



The 2009 International Conference on Ecology & Transportation Adapting to Change

September 13-17, 2009 • Duluth Entertainment Convention Center • Duluth, Minnesota



Final Conference Program Agenda

Updated September 9, 2009

NOTE TO PARTICIPANTS: This is the final agenda as published in the conference program booklet. Any changes made after the above date will be announced at conference and / or included as an addendum in your registration packets. We look forward to seeing you in Duluth!

SPECIAL INTEREST SESSIONS: Technical sessions which feature topics of special interest are noted by the following symbols:



Landscape
Architecture



Birds



Herpetofauna



Engineering/
Facility Design



Policy and
Process

TIME	SUNDAY, SEPTEMBER 13, 2009
3:00 PM – 7:00 PM	Conference Registration and Check-in open Speaker Ready Room open (Board Room)
5:00 PM – 7:00 PM	ICOET Steering Committee Business Meeting (by invitation) (St. Louis River Room)
7:00 PM – 8:15 PM	Division Street Documentary Film Screening (Lake Superior Ballroom L) <i>Moderator: Trisha White, Habitat & Highways Campaign Director, Defenders of Wildlife</i>

TIME	MONDAY, SEPTEMBER 14, 2009
7:00 AM – 5:30 PM	Conference Registration and Check-in open Speaker Ready Room open (Board Room)
8:30 AM – 9:30 AM	Conference Welcome and Opening Remarks (Lake Superior Ballroom J) <ul style="list-style-type: none"> ▪ Paul Wagner, Washington State DOT, ICOET 2009 Conference Chair ▪ James Martin, PE, Associate Director, Center for Transportation and the Environment ▪ Thomas Sorel, Commissioner, Minnesota Department of Transportation ▪ Don Ness, Mayor of Duluth
9:30 AM – 10:30 AM	Plenary Session 110: US / International Policy Updates (Lake Superior Ballroom J) <i>Moderator: Thomas Sorel, Commissioner, Minnesota DOT</i> <ul style="list-style-type: none"> ▪ Carol Adkins, Acting Director, Office of Project Development and Environmental Review, FHWA, Washington, DC ▪ Lars Nilsson, Environmental Director, National Road Administration, Sweden ▪ Thomas Duffus, Upper Midwest Director, The Conservation Fund, Duluth, MN
10:30 AM – 11:00 AM	Break in Sponsors Hall (Lake Superior Ballroom O) Edmund Fitzgerald Exhibit Hall open for Poster Set-up until 5:30 PM



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TIME	MONDAY, SEPTEMBER 14, 2009
11:00 AM – 12:30 PM	<p>Plenary Session 120: Moving Toward Sustainability – Case Studies in Integrating Land Use, Conservation, Transportation, and Community Planning (Lake Superior Ballroom J)</p> <p><i>Moderator: Debra Nelson, Water and Ecosystems Section Manager, New York State DOT</i></p> <ul style="list-style-type: none"> ▪ Integrating Conservation and Long-Range Transportation Planning Using a Strategic Assessment Framework (<i>Craig Casper, Pikes Peak Area COG, Colorado Springs, CO, USA</i>) ▪ Looking to the Future with Retrofit Options from Lessons Learned (<i>Bruce Eilerts, Arizona DOT Office of Environmental Services, Phoenix, AZ, USA</i>) ▪ Long Point World Biosphere Reserve Causeway Improvement Plan, Port Rowan, Ontario, Canada: Benefits for Wildlife Movement, Species at Risk, Traffic, and Pedestrian Safety (<i>Geoffrey Gartshore, Ecoplans Limited, Ontario, Canada</i>)
12:30 PM – 2:00 PM	<p>FHWA Environmental Excellence Awards Luncheon (Lake Superior Ballroom K)</p> <p>Thanks to our official sponsor Federal Highway Administration!</p>
2:00 PM – 3:30 PM	<p>CONCURRENT SESSIONS</p> <p>Session 131: Climate Change – Understanding the Impacts and Developing Mitigation Strategies   (Lake Superior Ballroom J)</p> <p><i>Moderator: Shari Schaftlein, Office of Project Development and Environmental Review, FHWA, Washington, DC</i></p> <ul style="list-style-type: none"> ▪ How will Climate Change affect the Design and Management of the Highways Agency Soft Estate? (<i>Lucia Collinwood, Parsons Brinckerhoff, Cardiff, Wales</i>) ▪ The FHWA Carbon Sequestration Pilot Program: Economics, Environment and Policy (<i>Stephen Earsom, FHWA, Washington DC, USA</i>) ▪ Potential Impacts of Climate Change on Urban Flooding: Implications for Transportation Infrastructure and Travel Disruption (<i>Heejun Chang, Portland State University, Portland, OR, USA</i>) ▪ Washington State Department of Transportation Interim Approach to Project-Level Greenhouse Gas and Climate Change Evaluations For Transportation Projects (<i>Tim Sexton, Washington State DOT, Seattle, WA, USA</i>) <p>Session 132: Citizen Science – Effective Strategies and Stakeholder Involvement (Lake Superior Ballroom L) </p> <p><i>Moderator: Susan Hagood, Wildlife Issues Specialist, Humane Society of the United States, Washington, DC</i></p> <ul style="list-style-type: none"> ▪ Road Watch in Pass: Web-based Citizen Involvement in Wildlife Data Collection (<i>Tracy Lee and Danah Duke, Miistakis Institute for the Rockies, Alberta, Canada</i>) ▪ Wildlife Tunnels Under a Busy, Suburban Boston Roadway (<i>Lydia Rogers, Wildlife Passages Task Force, Concord, MA, USA</i>) ▪ Motorists as Citizen Scientists: The Benefits of a Wildlife Reporting Website (<i>Angela Kociolek, Western Transportation Institute at Montana State University, Bozeman, MT, USA</i>) ▪ Can Citizen Science Represent Wildlife Activity Along Highways? Validating a Monitoring Program (<i>Kylie Paul, University of Montana, Missoula, MT, USA</i>)
3:30 PM – 4:00 PM	<p>Break in Sponsors Hall (Lake Superior Ballroom O)</p> <p>Edmund Fitzgerald Exhibit Hall open for Poster Set-up until 5:30 PM</p>






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TIME	MONDAY, SEPTEMBER 14, 2009
<p>4:00 PM – 5:30 PM</p>	<p>CONCURRENT SESSIONS</p> <p>Session 141: Adapting Agency Relationships in a Changing Regulatory Environment  (Lake Superior Ballroom J) <i>Moderator: Derrell Turner, Administrator, FHWA Minnesota Division</i></p> <ul style="list-style-type: none"> ▪ Interagency Partnering for the Development of Stream Crossing Standards in New York State (<i>Brandon Greco and Debra Nelson, New York State DOT, Albany, NY, USA</i>) ▪ Endangered Species Act Section 7 Consultation and the US Fish And Wildlife Service's Information, Planning, and Consultation (IPaC) System (<i>Michael Horton, US Fish and Wildlife Service, Arlington, VA, USA</i>) ▪ Intercounty Connector (ICC): Environmental Compliance Management Using Integrated Technologies to Provide Context Sensitive Solutions (<i>Holly Shipley, KCI Technologies, Inc., Sparks, MD, USA</i>) <p>Session 142: Technical Tools for Integrating Ecological Considerations in Planning and Construction  (French River Room) <i>Moderator: Cameron Bump, Transportation Liaison, Wisconsin Department of Natural Resources</i></p> <ul style="list-style-type: none"> ▪ Traffic Volume as a Primary Road Characteristic Impacting Wildlife: A Model for Land Use and Transportation Planning (<i>Barbara Charry, Maine Audubon, Falmouth, ME, USA</i>) ▪ Integrating Environmental Concerns with the Planning and Construction of the South Extension of Interstate 355 into Will County, Illinois (<i>Angela LaPorte and Brian Smith, AECOM, Chicago, IL, USA</i>) ▪ Ecological Effects of Road Construction on Regional Ecosystem (<i>Shyh-Chyang Lin, National Kinmen Institute of Technology, Kinmen, Taiwan</i>) ▪ Incorporating Road-Mortality Hotspot Modeling and Connectivity Analyses into Road Mitigation Planning in Ontario, Canada (<i>Kari Gunson, Ontario Road Ecology Group, Ontario, Canada</i>) <p>Session 143: Advance Mitigation and Mitigation Banking Programs (Lake Superior Ballroom L)  <i>Moderator: Sarma Straumanis, Wetland Program Coordinator, Minnesota DOT</i></p> <ul style="list-style-type: none"> ▪ Use of Habitat Credit Trading as a Mitigation Tool for Transportation Projects: A FHWA Pilot Project in Arkansas (<i>Andrew Peck, Department of Environmental Sciences, Arkansas State University, AR, USA</i>) ▪ Regional Advance Mitigation Planning: A Pilot Study Integrating Multi-agency Mitigation Needs and Actions Within a Comprehensive Ecological Framework (<i>Patrick Huber, University of California, Davis, CA, USA</i>) ▪ Status of Mitigation Banking for Transportation in the Upper Midwest (<i>Thomas Mings, US Army Corps of Engineers, St. Paul, MN, USA</i>)
<p>5:30 PM</p>	<p>Monday Sessions Adjourn Edmund Fitzgerald Exhibit Hall closes</p> <p>US Fish and Wildlife Service Transportation Biologists Peer Exchange Meeting (by invitation) (St. Louis River Room)</p>
<p>6:00 PM – 8:00 PM</p>	<p>Welcome Reception and Cash Bar at Great Lakes Aquarium Thanks to our Silver co-sponsor ARCADIS!</p>









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7:30 AM – 5:30 PM	Conference Registration and Check-in open Speaker Ready Room open (Board Room) Edmund Fitzgerald Exhibit Hall open for Poster Set-up until 3:30 PM
8:30 AM – 10:00 AM	<p>CONCURRENT SESSIONS</p> <p>Session 211: Integrating Ecology and Transportation Planning at the Landscape Scale    (Lake Superior Ballroom J) <i>Moderator: Mary Gray, Environmental Protection Specialist, FHWA, Olympia, WA</i></p> <ul style="list-style-type: none"> ▪ California Essential Habitat Connectivity Planning (<i>Amy Pettler, Caltrans, Sacramento, CA, USA</i>) ▪ Establishing the Legacy Nature Preserve through Collaborative Planning and Adaptive Management (<i>Michael Perkins, HDR, Inc., Salt Lake City, UT, USA</i>) ▪ Nebraska Department of Road's Plan for the Roadside Environment (<i>Arthur Thompson, Nebraska Department of Roads, Lincoln, NE, USA</i>) ▪ Similar Impacts, Similar Solutions? The Effects of Transport Infrastructure on Outdoor Recreation and Wildlife (<i>Jan Olof Helldin, Swedish Biodiversity Centre, SLU, Uppsala, Sweden</i>) <p>Session 212: Ecological Considerations for Planning and Designing Bridges (French River Room)  <i>Moderator: Peter Leete, Hydrologist, Minnesota Department of Natural Resources</i></p> <ul style="list-style-type: none"> ▪ Road Infrastructure and Stream Habitat Connectivity: Research Tools to Aid Management and Conservation Plans in a Changing Environment (<i>Keith Nislow, US Forest Service Northern Research Station, Amherst, MA, USA</i>) ▪ MassHighway Guidance Handbook: Design of Bridges and Culverts for Wildlife Passage (<i>David Nyman, Comprehensive Environmental Inc., Milford, MA, USA</i>) ▪ Do Bridges Affect Migrating Juvenile Salmon: Tracking Juvenile Salmon and Predator Fish Movements and Habitat Use Near the SR 520 Bridge in Lake Washington (<i>Philip Bloch, Washington State DOT, Seattle, WA, USA</i>) ▪ Are Non-Wildlife Underpasses Effective Passages for Wildlife? (<i>Andreas Seiler, Swedish University of Agricultural Sciences, Uppsala, Sweden</i>) <p>Session 213: Wildlife Habitat Connectivity – Innovative Tools and Techniques   (Lake Superior Ballroom L) <i>Moderator: Hans Bekker, Senior Ecologist, Rijkswaterstaat Centre for Traffic and Navigation, Zuid-Holland, The Netherlands</i></p> <ul style="list-style-type: none"> ▪ Are We There Yet? A Case for Spatially Explicit Linkage Modeling for Integrative Conservation Planning (<i>Julia Kintsch, ECO-resolutions, LLC, Denver, CO, USA</i>) ▪ Monitoring Wildlife Overpass Use by Amphibians – Do Artificially Maintained Humid Conditions Enhance Crossing Rates? (<i>Edgar Van der Grift, Alterra Wageningen UR, Gelderland, The Netherlands</i>) ▪ New Concepts in Wildlife Habitat Linkage Assessments To Focus Mitigation Measures and Reduce Wildlife Crossing Costs (<i>Bill Ruediger, Wildlife Consulting Resources, Missoula, MT, USA</i>) ▪ Washington's Habitat Connectivity Highway Retrofit Initiative (<i>Kelly McAllister, Washington State DOT, Olympia, WA, USA</i>)
10:00 AM – 10:30 AM	Break in Sponsors Hall (Lake Superior Ballroom O) Edmund Fitzgerald Exhibit Hall open for Poster Preview and Set-up until 3:30 PM









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10:30 AM – 12 NOON	<p>CONCURRENT SESSIONS</p> <p>Session 221: Wildlife Habitat Connectivity – Planning and Design    (Lake Superior Ballroom J) <i>Moderator: Jennie Ross, Environmental Assessment Unit Chief, Minnesota DOT</i></p> <ul style="list-style-type: none"> ▪ Idaho Statewide Wildlife / Transportation Database (Brent Inghram, FHWA Idaho Division, Boise, ID, and Gregg Servheen, Idaho Department of Fish and Game, Boise, ID, USA) ▪ Judd Road Connector: Lessons Learned in Ecological Mitigation – Wildlife Crossings, Habitat Preservation, Wetlands and More (Ed Frantz, New York State DOT, Utica, NY, USA) ▪ Avian Protection Plan for the Nebraska Department of Roads (Eric Zach, Nebraska Department of Roads, Lincoln, NE, and Dionne Gioia, US Dept of Agriculture APHIS Wildlife Services, Union, NE, USA) ▪ How Do Major Roads Affect Barn Owls? Distribution, Space Use, Food Source and Mortality (Joana Sousa, Centro Biologia Ambiental, Lisboa, Portugal) <p>Session 222: Wetland Mitigation and Ecological Considerations for Stormwater Management  (French River Room) <i>Moderator: Wesley Saunders-Pearce, MS4 Specialist, Minnesota DOT</i></p> <ul style="list-style-type: none"> ▪ The Proposed I-69 Crossing of the Ouachita River and Associated Wetlands In Southern Arkansas: A Comparison of the Charleston Method vs. West Gulf Coastal Plains Hydrogeomorphic Method to Determine Mitigation Requirements (Henry W. Langston, Arkansas Highway and Transportation Department, Little Rock, AR, USA) ▪ Wetland Mitigation in Abandoned Gravel Pits – Creating Fresh Meadow and Shrub Swamp (Kurt Johnson, University of Minnesota Natural Resources Research Institute, Duluth, MN, USA) ▪ Regenerative Stormwater Conveyance (RSC) as an Integrated Approach to Sustainable Stormwater Planning on Linear Projects (Joe Berg, Biohabitats, Inc., Baltimore MD, USA) ▪ Oregon DOT Stormwater Treatment and Management Program: A Framework for Adapting to Changing Pollutants, Regulations, and Practices (Zak Toledo, HDR, Inc., Salem, OR, USA) <p>Session 223: Wildlife-Vehicle Collisions – Data Collection, Monitoring and Modeling   (Lake Superior Ballroom L) <i>Moderator: Cheryl Martin, Environmental Engineer, FHWA Minnesota Division</i></p> <ul style="list-style-type: none"> ▪ Arboreal Mammals Use an Aerial Rope Bridge to Cross a Major Highway (Rodney van der Ree, Australian Research Centre for Urban Ecology, Victoria, Australia) ▪ Using Global Positioning System Technology to Determine Wildlife Crossing Structure Placement and Evaluating Their Success in Arizona (Jeffrey Gagnon, Arizona Game and Fish Department, Phoenix, AZ, USA) ▪ Bozeman Pass Wildlife Pre-and Post-Fence Monitoring Project (April Craighead, Craighead Environmental Research Institute, Bozeman, MT, USA) ▪ Predictive Models of Herpetofauna Road Mortality Hotspots in Extensive Road Networks: Three Approaches and a General Procedure for Creating Hotspot Models (Tom Langen, Clarkson University, Potsdam, NY, USA) 	
	12 NOON – 1:30 PM	<p>Keynote Speaker Luncheon (Lake Superior Ballroom K)</p> <ul style="list-style-type: none"> ▪ Rick Ridgeway, Vice President of Environmental Initiatives, Patagonia, Inc. <p>Thanks to our Bronze co-sponsors Connectivity for Wildlife LLC, ElectroBraid Fence, and Great Lakes Maritime Research Institute!</p>






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1:30 PM – 3:00 PM	<p>CONCURRENT SESSIONS</p> <p>Session 231: Mitigating Highway Impacts on Ecosystems (Lake Superior Ballroom J) </p> <p><i>Moderator: David Weirens, Land and Water Section Manager, Minnesota Board of Water and Soil Resources</i></p> <ul style="list-style-type: none"> Evaluation of a Rapid Assessment Protocol to Assess Road-Stream Crossings for Aquatic Organism Passage (<i>Scott Jackson, UMass Department of Natural Resources Conservation, Amherst, MA, USA</i>) Where the River Meets the Road: How Washington State is Providing Habitat while Protecting Highways (<i>Paul J. Wagner, Washington State DOT, Olympia, WA, USA</i>) Effective Mitigation: The Cumulative Impact of Climate Change on Transportation Network and its Implications on Aquatic Biodiversity of Ganges Headwaters, Garhwal Himalayas (<i>Ramesh C. Sharma, Departmental of Environmental Sciences, H.N.B. Garhwal University, Uttarakhand, India</i>) Adapting Relationships for Agencies and Institutions: The I-90 Snoqualmie Pass East Project's Collaborative Approach to Identifying a Preferred Alternative and Mitigation Strategy (<i>Jason Smith, Washington State DOT, Yakima, WA, USA</i>) <p>Session 232: Improving Data Collection and Monitoring Methods (French River Room) </p> <p><i>Moderator: Leonard Sielecki, Environmental Management Section, University of Victoria, British Columbia, Canada</i></p> <ul style="list-style-type: none"> Reducing Road-Based Habitat Fragmentation: An Eastern Box Turtle (<i>Terrapene c. carolina</i>) Case Study (<i>Susan Hagood, The Humane Society of the US, Washington DC, USA</i>) Re-evaluating the Needs for Animal Passages in Israel: Towards a Long-term Monitoring Scheme (<i>Tamar Achiron-Frumkin, Ecological and Environmental Advisors, Israel</i>) Restoring Ecological Networks Across Transport Corridors in Bulgaria (<i>Edgar Van der Grift and Vanya Simeonova, Alterra Wageningen UR, Gelderland, The Netherlands</i>) Development and Utilization of a Regional Invasive Plant Species Database at the New York State Department of Transportation (<i>Christine Colley, New York State DOT, Buffalo, NY, USA</i>) <p>Session 233: Wildlife-Vehicle Collisions – Effective Mitigation Strategies (Lake Superior Ballroom L) </p> <p><i>Moderator: Joe Burns, National Transportation Ecology Program Leader, US Forest Service, Washington, DC</i></p> <ul style="list-style-type: none"> Using Specialized Tunnels to Reduce Highway Mortality of Amphibians (<i>Cyndi Smith and Katie Pagnucco, Parks Canada – Waterton Lakes National Park, Alberta, Canada</i>) A Quantitative Comparison of the Reliability of Animal Detection Systems and Recommended Requirements for System Reliability (<i>Marcel Huijser, Western Transportation Institute at Montana State University, Bozeman, MT, USA</i>) Evaluation of an Animal-Activated Highway Crosswalk Integrated with Retrofit Fencing Applications (<i>Norris Dodd, AZTEC Engineering, Phoenix, AZ, USA</i>) Effectiveness of Mitigation Measures to Reduce Road Mortality in the Netherlands: Badger <i>Meles meles</i> (<i>Hans Bekker, Rijkswaterstaat Centre for Traffic and Navigation, Zuid-Holland, The Netherlands</i>) 	
	3:00 PM – 3:30 PM	<p>Break in Posters Hall (Edmund Fitzgerald Exhibit Hall)</p>
	3:30 PM – 5:30 PM	<p>Session 240: Poster Presentations (Edmund Fitzgerald Exhibit Hall)</p> <p>50 posters showcasing innovative projects, applications, and research in progress will be on display. Authors representing 10 countries will be available to discuss their work with fellow participants.</p>



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TIME	TUESDAY, SEPTEMBER 15, 2009
5:30 PM	Tuesday Sessions Adjourn Dinner (on your own)
	BUSINESS MEETINGS These meetings are open to all ICOET participants unless noted as <i>(by invitation)</i> .
5:00 PM	Deer-Vehicle Crash Information and Research Center Technical Advisory Committee (Gooseberry Falls Room 1) FHWA Transportation Liaison Peer Exchange Workshop <i>(by invitation)</i> (Gooseberry Falls Room 3) TransWild Alliance Meeting hosted by Defenders of Wildlife <i>(by invitation)</i> (Comfort Suites Conference Room)
7:00 PM	TRB ADC30 Committee on Ecology and Transportation (St. Louis River Room) TRB AFB40 Committee on Landscape and Environmental Design (Split Rock Room 1)

TIME	WEDNESDAY, SEPTEMBER 16, 2009
7:30 AM – 5:00 PM	Conference Registration and Check-in open Speaker Ready Room open (Board Room) Edmund Fitzgerald Exhibit Hall open for removing Poster displays until 12:00 Noon
8:00 AM – 9:00 AM	Plenary Session 310: Field Trips Overview by Minnesota Department of Transportation (Lake Superior Ballroom J) <i>Moderator: Frank Pafko, Environmental Services Director, Minnesota DOT</i> <ul style="list-style-type: none"> ▪ Dwayne Stenlund, Erosion Control Specialist, Minnesota DOT ▪ Scott Bradley, Director of Context Sensitive Solutions, Minnesota DOT ▪ Paul Sundberg, Manager, Gooseberry Falls State Park, Minnesota Department of Natural Resources
9:00 AM – 9:30 AM	Pick up Box Lunches and Board Buses (Atrium Lobby)
9:30 AM – 4:00 PM	Field Trips (Atrium Lobby – buses depart promptly at 9:30 AM) <ul style="list-style-type: none"> ▪ Trip 1: North Shore National Scenic Byway ▪ Trip 2: Aquatic Habitat Reconstruction Tour
6:00 PM – 9:00 PM	Dinner and Cash Bar at Grandma's Sports Garden Thanks to our Gold co-sponsor HDR Engineering, Inc.! Please Note: Your ICOET name tag is required for admission – be sure to wear it!





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TIME	THURSDAY, SEPTEMBER 17, 2009
7:30 AM – 10:30 AM	Conference Registration and Check-in open Speaker Ready Room open (Board Room)
8:30 AM – 10:00 AM	<p>CONCURRENT SESSIONS</p> <p>Session 411: The Economics of Mitigation and Cost-Effective Strategies (Lake Superior Ballroom J) </p> <p><i>Moderator: Tom Mings, Senior Ecologist, US Army Corps of Engineers</i></p> <ul style="list-style-type: none"> ▪ Cost Justification and Examples of Cost-Benefit Analyses of Mitigation Measures Aimed at Reducing Collisions with Large Ungulates in the United States and Canada (<i>Marcel Huijser, Western Transportation Institute at Montana State University, Bozeman, MT, USA</i>) ▪ An Analysis of the Efficacy and Comparative Costs of Using Flow Devices to Resolve Conflicts with North American Beavers Along Roadways in the Coastal Plain of Virginia (<i>Stephanie Boyles, Christopher Newport University, Portsmouth, VA, USA</i>) ▪ Prioritizing Road Crossing Improvement to Restore Stream Connectivity for Stream-Resident Fish (<i>Matthew Diebel, University of Wisconsin, Madison, WI, USA</i>) <p>Session 412: Wildlife Crossings – Location and Design (Lake Superior Ballroom L) </p> <p><i>Moderator: Scott Bradley, Director of Context Sensitive Solutions, Minnesota DOT</i></p> <ul style="list-style-type: none"> ▪ Multi-Scale Habitat-Resistance Models for Predicting Road Mortality “Hotspots” for Reptiles and Amphibians (<i>David Patrick, Paul Smith’s College, Paul Smiths, NY and Viorel Popescu, University of Maine, Orono, ME, USA</i>) ▪ Integrating Ecosystem Needs with Transportation Facility Design: Design Engineering Challenges of the I-90 Snoqualmie Pass East Project (<i>Randall Giles, Washington State DOT, Yakima, WA, USA</i>) ▪ A Summary of the Wildlife Linkage and Highway Safety Assessment: A Prioritization and Planning Tool For Western Montana (<i>Elizabeth Williamson and Dylan Taylor, American Wildlands, Bozeman, MT, USA</i>) ▪ Using Noninvasive Genetic Sampling Methods to Assess the Value of Wildlife Crossings for Black and Grizzly Bear Populations in Banff National Park, Alberta, Canada (<i>Michael Sawaya, Montana State University, Bozeman, MT, USA</i>)
10:00 AM – 10:30 AM	Break in Sponsors Hall (Lake Superior Ballroom O)





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10:30 AM – 12 NOON	<p>CONCURRENT SESSIONS</p> <p>Session 421: Integrating Ecological Considerations into Construction, Operations, and Maintenance  (Lake Superior Ballroom L) <i>Moderator: Carmelita Nelson, Roadsides for Wildlife Program Manager, Minnesota Department of Natural Resources</i></p> <ul style="list-style-type: none"> ▪ The Ecological Implications of Cured-in-Place Pipe Rehabilitation Technology (<i>Bridget Donaldson, Virginia Transportation Research Council, Charlottesville, VA, USA</i>) ▪ Managing an Unpredicted and Unexpected Large Scale Amphibian Migration: Applying Hungarian Experience and Knowledge to Protect Western Toads on a British Columbia Highway (<i>Leonard Sielecki, University of Victoria, British Columbia, Canada</i>) ▪ Down the Drain: How to Avoid Trapping Amphibians in Road and Sewer Drainage Systems – Designing Fauna Friendly Drainage Systems and Other Protective Measures (<i>Bruno Schelbert, Departement Construction, Traffic and Environment, Aarau, Switzerland</i>) ▪ "Sustainable Highway Construction" is NOT an Oxymoron (<i>Gary Demich, H.W. Lochner, Inc., Chicago, IL, USA</i>) <p>Session 422: FHWA's Eco-Logical Program – Case Studies (Lake Superior Ballroom J)  <i>Moderator: Carol Adkins, Acting Director, Office of Project Development and Environmental Review,, FHWA, Washington, DC</i></p> <ul style="list-style-type: none"> ▪ Eco-Logical: An Ecosystem Approach to Developing Transportation Infrastructure Projects in a Changing Environment (<i>Bethaney Bacher-Gresock, FHWA, Washington DC and Julianne Schwarzer, Volpe National Transportation Systems Center, Cambridge, MA, USA</i>) ▪ MARC's Eco-Logical Project: A Regional Approach to Linking Environmental and Transportation Planning (<i>Lisa Pool and Tom Jacobs, Mid-America Regional Council, Kansas City, MO, USA</i>) ▪ Developing and Piloting an Eco-Logical Approach to Transportation Project Delivery in Montana (<i>Deborah Wambach, Montana DOT, and Scott Jackson, US Fish and Wildlife Service, Helena, MT, USA</i>) ▪ Texas Ecological Assessment Protocol (TEAP): Eco-Logical information for Transportation Planning (<i>Sharon Osowski, US Environmental Protection Agency, Dallas, TX, USA</i>)
12 NOON – 12:30 PM	<p>Conference Wrap-up and Closing Remarks (Lake Superior Ballroom J) Paul Wagner, Washington State DOT, ICOET 2009 Conference Chair</p>
12:30 PM	<p>Conference Adjourns FHWA Transportation Liaison Peer Exchange Workshop (by invitation) (St. Louis River Room)</p>
2:00 PM	<p>USDA Forest Service Coordination Meeting (Split Rock Room 1)</p>



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3:30 PM – 5:30 PM
Edmund Fitzgerald Exhibit Hall

AD – Adapting Relationships for Agencies and Institutions

- AD-01 Wildlife Mortality Surveys on 1014km of Highways in Portugal (2002-2007): Results and Limitations of the Procedures (*Clara Grilo, Universidade de Lisboa, Centro de Biologia Ambiental, Dept Biologia Animal, Lisbon, Portugal*)
- AD-02 Vegetation Management Memorandum of Understanding between Minnesota Department of Transportation and Fond du Lac Band of Lake Superior Chippewa (*Nancy Schuldt, Fond du Lac Band of Lake Superior Chippewa, Cloquet, MN, USA*)
- AD-03 Oregon DOT's OTIA III Bridge Program: Five Years of Adapting for Environmental Stewardship (*Zak Toledo, HDR, Inc., Salem, OR, USA*)

PL – Planning for Change

- PL-01 Fragmentation of China's Landscape by Roads and Urban Areas (*Taian Li, Life Science School, Lanzhou, Gansu Province, PR of China, and Alison Berry, University of California, Davis, CA, USA*)
- PL-02 Integrating Biodiversity and Infrastructure Considerations to Prioritize Transportation Projects in the Taunton River Watershed, Massachusetts (*Alison Bowden, The Nature Conservancy in Massachusetts, Boston, MA, USA*)
- PL-03 Ecological Survey Approaches in a Changing World (*Patricia Cramer, Utah State University, Logan, UT, USA*)
- PL-04 New FHWA Manuals for Mitigation Measures Aimed at Reducing Wildlife-Vehicle Collisions and Providing Safe Crossing Opportunities for Wildlife (*Marcel Huijser, Western Transportation Institute at Montana State University, Bozeman, MT, USA*)
- PL-05 A Conceptual Framework for Assessing Barrier Effects to Wildlife Populations Using Variable Responses to Traffic Volume (*Sandra Jacobson, US Forest Service, Pacific Southwest Research Station, Bend, OR, USA*)
- PL-06 Peregrine Falcons Utilize a Busy Highway Corridor in East-Central Alaska (*W.N. Johnson, US Fish and Wildlife Service, Tok, AK, USA*)
- PL-07 Comparing Efforts to Incorporate Green Streets Practices into the Transportation Planning Process in North Carolina (*Donald Kostelec, The Louis Berger Group, Inc., Asheville, NC, USA*)
- PL-08 Community-based Environmental Planning: Preventing Urban Encroachment on a Lagoon Catchment Area (*Erin Roger, University of New South Wales, Sydney, New South Wales, Australia*)
- PL-09 Planning for Change: WSDOT's Adaptive Approach to Communicating About the I-90 Snoqualmie Pass East Project with Diverse Groups (*Jason Smith, Washington State DOT, Yakima, WA, USA*)
- PL-10 New French Environmental Policy and Linear Infrastructures: The Implementation of the National Ecological Network – The "Green And Blue Belt" (*Sabine Bielsa, MEEDDAT - SETRA, Bagneux, Paris, France*)



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MO – Ecological Considerations for Maintenance and Operations

- MO-01 Motorways and Bird Traffic Casualties: Carrions Censuses and Scavenging Bias (*Eric Guinard, Centre d'Etudes Techniques de l'Equipement du Sud-Ouest, Saint-Medard-En-Jalles, Aquitaine, France*)
- MO-02 Roadside Verges in Intensive Agrarian Landscapes: A Positive Impact on Biodiversity to be Taken Into Account in Roadside Management (*Sabine Bielsa, MEEDDAT - SETRA, Bagneux, Paris, France*)
- MO-03 Steep Cut Slope Composting: Field Trials and Evaluation (*Robert Ament, Western Transportation Institute at Montana State University, Bozeman, MT, USA*)
- MO-04 Monitoring and Enhancing Wildlife Movement Across Freeways in Urban Southern California (*Barbara Marquez and Gregg Erickson, California DOT, Sacramento, CA, and Jeff Sikich, National Park Service, Thousand Oaks, CA, USA*)
- MO-05 Occurrence of Road and Traffic Associated Heavy Metals in Soil Sediments in southern New Mexico (*Kevin Floyd, The University of Texas at El Paso, El Paso, TX, USA*)
- MO-06 Inter-Species Associations at Wildlife-Crossing Structures: An Analysis of Long-Term and Daily Patterns of Wildlife Movement along the Trans-Canada Highway, Banff National Park, Alberta (*Adam Ford, Banff Wildlife Crossings Project, Banff, Alberta, Canada*)
- MO-07 Evaluation of Mitigation Measures for Highway Bird Road-kill (*Yung-Hui Hsu, Institute of Ecology and Evolutionary Biology, Taipei, Taiwan*)
- MO-08 The Importance of Pre-Construction Data for Planning and Evaluating Wildlife Crossing Structures (*Paula MacKay, Western Transportation Institute at Montana State University, Ellensburg, WA, USA*)
- MO-09 Do Forest Roads Influence Wildfire Boundary Locations? (*Ganapathy Narayanaraj, South Dakota State University, Brookings, SD, USA*)
- MO-10 Effect of the Sampling Effort upon the Richness of Roadkill Species in the south of Brazil (*Clarissa A. Rosa and Alex Bager, Universidade Federal de Lavras, Lavras, Minas Gerais, Brazil*)
- MO-11 Structure, Function, and Ecosystem Services of Interstate Forests in Louisville, Kentucky (*Tara Trammell, Dept. of Biology, University of Louisville, KY, USA*)
- MO-12 Ecological Considerations for the Management of Non-native Invasive Species during the Maintenance and Operation of National Road Schemes in Ireland (*Rosalyn Thompson and Lisa Dolan, Environmental Research Institute, University College Cork, Cork, Ireland*)



Final Conference Program Agenda

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TUESDAY, SEPTEMBER 15, 2009
Session 240: Poster Presentations
3:30 PM – 5:30 PM
Edmund Fitzgerald Exhibit Hall

ID – Integrating Ecosystem Needs with Transportation Facility Design

- ID-01 The Integration of Ecosystems Needs and Transportation Facility Design – The Irish Historical Context (*Lisa Dolan, Environmental Research Institute, University College Cork, Cork, Ireland*)
- ID-02 Effect of Culvert Barriers on Topeka Shiner and Other Warm Water Fish Species in South Dakota (*Matt Blank, Western Transportation Institute at Montana State University, Bozeman, MT, USA*)
- ID-03 The Effectiveness of Vertebrate Passage and Prevention Structures: A Study of Boeckman Road in Wilsonville (*Leslie Bliss-Ketchum, Portland State University Environmental Science & Management Dept., Portland, OR, USA*)
- ID-04 Designing New Highways to Reverse Habitat Connectivity Loss due to Old Highways and Land Use Change: A Case Study in Nayarit, Mexico (*Norma Fernández Buces, Grupo SELOME SA de CV Environmental Consultants, México City, México*)
- ID-05 Oostvaarderswold Corridor: Designing for Natural Systems Within the Human Matrix (*Cynthia Lapp, University of Minnesota, Minneapolis, MN, USA*)
- ID-06 Proposed Crossing Design to Achieve Road Permeability for Multiple Species along a Riparian/Upland Corridor in Southern California (*Dana Morin, EDAW, Inc., San Diego, CA, USA*)
- ID-07 Bolinas Lagoon: An Incremental Improvement (*Charles Morton, Caltrans, Oakland, CA, USA*)
- ID-08 Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings (**Interactive Display**) (*Gregory Napper, US Forest Service, San Dimas, CA, USA*)
- ID-09 A Comprehensive Wildlife Crossing Mitigation Approach in Riverside County, California (*Brock Ortega, Dudek Engineering + Environmental, Encinitas, CA, USA*)
- ID-10 Highways Permeability for Carnivores in Portugal: Water-Effect and Effectiveness of Dry Ledges (*Dyana Reto, Universidade de Lisboa, Centro de Biologia Ambiental, Departamento de Biologia Animal, Lisbon, Portugal*)
- ID-11 Wildlife-Friendly Erosion Control Matting: The Standard for Vermont (*Chris Slesar, Vermont Agency of Transportation, Montpelier, VT, USA*)
- ID-12 Getting There: The Role of Wildlife Crossing Structures in Restoring Terrestrial Habitat Connectivity Across Roads (*Dawn Tanner, University of Minnesota, St. Paul, MN, USA*)
- ID-13 Wildlife Ecology for Dummies: Design Elements of Wildlife Crossing Structures – A Literature Review (*Stephen Tonjes, Florida DOT, DeLand, FL, USA*)
- ID-14 Permeability of Linear Features to the Movements of Songbirds in an Urban Landscape (*Marie Tremblay, University of Alberta, Calgary, Alberta, Canada*)



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ID-15 Tibetan Antelopes are Behaviorally Adapting to the Qinghai-Tibet Highway and Railway (*Yun Wang, China Academy of Transportation Sciences, Chaoyang District, Beijing, P.R.China*)

ID-16 ODOT's Biology and Wetland Monitoring: An Improved Approach to Data Collection and Reporting (*Bob Carson, Mason, Bruce & Girard, Inc., Portland, OR, USA*)

TT – Innovative Tools and Techniques

TT-01 Identifying Wildlife Linkages and Wildlife-Vehicle Collision Hot Spots on Oregon Highways (*Bob Carson, Mason, Bruce & Girard, Inc., Portland, OR, USA*)

TT-02 Web-BA: An Innovative Tool for Streamlining Biological Assessments under the Federal Endangered Species Act (*Scott Boettcher, Cherry Creek Environmental, Inc., Olympia, WA, USA*)

TT-03 Assessing Mitigation Measures to Reduce Moose-Vehicle Collisions: A Modeling Approach (*Paul Grosman, Concordia University, Montreal, Quebec, Canada*)

TT-04 Spatiotemporal Distributions of Wildlife-Vehicle Collisions and their Application for Mitigation Planning (*Kari Gunson, EcoKare International, Toronto, Ontario, Canada*)

TT-05 Understanding and Communicating the Indirect Effects of Transportation on Land Use (*Jeff Heilman and Colin McConnaha, Parametrix, Portland, OR, USA*)

TT-06 Changing Indecision into Action: A Case Study on Successful Interagency Cooperation to Benefit the Natural Environment – Interstate 295 / Interstate 76 / NJ Route 42 Interchange, Camden County, NJ (*Ileana Ivanciu, Dewberry, Parsippany, NJ, USA*)

TT-07 Developing a Model for Identifying Possible Road-Kill Locations on Highways Using Indicator Species and Limited Wildlife Data. (*Parag Khatavkar, International Institute for Geo-Information Science and Earth Observation, Enschede, Overijssel, The Netherlands*)

TT-08 TDOT's Early Environmental Screening Process (*Benjamin Richards, Tennessee DOT, Nashville, TN, USA*)

TT-09 Developing a State Wildlife Roadkill Identification Guide (*Leonard Sielecki, University of Victoria, Victoria, British Columbia, Canada*)