



TRANSPORTATION RESEARCH BOARD

Environment & Sustainability in Transportation Overview

TRB at a Glance

The mission of the Transportation Research Board (TRB) is to provide leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal.

A resource to the nation and to the transportation community worldwide, TRB provides an extensive portfolio of services:

- Opportunities for information exchange on current transportation research and practice,
- Management of cooperative research and other research programs,
- Analyses of national transportation policy issues and guidance on federal and other research programs
- Publications and access to research information from around the world.

More info at www.trb.org

TRB's Transportation Research Information Services (TRIS)

TRIS includes the TRB Library and the TRIS Databases (listed below) which are available for free on TRB's website.

The TRB Library provides information services to TRB staff, sponsors, TRB Committee members and panels and researchers. Access to the TRB Library is a benefit to TRB sponsors and TRB committee members.

In cooperation with your State DOT Library or Information Service, the TRB Library provides:

- Reference and research assistance
- Literature searches
- Articles for TRB Committee work

The TRB Library provides training on effective and efficient use of the following TRIS resources:

TRID – The world's largest and most comprehensive bibliographic source on all modes and disciplines of transportation
trid.trb.org

Practice Ready Papers (PRP) Database - Papers with information that is ready for immediate implementation or requires minimal additional research or implementation effort.
prp.trb.org

Publications Index (PubsIndex) Database – The papers, articles and reports published by the Transportation Research Board, Highway Research Board, Strategic Highway Research Programs or the Marine Board
pubsindex.trb.org

Research in Progress (RiP) Database – Current or recently completed transportation research projects
rip.trb.org

Research Needs Statements (RNS) – Research needs as identified by TRB Technical Activities standing committees
rns.trb.org

More information about TRIS is available online at: <http://www.trb.org/InformationServices/InformationServices.aspx>
Contact the Library at TRBLibrary@nas.edu or 1 (202) 334-2989

Upcoming and Recent Events

- Conferences (co-sponsored by TRB):
 - July 15, 2017 Sharm ElSheikh, Egypt **GeoMEast International Conference: “Innovative Infrastructure Geotechnology”**
 - July 23, 2017 Minneapolis, Minnesota **Transportation-Related Noise and Vibration Committee Summer**

Information continues behind



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Conference

- September 11, 2017 Washington, D.C. **The Second TRB Conference on Transportation Needs of National Parks and Public Lands: Partnerships for Enhancing Stewardship and Mobility**
- September 11, 2017 Washington, D.C. **Transportation and Federal Land Partnerships: Enhancing Stewardship and Mobility**
- April 16, 2018 Vienna, Austria **Transport Research Arena 2018**
- July 23, 2018 Hangzhou, Zhejiang, China **GeoChina 2018 International Conference**

• **Webinars:**

- August 21, 2017 **New Pavement Engineering Technologies - The Long Term Pavement Performance Climate and Bind Tools**
- August 22, 2017 **Geometric Highway Design Process for the 21st Century**

View TRB webinars here: <http://www.trb.org/ElectronicSessions/ConferenceRecordings.aspx>

Technical Committees

Technical Activities Division (TAD) Standing Committees:

- ABE40 [Transportation and Sustainability](#)
- A0020T [Special Task Force on Climate Change and Energy](#)
- AD000 [Planning and Environment Group](#)
- ADC00 [Section - Environment and Energy](#)
- ADC10 [Standing Committee on Environmental Analysis in Transportation](#)
- ADC20 [Standing Committee on Transportation and Air Quality](#)
- ADC30 [Standing Committee on Ecology and Transportation](#)
- ADC40 [Standing Committee on Transportation-Related Noise and Vibration](#)
- ADC50 [Standing Committee on Historic and Archeological Preservation in Transportation](#)
- ADC60 [Standing Committee on Resource Conservation and Recovery](#)
- ADC70 [Standing Committee on Transportation Energy](#)
- ADC80 [Standing Committee on Alternative Transportation Fuels and Technologies](#)
- ADD40 [Standing Committee on Transportation and Sustainability](#)
- ADD50 [Standing Committee on Environmental Justice in Transportation](#)
- ADD55T [Task Force on Arterials and Public Health](#)
- AFB40 [Standing Committee on Landscape and Environmental Design](#)
- AFB60 [Standing Committee on Hydrology and Hydraulics](#)
- AFB65 [Standing Committee on Stormwater](#)
- AL050 [Standing Committee on Environmental Issues in Transportation Law](#)
- AT040 [Standing Committee on Transportation of Hazardous Materials](#)
- AV030 [Standing Committee on Environmental Impacts of Aviation](#)
- AW030 [Standing Committee on Marine Environment](#)

Joint Subcommittee

- Health in Transportation

Council:

- [A0040T Young Members Council \(YMC\)](#)



To become Friend of any committee visit MyTRB.org

Cooperative Research Program (CRP)

ACRP Reports

○ Guidebook for Selecting Methods to Monitor Airport and Aircraft Deicing Materials	2017	ACRP Research Report Issue: 72 (2 nd edition)
○ Green Stormwater Infrastructure - Volume 2: Guidebook	2017	ACRP Research Report Issue: 174
○ Green Stormwater Infrastructure - Volume 1: Primer	2017	ACRP Research Report Issue: 174
○ Use and Potential Impacts of AFFF Containing PFASs at Airports	2017	ACRP Research Report Issue: 173
○ Clean Water Act Requirements for Airports	2017	ACRP Research Report Issue: 169
○ Interpreting the Results of Airport Water Monitoring: A Guidebook	2017	ACRP Research Report Issue: 166
○ Tracking Alternative Jet Fuel	2016	ACRP Research Report Issue: 165
○ Exhaust Emissions from In-Use General Aviation Aircraft	2016	ACRP Research Report Issue: 164
○ Guidebook for Assessing Airport Lead Impacts	2016	ACRP Research Report Issue: 162
○ Addressing Significant Weather Impacts on Airports: Quick Start Guide and Toolkit	2016	ACRP Report Issue: 160
○ Deriving Benefits from Alternative Aircraft-Taxi Systems	2016	ACRP Report Issue: 158
○ NextGen for Airports, Volume 5: Airport Planning and Development	2017	ACRP Report Issue: 150
○ NextGEN for Airports, Volume 3: Resources for Airports	2016	ACRP Report Issue: 150
○ NextGEN for Airports, Volume 2: Engaging Airport Stakeholders Guidebook	2016	ACRP Report Issue: 150
○ NextGen for Airports, Volume 4: Leveraging NextGen Spatial Data to Benefit Airports: Guidebook	2016	ACRP Report Issue: 150

NCHRP Reports

○ Mapping Heavy Vehicle Noise Source Heights for Highway Noise Analysis	2017	NCHRP Research Report Issue: 842
○ A Watershed Approach to Mitigating Stormwater Impacts	2017	NCHRP Research Report Issue: 840
○ Evaluation and Assessment of Environmentally Sensitive Stream Bank Protection Measures	2016	NCHRP Report Issue: 822
○ Navigating Multi-Agency NEPA Processes to Advance Multimodal Transportation Projects	2016	NCHRP Report Issue: 827

Transportation Research E-Circulars

○ Trends and Issues in Marine Transportation and the Environment	2016	Transportation Research E-Circular Issue: E-C206
○ Surface Transportation System Resilience to Climate Change and Extreme Weather Events: First International Conference	2016	Transportation Research E-Circular Issue: E-C204
○ Transportation for Sustainability: An International Conference. May 6-8, 2015, Washington, D.C.	2016	Transportation Research E-Circular Issue: E-C203

Other Reports

○ Development of a NO_x Chemistry Module for EDMS/AEDT to Predict NO₂ Concentrations	2016	ACRP Web-Only Document Issue: 30
○ Evaluation of Small Quantities of Class 3 and Class 9 Hazardous	2016	HMCPR Web-Only Document



- Current research
 - Effective Decision-Making Methods for Freight-Efficient Land Use. <http://rip.trb.org/view/1460536>
 - Evaluating the Suitability of Roadway Corridors for Use by Monarch Butterflies. <http://rip.trb.org/view/1459512>
 - Right-Sizing Transportation Investments--Methods for Planning and Programming. <http://rip.trb.org/view/1458283>
 - Research for AASHTO Standing Committee on Highways. Task 399. Identifying Bridge Maintenance and Preservation Activities which Minimize Environmental Impact. <http://rip.trb.org/view/1463488>
 - Synthesis of Information Related to Airport Practices. Topic S02-17. Sustainability's Role in Airport Growth. <http://rip.trb.org/view/1440771>
 - Synthesis of Information Related to Airport Practices. Topic S02-18. Airport Waste Management and Recycling Practices. <http://rip.trb.org/view/1440770>
 - Synthesis of Information Related to Airport Practices. Topic S02-19. Airport Experience with Alternative Fuels and Vehicles-Private Ground Transportation Operators. <http://rip.trb.org/view/1440769>
 - Task Order Support for ACRP Insight Events. Task 16-03. Forum on Airport Roles in Reducing Communicable Diseases Transmission. <http://rip.trb.org/view/1440674>
 - Synthesis of Information Related to Airport Practices, Topic S02-19. Airport Experience with Alternative Fuels and Vehicles V Private Ground Transportation Operators. <http://rip.trb.org/view/1427755>
 - Synthesis of Information Related to Airport Practices, Topic S02-18. Airport Waste Management and Recycling Practices. <http://rip.trb.org/view/1427756>
 - Synthesis of Information Related to Airport Practices, Topic S01-16. Microgrids and their Application at Airports. <http://rip.trb.org/view/1427757>
 - Sustainable Highway Construction Practices. <http://rip.trb.org/view/1400108>
 - Research for the AASHTO Standing Committee on Public Transportation. Task 72. Small System Alternative Fuel Strategies. <http://rip.trb.org/view/1471598>
 - Synthesis of Information Related to Transit Practices. Topic SA-41. Battery Electric Buses - State of the Practice. <http://rip.trb.org/view/1460535>
 - Synthesis of Information Related to Transit Practices. Topic SA-41. Electric Battery Buses - State of the Practice. <http://rip.trb.org/view/1410364>
 - Synthesis of Information Related to Airport Practices. Topic S02-16. Airport Community, Water Quality Events, and the Aircraft Drinking Water Rule. <http://rip.trb.org/view/1440772>
 - Guidelines for the Waste Concrete Fines. <http://rip.trb.org/view/1334963>
 - Reducing the Impact of Lead Emissions at Airports. <http://rip.trb.org/view/1331144>
 - Improving AEDT Noise Modeling of Hard, Soft, and Mixed Ground Surfaces. <http://rip.trb.org/view/1331141>
 - Dispersion Modeling Guidance for Airports Addressing Local Air Quality Health Concerns. <http://rip.trb.org/view/1331145>
 - Assessing Community Annoyance of Helicopter Noise.



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- <http://rip.trb.org/view/1331580>
- Field Evaluation of Reflected Noise from a Single Noise Barrier.
<http://rip.trb.org/view/1335816>
- Research for the AASHTO Standing Committee on the Environment. Task 78. Programmatic Agreements for Project-Level Air Quality Analyses Using MOVES, CAL3QHC/R and AERMOD.
<http://rip.trb.org/view/1332758>
- Field Performance of Corrugated Pipe Manufactured with Recycled Polyethylene Content.
<http://rip.trb.org/view/1332069>
- Measuring PM Emissions from Aircraft Auxiliary Power Units, Tires and Brakes.
<http://rip.trb.org/view/1230144>

- Upcoming/proposed projects
 - Assessing Aircraft Noise Conditions Affecting Student Learning.
<http://rip.trb.org/view/1230071>
 - Recycling Strategies for the Airport Industry.
<http://rip.trb.org/view/1230146>
 - Test Procedures and Classification Criteria for Release of Toxic Gases from Water-Reactive Materials.
<http://rip.trb.org/view/1231454>
 - Travel Impacts and Greenhouse Gas Benefits of Rural and Smaller Community Land Use Strategies.
<http://rip.trb.org/view/1232125>
 - Quick Response for Special Needs. Task 18. Primer on Carbon Credits and Revenue Opportunities for Airports.
<http://rip.trb.org/view/123224>
 - Synthesis of Information Related to Airport Problems. Topic S02-13. Helicopter Noise Information for Airport Noise Managers.
<http://rip.trb.org/view/1330725>
 - Guidelines for the Consideration of Atmospheric Effects for Improved Noise Modeling.
<http://rip.trb.org/view/1330937>
 - Research for the AASHTO Standing Committee on the Environment. Task 100. Compilation of Existing Data on Northern Long-Eared and Other Cave-Dwelling Bat Habitat and the Roadside Environment.
<http://rip.trb.org/view/1357464>
 - Task Order Support for ACRP Insight Events. Task 16-02. Forum on Economic and Social Sustainability at Airports.
<http://rip.trb.org/view/1373411>
 - Synthesis of Information Related to Airport Practices. Topic S02-16. Airport Experience with Implementing Notifications Required by the Aircraft Drinking Water Rule.
<http://rip.trb.org/view/1377075>
 - Sustainability Website Ownership and Operation.
<http://rip.trb.org/view/1403208>
 - Quantifying the Impact of Freight-Efficient Land Use Patterns to Support Effective Decision Making.
<http://rip.trb.org/view/1406908>
 - Guidebook for Implementing Constructability Across the Entire Project Development Process: NEPA to Final Design.
<http://rip.trb.org/view/1407095>
 - Synthesis of Information Related to Highway Practices. Topic 48-15. Determine the Value of Multimodal Projects Versus Added Capacity Highway Projects.
<http://rip.trb.org/view/1407096>
 - Synthesis of Information Related to Highway Practices. Topic 48-14. State of Practice of State DOTs and



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Metropolitan Planning Organizations in Analyzing Data for Managing Transportation Performance.

<http://rip.trb.org/view/1407097>

- Evaluating the Use of Highway Corridors by Monarch Butterflies.
<http://rip.trb.org/view/1407188>
- Effective Performance Management for Transportation Agencies.
<http://rip.trb.org/view/1407189>
- Transforming Roadside Management Technology and Practices for the Benefit of Safety, Ecology, and Economy.
<http://rip.trb.org/view/1407201>
- The Effectiveness of Compost Amended Vegetated Filter Strips Using a Compost Blanket Application Method for Pollutant Removal from Highway Runoff.
<http://rip.trb.org/view/1407202>
- Evaluating the Effectiveness of Hazard Zoning at General Aviation Airports.
<http://rip.trb.org/view/1417998>
- Commercial Space Transportation Noise Measurements.
<http://rip.trb.org/view/1418004>
- Quantifying Emissions Reductions at Airports from the Use of Alternative Jet Fuel.
<http://rip.trb.org/view/1418005>
- Handbook for Airports Evaluating Climate Resilience through Benefit Cost Analysis.
<http://rip.trb.org/view/1418007>
- Design and Use of a Green Revolving Fund at Airports.
<http://rip.trb.org/view/1418008>
- Evaluating the Environmental Benefits of Electric Air Conditioning and Power at Gates.
<http://rip.trb.org/view/1418009>
- Synthesis of Information Related to Airport Practices. Topic S02-17. Sustainability's Role in Airport Growth.
<http://rip.trb.org/view/141872>
- Legal Aspects of Airport Programs. Topic 09-02. Legal Issues Relating to Airports Promoting Competition.
<http://rip.trb.org/view/1421301>
- Quick Response for Special Needs. Task 28. Recovering International Recyclables from In-flight Service.
<http://rip.trb.org/view/1435652>
- Transportation System Resilience: CEO Primer & Engagement.
<http://rip.trb.org/view/1439859>
- Using Vegetated Compost Blankets to Achieve Highway Runoff Volume and Pollutant Reduction.
<http://rip.trb.org/view/1439860>
- Rapid Tests and Specifications for Construction of Asphalt-Treated Cold Recycled Pavements.
<http://rip.trb.org/view/1439863>
- Effective Performance Management by Transportation Agencies - Benchmarking and Comparative Measurement.
<http://rip.trb.org/view/1451126>
- Effective Low-Noise Rumble Strips.
<http://rip.trb.org/view/1467311>
- Improved Methodology to Accurately Determine Wind Drag Coefficients for Highway Signs and Their Support Structures.
<http://rip.trb.org/view/1467312>
- Update Permanent Vegetation Control (Barriers) for Roadside.



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<http://rip.trb.org/view/1467313>

- Surface Transportation Resilience and Security Research. Task 56. Support for State DOT Transportation Systems Resilience and All-Hazards Programs.
<http://rip.trb.org/view/1467497>
- Methods for State DOTs to Reduce Greenhouse Gas Emissions from the Transportation Sector.
<http://rip.trb.org/view/1467498>
- Quantifying the Contribution of Vehicle Emissions to Local Air Quality.
<http://rip.trb.org/view/1467499>
- Develop a Formula for Determining Scour Depth around Structures in Gravel-bed Rivers.
<http://rip.trb.org/view/146750>
- Assessment and Simplification of Pavement Environmental Effects Models on Pavement Performance.
<http://rip.trb.org/view/1472756>

Panel Member nominations accepted (<http://www.trb.org/TCRP/CRPInfoPanelMembers.aspx>)

Second Strategic Highway Research Program (SHRP 2)

- SHRP 2 Report, Issue SHRP 2 Capacity Project - Pilot Testing of the TCAPP Decision Guide and Related Capacity Products: Oregon Metro Greenhouse Gas Planning.
- SHRP 2 Report, Issue S2-C06-RW-4 - Manager's Guide to the Integrated Ecological Framework.
- SHRP 2 Report, Issue S2-C06-RW-2 - An Ecological Approach to Integrating Conservation and Highway Planning, Volume 2.
- SHRP 2 Report, Issue S2-C06-RW-1 - An Ecological Approach to Integrating Conservation and Highway Planning, Volume 1.
- SHRP 2 Report, Issue S2-C41-RW-1 - TCAPP and Integrated Ecological Framework Pilot Projects: Synthesis of Lessons Learned.
- SHRP 2 Report, Issue S2-C06-RW-3 - Practitioner's Guide to the Integrated Ecological Framework.
- SHRP 2 Report, Issue S2-C09-RW-2 - Practitioner's Guide to Incorporating Greenhouse Gas Emissions into the Collaborative Decision-Making Process.
- SHRP 2 Report, Issue S2-C09-RR-1 - Incorporating Greenhouse Gas Emissions into the Collaborative Decision-Making Process.
- SHRP 2 Report, Issue S2-C19-RR-1 - Expedited Planning and Environmental Review of Highway Projects.
- SHRP 2 Report, Issue S2-C02-RR - Performance Measurement Framework for Highway Capacity Decision Making.

Other Relevant Reports from the National Academies of Sciences, Engineering and Medicine

- [Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide](#) 2017
- [Climate and Health Challenges Posed by Black Carbon: Proceedings of a Workshop-in Brief](#) 2016
- [Review of the U.S. Global Change Research Program's Update to the Strategic Plan Document](#) 2016
- [Commercial Aircraft Propulsion and Energy Systems Research: Reducing Global Carbon Emissions](#) 2016
- [Transitioning Toward Sustainability: Advancing the Scientific Foundation: Proceedings of a Workshop](#) 2016
- [The Power of Change: Innovation for Development and Deployment of Increasingly Clean Electric Power Technologies](#) 2016
- [Spills of Diluted Bitumen from Pipelines: A Comparative Study of Environmental Fate, Effects, and Response](#) 2015