is worth considering what we can learn and gain from the adversity. Should we engage in evaluation of where we are in transportation ecology, find out if we are being successful; what should we really be doing, and who should we be doing it with?

This year's ICOET will be the largest in terms of abstract submissions (270), number of panels and organized sessions (19), and number of professionals and students participating. As in previous years, ICOET will be held in hybrid format (in-person and virtual), allowing greater participation by international and state partners and also limiting greenhouse gas production from travel. ICOET benefits from: a) a very active Steering Committee, which advises on overall strategies in conference content and evolution, selects awardees, and connects the conference to other organizations; b) a Program Committee that functions as a deep bench of scientific and practice experts, and c) an Abstract Review Committee, which includes many of you, providing your expert reviews of all contributed presentations. To these Committees -- I appreciate all of your efforts, individually and collectively.

The Road Ecology Center (<https://roadecology.ucdavis.edu>) is joined in organizing ICOET 2025 by the UC Davis Institute of Transportation Studies (<https://its.ucdavis.edu/>) and the National Center for Sustainable Transportation (<https://ncst.ucdavis.edu/>). The three organizations are each pioneers and among the largest in their fields and, in combination cover most issues in evolving sustainable transportation. We are excited to bring you ICOET 2025 and to make sure that ICOET is continuously and expertly managed into the future. We look forward to meeting many of you in-person and virtually and to helping you have a great ICOET experience. Look us up online, or during the conference.



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KEYNOTE SPEAKERS



Ben Goldfarb

Journalist

<https://www.bengoldfarb.com/>

Ben Goldfarb is an environmental journalist whose work has appeared in National Geographic, the Atlantic, the New Yorker, Smithsonian Magazine, Science, and many other publications. His most recent book, *Crossings: How Road Ecology Is Shaping the Future of Our Planet*, was named one of the best books of 2023 by the New York Times, and received the Rachel Carson Award for Excellence in Environmental Writing and the Banff Book Competition's Grand Prize. His previous book, *Eager: The Surprising, Secret Life of Beavers and Why They Matter*, won the PEN/E.O. Wilson Literary Science Writing Award. He lives in Colorado with his wife, Elise, and his dog, Kit — which is, of course, what you call a baby beaver.



Colorado DOT Keynote speakers to be announced!



SPONSORS & ORGANIZERS

THANK YOU to our generous private Sponsors for continuing to help us reduce registration fees, to our outstanding co-host agencies, and to the members of the Steering, Program, Abstract Review, and Awards Committees. ICOET 2025 is made possible through the financial and volunteer support of the many organizations listed in this program. Please take time during your participation during the conference to visit the Sponsor booths and exhibits, learn about their products and services, and to express your appreciation for their support of the conference.

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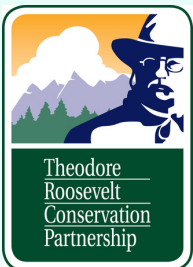
SPECIES
FROM FECES



Hobbs Ecology



CONTRIBUTORS



Theodore
Roosevelt
Conservation
Partnership



Kiewit

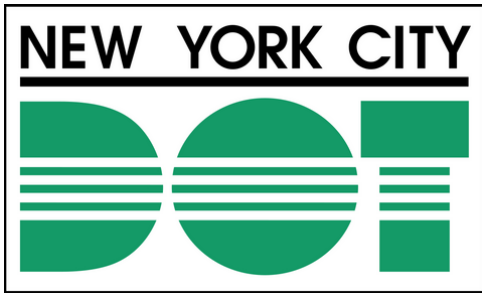


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POOLED FUND STUDY PARTICIPANTS

THANK YOU to these state Departments of Transportation that have donated up to \$10,000 towards ICOET 2025. They show the dedication happening across the nation for improvements to transportation ecology.



EVENT PROGRAM

9 AM MDT = 8AM PDT; 3PM GMT; 5PM Johannesburg, South Africa; 8:30PM Mumbai, India, 1AM(next day) Sydney, Australia

* indicates a virtual presentation

Room assignments and session orders to be announced closer to event.

SUNDAY, MAY 11

12:00 PM (MDT)

ICOET Check-In Starts

Stop by the registration booth to collect your materials

1:30 PM (MDT)

Trainings

- FHWA: Planning and implementing wildlife crossings under IJJA
- FHWA: Introduction to the stochastic empirical loading and dilution model

2:45 PM (MDT)

Break

3:00 PM (MDT)

Trainings

- AI: What is it and how can you use it?
- Managing and monitoring bats at transportation structures



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MONDAY, MAY 12

-
- 8:30 AM (MDT)** **Day 1 Welcome Plenary Session**
Remarks from Conference Chair, Steering Committee, and Organizer
-
- 9:20 AM (MDT)** **International and VT Welcomes**
Keynote Addresses by CO Transportation and Natural Resources Secretaries
-
- 9:50 AM (MDT)** **Plenary Keynote #1**
-
- 10:30 AM (MDT)** **Break & Poster Setup**
10 minutes
-
- 10:40 AM (MDT)** **Technical Sessions 1, 2, 3, 4, & 5 and Panel 1**
- Panel 1: Planning for pollinators: How voluntary conservation initiatives can address the challenges of pollinator listings for transportation agencies
 - Session 1: Partnerships connecting the Florida wildlife corridor (80, 85, 103, 201)
 - Session 2: A road runs through it: Improving stream quality & stability (5, 75, 183, 222)
 - Session 3: Dead serious about preventing roadkill (17, 19, 146, 172)
 - Session 4: Collaborative initiatives for leveraging road ecology in Latin America (69, 79, 130, 185)
 - Session 5: The cat's meow (4, 63, 73, 128)
-
- 12:10 PM (MDT)** **Local Lunch, Sponsor Meet-up, & Poster Setup**
60 minutes
-

EVENT PROGRAM

9 AM MDT = 8AM PDT; 3PM GMT; 5PM Johannesburg,
South Africa; 8:30PM Mumbai, India, 1AM(next day)
Sydney, Australia

* indicates a virtual presentation

Room assignments and
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announced closer to event.

MONDAY, MAY 12 CONTINUED

1:10 PM (MDT)

Technical Sessions 6, 7, 8, 9, & 10 and Lightning Session 1

- Session 6: No bank, no problem: An almost comprehensive review of FDOT alternative mitigation strategies for wildlife and resiliency (40, 77, 98, 200)
- Lightning Session 1 (8, 11, 12, 20, 34, 68, 112, *197, *198, 277)
- Session 7: Batting a thousand (10, 18, 153, *250)
- Session 8: Connecting the dots ... Wildlife fencing and crossings (41, 120, 253, 275)
- Session 9: Canopy bridges: A cost effective, under-utilized fragmentation solution for arboreal species (61, 62, 105, 177)
- Session 10: The 3Cs: Connectivity, collaboration, crossings (129, 154, 163, 231)

2:40 PM (MDT)

Break

20 minutes

3:00 PM (MDT)

Technical Sessions 11, 12, 13, 14, & 5 and Panel 2

- Panel 2: Stitching it together: Integrating transportation and land use policies to support ecological connectivity at the landscape scale
- Session 11: Corridors, collisions, & conservation funding (*30, 123, 193, 194)
- Session 12: I get by with a little help from my friends (38, 134, 136, 262)
- Session 13: Predictions are hard, especially about the future (1, 7, 25, 26)
- Session 14: New voices, new solutions (132, 178, 217, 282)
- Session 15: I think I am being followed (158, 187, 221, 243)

6:00 PM (MDT)

Welcome Reception

120 minutes

END OF DAY 1



EVENT PROGRAM

9 AM MDT = 8AM PDT; 3PM GMT; 5PM Johannesburg, South Africa; 8:30PM Mumbai, India, 1AM(next day) Sydney, Australia

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Room assignments and session orders to be announced closer to event.

TUESDAY, MAY 13

9:00 AM (MDT)

Technical Sessions 16, 17, 18, 19, & 20 and Lightning Session 2

- Session 16: This session is 90% bats, and the other half is birds (53, 215, 232, 257)
- Lightning Session 2 (16, 67, 70, 117, 119, *143, 152, 214, 272, *283)
- Session 17: Watershed moments in aquatic connectivity (102, 219, 242, 269)
- Session 18: Connecting people to connect habitat (83, 124, 229, 268)
- Session 19: Planning for California's wildlife crossing future (35, 43, 60, 71, 72, 95, 241, 248)
- Session 20: Borders and barriers (48, 87, 96, 264)

10:30 AM (MDT)

Break

15 minutes

10:45 AM (MDT)

Technical Sessions 19 (cont), 21, 22, 23, & 24 and Lightning Session 3

- Session 21: Lift each other up: Seeing opportunities & sawing barriers (58, 118, 205, 246)
- Lightning Session 3 (33, 42, 65, 91, 101, 106, 140, 207, 225, 271)
- Session 22: Nature on the verge - What's the buzz? (46, *160, *199, 204)
- Session 23: Can't we all get along...? Benefiting wildlife through collaboration (84, 109, 142, 175)
- Session 19: Planning for California's wildlife crossing future (Continued)
- Session 24: Digital pathways: Enhancing wildlife connectivity through technology (23, 238, 254, 281)

12:15 PM (MDT)

Local Lunch & Plenary Keynote #2

Details to come closer to conference

EVENT PROGRAM

9 AM MDT = 8AM PDT; 3PM GMT; 5PM Johannesburg,
South Africa; 8:30PM Mumbai, India, 1AM(next day)
Sydney, Australia

* indicates a virtual presentation

**Room assignments and
session orders to be
announced closer to event.**

TUESDAY, MAY 13 CONTINUED

1:30 PM (MDT) **Technical Sessions 25, 26, 27, & 28, Panel 3, and Lightning Session 4**

- Panel 3: Connecting Colorado: How Colorado used a statewide prioritization process to implement wildlife mitigation projects
- Lightning Session 4 (*59, *82, *92, 159, *191, 202, *251, *252, *260, *261)
- Session 25: A novel, methodological approach to present and future multi-benefit, resilient transportation design in Yellowstone National Park (64, 99, 165, 247)
- Session 26: Building partnerships to build wildlife crossings (45, 104, 157, 239)
- Session 27: Successes in crossing structures: lessons from the I-90 Snoqualmie Pass East Project across taxonomic groups and diverse measures (21, 22, 121, 208)
- Session 28: Global perspectives from the roadkill café (2, 161, *170, 180)

3:00 PM (MDT) **Break** 15 minutes

3:15 PM (MDT) **Panel 4, 5, 6, & 7 and Trainings and Workshops**

- Panel 4/5: Collaborative strategies for integrating ecology into transportation projects: Insights from the Duckabush Estuary restoration/Arach-No-phobia: Perspectives and results from a unique, collaborative study of tarantulas in southeast Colorado
- Panel 6/7: Wild ways: Designing connectivity/The application of nature-based solutions (NBS) for transportation systems
- Training: Equity and community involvement in transportation ecology
- Training: Advancing transportation ecology through agency-university partnerships
- Workshop: Communicating your transport ecology story to the community, engineers and your Mum: Enthralling your audience with a captivating blog and stunning audio-visuals
- Workshop: From policy to practice: Tackling barriers to building wildlife crossings

5:00 PM (MDT) **Poster Reception** 120 minutes

END OF DAY 2

EVENT PROGRAM

9 AM MDT = 8AM PDT; 3PM GMT; 5PM Johannesburg, South Africa; 8:30PM Mumbai, India, 1AM(next day) Sydney, Australia

WEDNESDAY, MAY 14

* indicates a virtual presentation

Room assignments and session orders to be announced closer to event.

8:00 AM (MDT)) **Field Trip Day Orientation**

Details to come closer to confernece.

8:30 AM (MDT) **Field Trips**

- Field Trip 1: Details to come closer to conference
- Field Trip 2: Details to come closer to conference
- Field Trip 3: Details to come closer to conference
- Field Trip 4: Details to come closer to conference
- Field Trip 5: Details to come closer to conference
- Field Trip 6: Details to come closer to conference
- Field Trip 7: Details to come closer to conference

END OF DAY 3



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* indicates a virtual presentation

Room assignments and session orders to be announced closer to event.

THURSDAY, MAY 15

9:00 AM (MDT)

Technical Sessions 29, 30, 21, & 32; Panel 8 &9; and Lightning Session 5

- Panel 8: Leveraging training for a culture of conservation in transportation
- Lightning Session 5 (39, 49, 108, 114, 145, 162, 166, 206, 249, 279)
- Session 29: (Team)Work zone ahead – How interagency collaborations are endeavoring to improve our understanding of how bats and bat habitat are connected to transportation Infrastructure (54, 74, 78, 97, 116, 211, 235, 258)
- Session 30: Planning for climate-informed wildlife crossings (56, 110, 115)
- Session 31: Conversations on conservation collaboration (156, 176, 233, 240)
- Session 32: Wildlife spatial ecology and road systems (90, 107, 168, 276)

10:30 AM (MDT)

Break

15 minutes

10:45 AM (MDT)

Technical Sessions 29 (Cont.), 34, 35, & 36 and Panel 9 & 10

- Panel 9: Wildlife connectivity Projects and natural resource assessments
- Panel 10: The Bipartisan Infrastructure Law - A watershed moment for aquatic organism passage
- Session 29 Collaborations are endeavoring to improve our understanding of how bats and bat habitat are connected to transportation infrastructure (Continued)
- Session 34: California dreamin': Wildlife crossing planning (47, 151, 167, 278)
- Session 35: Restoration can be fun-guys (113, 173, 209, 213)
- Session 36: Making way for moving mammals (A nod to Norris) (188, 245, 274, 284)



EVENT PROGRAM

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* indicates a virtual presentation

Room assignments and session orders to be announced closer to event.

THURSDAY, MAY 15 CONTINUED

12:15 PM (MDT) **Plenary Wrap-Up and Introduction to ICOET 2027**
Details to come closer to conference

END OF CONFERENCE



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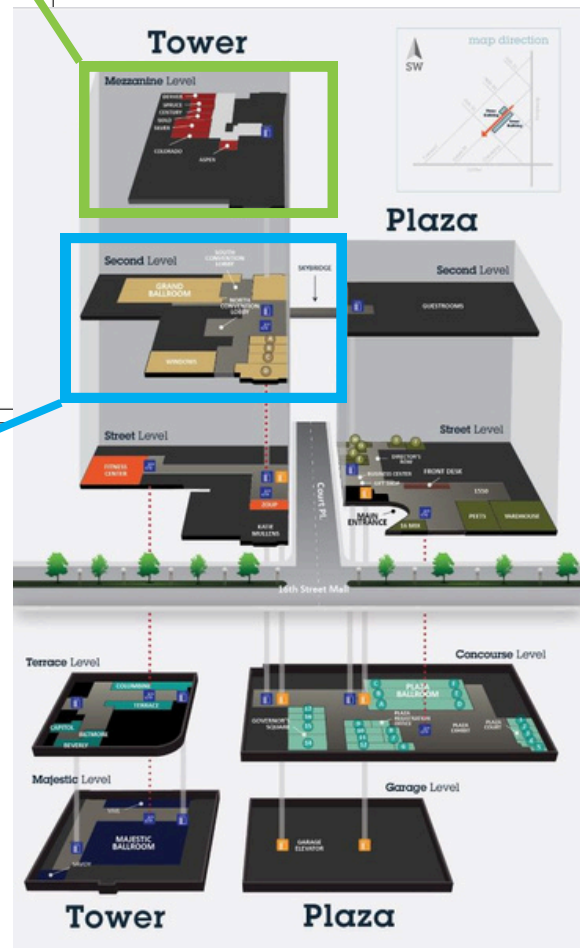
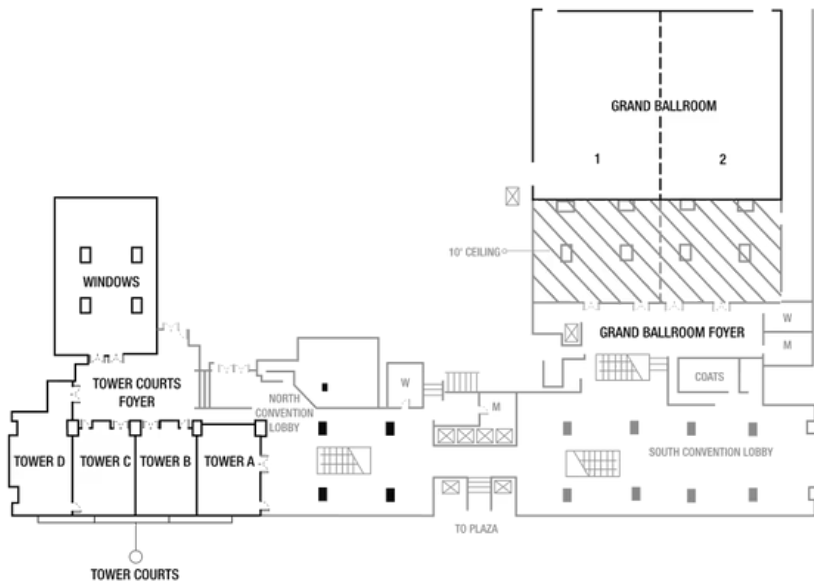
Conference Room Map

Room Assignments to be Announced Closer to Event

I.M. PEI TOWER MEZZANINE LEVEL



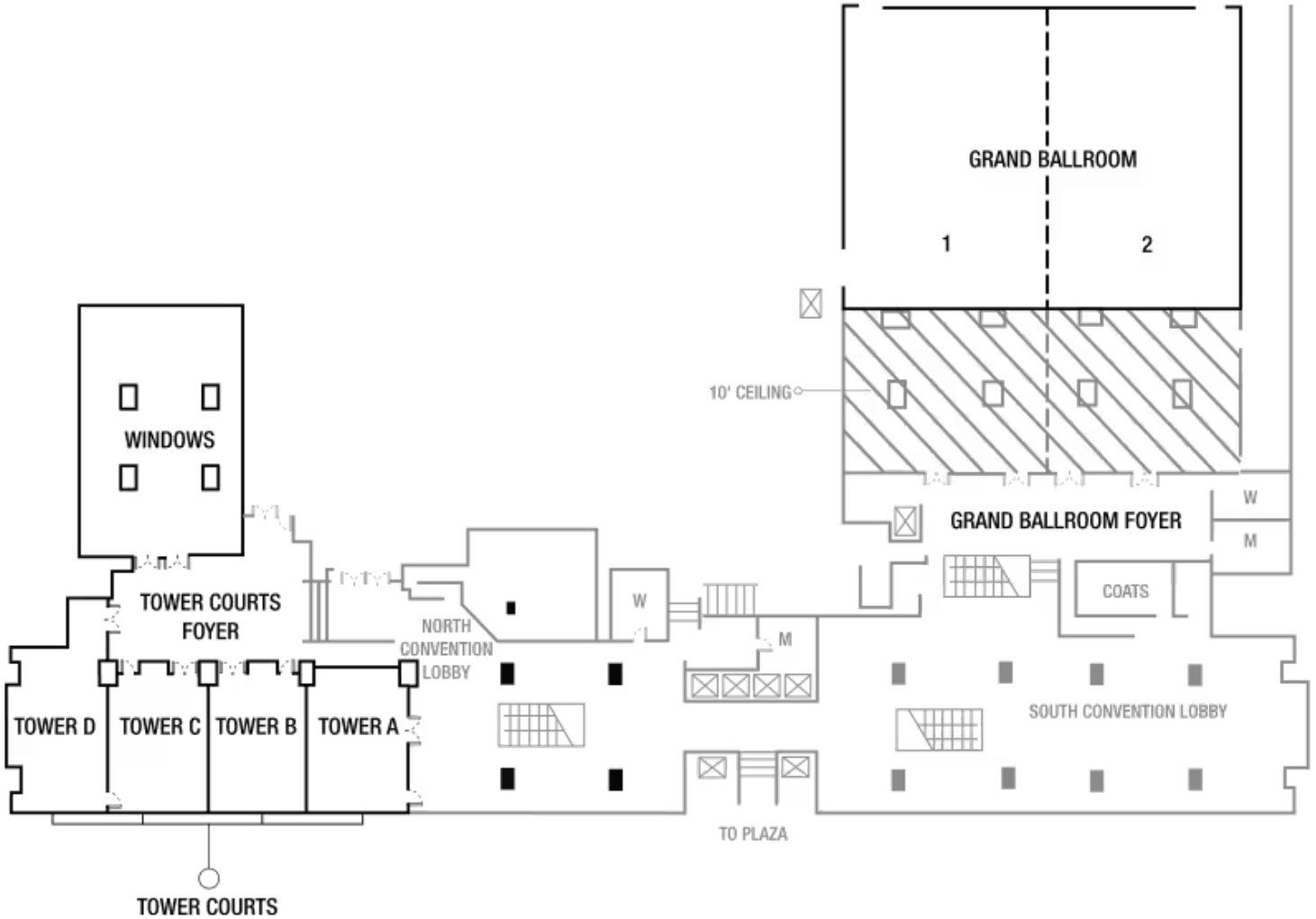
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Conference Room Map

Room Assignments to be
Announced Closer to Event

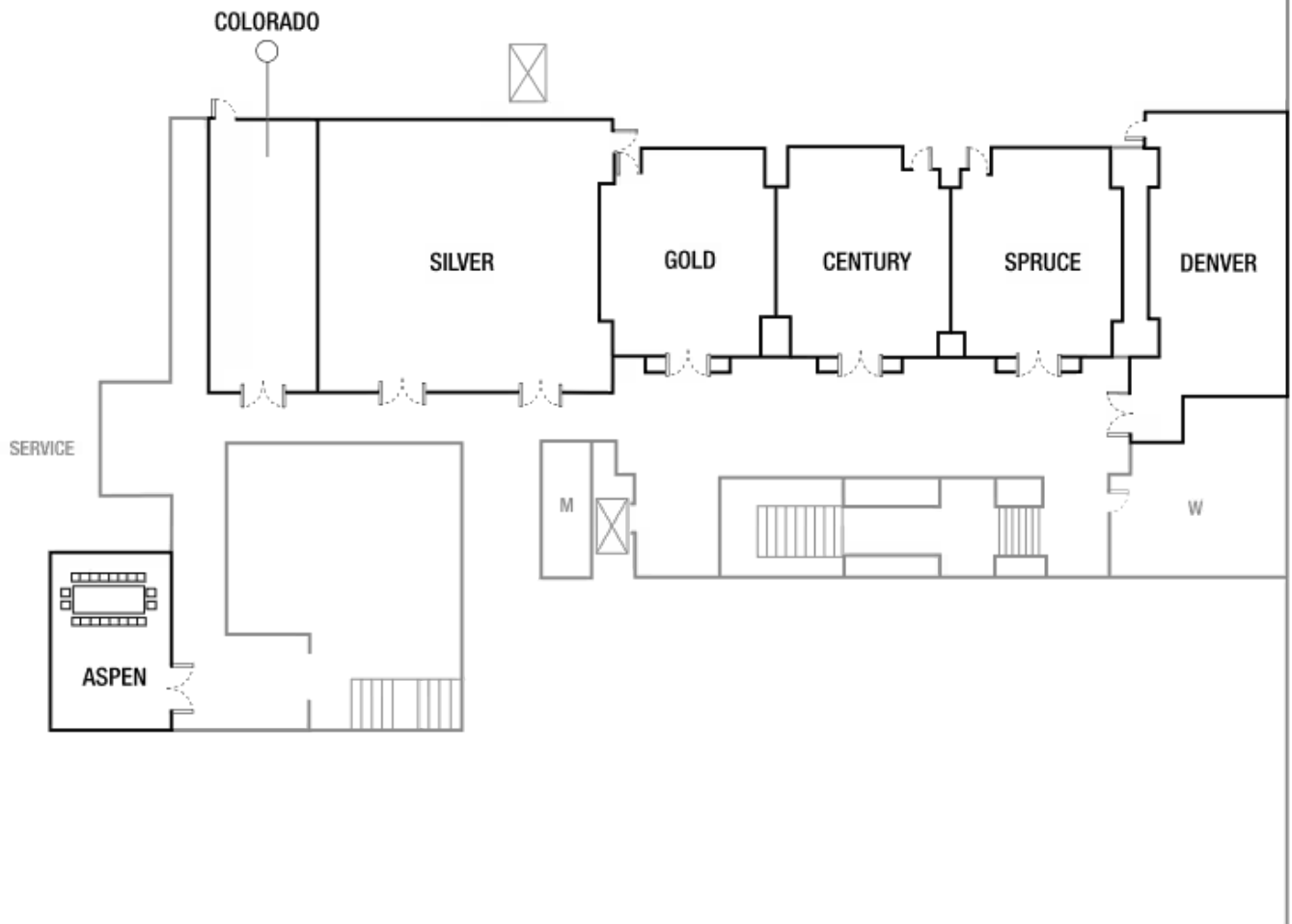
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Conference Room Map

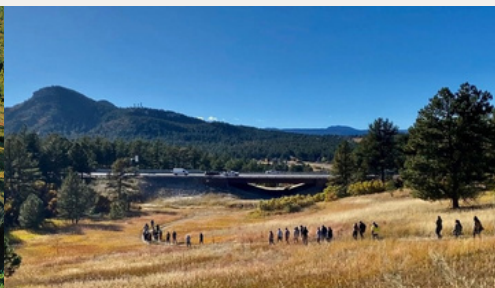
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US 160 Wildlife Overpass



I-25 Wildlife Underpass



CO 9 Wildlife Overpass

CDOT's Bridging Divides Through Collaboration

"Connecting the little pieces to to make a big difference!" - The Colorado Department of Transportation



Kristin Salamack, USFWS/CDOT
Arach-No-phobia: Perspectives and results from a unique, collaborative study of tarantulas in southeast Colorado. Join CDOT at the panel presentation to discuss the study of tarantula movements in southeast Colorado.



Mark Lawler, CDOT

CDOT's lynx in-lieu fee fund: Colorado's Department of Transportation has developed an approach that gives them the option to pool funds to mitigate impacts for Canada lynx.

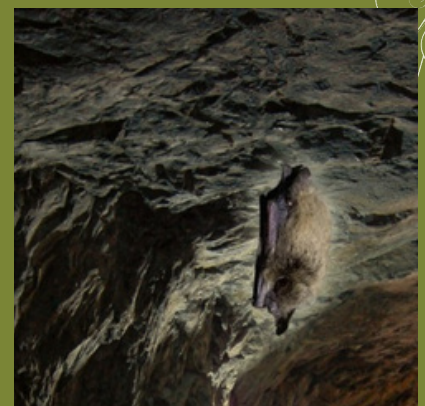


Chuck Attardo CDOT

Connecting Colorado: How Colorado Used a Statewide Prioritization Process to Implement Wildlife Mitigation Projects: I-25/Greenland Wildlife Overpass - Success Isn't Comfortable



Francesca Tordonato, CDOT
Feasibility of Composting as an Alternative Disposal Method for Wildlife Vehicle Collision-Induced Carcasses within Colorado Department of Transportation Processes.



Jason Roth & Anne Hoffman, CDOT

Understanding Bat Use of CDOT Structures: Two species of bats (tricolored and little brown) are proposed to soon be protected by the Endangered Species Act. Learn about Colorado's research to aid the challenges posed by this lack of existing data.

Explore the 2025 ICOET Program for a full list of presentation times and details.



Colorado Parks & Wildlife



COLORADO
Department of Transportation



Colorado Wildlife Transportation Alliance

PODIUM PRESENTATIONS

See Daily Schedule for Time Slot



Green Denotes
Student
Presentation



Exploring wildlife crossing effectiveness on the N4 Toll Route (TRAC N4), Gauteng Province, South Africa

Thabo Innocent Hlatshwayo (Centre for Functional Biodiversity, School of Life Sciences, University of KwaZulu-Natal; Endangered Wildlife Trust), Manqoba Moses Zungu, Wendy Jane Collinson-Jonker, Colleen T Downs



Effects of public roads on wildlife-vehicle collisions in Hluhluwe-iMfolozi Park and iSimangaliso Wetland Park in KwaZulu-Natal, South Africa

Cameron T. Cormac (Centre for Functional Biodiversity, School of Life Sciences, University of KwaZulu-Natal), Colleen T. Downs, Wendy Collinson, Cormac Price, Jarryd P. Streicher, Dave J. Druce



The influence of anthrophony on use of wildlife crossing structures built for ocelots in Texas

Thomas J. Yamashita (Caesar Kleberg Wildlife Research Institute, Texas A&M University), Ashley M. Tanner, Evan P. Tanner, Daniel G. Scognamillo, Michael E. Tewes, John H. Young Jr., Jason V. Lombardi



Failure probability curves for road cut slopes considering the effect of water erosion and variability in the rainfall pattern

Manuel Contreras-Jara (Department of Construction Engineering and Management, Pontificia Universidad Católica de Chile; Research Center for Integrated Disaster Risk Management), Esteban Sáez, Alondra Chamorro Gine, Carlos Bonilla, Jorge Gironas, Tomás Echaveguren, Eduardo Arancibia-Ruiz



Predicting Wildlife Use of Existing Highway Bridges and Culverts

Noah Thoron (University of California, Davis), David P Waetjen, Fraser Shilling



eDNA Surveys for Bridge-Roosting Bats

Daniel Fisher (Rutgers University), MacKenzie Hall, Brooke Maslo, Robert Kwait, Erin McHale, Morgan Mark, Kathleen Kerwin



Estimating Total Roadkill Rate for a US State

Alice Michel (University of California Davis), David Waetjen, Chloe Schaecher, Fraser Shilling



To What Extent Have the Mandates of Transportation Agencies Improved Regarding the Consideration of Biodiversity? An International Comparison.

Sabrina Mruzek (Concordia University), Jochen A.G. Jaeger



Median Treatment May Impact Wildlife-Vehicle Collisions on California Highways

Lorna Haworth (UC Davis Road Ecology Center), Ben Hodgson, Leo Hecht, Ash Henderson, Laura Morris, Shannon Lemieux, Michelle See, Fraser Shilling



Body condition index of small mammals as an indicator of habitat quality of wildlife crossing structures

Lindsay Millward (Oregon State University), Kristina Ernest



Small Mammal Perception of Risk on Wildlife Crossing Structures

Sarah Sanz (Central Washington University), Kris Ernest

PODIUM PRESENTATIONS

See Daily Schedule for Time Slot



Green Denotes
Student
Presentation



Computer Vision Automation of Wildlife Monitoring on WSDOT's I-90 Snoqualmie Pass East Project

Vedant Srinivas (Stanford University), Fraser Shilling, Mark Norman, Josh Zylstra



Predicting species assemblages at wildlife crossing structures using multivariate regression of principal coordinates: implications for ocelots in the U.S.A.

Thomas J. Yamashita (Caesar Kleberg Wildlife Research Institute, Texas A&M University), Daniel G. Scognamillo, Kevin W. Ryer, Richard J. Kline, Michael E. Tewes, John H. Young Jr., Jason V. Lombardi



Scale sensitivity of two habitat generalists with applications

Matthew Roos (SUNY ESF, Department of Environmental Biology), H. Brian Underwood



Hypernature for Iowa's Rail-Trail Corridors: a typology of enhancements for linear infrastructure in the Corn Belt

Sumaiya Binte Azad (Iowa State University), Austin Dunn, Katharine Shiffler



State Route 152 Pacheco Pass: Working Together for the Benefit of Wildlife

Julie King (Santa Clara Valley Habitat Agency)



Identifying Road Encounter Hotspots of Blanding's Turtle Using Sparse, Unsystematically Collected Data and Behavioral Modeling

Tom Langen (Clarkson University), Sean Jackson, Alexandra Burrows, Glenn Johnson



A Unique Solution to Stormwater Challenges. Part of Session: No Bank, No Problem: An Almost Comprehensive Review of FDOT Alternative Mitigation Strategies for Wildlife and Resiliency.

Casey Lyon (Florida Department of Transportation)



Testing the effectiveness of wildlife fences for arboreal mammals

Edgar van der Grift (Wageningen University and Research), Nina Villing, Hugh Jansman, Margreet Laar



Multi-disciplinary Design for Habitat Connectivity in the Wildland-Urban Interface of Los Angeles County

Clark Stevens (Resource Conservation District of the Santa Monica Mountains)



Act Locally: Integrating Wildlife Crossings and Connectivity into Municipal and County Plans and Policies in the United States: Examples, Case Studies, and Recommendations

Kylie Paul (Center for Large Landscape Conservation), Nic Callero, Julia Kintsch, Michelle Cowardin, Michael Dax, Kasey Lindstrom, Daniel Estes



Programmatic Consultation for the American Burying Beetle for Nebraska Department of Transportation Projects

Jessica Jurzenski PhD (Felsburg Holt & Ullevig), Jeff Hartman PhD, Ben Trenne, Matt Greiner, Justin Luther, Luke Pitts, Brian Yanchik, Charlotte Kucera



Statewide Modeling of Traffic Illumination of Surrounding Habitat

Ben Hodgson (UC Davis Road Ecology Center), David Waetjen, Fraser Shilling

PODIUM PRESENTATIONS

See Daily Schedule for Time Slot



They can't all swim. Identifying where to you help wildlife get across 300 miles of the California Aqueduct?

Brock Ortega (Dudek), Shelly Amrhein, Valerie Goodwin, Mike Howard, Mike Henry PhD, Anna Cassady, Alexandria Reed, Lorna Haworth, Autumn Iverson



The Bat Mitigation and Monitoring Plan: A Collaborative Approach to Improving Bat Mitigation Outcomes

Jill Carpenter (LSA Associates)



Under the Spans: Investigating bridge use by bats in Wyoming

Riley Bernard (Department of Zoology & Physiology, University of Wyoming), Logan Detweiler, Riley Fehr Bernard, Logan William Detweiler, Joshua Franklin Layfield



Modeling climate-driven changes in wildlife movement to inform crossing structure locations that support connectivity now and in the future

Justin P. Suraci (Conservation Science Partners, Inc.), Caitlin E. Littlefield, Patrick T. Freeman, L. Mae Lacey, Julia Kintsch, Matthew Skroch, Nova Simpson, Nicholas Callero, Nathan Jones, Mark Traxler



Interagency cooperation for large-scale broadband infrastructure projects in existing transportation corridors: lessons learned from the California Middle-Mile Broadband Network

David L. Sherer U.(S. Fish and Wildlife Service), Colleen Draguesku, Jennifer Osmondson, Tierra Groff, Jeanette Mar



Gaviota Pass Wildlife Connectivity and Vehicle Collision Reduction Project: California's First Wildlife Crossings Pilot Program Grant

Morgan Robertson (Caltrans District 5), Shannon Crossen, Larissa Clarke, Alexandra Thiel, Mitch Dallas



Canopy bridge design: Emerging recommendations from a growing body of literature

Fernanda Delborgo Abra (Smithsonian's National Zoo and Conservation Biology Institute, ViaFauna Estudos Ambientais), Fernanda Z. Teixeira, Birthe Linden, Kylie Soanes, Anna Nekaris, Inés Azofeifa Rojas, Gabriella da Costa Pereira, Farah Carrasco Rueda, Thais Queiroz Morcatti.



A global review of canopy bridges studies as a tool to mitigate habitat fragmentation

Fernanda Z. Teixeira (Center for Large Landscape Conservation (CLLC)), Fernanda Delborgo Abra, Tremaine Gregory, Birthe Linden, Kylie Soanes, Anna Nekaris, Inés Azofeifa Rojas, Gabriella da Costa Pereira, Farah Carrasco Rueda, Thais Queiroz Morcatti



Primary arteries are obstacles to mountain lion recolonization of eastern North America, as predicted by an individual-based model

Mark Elbroch (Panthera), Thomas W. Glass, Richard Beausoleil, Brian N. Kertson, Benjamin T. Maletzke, Quinton Martins, Marc R. Matchett, T. Winston Vickers, Christopher C. Wilmers, Heiko U. Wittmer, Hugh Robinson

PODIUM PRESENTATIONS

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Climate Change Projections for Fluvial Hazards along the Northeast Entrance Road Corridor in Yellowstone National Park, WY.

Thomas C. Walsh, PhD, PE (Jacobs), Tyler Jantzen



Collaborative National Inventory of Wildlife Underpasses on Costa Rican Roads

Daniela Araya-Gambo (PANTHERA), Yosette Araya-Jimenez, Andrea Avila-Alfaro, Esther Pomareda García, Esmeralda Arevalo Huevo, Katia Castro del Valle, Angie Sánchez Nuñez, Karina Rodriguez Saenz, Silvio Boyat, Andrea Induni Vizcaini, Anthony Gomez Portugues, Einer Reyes Martinez, Alejandra Mendez Baez



Connecting people to connect wildlife: A case study from Coyote Valley, CA

Taylor Jang (Peninsula Open Space Trust), Marian Vernon



Building Regional Connectivity for the Santa Cruz Mountains through Collaboration

Bryan Largay (Land Trust of Santa Cruz County), Tanya Diamond, Morgan Robertson



Habitat selection and connectivity of mountain lions (Puma concolor) across anthropogenic barriers on the Olympic Peninsula: a multi-method comparison

Read Barbee (Panthera)



Detection of Listed Bat Species Under Bridges Through the Use of Fecal DNA

Faith M. Walker (Species from Feces Lab, Northern Arizona University), Cory Olson, Susan Dulc, Heather Gates, Cori L. Lausen, Erin Low, Daniel E. Sanchez



Stream Design, Living in a Digital World

Nich VanBuecken (Jacobs), Ben Dupuy



FDOT Sunshine Skyway Wave Attenuating Devices (Part of Session - No Bank, No Problem: An Almost Comprehensive Review of FDOT Alternative Mitigation Strategies for Wildlife and Resiliency)

Nicole Monies (Florida Department of Transportation (FDOT))



Understanding Bat Use of CDOT Structures

Jason Roth (Colorado Department of Transportation), Anne Hoffman, Grey Buttner, Vanessa Santistevan, Dalton Kidder, Kristin Salamack, Sara BarnasT, Conner Denton, Erik Schmude, Summer Slama, Jeff Peterson



Experience of Implementing the Wildlife Friendly Roads Toolbox for ten years in Costa Rica

Esther Pomareda García (Vías Amigables con la Vida Silvestre-Centro de Rescate Las Pumas), Esmeralda Arévalo Huevo, Daniela Araya Gamboa, Yocelin Ríos Montero, Rosemarie Menacho Odio, Cristina Aguilar Ruiz



Aligning Vision and Tactics to Salvage Florida's Wildlife Corridor (also Part 1 of Partnerships Connecting the Florida Wildlife Corridor)

Jason Lauritsen (Florida Wildlife Corridor Foundation)

PODIUM PRESENTATIONS

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Establishing Least Cost Corridors for Safe Passage of *Ursus americanus* across Interstate 40 in the Pigeon River Gorge, North Carolina, USA.

Aurora Wynne (National Parks Conservation Association), Liesl Erb, Steve Goodman



Revisiting US 64 in Eastern North Carolina (ICOET 2015), A Different Approach to Implementing Wildlife Crossings in this Important Landscape

Travis Wilson (North Carolina Wildlife Resources Commission)



Corridors and Conservation Strategies in Florida – A USFWS Perspective

US Fish and Wildlife Service



US-Mexico border wall impedes wildlife movement

Eamon Harrity (Sky Island Alliance), Myles Traphagen, Dr. Aaron Facka, Meagan Bethel, Emily Burns, Michael Dax



The multi-scale complexities of wildlife movement: workflows for siting crossing structures using GPS collars and related data

Christina M. Aiello (Oregon State University Department of Fisheries, Wildlife, and Conservation Sciences), Janene Colby, Paige R. Prentice, Nathan Galloway, Sahar Sadeqh Malak, Clinton W. Epps, Fraser M. Shilling



The East Bay Wildlife Connectivity Project: How to get pumas (and prey) through three VERY BUSY California highways

Courtney Coon (Alameda County Resource Conservation District), Farley Connelly, Fraser Shilling, Brock Ortega, Sasha Dansky



Unbroken from Canada to Mexico: Is Interstate 5 a Continental Barrier to Wildlife?

Shannon Lemieux (University of California, Davis Road Ecology Center), Laura Morris, Jay Chen, Madison Morgan, Cierra Kelly, Ben Hodgson, Leo Hecht, Fraser Shilling



Predicting Bat Roosts in Bridges using Bayesian Additive Regression Trees

Amy Wray (Fort Collins Science Center, USGS), Jacob Oram, Helen Davis, Luz de Wit, Winifred Frick, Andrew Hoegh, Kathryn Irvine, Patrick Pollock, Andrea Schuhmann, Frank Tousley, Brian Reichert



SR A1A Hurricane Response

Zakia Williams (US Fish and Wildlife Service Florida Ecological Services)



In-Stream Ecological Drivers and Impacts of Uncertain Future Hydrological Regimes along the Northeast Entrance Road Corridor in Yellowstone National Park, WY

Karen Williams, PhD (Jacobs)



Tait Station Dam Removal - An Innovative Approach to Ecological Lift

Joel Thrash (Stantec), Matt Perlik



FDOT Pile Bridge Wildlife Crossings

Brent Setchell (Florida Department of Transportation)

PODIUM PRESENTATIONS

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Tackling large challenges by harnessing the power of collaboration from science to implementation: An overview of how a an individual became multiple coalitions focused on getting wildlife crossing structures on I-5 in Washington State

Brian Stewart (Conservation Northwest)



Planning and monitoring canopy bridges for an endangered primate in southern Brazil: enhancing connectivity for arboreal mammals

Larissa Oliveira Gonçalves (Systematics and Ecology Lab, Federal University of Rio Grande do Sul), Júlia Beduschi, Talita Menger, Caroline Zank, Andreas Kindel



Developing a Caltrans-approved wildlife fencing attachment for guardrail systems to reduce road mortality and provide habitat connectivity for reptiles, amphibians, and small mammals

Steve Béga (Animex International), Alexandra Thiel



Advancing ecological connectivity, human safety, and wildlife conservation in the Gateway to Yellowstone

Liz Fairbank (Center for Large Landscape Conservation), Abigail Breuer, Marcel Huijser



Prioritizing Wildlife Crossing Locations Across Nevada's State Highway System

Nathan Jones (HDR), Julia Kintsch, Nova Simpson, Tanya Diamond, Mark Traxler, Juan Garcia



Exploring Nature Based Solutions for Resilience at Virginia DOT

Anna Salzberg (Virginia Department of Transportation (VDOT)), Kelsey Czyzyk, Tessa Artruc, Maria Mutuc, Chris Berg



The missing link in state wildlife crossing prioritization processes

Nicholas Callero (The Pew Charitable Trusts), Nathan Jones, Justin Suraci, Julia Kintsch



Georgia's Bat Programmatic Agreement & Lessons Learned Through Collaboration and Implementation

Ryan Pawlikowski (Georgia Department of Transportation), Morgan Niccoli



Bridging the Great Sonoran Desert Divide: Cooperative Partnerships to Protect Connectivity for Wildlife in the Tucson-Tortolita Mountain Wildlife Linkage in Tucson, Arizona

Jessica Moreno (Coalition for Sonoran Desert Protection)



What makes a good wildlife fence? An exploration into implementing and maintaining an effective wildlife exclusion and safe passage project

Steve Bega (Animex International), Steve Mars, Kari Gunson



Medium to large mammal use of wildlife crossing structures in the I-90 Snoqualmie Pass East Project

Alison Scoville (Central Washington University), Mark Norman, Josh Zylstra, Glen Kalisz

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Sharing Knowledge of Wildlife-Vehicle Conflict in a Planning Tool to Foster Collaboration

Will Thoman (Idaho Transportation Department), Patricia Cramer, Julie Hausknecht



Wildlife crossings: Paving the way to sustainable development - A case study from India

Lalit Kumar Sharma (Zoological Survey Of India, Kolkata Hq), Saurav Bhattacharjee



Predicting Florida Panther Movements and Potential Road Crossing Locations within South-Central Florida (2023)

Daniel J. Smith (Center for Landscape Conservation Planning, University of Florida)



Turning Lemons into Lemonade: Breaking Organizational Silos to Increase Wildlife Crossing Planning in the United States National Park Service

Hanem Abouelezz (NPS Washington Support Office (WASO)), Kristy Boscheinen, Michael Mencarini



The LACTWG: crossing borders for environmentally sustainable transport infrastructure in Latin America

Fernanda Z. Teixeira (Center for Large Landscape Conservation (CLLC)), Larissa Oliveira Gonçalves, Talita Menger, Júlia Beduschi, Daniela Araya Gamboa, Esther Pomareda García, Esmeralda Arevalo Huevo, Diego Varela, Clara Grilo, Anthony Clevenger, Juan Carlos Jaramillo Fayad, Victor Colino Rabanal



It's Time for Younger Hands to Lead: YoPro, A Young Professionals Youth Workforce Development STEM Program in Brunswick, Georgia, USA

Kimberly Andrews (University of Georgia), Shawn Williams, Ray Daniels, Layla Davis, Andrew Mooring, Chayse Swinson, Athena West, Fraser Shilling



Effectiveness of Amphibian and Reptile Road Crossing Systems: Research, Literature Review and Meta-analysis

Cheryl Brehme (USGS Western Ecological Research Center), Robert Fisher



Multiple Turnarounds Increase the Probability that Migrating Salamanders Reach a Passage System in Stanford, CA, USA

Brittany Ewing (USGS), Cheryl Brehme, Michael Hobbs, Esther Cole Adelsheim, Robert Fisher



Interstate Collaboration - Colorado/New Mexico I-25 Raton Pass

James Hirsch (New Mexico Department of Transportation), Gabriel Cosyleon



Confirming high levels of wildlife roadkill in baseline surveys on US Highway 64, North Carolina, USA

Ron Sutherland (Wildlands Network), Alexandra Blunt, Ashwin Narayanan



Methods to Assess Ecological Lift Associated with Wildlife Connectivity Actions

Integral Consulting Inc.

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Delivering a landscape scale connectivity strategy for threatened species on a coastal motorway, investigating overall success through the analysis of operational monitoring data

Chris Thomson (Jacobs Australia), Scott Lawrence, Dr David Rohweder



The long and winding road: lessons from project planning and implementation in Wyoming

Corinna Riginos (The Nature Conservancy), Jill Randall, Chris McBarnes, Hall Sawyer, Tom Hart



A New & Substantial Project Acceleration Method at No Additional Cost – Strategic use of Planning and Environmental Linkages (PEL) by State DOTs and MPOs

Ted Devens (Stantec Consulting, Inc.), Theresa Maahs



After the Crossing: Protecting land and incorporating a land back philosophy in order to protect wildlife pathways that lead to crossing structures

Brian Stewart (Conservation Northwest)



Using an automated radio-tracking system as a novel approach to the landscape scale assessment and monitoring of bats on a UK based linear infrastructure project

Chris Kerfoot (Jacobs UK), Charlotte Wevill



Bee-ing Social: Using Social Science to Bridge the Gap Between People, Roadsides, and Biodiversity

Laura A. Warner (University of Florida), Cody Gusto, Sravani Pasula, Jaret Daniels, Anissa Mattox, Sydney Honeycutt, Ricky Telg, Angie Lindsey



Mitigating the roadkill of raptors along a section of the N3 highway through the use of raptor perches, South Africa

Thabo Innocent Hlatshwayo (University of KwaZulu-Natal, Endangered Wildlife Trust), Manqoba Moses Zungu, Wendy Jane Collinson-Jonker, Colleen T Downs



Sir Francis Drake Boulevard Road Improvement Project: A Collaboration and Mitigation Success Story

Timberley Belish (Federal Highway Administration Eastern Federal Lands Highway Division), Tamara Burke



Incorporating Resilient Design for Present and Future Hazards along the Northeast Entrance Road Corridor in Yellowstone National Park, WY: Lessons Learned

Jeff Dobmeier (Jacobs)



A Novel Population Viability Analysis to Evaluate Road Mitigation Designs

Philip Gould (USGS Western Ecological Research Center), Cheryl Brehme, Merav Vonshak, Robert Fisher

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Use of road underpasses by timber rattlesnake (*Crotalus horridus*) and other species of conservation concern point towards an effective design for further implementation in Southern Appalachia

Liz Hillard (Wildlands Network), John Sealy, Sarah McMullen, Kevin Bischof



Fifteen Years of the Largest US WVC Reporting System: the California Roadkill Observation System

Dave Waetjen (UC Davis Road Ecology Center), Fraser Shilling



A multi-tiered assessment of wildlife-vehicle collision risk to inform mitigation

Amy Villamagna, Ph.D. (Plymouth State University), Clara Dawson, Remington Moll, Rebecca Martin, Eric Laflamme, Hyun Joong Kim



Strategies for valuing and restoring ecosystem services of roadside vegetation following large-scale clearing

Dr. Ellen Oettinger White (State University of New York College of Environmental Science and Forestry), Dr. Marcia S. Meixler



I-25 Highway Improvement Project Use of Process Based Restoration Techniques to Provide Wildlife Habitat Connectivity and Mitigation for Federally Threatened Species

Patrick Hickey (Jacobs Engineering Restoration Ecologist), Francesca Tordonato



A Win-Win Collaboration: Transportation Liaisons Streamlining ESA Section 7 Consultations

Jennifer Lang (Washington State Department of Transportation), Michelle Meade



The Reconecta Project: Projeto Reconecta: Bridging the Amazon for the Conservation of Endangered Primates

Fernanda D. Abra (Smithsonian's National Zoo and Conservation Biology Institute (NZCBI)), Tremaine Gregory, Alfonso Alonso, Marcel Huijser, Marcelo Gordo



Coalition of women assist Costa Rica to build wildlife-friendly roads

Daniela Araya Gamboa (PANTHERA), Esther Pomareda García, Esmeralda Arévalo Huevo, Andrea Ávila Alfaro, Angie Sánchez Nuñez, Karina Rodríguez Saenz, Marcela Sudasassi Vargas, Grettel Delgadillo Molina, Shirley Ramírez Carvajal, Ana Lucía Orozco Rubio, Susana Gutiérrez Acuña, Katya Barrantes Salas



Roadkill-Induced Extirpation of Largest Known Population of Pacific Newts (*Taricha* spp) Requires Emergency Response

Shannon Lemieux (University of California Davis Road Ecology Center), Madison Morgan, Laura Morris, Selena Cao, Fraser Shilling



6PPD-Quinone: Responding to an Emerging Contaminant

Jana Crawford (Jacobs)



Ten years of experience supporting the development of road ecology public policies in Brazil

Larissa O. Gonçalves (Universidade Federal do Rio Grande do Sul), Fernanda Z. Teixeira, Talita Menger, Júlia Beduschi, Caroline Zank, Bibiana Terra Dasoler, Andreas Kindel

PODIUM PRESENTATIONS

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Using tracking data and actionable maps to guide linear infrastructure development for migratory ungulates worldwide

Matthew Kauffman (USGS), Thomas Mueller, Janey Fugate, Melinda Boyers, Buuveibaatar Bayarbaatar, Francesca Cagnacci, Simon Chamaille-Jammes, Nandia Dejid, Elie Gurarie, Grant Hopcraft, Kyle Joly, Petra Kaczensky, Steffen Mumme, Albert Salemgareyev, Wenjing Xu, Wibke Peters, Steffen Zuther, Tim Fullman



Whitetail Whispers; North Idaho Wildlife Crossing Study

Daniel Baker (HDR), Mark Traxler



CDOT's lynx in-lieu fee fund

Jeff Peterson (Colorado Dept of Transportation), Mark Lawler



Feasibility of Composting as an Alternative Disposal Method for Wildlife Vehicle Collision-Induced Carcasses within Colorado Department of Transportation Processes

Francesca Tordonato (Colorado Department of Transportation)



Buzzing down the highway: Understanding driver segments and their views on pollinator-friendly roadsides

Laura A. Warner (University of Florida), Sravani Pasula, Jaret Daniels



No Bank, No Problem: An Almost Comprehensive Review of FDOT Alternative Mitigation Strategies for Wildlife and Resiliency - Wildlife Crossings

Jason Houck (Ardurra)



Road to Recovery – How FDOT and USFWS have partnered to recover the endangered Florida Panther

Florida Department of Transportation



To What Extent Are Rare Species Using ROW Habitats & What Can We Do for Them? GDOT's Program-wide Rare Species Field Verification Effort & Species-specific ROW Management Plan Development

Sujai Veeramachaneni (Georgia Department of Transportation), Carlee Steppe, Hannah Held, Laci Pattavina, James (Mincy) Moffett, Katrina Morris, Katie O'shields, Christopher Goodson



Agency Partnerships and Tools for Streamlining Transportation Consultations

Laci Pattavina (US Fish and Wildlife Services), Eric Prowell, Ryan Pawlikowski, Chris Goodson



Big crossings for little animals: The use of large crossing structures by amphibians and reptiles to cross I-90 in the Snoqualmie Pass area, WA, USA

Jason T. Irwin (Central Washington University)



Studies of fungal communities in pre and post restoration of the I-90 Snoqualmie Pass East Project Wildlife Overcrossing

Helen Lau (US Forest Service Okanogan Wenatchee National Forest), Dr. Jim JohnsonThomas Luehl, Dana Whitmore

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Leveraging Data from Transportation Structure Surveys: How NABat is Supporting Collaborative Assessment and Monitoring of Transportation Structures

Andrea Schuhmann (U.S. Geological Survey, Fort Collins Science Center, North American Bat Monitoring Program), Bethany Straw, Brian Reichert



There and Back Again; A Restoration Journey

Kelly Evans (USFS)



GDOT prioritization of bridges for inspection, monitoring, and nest removal by APHIS biologists ahead of planned demolition or construction activities during the migratory bird nesting season

Carolyn Bryan (AECOM), Sharilyn Meyers, Ashlie Stone, Sujai Veeramachaneni



Northeastern US Habitats and Highways Training

Allissa Fadden (The Nature Conservancy), Chris Slesar, Jens Hilke, Jed Merrow



Assessment and Prioritization of Road-Stream Crossings to Restore Aquatic Connectivity

Scott Jackson (University of Massachusetts Amherst), Kat Hoenke



Landscape connectivity and spatial ecology for an endangered carnivore: how ocelots move near transportation infrastructure

Sean Kiernan (Caesar Kleberg Wildlife Research Institute, Texas A&M-Kingsville), John Young, Michael Tewes, Trevor Black, Emma Brookover, Elizabeth Grunwald, Tom Langschie, Daniel Scognamillo, William Stephens, Jack Towson, Hunter Vasquez, Thomas Yamashita



Use of the Palmiter Stream Management Technique to Maintain Transportation Infrastructure

Matthew Perlik (Ohio DOT)



Colorado wildlife mitigation and collaborative Context Sensitive Solutions on the I-70 Mountain Corridor as part of the Programmatic Environmental Impacts Statement, highlighting the process for Vail Pass

John W. Kronholm (Colorado Department of Transportation),



Collaborating for Connectivity: Multi-Agency Efforts to Remediate Barriers to Wildlife Movement in the Tehachapi Linkage in California

Katie Rodriguez (Caltrans), Trish Smith



Filling the Gap - Bat Exclusions on Bridges Prior to Demolition

Meghan Lind (Stantec Consulting Services Inc.), Liza Colucci, Tracy White



Conserving land, conserving miles: conservation's role in reducing Vehicle Miles Traveled

Liz O'Donoghue (The Nature Conservancy), Mary Rose Fissinger



A Range-wide Approach to Bat Consultation for Routine Transportation Projects

Sumalee Hoskin (U.S. Fish and Wildlife Service), Catherine Liller, Karen Hallberg, Robin McWilliams, Dan Buford, Charlotte Kucera, Brian Yanchik

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Hot Take: Thermal videography can play a critical role in documenting wildlife species demographics and vitality in the face of a major habitat barrier in the Green Mountain State

Melinda Squillace (Hoyle, Tanner and Associates, Inc.), Brogan Morton, Glenn Gingras, Jon Olin, Hoyle, Kelly LaVigne



Advancing Wildlife Connectivity Efforts in Virginia with Bipartisan Infrastructure Law Discretionary Grant Funding

Amy Golden (Virginia Department of Transportation), Bridget Donaldson



Navigating the Environmental Challenges during Design and Construction of the Vulture Mountains Recreation Area

Sabra McNeish (Jacobs Engineering), Marinela Papa



The California Wildlife Conservation Board's Wildlife Corridor Program

Don Crocker (Wildlife Conservation Board)



A Streamlined Approach to Aquatic Species Consultation on Transportation Projects in Georgia

Matt Carroll (Georgia Dept of Transportation), Morgan Niccoli, Eric Prowell, Chris Goodson, Laci Pattavina, Melissa Rottenberg



Use of GPS Collar Data to plan and prioritize wildlife crossing projects in Wyoming: A Case Study of the Carter Mountain Pronghorn Herd

Jill Randall (Wyoming Game and Fish Department), Hall Sawyer, Sam Stephens, Corey Class



Finding evidence of a 70 years old road effect on wildlife at a Complex of Protected Areas, Costa Rica

Daniela Araya-Gamboa (PANTHERA), Roberto Salom Pérez, Yosette Araya Jiménez, Deiver Espinoza-Muñoz, Erika Faubion, Jeremy Quirós-Navarro, Eladio Salazar, Jeffrey Flores Rojas, Kendall Calderón Navarro



Collaborative Strategies for Wildlife Connectivity: Integrating Partnerships, Planning, and Policy in Linear Infrastructure and Urban Development in Utah County

Bettina Cameron (Eagle Mountain Nature and Wildlife Alliance), Wendy Warren



Changes in Future Hydrological Regimes along the Northeast Entrance Road Corridor in Yellowstone National Park, WY

Craig Baxter (Jacobs)



Building Bridges for Connectivity: CDFW's Efforts and the Impact of AB 2344

Juan Torres (CDFW)



Living on the edge of the range: time-use metrics of non-traditional hibernacula on the southern edge of a small hibernator

Nathan W. Fuller (US Fish and Wildlife Service), Leah N. Crowley, Samantha Leivers, Catherine G. Haase

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Evaluating Ecological Inputs and Engineering Design to Improve Wildlife Connectivity

Sasha Dansky (Mark Thomas & Company)



Wildlife Detection and Classification from Trail Cam Video using Deep Learning

Trung Duong (Colorado State University Pueblo), Mahesh Sharma, Saqib Gulzar, Elena Sidorova, Md Rashad Islam, Elena Sidorova



What are the critical challenges when a Road Agency fails to implement their own environmental policy?

Josie Stokes (City of Gold Coast Council)



An Association of Fish and Wildlife Agencies Resolution for B.A.T.S. (Bats and Transportation Structures) Promoting Cooperation With State Transportation Agencies

Trina Morris (Georgia Department of Natural Resources), Leanne Burns



Data-based Design – Building Diamondback Terrapin Barriers and Nesting Habitat into Road Construction

Kimberly M. Andrews (University of Georgia), Abbey C. Crossman, Chris Goodson



Assessing the Impact of Linear Infrastructure-Induced Habitat Fragmentation on the Diversity, and richness of Urban Bird Populations: A Case Study in Chattisgarh, India

ANAM AHSAN (University of Missouri)



Developing Transportation Priorities for the Washington Habitat Connectivity Action Plan

Glen Kalisz (Washington State Department of Transportation), Patty Cramer



This is Water: Integrating Ecological Connectivity and Conservation into Water Infrastructure Planning and Design

Shannon Crossen (Jacobs), Craig Broadhead, David Allison



Minimizing Railway Construction Impacts to Asian Elephants and other Wildlife with a Comprehensive Mitigation Strategy in Bangladesh: From Planning to Post-Construction Effectiveness Monitoring

Norris L. Dodd (Consultant to Asian Development Bank), Asif Imran, Karma Yangzon



Planning Wildlife Crossings at the State Scale Using Spatially Explicit Decision Support

Fraser Shilling (Road Ecology Center, UC Davis)



The utility and limitations of mark recapture models in evaluating crossing structure use

Hannah Specht (University of Montana), Joshua J. Millspaugh, Thomas Hart, Scott Gamon

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Wildlife Crossing Planning Tool / CROS Plan

Dave Waetjen (Road Ecology Center, UC Davis), Fraser Shilling



Technological solutions for reducing wildlife-vehicle collisions: A framework to develop, test, and apply new solutions

Tahlia Townsend (WSP Australia), Rodney van der Ree



Resiliency in the Face of Adversity: a Tale of Climate Change, Infrastructure, Ecological Mitigation and Collaboration

Rick Black (SLR International)



Utah's Migration Initiative and Inter-Agency Partnership Implications

Makeda Hanon (Utah Division of Wildlife Resources), Matt Howard

The Pew Charitable Trusts works to conserve wildlife corridors and promote wildlife crossings throughout the United States.

Pew



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Our purpose is to create a more connected, sustainable world.

We're setting the standard for fish and wildlife crossings and nature-positive solutions with an interdisciplinary team of ecological connectivity experts. We've successfully delivered hundreds of projects that reconnect fish and wildlife habitat, improve road safety, and prevent wildlife-vehicle collisions.

We're shaping a greener, more sustainable tomorrow.



Jacobs is proud of the work we have done to support the WSDOT Snoqualmie Pass East Project. Photo provided by Washington Department of Transportation.

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LIGHTNING PRESENTATIONS

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Blue Denotes
Student
Presentation



Spatiotemporal assessment of elk movement across a major highway

Brielle Jaglowski (Cal Poly Humboldt), Micaela Szykman Gunther, Carrington Hilson



Wildlife-friendly National Route 253. Guanacaste, Costa Rica

Esmeralda Arévalo Huerdo (Universidad Latina de Costa Rica), Esther Pomareda García, Daniela Araya Gamboa



Patterns of Population Structure and Gene Flow in a Fragmented Environment: How Road Infrastructure Impacts Bobcat and Ocelot Dispersal

Jack Towson (Texas A&M University - Kingsville, CKWRI), John Young, Trevor Black, Trevor Black, Emma Brookover, Elizabeth Grunwald, Thomas Landschied, Sean Kiernan, Daniel Scognamillo, William Stephens, Hunter Vasquez, Thomas Yamashita, Michael Tewes



An investigation into the fracturing of asphalt pavement surfaces using Daikon radishes

Prince Aminu (University of Delaware), Haritha Malladi, Daniel Feinberg



Connectivity at a Crossroads: Evaluating Urban Green Spaces and Linear Infrastructure Effects on Tiger Conservation for Bhopal city, MP, India

Anam Ahsan (University of Missouri), DP Srivastava, Dr BS Adhikari, Dr Shekhar Kolipaka



Turtles and The Railway: A Simple Solution for Rail Mortality of Turtles and other Herps.

Jessie Johnson (VTrans)



Breaking Barriers: Protecting Wildlife Through Community-Driven Barbed Wire Removal

Christie Greene (Wild Aware), Sara Barnas, Einar Jensen



Interagency Collaboration for Wildlife Connectivity in the Northern Appalachians: An Assessment of Current Transportation Planning Actions and Future Opportunities

Alissa Fadden (The Nature Conservancy), Renee Callahan, Marta Brocki



Integrating science and real data into a community-based conservation effort; managing for a mule deer migration route through Eagle Mountain City, Utah.

Todd A. Black, B. Cameron, J.C. Seamons, S.M. Mumford



Identifying the best technology for detecting wildlife on roads and how this could help you.

Steve Bega (Animex International), Gert Hamberg

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Restoring California's Wildlife Connectivity in Region 1

Colton Wise (California Department of Fish and Wildlife), Angela Rehse



Collaborative Strategies for Corridor Conservation in Colorado

Michelle Cowardin



Development and assessment of environmental DNA surveying for the federally endangered Salamander Mussel (*Simpsonia ambigua*)

Nathaniel Marshall (Stantec Consulting), Cody Fleece, Joel Thrash, Matt Perlik, Matthew Raymond



A Feasibility Study of Animal Detection and Driver Warning Systems to Mitigate Animal-Vehicle Conflicts on a Rural Highway in Southwest Virginia

Roe (S. Bell) (Virginia Tech Transportation Institute), Tarah Crowder, Andrew S. Alden



Aquatic Organism Passage Solutions at Culverts Similar Structures

Shane Scott (Principal Biologist)



Challenges when addressing connectivity issues with California's diverse habitat and wildlife

Sara Holm (CA Department of Fish and Wildlife), Juan Torres, Angela Rehse, Sarah Estrella, Michael Sawaya, Skylar Feltman, Benjamin Carter



Structure Surveys for Bats: Emerging Trends in Frequency of Bat Use in North Carolina Bridges & Culverts

Cheryl Knepp (North Carolina Department of Transportation)



Restoring California's Wildlife Connectivity, Regional Collaboration to a Statewide Issue.

Colton Wise (California Department of Fish And Wildlife), Juan Torres, Angela Rehse, Sarah Estrella, Sara Holm, Michael Sawaya, Skylar Feltman, Benjamin Carter



Wild Cats on the roads of Costa Rica, 10 years of data

Esther Pomareda García (Vías Amigables con la Vida Silvestre-Centro de Rescate Las Pumas), Daniela Araya Gamboa, Esmeralda Arevalo Huevo



Kentucky Transportation Cabinet - Wildlife Vehicle Collision Reduction Pilot Project

Tony Miller (Lochner), Andrew Logsdon, Calvin Andries

LIGHTNING PRESENTATIONS

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Evaluation of Environmental Measures for the Protection of Wildlife in Costa Rica's Road Network

Daniela Araya-Gamboa (PANTHERA), Susana Gutiérrez Acuña, Fernanda Zimmermann Teixeira, Roberto Salom Pérez, Esther Pomareda García, Yosette Araya Jiménez, Erick Víquez Alvarado, Esmeralda Arévalo Huezo, Silvio Boyat, Jaime Quirós Calderón, Deiver Espinoza Muñoz, Manfred Herrera Díaz, Andrés Zúñiga Garita, Manuel Mairena Jiménez, Katherine Ulate Gómez, Mónica Chavez Ramos, Joseph Lacayo Castrillo, Katherine Chacón, Abigail Corao Retana, Jesús Vado Góngora, Esperanza Gonzalez Mahecha and Priscila Picado Valenzuela



Impact analysis of an Eco-geomorphological design on conventional minor culverts: A study in Northern Mexico.

Armando Ponce de Leon Aldaco (Departamento de Ingenieria Civil, Universidad de Monterrey), Santos Sáenz Delgado, Camilo Cañón Barriga,



Beta Testing The Development of an Artificial Intelligence (AI) Chatbot for Ecology

Lauren Schramm (Pond & Company), Glenn Martin



Reconnecting Floodplains Along the San Joaquin River, California

Jeremy Thomas (Jacobs), Debra Bishop, Michael Founds



Road disturbance: Impact on groundwater flows and ecological integrity of boreal peatlands

Ariane Bouffard (Ministry of Transport and Sustainable Mobility and University of Quebec at Montreal), Marie Larocque, Monique Poulin, Michelle Garneau, Jonathan Chabot-Grégoire, Mathieu Vaillancourt



Wild feline roadkill in Costa Rica

Esther Pomareda García (Vías Amigables con la Vida Silvestre-Centro de Rescate Las Pumas), Daniela Araya Gamboa, Esmeralda Arevalo Huezo



Testing milkweed installation practices for augmentation and restoration along Florida's roadsides

Chase B. Kimmel (Florida Museum of Natural History, University of Florida), Jaret C. Daniels, Ivone de Bem Oliveira, Kristin Rossetti



Strategies for reducing project-level environmental impacts: understanding different viewpoints on what is most important and feasible.

Margaret Minzner (Ohio, Kentucky, Indiana Regional Council of Governments)



Environmental impacts on pavement rehabilitation

Rajashekar Reddy Dudipala (Osmania University)

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Assessment and Identification of Wildlife Crash Zones in the US Railroad Network

Elena Sidorova PhD (Southern Colorado Institute of Transportation Technology (SCITT), Colorado State University Pueblo), Saqib Gulzar, Md Rashad Islam PhD



State of the Art Thermal Camera and Radar Technology Based Wildlife Detection and Motorist Warning Systems for Preventing Wildlife Vehicle Collisions on Unfenced Roadways

Tim Hazlehurst (CrossTek)



The road to success is paved with collaboration: Insights from Norway

Svenja B. Kroeger (Norwegian Institute of Bioeconomy Research (NIBIO))



Restoring California's Wildlife Connectivity: California Department of Fish and Wildlife's Priority Wildlife Connectivity Barriers in the Central Region

Michael A. Sawaya (California Department of Fish and Wildlife), David G. Hacker



Planning wildlife barrier fencing and crossings using mountain lion road crossing events vs. roadkills

Rafael Barrientos (Universidad Complutense de Madrid), Guillermo Fandos, Winston Vickers, Travis Longcore, David P Waetjen, Fernando Nájera, Fraser M Shilling



Explaining factors of wildlife-trains collisions and use of underpasses and overpasses not dedicated to wildlife by wild ungulates in north-western France – PhD study currently in progress.

Tes. HEYDORFF-DECAUX (SNCF Réseau and LADYSS laboratory)



Balancing Preservation and Recreational Access in the Gateway Segment of Clear Creek Canyon Park

Matt Andrews (Muller Engineering Company), Scot Grossman, Moneka Worah



Multi-species occupancy and connectivity modeling for road route planning and mitigation guidance in Southern Brazil

Talita Menger (Road and Railway Ecology Group (NERF), Federal University of Rio Grande do Sul, Precisa Environmental Consulting), Andreas Kindel, Bibiana Terra Dasoler, Fernanda Z. Teixeira, Júlia Beduschi, Larissa Oliveira Gonçalves, Vinicius Bastazini



Temporary Bridges for Mammals in the UK: Designs, Results, and Lessons Learned

Steve Bega (Animex International), Hattie Taylor, Ian White



Relocating a Rare Crayfish: Jefferson County Crayfish

Kayti Ewing (Arkansas Department of Transportation), Maxwell Hartman, Dustin Lynch, Matt Schrum, Lindsey Lewis, Randal Looney

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Bridging the Gap Between Ecologists and Transportation Professionals (Engineers, Planners, Operations Staff,...) thru Training
Ed Frantz



Wildlife-Friendly Trails: Shared challenges and potential opportunities to adaptively apply wildlife-vehicle conflict solutions to reduce wildlife-recreation conflict
Renee Callahan (ARC Solutions), Marta Brocki, Darin Martens



Wildlife connectivity barriers in southeastern California: identifying the problems and finding solutions
Benjamin Carter (California Department of Fish and Wildlife)



Restoring California's Wildlife Connectivity, Region 5
Skylar Feltman (California Department of Fish and Wildlife)



California Barriers, San Francisco Bay-Delta Region
Sarah Estrella (California Department of Fish and Wildlife)



UNLOCKING ROADKILL DATA: a comprehensive resource to mitigate the impacts of transportation
Clara Grilo (CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, InBIO Laboratório Associado, Campus de Vairão, Universidade do Porto), Tomé Neves, Jennifer Bates, Aliza le Roux, Pablo Medrano-Vizcaíno, Mattia Quaranta, Inês Silva, Kylie Soanes, Yun Wang



Waterbury IM CULV(109) Wildlife Crossing Structure-Vermont's Landscape Level Connectivity Project Funded by IJJA WCPP
Jessie Johnson (VTrans)



Collaboration for wetland mitigation to benefit aquatic ecosystems along roadsides in Oklahoma
Ricky Wilson (HDR Engineering Inc.), Jared Bechtol



Using landscape structure and species navigation traits to plan road mitigation: insights from individual-based models
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"



Wildlife-Detection Driver Warning Systems' Performance Under Two Different Sets of Conditions
Patricia Cramer (Wildlife Connectivity Institute), Robert Hamlin,

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Applying Roadside Green Infrastructure for Air Pollution and Climate Mitigation at School-based Projects

Sheila Batka (U.S. Environmental Protection Agency (U.S. EPA) Region 5 Air and Radiation Division), Richard Baldauf, Ken Davidson, Jennifer Tyler, Kathy Kowal, Yulissa Aguilar, Megan Gavin, MARRISA MATSLER, RYDER FREED

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Methodology For Evaluating Mitigation Methods To Improve The Resilience Of Road Cut Slopes

Eduardo Arancibia-Ruiz (Pontificia Universidad Católica de Chile), Alondra Chamorro, Manuel Contreras-Jara, Tomás Echaveguren



Herpetofauna as a Model for Studying the Underestimation of Mortality in Small Vertebrates

Tatiane de Mello do Carmo (State University of Rio de Janeiro), Camila S. Barros, Mariana M. Vale, Marcus Vinicius Vieira



Western Toads Use Undercrossing Structures on Interstate 90's Snoqualmie Pass, Washington State, USA

Marianne Hall (Central Washington University), Dr. Jason T. Irwin



Project Deer: A low-cost, Onboard Audiovisual Animal Detection and Driver Alert System to Mitigate WVCs

Siddhi Singh (STEM School Highlands Ranch)



Evaluating Wildlife Responses to Highway Infrastructure: A Framework for Reducing Wildlife-Vehicle Collisions

Mahesh Sharma (Colorado State University), Saqib Gulzar, Elena Sidorova, Trung Duong, Md Rashad Islam



Predicting roadkill: a regional-scale model for the Northern Tamandua integrating environmental and road characteristics

Silvio Boyat (Universidad Latina de Costa Rica), Esmeralda Arévalo-Huezo



Recent Wildlife Overpass Innovations

Stuart Murphy (Atlantic Industries Limited), Jason Ford, Kevin Williams, Meckkey El Sharnouby, Phil Carroll



Barbed Wire: An Invisible Barrier to Wildlife Movement

Christie Greene (Wild Aware)



Designing and implementing an alternative approach to researching wildlife crossings and highway wildlife-vehicle collisions through a community-based lens

Christie Greene (Wild Aware), Micheal Horwith



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Bill Vogrin-CPW



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Mark Thomas is at the forefront of developing innovative solutions to improve connectivity and safety for wildlife. As transportation design experts, we incorporate biological priorities with engineering design considerations to develop improvements that are approvable by state transportation agencies, constructible, and meet the biological needs of area species.



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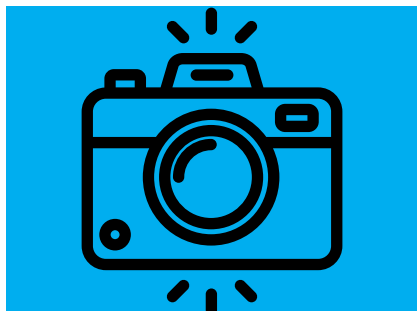
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