



# Committee on Ecology and Transportation Newsletter

Transportation Research Board Committee ADC30

July 2016



## View from the Chair

*Alex Levy, Senior Ecologist,  
VHB*

**YESTERDAY, IT WAS ADAPTATION.  
TODAY, SUSTAINABILITY.  
TOMORROW, RESILIENCE.**

It is probably no mere coincidence that thematic jargon from the last decade of TRB seems borrowed right out of the lexicon of ecology. After all, the inquisitive world of science, technology, engineering, and math seems always on the threshold of an enlightened thinking about the interrelationships of the living, physical, and mobile worlds. It is a perspective that many of the friends and members of the Committee on Ecology and Transportation may find as intuitive as it is inspiring: that organisms and their environment are in a continuous state of interaction, interdependency, and struggle for equilibrium.

Just a little more than a week after the historic events of 9/11/2001, at the first International Conference on Ecology and Transportation (ICOET) in Keystone Colorado, a group of peers posited the forging of connectivity between ICOET and the National Academies. Shortly following ICOET 2003, in Lake Placid, New York, what had grown to a few dozen conservation and transportation advocates, and our champions in TRB, helped create us as a Task Force. Now at a decade since our formal establishment as the Standing Committee within TRB, Ecology and Transportation, we enter a new era.

Where more-charismatic issues of wildlife and highway conflicts, habitat fragmentation, and connectivity were the themes that buoyed our first decade, it is in our committee's emerging generation of new and returning members that even broader tenets of landscape ecology and more-discrete conservation principles are increasingly the topics of discourse

and inquiry. As we continue adjusting our focus, we are coming to ask new questions, revisiting some familiar ideas, and forging new friendships and partnerships from within the TRB community of over 200 standing committees.

Among the emerging themes, in the past year we have embraced the nexus between road ecology and pollinator conservation, explored emerging geographic information tools, and pondered at the relationship between automated and connected vehicle technologies and an evolution in how we might resolve wildlife-vehicle conflicts. In the coming year, we will be exploring transportation infrastructure's relationship to North America's imperiled and economically important bat species. We will be revisiting the state-of-the-practice for native vegetation use and management on our roadsides, as well as in the greening and maintenance of habitat connectivity infrastructure.

Analogous to "refreshing" the view on a computer's monitor, the new leadership for our Research Coordinator and Communications Coordinator is emblematic of our committee's staying abreast of the needs of our industry and the communities in which we all live, travel, work, and play.

I encourage you to explore our new website: [www.ecologyandtransportation.weebly.com](http://www.ecologyandtransportation.weebly.com), as well as this inaugural edition of the next generation of our semi-annual newsletter. In the pages that follow are what I think you will agree are some timely ideas and themes, as well as a roster of the women and men who have recently rotated from committee membership and those who have accepted the challenge and privilege of serving for the next triennial cycle.

For myself, and on behalf of TRB, I offer my sincere gratitude to the persistent, inquisitive, and dedicated members and friends of the Committee on Ecology and Transportation.

## NYS Department of Transportation to host the 7th biennial Northeastern Transportation and Wildlife Conference (NETWC) in Lake Placid, New York

*Submitted by: Debra Nelson, NETWC 2016 Conference Chair & Sarah Piccuch, NETWC 2016 Program Chair*

The New York State Department of Transportation is pleased to be hosting the 7th biennial Northeastern Transportation and Wildlife Conference (NETWC) in Lake Placid, New York, September 11-14, 2016.

NETWC focuses on wildlife and transportation issues in the northeastern United States. This conference grew out of the excitement and energy sparked by the International Conference on Ecology and Transportation (ICOET) held in Lake Placid in 2003. Held every two years, NETWC has been hosted by the various northeastern state DOTs and has continued to grow in its range of topics and attendees, including participation beyond our region to the Canadian provinces and other U.S. states. Now we return to Lake Placid to continue the synergy and enthusiasm that originated here over a decade ago.

This year's theme, Mile Markers of Road Ecology: Paved Ways and New Paths, encourages us to look at how far we have come since the first NETWC that was held in 2004 to incorporate road ecology into transportation planning and operations in the northeast. NETWC 2016 presents an opportunity to bridge lessons from the past with plans for the future while linking theory with practice.

We are excited and honored that Bill McKibben is this year's keynote speaker. Bill is an internationally-renowned author, environmentalist, and activist. In 1988 he wrote *The End of Nature*, the first book for a common audience about global warming. He is a co-founder and Senior Advisor at **350.org**, an international climate campaign that works in 188 countries around the world. A visionary attuned to the complexities of progressing environmental change in fossil fueled society, Mr. McKibben is sure to inspire and set the charge for a future of change.

The conference program is packed with concurrent sessions that will offer engaging presentations in a variety of formats including podium presentations, panels, workshops, posters, and lightning talks (a series of rapid fire presentations to get your energy and ideas flowing!). Topics encompass landscape connectivity and planning, stream restoration, storm response and resiliency, invasive species management, lessons from past projects, and other ecological issues related to transportation systems.

There are workshops on emergency stream intervention training to help us be better poised for recovery from storms, trail camera best practices for monitoring wildlife near roads, and the use of citizen science in road ecology. We have a full afternoon field trip planned to showcase past and current projects that balance the needs of the regions transportation facilities with the protection and preservation the Adirondack Park, the largest publicly protected area in the contiguous United States.

Please visit [www.netwc.org](http://www.netwc.org) to see the full program agenda and to register online. We hope to see you in September at this highly interactive conference where we will share our knowledge, take in the stunning beauty of the natural surroundings of Lake Placid, and network with friends old and new.



**Some 17 million acres** of greenspace lines US highways and byways, and it's vital habitat for pollinators, as well as small voles and mice and birds. At the referral of the TRB Committee on Ecology and Transportation, *Living on Earth*, the weekly environmental news and information program distributed by Public Radio International, recently spoke with Bonnie Harper-Lore, a restoration ecologist formerly with the Federal Highway Administration. The conversation was about the value greenspace offers to wildlife and how President Lyndon Johnson's wife, Ladybird, helped uplift this elongated haven for creatures and wildflowers. You can listen to the segment by following the link: <http://www.loe.org/shows/segments.html?programID=16-P13-00027&segmentID=5>

Be on the lookout for this subject to be explored at the 2017 TRB Annual Meeting as part of a unique cross-cutting session, *Cultivating Resiliency: Revisiting the Roadside-Use of Native Plants for Sustainability, Safety, and Resource Conservation*.

# Wildlife Watch: Five Years of Citizen Science Observations

*Submitted by: Barbara Charry, Conservation Biologist/  
GIS Manager, Maine Audubon*

## Help us watch the road

**It's spring and wildlife are on the move. We need your help monitoring roads and reporting observations to our database.**

**Get involved at  
[maineaudubon.org/roadwatch](http://maineaudubon.org/roadwatch)**

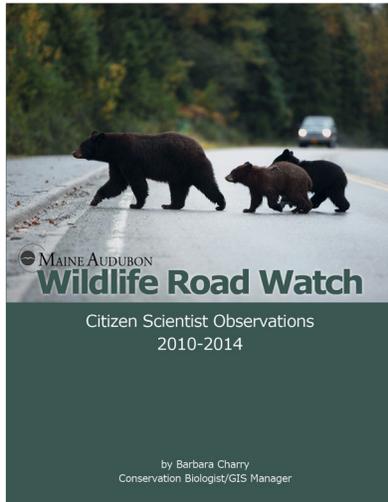
Maine Audubon's Wildlife Road Watch (WRW) is a citizen science project developed in partnership with the Maine Department of Inland Fisheries and Wildlife, Maine Department of Transportation and University of California, Davis Road Ecology Center. Volunteers record their observations of wildlife (both dead and alive) crossing roads across the state on the WRW website ([maineaudubon.org/wildliferoadwatch](http://maineaudubon.org/wildliferoadwatch)).

Wildlife need to move across the landscape to find food and water and areas to rest, breed and raise their young. Roads and traffic can make it difficult or impossible for animals to move safely. Wildlife populations can be greatly reduced or even undergo extirpation (local extinction) due to vehicle collisions, as well as the inability to move to necessary habitats.

Wildlife movement has become even more important for population survival as habitats shift and change

due to climate change and animals must adapt by moving to find more suitable habitat. Wildlife-vehicle collisions are also a serious safety issue for drivers. Identifying where animals are moving successfully and unsuccessfully across roads can help wildlife and road managers, at both the Maine Department of Transportation and local town level, know where to implement wildlife crossings and road enhancements to help animals cross roads safely and protect driver safety. This can include wildlife crossing underpasses, overpasses, fencing and signs.

Between July 2010 and December 31, 2014, over 460 volunteers recorded over 4800 wildlife observations. The observations were used in a geographic information system (GIS) to find stretches of road where wildlife road-crossing attempts occur more frequently (high density locations) and places where there are statistically-significant clusters of wildlife road-crossing attempts (hotspots). Both high density locations and hotspots are important for understanding and planning for wildlife movement. One of the findings from our analysis is that interstate interchanges, especially those near wetlands, streams and rivers, are a big source of mortality.



*Find the full report go to [maineaudubon.org/roadwatch](http://maineaudubon.org/roadwatch).  
View an interactive map of identified high density and hotspot locations.*



## Call for Papers

TRB 96th Annual Meeting, January 8-12, 2017, Washington, D.C.

Committee Friends, Bridget Donaldson & Ingeborg Hegemann collaborated on the development and submission of our Call for Papers, with contributed ideas from our friends and members, forming the backbone of our anticipated annual meeting program. To see or respond to our call-for-papers visit: <https://annualmeeting.mytrb.org/CallForPapers/Details/273>.

# Composting Roadkill: Research Leads to Implementation in Virginia

*Submitted by: Bridget Donaldson, Senior Research Scientist*

Millions of wildlife-vehicle collisions occur each year in the U.S. In Virginia, more than 56,000 of these are deer. Removing and disposing of the deer carcasses and those of the millions of other animals killed in collisions with vehicles are essential services that transportation agencies provide.

Most states manage roadkill with a combination of landfills and burial. Virginia and many other states are faced with a decreasing availability of landfills and a lack of viable burial areas. Road maintenance teams need roadkill management strategies that are viable, environmentally compliant, and cost-effective.

In 2009, the Virginia Transportation Research Council (VTRC) began a series of research projects to evaluate the environmental implications of composting roadkill and the utility of the practice as an option for managing the carcasses in a way that protects the environment and is compliant with state and federal regulations. VTRC evaluated static windrow composting and two types of compost vessels, the rotary drum and the forced aeration system (Figure 1).

With each composting method, several criteria were tested, including temperature rise, pathogen destruction, leachate volume and contaminants, and operational performance. The suitability of compost for road project applications was determined by testing compost for a suite of biological, physical, and chemical properties and conducting a demonstration project at a VDOT facility.

Mature compost generated from the evaluated composting methods met the U.S. Environmental Protection Agency’s compost specifications for transportation applications. In addition, compost used in seed germination tests resulted in plants that were significantly larger (by weight) than those grown with soil.

The VTRC research established that the composting methods evaluated are effective and do not contaminate groundwater or surface water and do not spread pathogens. Composting offers environmental benefits, potential savings, and a practical end product. These findings led to a joint memorandum of understanding (MOU) between VDOT and the Virginia Department of Environmental Quality for composting animal remains from roadway maintenance operations.

VTRC recently completed guidelines for composting, including detailed descriptions of materials, the steps, and the time and the temperatures needed to achieve compost maturity. The guidelines also include beneficial applications for the finished compost. Virginia DOT currently has five compost vessels that serve 15 maintenance areas. The agency plans to increase windrow composting throughout the state and to

locate several additional composting vessels strategically.

The research and implementation efforts are featured in a Research Pays Off article in the latest issue of TR News, the magazine of the Transportation Research Board (Figure 2).



Figure 2. The March-April 2016 edition of TR News, featuring roadkill composting research and implementation efforts in Virginia.

Figure 1. Three composting methods researched by VTRC: static windrows (left), forced aeration system (center), and rotary drum (right).



# A Citizen Science Survey of Mammalian Roadkill In South Africa: Emerging Patterns and Lessons Learned

Submitted by: Wendy Collinson

Roads impact wildlife through a range of mechanisms from habitat loss and decreased landscape connectivity to direct mortality from wildlife-vehicle collisions. These collisions have been rated amongst the highest modern risks to wildlife. With the development of citizen science projects, in which members of the public participate in data collection, it is now possible to monitor impacts of roadkill over scales far beyond the limit of traditional studies.



Stéphanie Périquet, a postdoctoral fellow from the University of the Free State, has been analysing the EWT’s roadkill database mammalian roadkill reports. These data are submitted via citizen science surveys (mainly the Road Watch cellphone app and data provided by road patrols) from across the country and will investigate what was reported killed on the roads and where. The goal of this study is also to consider the utility of citizen science survey as a new tool for conservation.

We examined a total of 2680 roadkill reports comprising 107 mammalian species from 14 orders, with the majority (79.3%) of these data submitted by regular and trained reporters (such as road patrols). Data from the regular reporters showed that carnivores (44%), small mammals ( $\leq 10\text{kg}$ , 25%) and nocturnal species (43%) were most commonly reported as roadkill (Figure 1) with the five species most frequently reported being Scrub Hare, various rabbit species, Bat-eared Fox, Black-backed Jackal and Aardwolf.

We also found that there were some provincial differences in terms of the species most reported killed which were most probably due to difference in species abundance in these provinces (Figure 2).

Based on these reports, we also identified three hotspots of roadkill reports: (1) on the N3 from Johannesburg to Durban, within the first 200 km (2) on the N12 from Kimberley to Victoria West, within 125 km of Kimberley and (3) on the N8 from Bloemfontein to Kimberley continuing on the R48 joining the N10 to the N1 (Figure 2). These three hotspots alone accounted for 35.3% ( $n=556$ ) of all mammal roadkill reported with a GPS location.

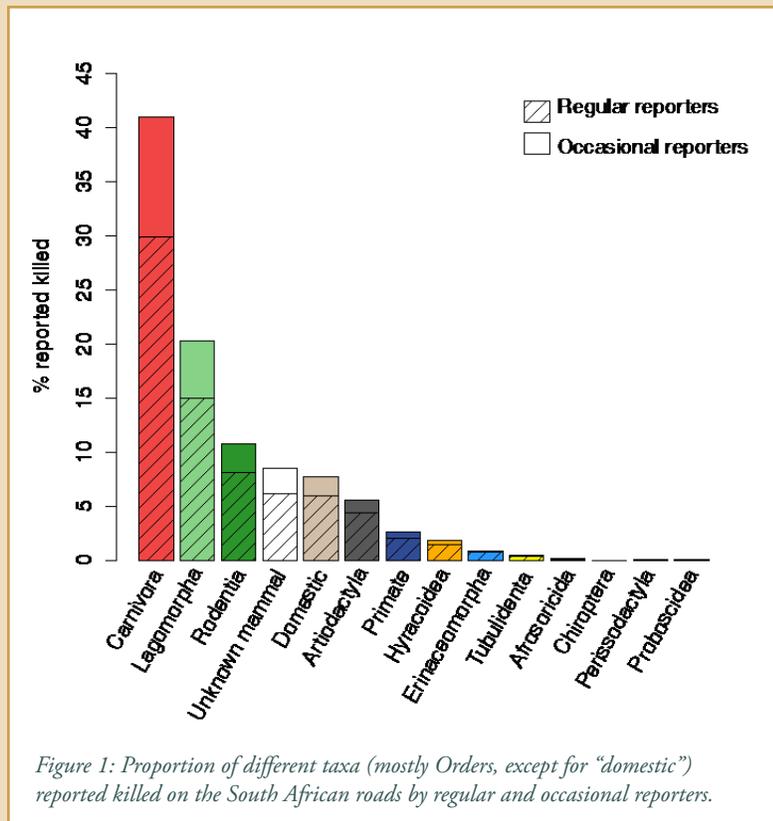
We found very little difference when comparing patterns of reports between regular and these of occasional ones (see Figure 1). Reports provided from occasional reporters also allowed the identification of the three major hotspots.

This study is the first to provide a nationwide survey of mammalian roadkill in South Africa. Observed patterns suggest that citizen science surveys can be used to provide robust roadkill data across large areas. Such surveys allow for the identification of potential roadkill hotspots and at-risk species, allowing researchers to focus their efforts, and ultimately leading to the design and implementation of effective roadkill-reduction measures.

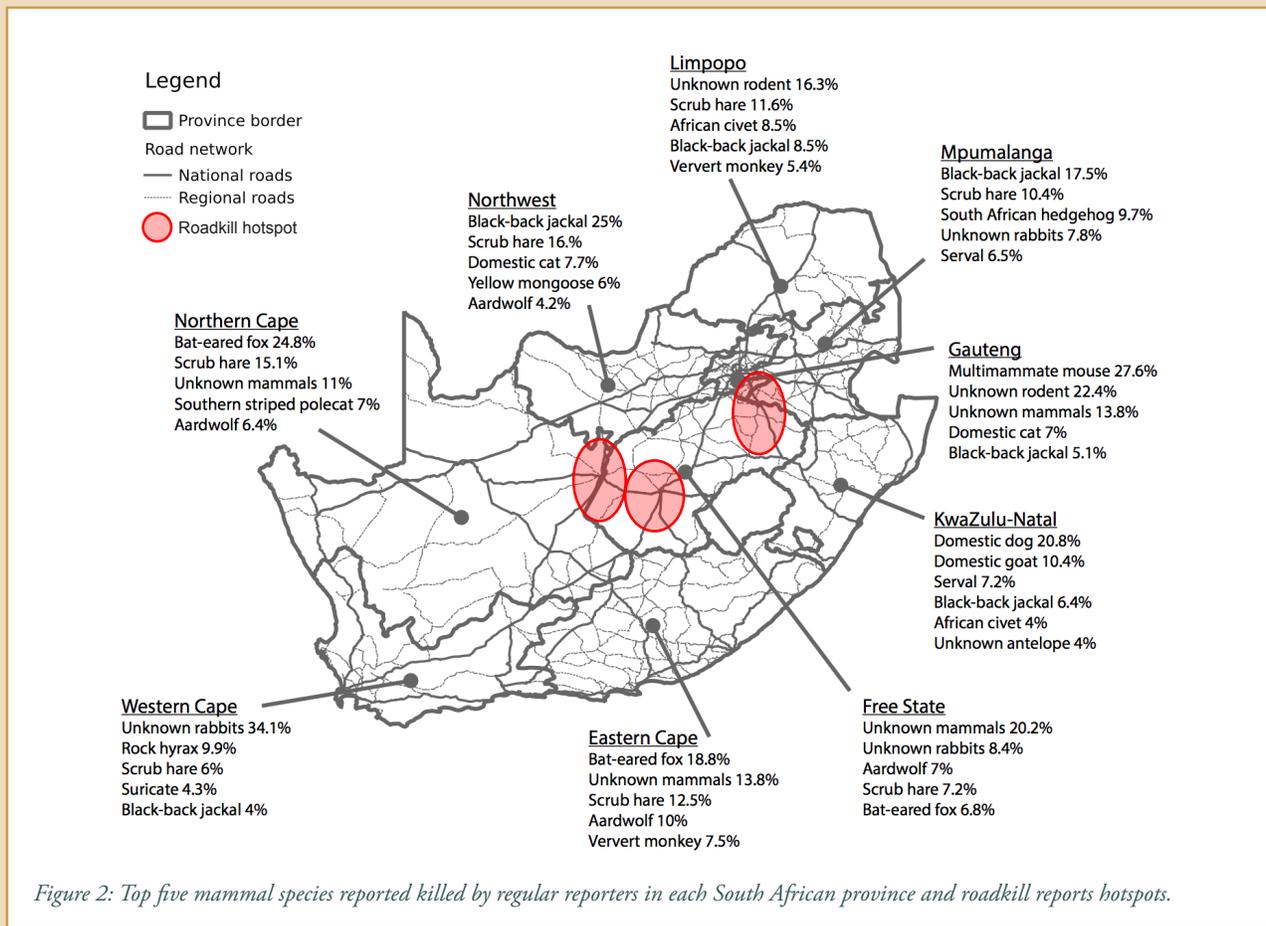
These results and conclusions will be presented and discussed at the next IENE conference taking place in Lyon, France late August 2016.

For more information, contact Stéphanie Périquet on [stephanie.periquet@gmail.com](mailto:stephanie.periquet@gmail.com) or visit [www.ewt.org.za](http://www.ewt.org.za)

■ LESSONS continued on page 7



■ LESSONS continued from page 6



## Florida DOT, District 4, Constructs Two Challenging Mangrove Wetland Restoration Projects in Broward County, Florida

*Submitted by: David Bogardus, Sr. Env. Scientist, Florida DOT, Ann Broadwell, Environmental Administrator, Florida DOT, Jeff Marcus, Principal, Stantec Consulting Services Inc., Craig Schmittler, Sr. Env. Scientist, Stantec Consulting Services, Inc.*

The Florida Department of Transportation, District 4, and their consultant team recently designed, permitted, constructed, and are currently completing the planting of, two mitigation sites in Broward County, Florida. The first site is located at the northwest corner of the property known as the Sheridan Street Natural Area (SSNA). The site is owned by the Broward County Parks and Recreation Department as

part of West Lake Park, a 1,569-acre recreation and natural area located in southeastern Broward County. The park is tidally influenced through a series of ditches and channels that directly connect the park to the Intracoastal Waterway (ICWW) on the east end of the Dania Cutoff Canal. The specific lot where this mitigation project was constructed is located at the corner of Sheridan Street and North 14th Avenue and has been previously cleared and filled for development. Prior to beginning the excavation of the mitigation area, contaminated soils containing concentrations of arsenic

■ MANGROVE continued on page 7

■ MANGROVE continued from page 6

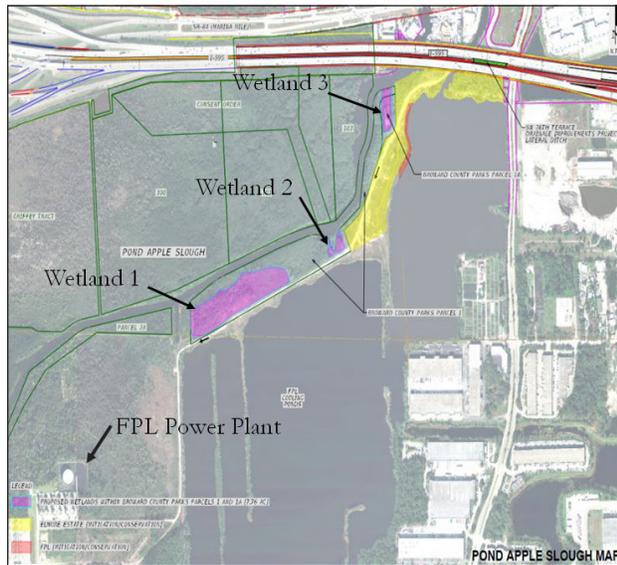


Figure 1. Overall Plan View of Pond Apple Slough Mitigation Project Site.

above acceptable commercial levels, had to be removed and transported to an approved upland disposal site. The mitigation activities included the excavation and grading of the property to create 2.29 acres of estuarine mangrove habitat and the associated transitional to upland fringe habitat. The project’s objective was to excavate a highly disturbed upland and create a healthy estuarine mangrove wetland system. The mitigation plan included planting approximately 6,300 red mangroves and 2,700 black mangroves to create a mangrove community at the upper tidal limits of West Lake Park. The plantings were completed May 16, 2016. The eastern edge of the created mitigation area abuts an existing mangrove wetland containing red mangroves, black mangroves, and white mangroves, which are expected to contribute seeds to naturally recruit into the newly created wetland system. The black mangrove plantings were concentrated at the western end of the mitigation area where ground elevations were slightly higher. The red mangroves were planted in the lower elevations closer to the existing system. An upland buffer area was created on the northern, western and southern fringes of the mangrove wetland. Plant species installed in this buffer zone included a diverse assemblage of upland and hammock species including Gumbo limbo, green buttonwood, and pigeon plum. Sand cordgrass, and sea oxeye daisy were planted at the top-of-slope. The unplanted sections of the buffer area were covered with mulch for the control of nuisance/exotic species.

The second site is the Pond Apple Slough mitigation site, which is located south of I-595 and west of SW 30th Avenue in Broward County, Florida. The project actually uses two vacant parcels (totaling 21.95 acres) that are also owned by Broward County. A significant portion of these

parcels is currently dominated by wetland habitat contiguous with the New River. However, historic mining activity on the adjacent property resulted in disturbances to a majority of the remaining upland habitats which were the focus of this habitat restoration project; the end result being the creation of approximately 9.48 acres of mangrove wetlands. The site was divided into three (3) individual wetland creation projects due to the fragmented nature of the disturbed upland habitats being restored. Wetland 1 (5.36 acres) is located at the southwestern end of the property and Wetland 2, located near the center of the project site, is 0.59 acres. Both of these areas required the clearing of exotic dominated disturbed lands remaining from the historic mining activities on site. Once the exotics had been removed, the vegetative debris was ground on site and processed to create sterile mulch which was used later to stabilize the bare ground areas between the plantings in the transitional and upland buffer habitats. The creation of transitional and upland buffer habitats resulted in an additional 2.39 acres of habitat restoration.

The third mitigation area on site, identified as Wetland 3, entailed a different type of habitat restoration. A small, deep finger canal located near the northern end of the property was backfilled to match adjacent wetland elevations to create mangrove habitat. The dense exotic shoreline vegetation surrounding the canal was removed and the area regraded. Spoil from the Wetland 2 upland excavation was trucked to this area for use as backfill for the finger canal. An earthen plug was installed across the mouth of the canal to prevent turbidity in the New River during the backfilling activities of the finger canal. It also allowed the fill to be placed in the canal without the need for manatee observ-

■ MANGROVE continued on page 8

Figure 2. Looking northeast across wetland mitigation area showing recently planted black and red mangroves.



■ MANGROVE continued from page 7

ers once the plug was completed. This habitat restoration in Wetland 3 resulted in the creation of 0.99 acres of wetlands and 0.15 acres of transitional upland buffer habitat.

Wetland 2 and Wetland 3 were completed in April of 2016. Wetland 1 plantings are expected to be completed by the end of June. The overall mitigation project resulted in the planting of the following species:

Red Mangroves ( <i>Rhizophora mangle</i> )	26,429
Pond Apple ( <i>Annona glabra</i> )	1,872
Green Buttonwood ( <i>Conocarpus erectus</i> )	33
Dahoon Holly ( <i>Ilex cassine</i> )	25
Sweet Bay Magnolia ( <i>Magnolia virginiana</i> )	15
Live Oak ( <i>Quercus virginiana</i> )	15
Leatherfern ( <i>Acrostichum danefolium</i> )	12,072
Sawgrass ( <i>Cladium jamaicense</i> )	4,049
Spider lily ( <i>Hymenocallis latifolia</i> )	1,735
Cocoplum ( <i>Chrysobalanus icaco</i> )	2,285
Scorpions Tail ( <i>Heliotropium agiospermun</i> )	8,702
Wild Coffee ( <i>Psychotira nervosa</i> )	2,285

The long term benefits from this project include: the eradication of the nuisance and exotic vegetation on the properties adjacent to the New River, the addition of 6.94 acres of wetland habitat in areas that previously were a source of potential turbidity, erosion and pollutants from the previous mining activities, and the filling of the deep finger canal eliminate a source of poor water quality, and the created wetlands will provide additional water quality treatment and habitat previously not available. It is important to note that these projects were developed as a team effort between Broward County and FDOT, District 4.

Figure 3. Wetland 2 showing pond apple plantings and cocoplums, spider lilies and scorpiontail in buffer habitat.



Figure 4. Wetland 3 Showing mangrove plantings in background, with sawgrass and spider lilies in foreground.

Both of these projects reflect FDOT’s commitment to maintaining Florida’s unique wetlands and natural habitats while continuing to serve the public by providing necessary transportation facilities throughout the State. FDOT and their consulting teams are always creatively thinking of new ways to offset unavoidable impacts associated with road improvement projects to allow necessary road projects to continue with minimal effects on Florida’s natural communities. By restoring these coastal wetlands, reconnection to native black and red mangroves as well as pond apple habitat was established that has enhanced the total ecosystem helping to restore and improve its overall functionality; thereby, providing an opportunity for greater wildlife utilization in an urbanized environment.

# Committee Members

## April 2016-April 2019

Andrew Alden, Blacksburg VA  
Virginia Tech Transportation  
Institute

Kimberly Andrews, PhD, Aiken SC  
University of Georgia, Savannah  
River Ecology Laboratory

Wendy Collinson, Johannesburg,  
South Africa  
Endangered Wildlife Trust

Patricia Cramer, PhD, Logan UT  
Utah State University

Ed Frantz, Utica NY  
New York State Department of  
Transportation

Kris Gade, PhD, Phoenix AZ  
Arizona Department of  
Transportation

Jeff Gagnon, Phoenix AZ  
Arizona Game and Fish Department

Meghan Hedeem, Atlanta GA  
Georgia Department of  
Transportation

Jennifer Hopwood, Portland OR  
Xerces Society

Jason Jurgens, Lincoln NE  
Nebraska Department of Roads

James Kagan, Portland OR  
Oregon State University

Julia Kintsch, Golden CO  
ECO-resolutions, LLC

Bethany Kunz, PhD, Columbia MO  
US Geological Survey, Columbia  
Research Station

Kathleen Kurgan, Washington DC  
AASHTO

Alexander Levy, Atlanta, GA  
VHB, **Committee Chair**

Will McGoldrick, Columbia SC  
South Carolina Department of  
Transportation

Todd Nichols, Baltimore, MD  
Maryland State Highway  
Administration

Marlys Osterhues, Washington DC  
Federal Highway Administration,  
Headquarters

Marisa Rodriguez-McGill,  
New Haven CT  
Yale University

Ed Samanns, Morristown NJ  
The Louis Berger Group, Inc.

Brian Sayre, Parsippany NJ  
Dewberry

Julianne Schwarzer, Cambridge MA  
USDOT Volpe National  
Transportation Research Center  
**2017 Program Coordinator**

Andreas Seiler, PhD,  
Riddarhyttan, Sweden  
Swedish University of Agricultural  
Science

Fraser Shilling, PhD, Davis CA  
University of California, Davis

Jeffrey Simmons, Columbia, SC  
Stantec Consulting, Inc.  
**Committee Communications  
Coordinator**

Todd Williams, Phoenix AZ  
Michael Baker International, Inc.  
**Committee Research Coordinator**

Chris Slesar, Montpelier, VT  
Vermont Agency of Transportation

Daniel Smith, PhD, Orlando, FL  
University of Central Florida  
**2017 Paper Review Coordinator**

Deb Wambach, Helena, MT  
Montana Department of  
Transportation

Xinjun Wang, PhD, Beijing, China  
China Academy of Transportation  
Science

***With sincere gratitude to  
our outgoing committee  
members:***

**Bethaney Bacher-Gresock,**  
Madison WI  
Federal Highway Administration,  
Wisconsin Division

**Marcia Bowen,** Falmouth ME  
(Retired) Normandeau Associates

**Joseph Burns,** Washington DC  
US Forest Service, Headquarters

**Lars Carlson,** PhD, Boston MA  
Jacobs Engineering

**Ian Chidister,** Madison WI  
Federal Highway Administration,  
Wisconsin Division

**Shannon Cox,** Raleigh NC  
Planning Communities

**Bridget Donaldson,**  
Charlottesville VA  
Virginia Tech Transportation  
Institute  
**Website Revision & Call for Papers  
Coordinator**

**Amanda Hardy,** PhD, Bozeman MT  
Wildlife Conservation Society

**Sandra Jacobson,** Davis CA  
US Forest Service, Pacific Southwest  
Research Station

**Jeffrey Lidicker,** PhD, Berkeley CA  
Jeffrey Lidicker Consulting

**Scott Marler,** Ames IA  
Iowa Department of Transportation

**James Martin,** Raleigh NC  
North Carolina State University

**Ray Schweinsburg,** PhD, Phoenix AZ  
Arizona Game and Fish Department

**Paul Wagner,** Olympia WA  
Washington State Department of  
Transportation

**Benjamin White,** Juneau AK

## Introducing a Few of Our New Committee Members

### Dr. Kimberly Andrews



Dr. Kimberly Andrews has a joint position as a staff researcher and educator at the University of Georgia's (UGA) Savannah River Ecology Lab in Aiken, SC and is the Research Coordinator for the Georgia Sea Turtle Center on Jekyll Island, where she established a research and graduate student program through her graduate faculty affiliation with the UGA Odum School of Ecology. The research in this integrated Applied Wildlife Conservation Lab focuses on spatial ecology, human-wildlife interactions, road effects, the assessment of wildlife-compatible designs for small vertebrates, developing approaches for retaining ecological viability and permeability in urbanizing landscapes, and advancing ecological studies through the integration of wildlife health. Kimberly works with coastal projects in Georgia and South Carolina to address impacts of development designs on wildlife movement patterns,

human-wildlife conflict assessment and reduction, and long-term ecosystem functioning. She assists property owners and managers in assessing development designs and communicating conservation priorities to the public. Additionally, she engages in environmental planning using ecological modeling assessments to project and prioritize sensitive species and habitats on federal lands as they may be influenced by local and global human activity. She is also the national chair of the PARC (Partners in Amphibian and Reptile Conservation) Roads Task Force group whose objective is to disseminate information, form collaborations, and assist in product development that inform wildlife enhancement components of transportation projects. Kimberly incorporates education and public involvement as a major component of all conservation research and management. Kimberly earned her Ph.D. in Ecology (2010), a M.Sc. in Conservation Ecology and Sustainable Development (2004), and a B.Sc. in Ecology (1999) from the UGA Odum School of Ecology.

### Julia Kintsch



Julia Kintsch is a conservation ecologist based and the founder of ECO-resolutions ecological resource consulting. Julia works directly with transportation, wildlife and land management agencies and communities in planning and designing for wildlife movements across large landscapes. Her work includes conducting connectivity analyses, designing highway mitigation, monitoring mitigation effectiveness, and facilitating stakeholder participation. Her work in conservation planning has been recognized by the Federal Highway Administration as an Exemplary Ecosystem Initiative. While largely focused in Colorado, her projects span the U.S. and Canada. Julia is a certified senior ecologist endorsed by the Ecological Society of America. She earned a master's degree in landscape ecology from Duke University and a bachelor's in environmental studies and German from the University of Colorado at Boulder.

### Andreas Seiler



Andreas Seiler works at Grimsö Wildlife Research Station and the Swedish Biodiversity centre, both at the Swedish University of Agricultural Sciences (SLU). He studies various aspects concerning landscape fragmentation due to infrastructure, in particular, traffic mortality in wildlife, prevention of animal-vehicle collisions, and mitigation of barrier effects on wildlife and traffic noise disturbance in birds. He has been involved in a number of follow-up studies and monitoring projects of new roads and railroads and works closely together with the Swedish Road and Rail Administrations on different ecological issues. Andreas has his PhD in wildlife biology from the SLU in 2003 and is active in the Infra Eco Network Europe (IENE).

■ PROFILE continued on page 11

■ PROFILE continued from page 10

## Jeff Simmons



Jeff Simmons recently assumed the role of Communications Coordinator for TRB ADC30. He is a Professional Wetland Scientist and New Hampshire-Certified Wetland Scientist with more than 25 years of professional experience in the transportation, electric transmission, renewable energy, and commercial development markets. His project portfolio includes a variety of highway, rail, bridge, and airport projects, as well as several grid scale wind farms and large electric substation and transmission facilities. Mr. Simmons has led numerous multidisciplinary teams in preparing NEPA and analogous State documents,

and he has routinely prepared Federal and State regulatory permits, and developed large scale compensatory wetland mitigation sites. Jeff is a former employee of the Connecticut Department of Transportation (CTDOT), Office of Environmental Planning, where he oversaw environmental permit compliance for active construction projects across the State of Connecticut, provided training to CTDOT maintenance staff in environmentally sensitive construction sequencing and proper implementation of erosion controls, and completed numerous permit documents in support of the Department's activities. Jeff is currently a Principal at Stantec, and is the company's US Environmental Services Leader for the Transportation Sector. He is also a member of the American Railway Engineering and Maintenance-of-Way Association (AREMA) Technical Committee 13 (Environmental). Jeff's education includes a BS in Environmental Science, and a MS in Natural Resources (Soil Science Option) from the University of New Hampshire.

## 2017 Environmental Excellence Awards

Application Period Opens August 1, 2016!

### 2017 Categories

#### Organization and Process Innovation

- Accelerating Project Delivery
- Collaboration and Partnership
- Educational and Training Programs
- Environmental Leadership
- Environmental Research
- Programmatic Agreements

#### Natural Environment

- Air Quality and Greenhouse Gas Emissions
- Climate Change Adaptation and Resilience
- Ecosystems, Habitat, and Wildlife
- Environmental Leadership
- Roadside Resource Management and Maintenance
- Wetlands, Watersheds, & Water Quality

#### Human Environment

- Community Considerations in Transportation Improvements
- Nonmotorized & Multimodal Transportation
- Demonstrated Advances in Nondiscrimination, Including Environmental Justice
- Cultural and Historic Resources
- Context Sensitive Solutions



For general questions, please email:

[EEAwardsNomination@dot.gov](mailto:EEAwardsNomination@dot.gov)

Organization and Process Innovation

[Damaris.Santiago@dot.gov](mailto:Damaris.Santiago@dot.gov)

Natural Environment

[Connie.Hill@dot.gov](mailto:Connie.Hill@dot.gov)

Human Environment

[Brenda.Kragh@dot.gov](mailto:Brenda.Kragh@dot.gov)

## The National Academies of SCIENCES • ENGINEERING • MEDICINE



TRANSPORTATION RESEARCH BOARD

The views expressed in this newsletter are those of the authors and do not reflect the policies or opinions of TRB, or the National Academy of Science, or Stantec.



Editor: Jeff Simmons  
Coordination: Kate McPherson  
Layout: Carrienne Knight