Transportation and the Environment

Mutual Enhancements

- Collaboration, Contexts, and Sustainability
- Air Quality Successes and Challenges
- Safe Road Passages for Wildlife
- Public Outreach on Transportation Noise
- Preserving History, Building Infrastructure
National Academy of Sciences
National Academy of Engineering
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National Research Council

The Transportation Research Board is one of six major divisions of the National Research Council, which serves as an independent adviser to the federal government and others on scientific and technical questions of national importance, and which is jointly administered by the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The mission of the Transportation Research Board is to provide leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. The Board’s varied activities annually engage about 7,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

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TRANSPORTATION AND THE ENVIRONMENT: MUTUAL ENHANCEMENTS

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The Environment and Transportation: Making Both Better Than Before
Mark S. Kross
Integrated transportation systems and environmental solutions are making not only transport but the environment better than before. Collaboration associated with contexts has become a hallmark of these efforts, addressing transportation needs through environmentally sensitive solutions assisted by directed research.

4 POINT OF VIEW
Transportation and Environmental Sustainability: Taking “Making It Better Than Before” into the Future
Rick Record and Andras Fekete
The National Environmental Policy Act has made sustainability part of the transportation decision-making process; the authors identify continuing principles and call for collaboration among federal agencies and stakeholders to provide guidance and accountability for the many efforts launched under stewardship, sustainability, smart growth, context-sensitive solutions, environmental management, and related initiatives.

8 Air Quality Management: Successes and Emerging Challenges
Jeffrey Houk and Michael Claggett
Solving the air pollution problems caused by transportation, particularly from highways, has been a focus of policy makers for decades. Research and experience have improved understanding and control of transportation-related air pollution, but new challenges are arising—such as tightened standards for ozone and emissions of particulate matter, as well as efforts to mitigate and adapt to climate change.

Patricia C. Cramer and John A. Bissonette
Transportation ecology focuses on the interactions of organisms and the environment with transportation infrastructures and vehicles. A major goal is to understand the effects of roads on wildlife populations and to develop measures to assist wildlife over and under roads—to prevent collisions with vehicles and to help wildlife and aquatic species move across accustomed areas.

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Hugh Saurenman, Adam Alexander, and Nicholas Miller
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Judith L. Rochat
features articles on innovative and timely research and development activities in all modes of transportation. Brief news items of interest to the transportation community are also included, along with profiles of transportation professionals, meeting announcements, summaries of new publications, and news of Transportation Research Board activities.

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Antony F. Opperman, Hope E. Luhman, Emily Pettis, and Stephanie Stoermer
Accommodating historic preservation concerns can be a difficult environmental challenge for transportation projects. Historic preservation research is working to improve transportation project delivery and the stewardship of historic assets involved in the transportation system. The authors examine three areas: the designation of historic status, the treatment of the recent historic past, and the preservation of historic bridges.

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Road and transportation congestion pricing—the various types in use and proposed, as well as their motivations—are examined in feature articles slated for the July–August TR News. Authors look at high-occupancy toll lanes, managed lanes, truck tollways, busways, uses of revenue, traffic flow and capacity, nontoll pricing, and tolling technology in the United States and abroad and consider the effects of congestion pricing on emissions reduction in Europe and on transportation planning practice.

Road prices are posted for MnPASS users connecting to I-94 and Highway 100 outside of downtown Minneapolis, Minnesota. MnPASS allows solo drivers to use a high-occupancy vehicle lane by paying an electronic toll; fees are based on traffic levels in the express lanes to ensure traffic flows at 50 to 55 miles per hour and on the vehicle's entrance and exit points.