

**Ecology and Transportation Committee  
TRB Committee ADC30 - Business Meeting  
Tuesday, June 8, 2010 4:30 PM – 6:30 PM EST**

- 1) The meeting was called to order at 4:35. Members and Friends of the Committee were introduced. The sign in sheet is attached. A conference call line was provided for members and friends to call in. One person (Paul Wagner) called in.
- 2) Steve Andrie FHWA asked if he could speak first about the Fsharp (Future Strategic Highway Research Program) program. He indicated that more pilot tests are coming out, along with an RFP on ecological approaches to mitigation. It will require a public agency lead with non-governmental organization or consultant partners to test projects and products. Information will be posted on the SHRP2 website including a webinar. Brian Yanchik will distribute the information to the committee. He anticipates be 4-5 awards. The project has to be one that has had or will need other agency approval.
- 3) Jimmy Kagan and Marie Venner also ask to speak and discussed framework for section 7; Marcia will distribute the information.
- 4) Tom said that draft minutes from the 2010 annual meeting had been circulated to members, and review comments were incorporated. Joe Burns made a motion was made to approve Minutes of January 12, 2010 business meeting; Bridget Donaldson seconded the motion; the motion was unanimously approved.
- 5) Tom gave a certificate of appreciation to Susan Hagood for helping with program organization for this meeting. Susan said that Joe Burns also helped tremendously. Tom told the group that he had asked for help in distributing the call for papers and each member to given them to at least two organizations. He asked all present to send the call to their alma mater, workplace, etc. Sandy recommended that we personally encourage folks to submit a paper.
- 6) Sub-Committee Brief Reports:
  - a) Communication Sub- Committee - Marcia Bowen, Chair & Chris Gesing, Web Site  
Marcia said that the duties of the communications committee include taking and finalizing meeting minutes, transmitting committee communications, publishing two newsletters, and maintaining the website. She has been regularly updating our email list of friends and now also has an outlook group that she can send to members. She will update it with the attendance list from this meeting. The next newsletter will be published in mid- to late summer. She will be soliciting ideas and input from members and friends. The subcommittee chairs will need to submit updates on their activities. Chris Gesing, our webmaster, was unable to attend. He submitted this website report:

The following are the activities since the January 2010 Business Meeting in Washington, DC:

1. Posted the 2010 Annual Meeting Committee-sponsored workshop and session presentations to the "Conferences" page. *Special thanks to the session and tour moderators for their help in obtaining the posting permissions and collecting the presentations for the website.*
2. Posted a link to the 2010 Environment and Energy Research Conference website.
3. Posted the January 2010 Business Meeting Minutes.
4. Continued updating the Home Page with announcements, registrations and preliminary program information for TRB Annual Meeting and ADC30 Summer Workshop. *Special thanks to Nancy Bailey at CTE for promptly posting the website updates.*

Future Efforts will be to keep the website updated with current events/news; maintain the listserv; continue collecting session and presentation materials at the TRB Annual Meetings and ADC30 Summer Workshops and making the information available from the "Conferences" web page; post ADC30 business meeting minutes as they are approved; post Subcommittee Goals and Objectives as they are developed and approved; and post links and information of interest to the Committee (e.g. AASHTO research) on the website. Chris asked that any suggestions for improving the website be submitted to [cgesing@mbakercorp.com](mailto:cgesing@mbakercorp.com).

b) Steering Sub- Committee – Mary Gray, Chair- Mary was unable to attend

c) Liaison - Lars Carlson, Chair

Lars maintains a list of committees and members responsible for liaison. He prepares a liaison report for publication in the newsletter. Members are requested to provide information on activities in those committees- a highlight or two is all that is needed. Joe Burns is trying to develop a website that helps cross-committee communications, especially committees involved with geo-spatial analysis; TRB is recommending use of google groups. Marcia will send information to Joe and contact Keith Knapp with respect to this.

d) Mid-Year Meeting – Susan Hagood, Chair

Susan thanked all who helped organize the conference. We had two excellent sessions.

e) Program Sub- Committee - Alex Levy, Chair

Alex said that we have 2.3 sessions assigned for the annual meeting. We generally reserve one session for papers. These will be leveraged as much as possible. We have a workshop proposal from the "international wildlife design crossing competition", who was asked to sponsor the top four finalists for a design competition. The workshop would include presentations and a panel of experts. They will be announcing finalists at special ceremony at the Smithsonian next January. TRB has insisted that the committee take ownership for this to succeed. Tony Clavenger WTI has put the idea forward. There will be a lot of positive publicity associated with it that we should take advantage of. Carol asked if we could get on the jury that selects the winners. We think they are already chosen, Sandy is on the technical committee.

Papers at the Annual Meeting can include oral presentations on projects or research completed or in progress, as well as posters. Generally we only have enough papers to host one research session; if that holds true for the 2011 annual meeting, we can supplement the paper session with a session on works in progress or a presentation by a panel. Research papers are the top priority since this what TRB is all about. Ideas should go to Alex, especially those that are partnered with other committees.

Marie Venner mentioned today's paper from David Woldner KY that highlighted agency collaborations/programmatic agreements as a good idea for the annual meeting . Joe said he plans workshops more than a year in advance (they must be submitted by June 1 to TRB); so he is already thinking about 2012- Marie offered to help him plan.

Alex also mentioned to new attendees that we welcome peer review volunteers; papers are reviewed in late summer. We only had three last year. Mark mentioned that ADC10 only had 7 papers last year to review, so our low number is no reflection on our activity level.

f) Research - Patty Cramer, Chair- see below

7) Remarks by Christy Gerencher, Senior Program Officer, TRB

Christy gave the dates for the annual meeting in 2011 as January 23-27. She would like to receive program sessions as soon as possible to suggest collaboration opportunities with other committees. Last year, TRB hired a contractor to collect all presentations, with a fee required to download, which was not enthusiastically received. This year, there will be free access to presentations to those registered for the conference and sponsors. TRB will need to increase registration fees by 10%; CD's will no longer be distributed, replaced by website access. All deadlines will remain the same.

8) Remarks by Kate Quinn, Environment and Energy Section Chair

Kate thanked everyone for attending and organizing. She gave Chair Tom Linkous a certificate of appreciation Tom for helping to organize the conference. There were more than 500 attendees; the conference was "grass-roots funded" with help from consultant sponsors, CTE, and NCDOT. This helps reduce attendee fees.

9) Remarks by James Martin, CTE

James said that the ICOET 2009 presentations are on line at icoet.net. They are very close to finalizing the dates for the 2011 conference (third week in August (22-25<sup>th</sup>) in Seattle (Westin hotel). Seattle has excellent light rail connections and there is no need for a car. Paul Wagner has some excellent ideas for field trips.

10) Report and Follow Up on Sunday Research Workshop - Patty Cramer

Patty discussed the research needs workshop. The Sunday workshop, organized by Shari Schaftlein FHWA, was grouped by four categories: energy, climate change, sustainability, livability, which match the new administration's program needs. Our committee doesn't really fit well in these four cross-cutting categories that were established prior to the meeting; Patty sat with Shari to discuss how our needs weren't met in terms of getting our research needs included. CTE is tasked with collecting ALL of the information- including the Sunday workshop, ideas generated during technical sessions and committee meetings, and those from registrants. A summary will be prepared and sent to the chairs within six weeks for review/comment. The committee will be sending our input. AASHTO has a pot of money (\$600,000) that is a funding source. Our committee needs to decide what to do with our current list of 24 or so needs. Patty wanted us to be visionary and not limited to the AASHTO fundable ideas or funding limits. We should be open to the universe of funders and ideas.

There was discussion about AASHTO, which has a lot of influence over TRB research funding. AASHTO's Standing Committee on Environment (SCOE)'s subcommittee would be the AASHTO/SCOE group most similar to us- Frank Pafko is chair. We promised to prioritize and we need to lobby with them more. We have just given them our research needs statements.

We also need to include them in both the TRB database and TERI database (which is linked with AASHTO). NCHRP is funded by AASHTO and administrated by TRB. The FHWA Step program is also a possible funding source. We can submit research needs statements to Shari or Mary Gray to help get funding.

There was further discussion of the draft research needs statement distributed by Patty Cramer (included here as an appendix). There was further discussion on the individual research ideas.

Bethany Williams recommended that dust suppressants have unintended and unknown consequences. USFWS Sean Furniss has been working on this issue, and USGS is collaborating with them. Marella Buncick USFWS mentioned road binders for unpaved roads are also in this category. Emily Teachout offered to provide a write up on acoustic effects and pile driving including next steps, mitigation and impacts to other organisms besides fish such as diving ducks. We will add Paul Wagner's research statement to this. Mark Kross recommended the inclusion of paleoecology and archeology along with recorded history to help predict future. Bridget Donaldson felt strongly about "G" culvert evaluation. Maintenance money is going to culvert replacement and there is lots of new technology. Bridget has had contamination problems from "in place" liner replacements; the Corps technology uses poured concrete but the elevational increase ends up impairing wildlife passage. Cured in place technology is being used at state and local levels everywhere without knowledge about impacts. This is a hot topic and AASHTO is very interested. Also Sandy indicated this is a discrete, fixable problem. Bridget's research on cured in place resulted in VA stopping the practice.

Patty will submit some ideas immediately to Shari and refine the rest for committee comment. Dale felt that modeling statement was critical, especially when considering climate change. He will develop and submit.

Patty said this is only the beginning- we need to do some politicking. Tom recommended finding a state or group of states that could support the funding request. Pooled funds are excellent vehicles for funding. Lars reminded the committee that he inputs the data into the TRB database, but needs to have ALL information submitted including estimated costs.

Mark reminded the group that new attendees will automatically become friends of the committee until they request that they be taken off the friends list.

The meeting was adjourned at 6:47.

## Appendix A.

### TRB Committee on Ecology and Transportation ADC30: Emerging Issues in Research 2010

March 10, 2010

From the research subcommittee chair, Patricia Cramer

[Patricia.cramer@usu.edu](mailto:Patricia.cramer@usu.edu): 435-764-1995

This is the committee's research needs statements that will be presented for inclusion in a white paper on research needs for the environment. Please review and contact Dr. Cramer for any additional ideas or clarification of how your statement may be written. Thank you.

Members of our committee were queried in December 2009 by our committee chair Tom Linkous as to the pressing research needs related to ecology and transportation. Several members responded with ideas. In early February, new research sub-committee chair, Patricia Cramer asked both members and friends of the committee via email, for ideas on research that would fit not only the typical FHWA and TRB research programs, but also broad scale ideas on ecology and transportation. In this document, those responses are organized according to the levels of a white paper on environmental research needs that is being written by members of the Volpe Center, and which will be distributed at the research needs workshop of the Summer mid-year meeting of the TRB environmental committees in June of 2010. Those subject headings are: **climate change, energy, sustainability, and livability**. After a conference call on Monday, March 8, 2010, Dr. Cramer organized the research ideas under those headings in anticipation of a Volpe needs deadline, March 15, 2010. The committee and friends who helped with these priorities will meet in conference call after that deadline to prioritize the top 10 priorities for this committee. More details to follow.

**Note:** Most of the titles below are further documented and discussed in the Appendix, which is not included in this version. Look for these descriptions under the submitter's name.

#### **Climate Change**

##### Plants and Animals and Climate Change

A- Research that helps to adopt the development of policies that instruct transportation agencies to adapt existing structures and plan future transportation facilities to facilitate the movement of plants and animals as a result of climate change. **Lars Carlson**

B- Research on climate change and species movement. **Harold Hunt**

#### **Energy**

C- Evaluate the connection between atmospheric nitrogen and phosphorus and the eutrophication of lakes near roadways. **Dale Youngkin**

#### **Sustainability**

##### Storm water management & research

D-Evaluate storm water run off plumes and pollution by further researching the use of laser ablation coupled to mass spectroscopy. These techniques can help evaluate the effects on fresh water mussels and other aquatic species with calcium shells or skeletons. **William VanPeeters**

E-Evaluate the effects of storm water contaminants using confocal microscopy to document the effects of parts per billion of copper, zinc, lead cadmium and other toxicants on the neural development of the olfactory organ and lateral line systems in fish. **William VanPeeters**

F-Evaluate the efficacy of design elements implemented thus far to improve storm water management for roads, both retrofits and new projects. **Dale Youngkin**

##### Evaluate Technologies' Effects

G- Existing and emergent trenchless pipe rehabilitation technologies that may pose potential contamination of water and have effects on aquatic plant and animal life. **Bridget Donaldson**

H-Further evaluate the marine effects of pile driving, particularly the current threshold of 120dB for harm toward marine mammals. **Paul Wagner**

I- Physical and behavioral effects of pile driving and other under water construction and maintenance noise on fish. FHWA should set up monitoring stations both using DIDSON sonar and UW video cameras to document the effects or lack of effects of various pile driving methods and using various mitigating techniques (including changing hammer striking power, changing helmet cushion materials, bubble curtains configurations etc.). We could do this in cooperation with USFWS, and State Resource agencies.

**William VanPeters**

#### Wildlife, Fish, and Plant Connectivity

J- Wildlife and aquatic crossings: The US Forest Service is trying to develop an interagency aquatic passage monitoring protocol. The idea is that all agencies would use the same protocol and share data.

Hopefully it would allow us to make decisions about species and populations at the watershed and basin level, prioritize restoration, and improve structure design criteria. **Paul T. Anderson**

K- States and regions identify key wildlife habitat connectivity corridors and core areas across each state in conjunction with state natural resource agencies to assist in identifying potential areas of conflict when planned road improvements are enacted. **Paul Wagner**

L- Develop statewide decision-support maps of wildlife connectivity. **Paul Beier**

M- Develop state-based habitat connectivity analyses for every state, and mesh within regions. **Patricia Cramer**

N-Develop practical methods for assessing the demographic risk of road related mortality for sensitive wildlife species at the individual crossing, road segment and population scales, this helps not only wildlife but is one component of being able to develop appropriate cost effective mitigation. **Harold Hunt**

O- Compile in a research document the exact dimensions of wildlife crossings that have been found to be successful for target species and the full suite of species studied in wildlife crossings across the different bioregions of North America in order to create a single guide with scientific references. **Patricia Cramer**

P-Methods to eliminate transportation corridors as sources and avenues for dispersal of invasive species. What species are using the transportation corridors, what are the methods to control and eliminate those species from road-right-of-way, and identify successful programs. **Tom Linkous**

#### Planning

Q- What are the anticipated implications to environmental issues with our nation's shift from capacity-building projects (new projects) to preservation maintenance (keeping or replacing existing infrastructure), and how can transportation agencies address environmental needs with these improvements? **Deb Nelson**

R- Evaluate and report on examples of how DOTs can develop concurrence points or bench marks in the process of addressing and permitting effects to natural resources so that as DOT employees move off of projects and leave their agencies the compliance and coordination process continues on. Also find ways that DOTs can maintain employees. **Alex Levy**

S- What are states doing to measure environmental accomplishments in Operations and how are the findings incorporated into financial decisions? **Deb Nelson**

T- How we achieve sustainable development, balancing social, economic and environmental elements when there are bridges being closed, and other infrastructure failing? **Deb Nelson**

U- Develop strategies based on research, that enable DOTs to respond to public demand for programs to protect species and places that do not have established protections under current law, such as Maryland State Highways program has done with eastern box turtles. **Susan Hagood**

V- There are needs to develop a research road map for geographic information systems (GIS) that can better support informed decision making and help develop cross-cutting performance measures that could guide the development of GIS data layers and tools to integrate data for projects. **Joe Burns**

W- Develop ecosystem performance measures and create the application that creates ecological metrics at various spatial and temporal scales and that address various ecological, social, and economic priorities. **Joe Burns**

X- Improve ecosystem valuation for use in mitigation measures, to help establish mitigation cost-effectiveness (such as monetary value of reduction of wildlife-vehicle collisions or increased landscape permeability). **Patricia Cramer**

### **Livability**

#### **Planning**

Y- Develop strategies based on research, that enable DOTs to respond to public demand for programs to protect species and places that do not have established protections under current law, such as Maryland State Highways program has done with eastern box turtles. **Susan Hagood**