



# Committee on Ecology and Transportation Newsletter

Transportation Research Board Committee ADC30 (Formerly ADC30T) Winter 2006

## Message from the Chair

Tom Linkous, Chair

Members and Friends of the Ecology and Transportation Committee:

Welcome to what will be our first year as an official standing committee of the Transportation Research Board. The recommendations for membership on the committee have been acted on by TRB and those receiving appointment invitations must act on them within 30 days of the date of the invitation. If there is not a positive response within 30 days it will be interpreted as declining the appointment. Appointments will be effective this spring and are for 3 years. This is a milestone for all of us who have worked so hard for several years to make ecology an official part of the research priorities of the Transportation Research Board.

For our business meeting on January 22 (1:30 – 5:30 PM Caucus Room - Hilton) we have a couple of agenda items passed along by TRB staff that you can get a head start on before the meeting. They are:

**Action Item 1** - The Transportation Research Board is still working on the new *Strategic Plan Objectives and Action Plan* and is providing us one more opportunity for input. The current draft of the strategic plan along with a summary of the input received from the committee chairs is included in this newsletter. We have been requested to review this information and provide any additional ideas or tweaks to the TRB folks working on the plan. This will be an action item on our business meeting agenda for the annual meeting. Please take a little time to read over the attachment emailed to you before the January meeting and bring any suggestions or input to the business meeting.

**Action Item 2** – TRB is also developing a *Research Needs Statements Database* – As we were informed this

past summer, TRB is developing a web-based database to consolidate the collection of research needs statements for all the committees. The construction of this database tool will be completed in time for viewing at the Annual Meeting. We need a designated person enter and maintain the committee's research needs statements in the database. This is an appropriate task for the research subcommittee and the overall task will be delegated to this group, however we need an individual to take charge of this particular task. I will be finalizing an agenda for the business meeting of ADC30 in the next week and I would appreciate any input on that also. Time will be provided for agency updates for those representing agencies such as FHWA, USEPA, USFS or USFWS. If you represent an agency other than these 4 and would like time to update the committee on research, policy or other activities please let me know so that your agency can be included on the agenda. Likewise, university centers, including CTE, WTI and the Road Ecology Center will be provided time on the agenda to update us on their activities. If you would like to be on this part of the agenda and were not mentioned please let me know. Finally, if you are a subcommittee chair, please come prepared to update the status of the subcommittee and activities from the past year. (I know several subcommittees were not active, but we at least need to know that you are out there. We will need to do some planning for the next year's activities and set up some milestones for subcommittees.) On a personal note, retirement is sweet and can do things when I want, but time demands are much greater than I had anticipated and the free time to just read and work on recreational pursuits is much more constrained than I anticipated. However, I am enjoying it and finding time to spend at least a day a week in the woods to enjoy nature. It is amazing how different the woods are when I am not there for work purposes.

Happy Holidays and I look forward to seeing you in January.

# TRB Strategic Plan Update

*“A goal without a plan is just a wish.”*

Antoine de Saint-Exupéry

TRB has been involved in a strategic planning process, which has incorporated input from standing committee chairs like our own. We are providing a summary of some of the objectives and actions that have emerged in the November 2006 draft. The objectives fall in three areas (or rubrics): finance; outreach; and research, knowledge, and information:

## 1. Broaden and solidify TRB's financial base

This includes strategies for increasing revenues by increasing conference and workshop registration fees, publication prices, offering opportunities for private sector contributions, and attracting donors, foundations, and federal agencies for funding support.

## 2. Expand coverage and relevance

TRB plans outreach to each major mode (Freight, aviation, marine) as well as local government and MPOs, State DOTs, international organizations, industry and professional groups. TRB would also promote greater involvement by women, minorities, and young professionals,

## 3. Improve Effectiveness of TRB

TRB seeks to improve its effectiveness with a combination of ensuring its programs are relevant and improving outreach to users. TRB would like to better target its research agenda to critical issues and information gaps. TRB would like to be an information resource to Congress and to expedite generation of research results to practitioners, including those in the private sector. The TRB standing committees are an important part of this process. TRB would like to improve the coordination, communications, and linkages among committees, sections, and groups; un-

cover any major gaps that need to be filled; identify opportunities for merging of existing committees; and enhance committees' ability to address emerging and cross-cutting issues, including issues that may not fall within the domain of an existing committee. A key component will be to develop and update research needs statements, and maintain them as a comprehensive electronic database. The TRB research program should be enhanced by monitoring its effectiveness and usefulness to customers as well as enhancing its customer base through outreach to other organizations who could initiate or participate in cooperative research such as metropolitan planning organizations (MPOs), toll road authorities, etc.

## 4. Promote enhanced outreach and public understanding of TRB, research, and transportation

Finally, TRB would like to promote public understanding of TRB, research, and transportation by facilitating two-way communication with transportation customers; improve technology transfer and information dissemination of research projects, conferences, and other TRB products; achieve greater visibility for research results; and do a better job of communicating the benefits of TRB participation. As part of this, TRB would like to undertake more aggressive marketing of TRB and raise TRB profile with targeted groups and the general public. Enhancements to electronic communications including websites, e-newsletters, webcasts, on-line journals such as *Transportation Research Record* are an important element to the improved outreach.

TRB is soliciting input on its draft Strategic Plan through the Committees. Plan on a lively discussion in January when we meet.

## Northeastern Transportation and Wildlife Conference 2006

By Jesse Feinberg, *Defenders of Wildlife*

A regional outgrowth of the International Conference on Ecology and Transportation (ICOET), the 2006 Northeastern Transportation and Wildlife conference took place at the Sunday River Grand Summit Resort Hotel & Conference Center in Bethel, Maine on September 10-13. Individuals from fish and wildlife and transportation agencies from Maine, Vermont, New Hampshire, and FHWA were joined by municipal transportation and planning departments, consultants, academic researchers and nonprofit organizations to discuss

the issues and impacts surrounding the interactions between wildlife and transportation systems.

States shared their work since the 2004 NETWC conference held in Vermont, and discussed what they plan for the next two years. Issues such as reducing moose and deer vehicle collisions; research on amphibian, reptile, and aquatic crossing structures; updates on the Statewide Wildlife Action Plans; and discussion on each state's plans for future actions were discussed, among other topics.

The Northeastern conference meets every other year when ICOET is not in session. A 2008 NETWC is being planned for New Hampshire. More information can be found at <http://www.maine.gov/mdot/ntwc/agenda.php>

# MaineDOT Southern Maine Wildlife Passage Initiative

By Richard Bostwick,

Maine Department of Transportation, Environmental Office

After looking at work done in other states, The Maine Department of Transportation (MaineDOT) is dipping its foot into wildlife passage waters. The department is supporting efforts to include wildlife passage strategies into a new transportation facility in Southern Maine. MaineDOT is in the final planning stages for a bypass highway around the town of Gorham, ME. This will give MaineDOT the opportunity to look at ways to minimize impacts to wildlife and provide wildlife passage. This part of Gorham is relatively flat, with a few gullies that have streams and are travel corridors for wildlife, including deer. The flat topography has meant that most of the bypass has a low profile, which provides limited opportunities for incorporating structures large enough for drainage and passage use. The project is scheduled to be under construction starting in 2007.

The MaineDOT Environmental Office and MaineDOT Main Street Mobility group reviewed the project to evaluate it in terms of providing habitat connectivity for fish and wildlife impacted by the construction of the Gorham Bypass. As stated in the NEPA EA/FONSI, the need for wildlife passage was evaluated as appropriate. Due to variability of species and design constraints, wildlife passages of varying types and configurations were evaluated. In general, passage requirements can be described for the species groups as summarized below. All passage structures would have to have “funneling” entrances in association with some form of fencing to guide the animals to the structures.



Vernal pool and forested wetland, Gorham Bypass (ME)

## CRITERIA USED

Criteria for animal passage were based on literature search as well as information gleaned from the Northeastern Transportation and Wildlife Conference held in Maine in September of 2006. One of the more informative guides was a publication from the Ontario Ministry of Transportation entitled Wildlife and Transportation Reference for the Oak Ridges Moraine.



Example of medium/large wildlife crossing, New Brunswick, CA.

Fish and Aquatic Organism Passage Fish and other aquatic organisms (defined as any species which use rivers, streams and brooks, including the associated riparian habitat, at any point in their life cycle requirements) passage is required under the current Army Corps of Engineers Maine Programmatic General Permitting requirements, which were updated in October 2005. As a result, all new stream crossings are required to span 1.2 times the bankfull width. Almost all stream crossings on this project would be constructed using Maine’s 2004 Fish Passage Policy and Design guide. Additionally, any culvert would be up-sized and embedded. This ensures that adequate stream banks are incorporated into the crossing for species that utilize riparian habitat as travel corridors. An openness ratio ( i.e. what wildlife species can actually utilize above ground, defined as the product of the width and the height, which is then divided by the total length) of 0.10 to 0.25 meter for small mammals and amphibians is being considered. Funneling would be accomplished by incorporating strategies such as wing walls, and fencing can be incorporated.

## HERPTILE PASSAGE

In addition to providing passage for herptiles at stream crossings, additional crossing structures may be required throughout the project length. Many herptiles are typically wide-ranging species relative to their body sizes, ranging from hectares to square kilometers. Obligate vernal pool species (spotted and blue spotted salamanders, wood frogs) spend a portion of their life cycle in uplands away from the breeding pools (salamanders can travel over 800 meters to get from their forested habitat to the breeding pools). Passage would be needed to reduce adult mortalities. Since salamanders and other herptiles travel overland and not in aquatic environments, several factors need to be considered. These include backfilling the structures with soil and leaf litter, possibly from material grubbed from the project. While many herptiles burrow in the substrate or travel at night, openness ratio of at least 0.25 meter is still recommended. However, the need to minimize wetland impacts by lowering

■ continued on page 6

# Linking Conservation and Transportation Planning Workshops

*By Jesse Feinberg, Defenders of Wildlife*

This year, the FHWA Project Development and Environmental Review Office, NatureServe and Defenders of Wildlife hosted a series of pilot workshops to improve linkages between conservation and transportation planning. Working in conjunction with each state's transportation agency, workshops were held in Little Rock, Arkansas from May 31-June, in Denver, Colorado from August 15-16, and in Phoenix, Arizona from November 8-9.

Each workshop emphasized the use of state-specific information, tools and methods that can be shared between the transportation community and the resource and regulatory agencies at the local, state, regional, and national levels. By bringing together transportation planners and resource agencies, the workshops strove to facilitate early coordination between partners in order to save both money and time while achieving high quality environmental results.

Tools and resources such as the Statewide Wildlife Action Plans were discussed at length along with the transportation planning process.

Responding to surveys before the workshops began, participants from all three states agreed that sharing their ideas and strategizing on linking conservation and transportation planning was necessary and important. Participants also expressed the need for better communication between agencies as well as the desire to expand the sharing of resource and planning data. Feedback and surveys after the each workshop's completion confirm that these desired outcomes were addressed. Now, with follow-up meetings being scheduled for 2007, these partners can continue their successful cooperative efforts to link conservation and transportation planning. All documents and resources from each workshop can be found at <http://www.defenders.org/habitat/highways/workshops/home.html>.

## Intermodal News from Anchorage

*By Cynthia Wentworth  
Harvest Survey Coordinator Subsistence,  
US Fish and Wildlife Service*

During the past four decades, Alaska has heated more due to the effects of global warming than anywhere else in the country. This has prompted a commuter rail initiative to help reduce dependence on fossil fuels in an urban area almost completely dominated by cars and highways. The Commuter Rail Planning Committee for south central Alaska has been working since 2002 to begin commuter rail between downtown Anchorage, Dimond Center in south Anchorage, the Ted Stevens Anchorage International Airport, and the Matanuska-Susitna Valley 40 miles north of Anchorage. An Anchorage airport rail depot was completed in 2002, and an intermodal passenger rail terminal

was opened in Palmer in the Matanuska-Susitna Valley in 2005. Intermodal rail terminals are being designed for both downtown Anchorage and the Dimond Center.

Beginning in summer 2008, the Whistle Stop Project, a U.S. Forest Service and Alaska Railroad Partnership, plans to utilize a Colorado Railcar DMU (diesel multiple unit) self-propelled railcar to access summer recreational sites in the Chugach National Forest. The Commuter Rail Planning Committee is meeting with the Alaska Railroad, hoping that this self-propelled railcar can be used for commuter rail during winter months. This project will allow access to remote areas in the National Forest while minimizing adverse impacts to wildlife.

# SAVE THE DATE!



## The 2007 International Conference on Ecology & Transportation

“Bridging the Gaps, Naturally”

May 20–25, 2007

The Peabody Little Rock

(Little Rock, Arkansas)

### Sessions of Interest

The table below lists sessions that we are sponsoring as well as others that may be of interest. The TRB interactive program feature.

Sessions	Sunday January 21, 2007	Monday January 22, 2007	Tuesday January 23, 2007	Wednesday January 24, 2007
8:00-9:45	<b>WORKSHOPS</b> 8:30am-5pm: 120 Early Lessons Learned in Implementing SAFETEA-LU Environmental Provisions	<b>ADC10(1) Environmental Stewardship Subcmte Mtg.</b> (Dupont)	<b>458 Environment &amp; Energy Poster Session - 9:30-Noon</b> (International Center) <b>AV030 Environmental Impacts of Aviation Cmte Mtg</b> (SHOREHAM, Calvert)	<b>ADC10 Cmte Mtg</b> (Conservatory)
10:15-12:00	125 Programs and Practices to Enhance Waste Management, Conserve Resources, and Practice Sound Environmental	295 The Future of Energy in Transportation, Part 2: Mitigating Greenhouse Gas Emissions and Resource Competition <b>AR020(1) Rail Environmental Subcmte. Mtg.</b> (MARRIOTT-Park Tower Suite 8222)	<b>458 Environment &amp; Energy Poster Session continued - 9:30- Noon</b> (International Center) <b>477 Getting the Big Picture: Intermodal Environmental Analysis</b> (SHOREHAM)	<b>ADC10 Cmte Mtg Continued</b> (Conservatory)
12:00-1:30  1:30-3:15 (Wed: 2:30-4:00)	Management in DOTs 1:30p-5:00pm: 171 Planning for the Green and the Grey: How Green Infrastructure Plans Can Help Advance Transportation Projects	324 Innovative Practices in Addressing Transportation Noise Issues – Part 1 – Highways <b>ADC30 Cmte. Mtg</b> (Caucus)	<b>507 Wildlife Issues for Rail and Highway Corridors</b> (MARRIOTT Delaware) <b>AW030 Marine Environmental Cmte. Mtg.</b> (SHOREHAM-Cabinet)	<b>ANB20(2) Animal Vehicle Crash Mitigation Subcmte.</b> (MARRIOT-Balcony B) 2:30-6pm
3:45-5:30 (Wed: 4:30-6:00)		347 Current activities in animal-vehicle crash mitigation (Marriot Virginia C) 376 Innovative Practices in Addressing Transportation Noise Issues – Part 2 – Planes, Trains and Automobiles 369 Achieving Smart Mitigation in Transportation Projects 375 Impacts of Climate Change on Transportation Infrastructure and Systems <b>ADC30 Cmte. Mtg Continued</b> (Caucus) <b>ADC50 Cmte. Mtg Continued</b> (Georgetown South)	585 Papers in Environmental Analysis in Transportation 591 Transportation Ecology Research and Practices 592 Wayside Transit Noise Predictions Used to Supplement the FTA Noise Impact Methodology <b>ADC80 Cmte Mtg.</b> (Conservatory) <b>ADC50(3) Programs Subcmte Mtg.</b> (Chevy Chase)	<b>743 Transportation-Related Environmental Issues in Parks and Public Lands</b> <b>ADC20 Cmte. Mtg. Continued</b> (Hemisphere)

Color Code Key: **BLACK** – Sessions sponsored by Aviation Group Committees; **PURPLE** – Sessions cosponsored by/of interest to Section Committees; **BLUE** – Poster Session; **GREEN** – Committee/Subcommittee Meetings

■ **Wildlife Passage Initiative** – continued from page 2

highway profiles in wetlands means that this ratio is not always obtainable.

The bypass would be grade separated at local roads. This gives MaineDOT an opportunity to construct an open passage across a local road (locally known as Flaggy Meadow Road) into a large vernal pool at the north end. A resident states that this section of Flaggy Meadow Road experiences amphibian mortality every spring and the plan is to construct an open passageway under the bridge to separate the amphibians from the highway. Exclusionary fencing is also planned in the vicinity of the structures.

**MEDIUM AND LARGE MAMMAL PASSAGE**

Medium and large mammal passage, designed to accommodate fox, bobcat, and deer, will need to have an openness ratio of at least 0.6 meter. Research on open-

ness ratios have varied from 0.6 meter in Massachusetts, to openness ratios of 1.0 m (based on recent research in New Brunswick). Two stream crossings, Gully Brook and an unnamed tributary to Gully Brook are natural corridors for deer and should be adequate sites for large mammal passage. While a structure for stream and fish passage would only need to be about 3 meters wide, a 37 meter long structure with an opening of approximately 6 m wide by 4.5 m high will be used. These will have an openness ratio of 0.77 meter. Both of these areas involve a crossing under deep fill. An additional 2.4 m dry culvert will be used elsewhere to pass medium size animals like fox and raccoon.

Funneling can be accomplished by incorporating wing walls, and fencing can be incorporated by installing a 2.4-m fence. All of the crossings would be monitored after construction.