



Committee on Ecology and Transportation Newsletter

Transportation Research Board Committee ADC30

Winter 2010

Notes from the Chair

Tom Linkous, Chair

Winter has arrived which means it's time again to head to Washington for the Annual Meeting. It will be a great meeting and there will be time to renew acquaintances and make new friends as experts and practitioners of the science of road ecology gather to find out what's new in field. Our committee has reached its third anniversary which in TRB lingo means we are ripe for our first rotation of members. To meet this requirement we will need to rotate one third of our members. I will be asked to recommend 8 people to rotate off the committee and 8 people to join us in our efforts to bring ecological research into the mainstream of transportation planning and design.

We have come a long way in the eight years since the 2001 ICOET where we first resurrected the idea of a full standing committee on ecology in the Transportation Research Board. We are well established and have a solid working relationship

with ICOET and several other TRB committees. We are continuing to forge ties with AASHTO and some other professional organizations. We are also working with several federal agencies and universities to both bring their work to the transportation community and to show case their research. We are identifying research needs and looking for outlets to get this research done.

We have achieved our goal of becoming a functional committee. Now we need to determine how to proceed and best continue as an effective committee into the future. To accomplish this goal I am going to ask every member and any willing friends to send at least one emerging issue (yes, I stole this idea from ADC10 – thanks Rick and Muggs) to me for discussion at the annual meeting. Please provide an e-mail to me by January 5. I will attempt to compile these and bring copies to the meeting. Follow up may require post- Annual Meeting effort, but at least the initiation of this look at our mission will be underway by the close of our business meeting. You will receive an e-mail regarding this effort, possibly before the newsletter reaches you.

New FHWA Studies on DVCs

By: Marcia Bowen, Normandeau Associates

Two contracts with FHWA will contribute to the understanding of deer vehicle crashes (DVCs), which compose nearly 5% of all traffic accidents annually. The first is an investigation between DOT roadway mowing practices and their potential effects on numbers of deer vehicle crashes (DVC's) throughout the United States. Contractor Normandeau Associates is reviewing the literature and querying DOTs on practices and outcomes. Factors include increased visibility from frequent mowing regimes as well as palatability of the vegetation under different mowing regimes. Normandeau is currently reviewing available data and surveying DOTs to determine Best Management Practices. Safety impacts of roadside vegetation management practices will be quantified through modeling. The final report, due early in 2011, will describe the "best practices" in the area of roadside vegetation management and decision-making guidelines that include both economic and ecological factors.

The second study is focusing on DVC "hot spots". While deer-vehicle collisions have been widely studied in the United States since the 1970s but to date, no comprehensive review of the DVC literature has been paired with in-depth examination safety-

related practices. In order to improve State DOTs' ability to identify DVC "hot spots" and implement actions to reduce DVC rates, Normandeau will survey of the current DVC "hot spot" identification practice, and analyze the strengths and weaknesses of the tools currently being used by a sample of states. The efficacy of these tools will be examined in the context of the knowledge base regarding DVCs. The results of this analysis will be used to make recommendation to improve the current practice of identifying, prioritizing, and ameliorating DVC "hot spots". The study will be completed late in 2010.



*Patty Cramer,
Utah State
University*

U.S. Route 1 Cyr—Connor, Aroostook County, Maine

Moose Crash Avoidance Reflectors Aiding the Driver, a Maine Department of Transportation (MaineDOT) Crash Safety Strategy

*By Richard Bostwick; MaineDOT Environmental Office
Augusta, Maine*

Aroostook County has a growing problem with moose-vehicle crashes. As the moose population grows, so do crashes, and there is increasing pressure for MaineDOT to make the roads safer and for the Maine Department of Inland Fisheries and Wildlife (MDIFW) to reduce the herd by increasing the number of moose harvest permits in this area. MaineDOT and MDIFW have worked collaboratively to reduce the number of crashes statewide by the use of education, highway safety improvements, and increased number of moose permits. In the fall of 2008, MaineDOT installed reflectors along a one mile section of Route 1 in Connor Township and Cyr Plantation starting at the Cyr/Connor town line and extending north. The reflectors consist of a 12 by 16 inch square aluminum reflective material bent into a right angle and mounted on a post at about 3 feet above ground and 37 feet from the highway centerline. This is a rural and fairly straight section Route 1 that has a high incidence of moose crashes (between 3 and 8 a year (5 per year average) between 2004 and 2008). Unlike other reflector strategies, which seek to affect animal behavior, the intent was to create a solid band of light into the highway so that drivers would be able to detect any large animal that would enter the highway and break the light band.

During the Phase 1, reflectors were placed along a one-mile stretch of highway, about 120 feet apart. Results were reviewed in May, 2009 and the design was improved by reducing the space between reflectors, allowing some of the band of light to reflect back on the highway. Phase 2 took place in the late spring of 2009, when additional reflectors were added to lengthen the distance to around 1.4 miles and decrease the spacing to 60 feet apart.

Monitoring will be done by reviewing crash reports and roadkill reports from MaineDOT maintenance crews and others.

In this first year of operation, the Department has received favorable comments from drivers that the reflectors have increased the visibility of animals entering the road. In a joint site review by MaineDOT Environmental and Traffic Engineering Staff, moose were detected crossing the road about 1500 feet away.

Installation costs are estimated at \$25,000 for the 60-foot spacing, or about \$17,000 a mile. No winter damage was observed in the winter of 2008 – 2009, so routine maintenance costs are not yet known.



*Layout of reflectors nighttime at current 60 feet spacing MDIFW
Photo-Rich Hoppe*



Reflector detail MaineDOT photo- Richard Bostwick

■ See **MOOSE**, Page 3

■ MOOSE from page 2



Daytime at 120 foot spacing MaineDOT photo John Perry



Moose using wildlife crossing. Patty Cramer, Utah State University

2010 Midyear Meeting Update

By Susan Hagood, the Humane Society of the United States

Another Mega- Meeting is planned of all of the TRB Environment and Energy Committees. With a theme of ‘Better Delivery of Better Transportation Solutions’, all systems are “go” for the meeting from June 6-10 in Raleigh NC. The Ecology and Transportation liaison committee is hard at work and needs your help! Four tracks are currently planned: planning, process, application/delivery, and data. Each committee is being asked to suggest at least two-three session topics and well as to sponsor an additional two or three sessions. It is to our advantage that these reflect our interests. A preliminary program is shown below. Although the December 21st deadline has passed, there is still time to send suggestions to me at shagood@humanesociety.org or 301.258.3149.

Track:	Session Topics
Planning	<ul style="list-style-type: none"> • Role of Alternative Fuels in Regional and Corridor Planning • Case Studies in Streamlining Decision-Making through Linking Planning and NEPA – could be both Process and Planning • How should State DOT’s and MPO’s incorporate Sustainability into Statewide and MPO Planning?
Process	<ul style="list-style-type: none"> • Case Studies in Streamlining Decision-Making through Linking Planning and NEPA (Process track) • Successful Public Involvement in Successful Public Decision-Making (and/or Application/Delivery)
Application/Delivery	<ul style="list-style-type: none"> • Reducing Emissions through Integrated Intermodal Freight Practices • Project Level Analysis and Comparisons of GHG Emissions in NEPA Documentation • Landscape-level Assessments of Environmental Impacts and Applicability to Project Alternative Selection • Comparing Apples and Oranges--Making Real-World Resource Impact Tradeoffs in Assessing Project Alternatives • How Differing Public Involvement Strategies Affect CSS Outcomes • Developing and Defining Sustainable Practices--Planning through Maintenance (Process & Application tracks) • Recycling and Its Role in Achieving Emission Reduction Goals • Defining Sustainability Across Multiple and Competing Resources
Data	<ul style="list-style-type: none"> • Establishing Relational Data Sets for Consistent Habitat Assessment to Improve Transportation Planning • Reducing Environmental Process Timelines through Data Management and Sharing (Process & Data tracks)

ICOET 2009 a Success!!

By: Marcia Bowen, Normandeau Associates

Over 3600 ecologists and transportation professionals representing 16 countries made the trek to Duluth MN for the fourth biannual International Conference on Ecology and Transportation (ICOET). The theme was adapting to change, with a focus on Climate Change. The conference is critically important to our committee, as the presentations plant the seeds for our TRB research needs. With seven sets of concurrent sessions, 50 posters, and some awesome field trips, there was a lot of idea exchange and cross-pollination. Our Committee met early in the meeting, helping to plan our “take-away” strategy. Thanks to all who helped organize a great meeting! (All photos by Tom Linkous)



Lively discussion at the TRB Ecology and Transportation Business Meeting.



Wildlife Crossing on U.S. 61



Pallisade Creek Bridge and Wildlife Crossing



Split Rock Lighthouse on North Shore Scenic Byway Tour



Wildlife Crossing Monitoring Camera

2010 TRB Annual Meeting

Environment & Energy Section Workshops, Sessions and Meetings of Interest (At Hilton Hotel, unless otherwise indicated)

	Monday, January 11, 2010	Tuesday, January 12, 2010
8:00-9:45	221 Analyzing, Innovating & Integrating: Addressing Conflicts Between Wildlife Ecology & Transportation (ADC30, ANB20-2) 204 Low Carbon & Renewable Fuels Policy: Issues and Updates (ADC70, ADC80), <i>MARRIOTT</i> ADC10(2) Research Topics Subcmte Mtg. ADC40(2) Guided Rail and Transit Noise Subcmte. Mtg. AV030 Environmental Impacts of Aviation Cmte. Mtg., <i>SHOREHAM</i> ADD40(1) Sustainable Transportation Indicators Subcmte Mtg.	415 Emerging Ecological Challenges, Research and Solutions From the 2009 International Conference on Ecology & Transportation (AFB40, ADC30), <i>SHOREHAM</i> 437, 438, 439, 440, 441 [9:30am-Noon] Environment and Energy Section Poster Sessions ADC10 Cmte. Mtg. ABE80/ADC50 Tribal Historical and Archeological Preservation Subcmte Mtg. ADC40(3) Highway Noise & Vibration Subcmte Mtg. AR020(1) Rail Environmental Subcmte. Mtg, <i>MARRIOTT</i>
10:15- Noon	283 Highway Noise and Pavement Parameters, Part 1 (Part 2, Session 295) (ADC40, AFD90, AHD20, AFK40) ADC20 Cmte Mtg., <i>MARRIOTT</i> ADC10(1) Strategic Issues Subcmte Mtg. ADD40 Transportation and Sustainability Cmte. Mtg. AV030(1) Aviation Sustainability Subcmte. Mtg, <i>SHOREHAM</i>	460 U.S. Nuclear Power Generation: Present, Future, and Implications for Transportation (ABE40, AT040, A0020T, ADC70), <i>SHOREHAM, Hampton</i> 437, 438, 439, 440, 441 [9:30am-Noon] Environment and Energy Section Poster Sessions ADC40 Cmte. Mtg.
<i>Noon-1:30</i>		
1:30-3:15 <i>Wed: 2:30-4:00</i>	289 2009 MOVES Model (ADC20), <i>MARRIOTT</i> 314 Environmental and Historic Preservation Regulations: Overlap and Divergence (ADC50, ADC10) 295 Highway Noise and Pavement Parameters, Part 2 (Part 1, Session 283) (AHD20, AFD90, ADC40, AFK40), <i>MARRIOTT</i> ADC60 Cmte. Mtg , <i>SHOREHAM</i> AV030(2) Aviation Climate Change Subcmte. Mtg, <i>SHOREHAM</i>	488 Protecting and Enhancing the Environment – Technical Challenges and Opportunities (ADC60), <i>SHOREHAM</i> 495 Noise and Hydroacoustics: The Effects and Mitigation of Construction and Operational Sound on Fish and Wildlife Resources (ADC40, ADC30) 499 The Vehicle Miles Traveled Reduction Target Debate: Will This Get Us Where We Want To Go? (ADC10, ADA10, ADA20, ADA50) 471 Beyond LDVs: Energy Use and GHG Emissions from Heavy-Duty Vehicles (ADC80, ADC70), <i>MARRIOTT</i> ADC50 Cmte. Mtg. ADC20(1) Project Level Air Quality Analysis Subcmte Mtg., <i>MARRIOTT</i>
3:45-5:30 <i>Wed: 4:30-6:00</i>	365 Controlling Noise at the Wheel/Rail Interface (ADC40, AR055) 351 Tradeoffs and Complementarities Between Energy Security, Carbon Mitigation, and Sustainability (ADC70, ADC80), <i>MARRIOTT</i> ADC30 Cmte. Mtg. ADC50(3) Programs Subcmte. Mtg.	545 Protecting and Enhancing the Environment – Management and Financial Challenges and Opportunities (ADC60), <i>SHOREHAM</i> 549 Environmental Analysis in Transportation: Applications from Planning through Project Mitigation (ADC10) 538 Vehicle Electrification: How Close Are We? (ADC80, ADC70), <i>MARRIOTT</i> ADC40(1)/AV030 Aircraft Noise Subcmte Mtg. ADC20(2) Regional Air Quality Analysis Subcmte Mtg. ADD50 Environmental Justice in Transportation Cmte Mtg.
<i>5:45-7:15</i>		
7:30-9:30	373 Climate Change Roundtable (ADC20), <i>MARRIOTT</i> ANB20(2)/ADC30 Animal-Vehicle Collisions Subcmte Mtg., <i>MARRIOTT</i>	AW030 Marine Environmental Cmte. Mtg, <i>SHOREHAM</i>

Color Code Key: **BLACK** – Sessions sponsored by Environment and Energy Section Committees; **PURPLE** – Sessions/meetings of interest to Section Committees; **BLUE** – Poster Session; **GREEN** – Committee/Subcommittee Meetings.

NOTE: XXX before title indicates assigned session number in the printed and online Annual Meeting Program.

	Wednesday, January 13, 2010	Thursday, January 14, 2010
8:00-9:45	636 [9:30am-Noon] How Do Travelers Value Energy Efficiency and the Environment – Some Key Insights (ADB00, ADC20, ADC70, ADC80)	8:00am-Noon 713 How To Achieve A Global Low Carbon Transport System by 2050 (ADC70), MARRIOTT 717 The Role of Integrated Planning in Developing Sustainable Transportation Strategies (ADD20, ADD20(1), ADA20, ADD50, ADC10, ADD40)
10:15-Noon	636 [9:30am-Noon] How Do Travelers Value Energy Efficiency and the Environment – Some Key Insights (ADB00, ADC20, ADC70, ADC80) ADC70(1) International Aspects of Transportation Energy Subcmte. Mtg., MARRIOTT	Sunday, January 10, 2010 WORKSHOPS 9:00am-Noon 120 Vibration Effects of Transportation Projects on Historic Properties (ADC40, ADC50), SHOREHAM 1:30pm-4:30pm 163 Measuring Tire-Pavement Noise with On-Board Sound Intensity (ADC40, AFD90), SHOREHAM 162 Management of Historic Properties and Cultural Sites (ABE40, ADC50), SHOREHAM 141 Bridge Aesthetics: Practical Ideas for Short- and Medium-Span Bridges (AFF10, AFF10-2, ADC50), MARRIOTT 1:30pm-5:00pm 178 Ecosystem Service Markets and Associated Performance Measures (ADC30, ABJ60, ADC10),
Noon-1:30	ADC70/80(2) Climate Change Subcmte. Mtg., MARRIOTT	
1:30-3:15 <i>Wed: 2:30-4:00</i>	679 Performance-Based Reauthorization: Bolder and More Innovative – How Do We Prepare and Respond? Data Issues, PART 2 (ABJ00, ABC30, ABJ95, ADC70, ANB20), SHOREHAM ADC70 Transportation Energy Cmte Mtg., MARRIOTT	MEETINGS/ORIENTATIONS 2:30p-4:00p New & Young Attendees Welcome Session, MARRIOTT 4:30p-6:30p Policy & Multimodal Groups New Chairs Orientation – COMMITTEE CHAIRS ONLY 4:00p-7:00p Exhibit Hall Opening Reception, MARRIOTT 6:00p-9:00p Environment and Energy Section Meeting (MEMBERS ONLY) 7:00p-8:30p International Participants Reception
3:45-5:30 <i>Wed: 4:30-6:00</i>	ADC80 Cmte. Mtg., MARRIOTT	
5:45-7:15		
7:30-9:30		<i>NOTE: To find the names of the committees listed by their codes in this matrix, see next page or visit: http://144.171.11.40/cmsfeed/diva.asp</i>

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