TRB Snap Search: Environment & Sustainability

TRB’s involvement in research on Environment & Sustainability from 2019-2020

The Transportation Research Board (TRB) provides innovative, research-based solutions to improve how we move. TRB is part of the National Academies of Sciences, Engineering, and Medicine, an independent, non-profit institution that provides objective advice on scientific, engineering, and medical issues.

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

All available Snap Searches can be accessed online here: http://www.trb.org/InformationServices/Snap.aspx

TRB Research

TRID – The world's largest and most comprehensive bibliographic source on all modes and disciplines of transportation
- Click here to view search results on TRB published research Environment & Sustainability within the past year.

Specialty Webpages
- Environment Research at TRB
- Climate Change

Specialty Report
- Critical Issues in Transportation 2019

Recent Reports & Publications
- Airport Cooperative Research Program (ACRP)
  - Report 220 - Guidebook for Developing a Zero- or Low-Emissions Roadmap at Airports
  - Report 209 - Integrating Sustainability Planning and the Environmental Review Process
  - Report 208 - Benefit–Cost Analyses Guidebook for Airport Stormwater
  - Report 205 - Revolving Funds for Sustainability Projects at Airports
  - Research Results Digest 28 - Thought Leader Forum Summary—Emerging Issues for ACRP
  - Synthesis 100 - Airport Greenhouse Gas Reduction Efforts
  - Web-Only Document 46 - Recovering International Recyclables from In-Flight Service
  - Web-Only Document 36 - Enhanced AEDT Modeling of Aircraft Arrival and Departure Profiles, Volume 1: Guidance

- Conference Proceedings
  - Proceedings on the Web 23 - Economic and Social Sustainability at Airports

- National Cooperative Highway Research Program (NCHRP)
  - IDEA Report 204 - Biomimetic Antifreeze Molecules: A Novel Solution to Deicing Salts and Air-Entraining Admixtures
  - IDEA Report 200 - Rapid Rehabilitation of Highway Slopes Using Seeded Microbial Bio-Cement
  - NCHRP 25-53 - Approaches for Determining and Complying with TMDL Requirements Related to Roadway Stormwater Runoff
  - NCHRP 25-49 - Development of a Highway Construction Noise Prediction Model

Updated 06/04/2020
- Enhancing the International Stormwater BMP Database to Serve as a Highway Specific BMP Database
- Environmental Management System Perspectives For State DOTs
- Successful Practices for Environmental Commitments in Public/Private Partnerships (P-3) and Design-Build (D-B) Contracts
- Creating Lookup Tables to Streamline the Determination of Emission Reductions for CMAQ Projects
- Streamlining Carbon Monoxide Project-Level Air Quality Analyses with Programmatic Agreements
- Artificial Bat Roost Mitigation Designs and Standardized Monitoring Criteria
- Relationship Between Erodibility and Properties of Soils
- Sustainable Highway Construction Practices
- Economic Resilience and Long-Term Highway/Transportation Infrastructure Investment
- Evaluating the Suitability of Roadway Corridors for Use by Monarch Butterflies
- Incorporating the Costs and Benefits of Adaptation Measures in Preparation for Extreme Weather Events and Climate Change—Guidebook
- A Research Roadmap for Transportation and Public Health Management
- Evaluating the Effects of Recycling Agents on Asphalt Mixtures with High RAS and RAP Binder
- Stormwater Infiltration in the Highway Environment: Guidance Manual
- Approaches for Determining and Complying with TMDL Requirements Related to Roadway Stormwater Runoff
- Guide to Truck Activity Data for Emissions Modeling
- Integrating Tribal Expertise into Processes to Identify, Evaluate, and Record Cultural Resources
- Valuing Wildlife Crossings and Enhancements for Mitigation Credits
- Zero Emission Vehicles: Forecasting Fleet Scenarios and their Emissions Implications
- Field Test of BMPs Using Granulated Ferric Oxide Media to Remove Dissolved Metals in Roadway Stormwater Runoff

Transit Cooperative Research Program (TCRP)
- Social and Economic Sustainability Performance Measures for Public Transportation

Transportation Research Circulars
- 12th International Conference on Low-Volume Roads
- Mobility on Demand: A Smart, Sustainable, and Equitable Future

Current & Upcoming Projects

Current Projects
- Commercial Space Operations Noise and Sonic Boom Measurements
- Measuring Quality of Life in Communities Surrounding Airports
- High Resolution Spatiotemporal Population Distribution Data and Modeling for Aviation Noise Research Studies
- Commercial Space Vehicle Emissions Modeling
- Measuring the Impact of Temporary Flight Restrictions on Airports
- Methods for Evaluating Airfield Pavement Deicer Contributions to Airport Stormwater Quality
- Electric Aircraft on the Horizon -- An Airport Planning Perspective
- Research Roadmap on Environmental Issues
- Practices in Airport Renewable Energy Projects
- Quantifying the Impacts of Corridor Management
- Using Vegetated Compost Blankets to Achieve Highway Runoff Volume and Pollutant Reduction
- Transforming Roadside Management and Technology Practices for the Benefit of Safety, Ecology, and Economy
- Effective Low-Noise Rumble Strips
- Roadside Encroachment Data for All Vehicle Types Across a Range of Traffic Volumes
- Enhancing Pedestrian Volume Estimation and Developing HCM Pedestrian Methodologies for Safe and Sustainable Communities
- Pilot Test of Proposed Standard Practice for Recycling Agents in Asphalt Mixtures Incorporating RAP and RAS
- Research for the AASHTO Standing Committee on the Environment
- NCHRP 25-55 - Assessment of Regulatory Air Pollution Dispersion Models to Quantify the Impacts of Transportation Sector Emissions
- NCHRP 25-56 - Methods for State DOTs to Reduce Greenhouse Gas Emissions from the Transportation Sector
- NCHRP 25-60 - Watershed Approach to Mitigating Hydrologic Impacts of Transportation Projects
- NCHRP IDEA 20-30/IDEA 207 - MILDGLASS: GFRP Strand for Resilient Mild Pre-Stressed Concrete
- NCHRP IDEA 20-30/IDEA 211 - Reducing Stormwater Runoff and Pollutant Loading with Biochar Addition to Highway Greenways
- NCHRP Synthesis 20-05/Topic 51-02 - Practices for Bridge Approach Pavement Details and Bridge Approach Pavement Support Details for Durability, Ride and Water Management
- NCHRP Synthesis 20-05/Topic 51-08 - Practice and Performance of Cold In-Place Recycling and Cold Central Plant Recycling
- NCHRP Synthesis 20-05/Topic 51-18 - Practices for Project-Level Analyses for Air Quality
- TCRP J-11/Task 36 - An Update on Public Transportation's Impacts on Greenhouse Gas Emissions
- TCRP J-11/Task 38 - An Analysis of Green Bond Financing in the Public Transportation Industry
- Transit IDEA J-04/IDEA 96 - Multi-stage Planning for Electrifying Transit Bus Systems with Multiformat Charging Facilities

- Upcoming Projects
  - ACRP 07-18 - Develop Airfield Design Guidelines for Large Unmanned Aerial Systems (UAS)
  - ACRP Synthesis 11-03/Topic S10-18 - Improving Native and Honey Bee Foraging on Airports
  - NCHRP 05-22A - Gaps and Emerging Technologies in the Application of Solid-State Roadway Lighting
  - NCHRP 09-66 - Mechanical Properties of Laboratory Produced Recycled Plastic Modified (RPM) Asphalt Binders and Mixtures
  - NCHRP 09-65 - Capturing Durability of High Recycled Binder Ratio (RBR) Asphalt Mixture
  - NCHRP 15-80 - Design Guidance and Standards for Resilience
  - NCHRP 15-61A - Updates to the Design Practices Guide for Applying Climate Change Information to Hydrologic and Coastal Design of Transportation Infrastructure
  - NCHRP 20-06/Topic 25-07 - Review of Statutory and Case Law on Planning and Environmental Linkages
  - NCHRP 20-44(23) - Pilot Test of Climate Change Design Practices Guide for Hydrology and Hydraulics
  - NCHRP 20-102(23) - Potential Impacts of Highly Automated Vehicles and Shared Mobility on Traveler Behavior
  - NCHRP 25-61 - Effective On-Bridge Treatment of Stormwater
  - NCHRP 25-64 - Resources for State DOTs to Consider Greenhouse Gas Emissions and Climate Change in NEPA Documents
  - NCHRP Synthesis 20-05/Topic 52-17 - Use of Rejuvenators in Asphalt Concrete Mixtures Containing High RAP

Reports from the National Academies Press on Environment & Sustainability

- Climate Change: Evidence and Causes: Update 2020
- Advancing Urban Sustainability in China and the United States
- Reducing Fuel Consumption and Greenhouse Gas Emissions of Medium- and Heavy-Duty Vehicles, Phase Two
- The Use of Dispersants in Marine Oil Spill Response
- Environmental Engineering for the 21st Century
- Adapting to the 21st Century Innovation Environment
- Climate Change and Ecosystems
- Improving the EPA Multi-Sector General Permit for Industrial Stormwater Discharges

Committees & Panels

Sign-up to be a committee "Friend"

TRB Standing Committees – Search by transportation mode and committee topic

- AD000 – Planning and Environment Group
- ADC00 – Environment and Energy
- ADC20 – Transportation and Air Quality
- ADC70 – Transportation Energy
- ADD40 – Transportation and Sustainability
- AEP70 – Environmental Analysis and Ecology
- AEP80 – Transportation-Related Noise and Vibration
- AJL50 – Environmental Issues in Transportation Law
- AKD40 – Landscape and Environmental Design
- AKD50 – Hydrology, Hydraulics, and Stormwater
- AME10 – Equity in Transportation
- AME60 – Historic and Archeological Preservation in Transportation
Recent and Upcoming Events

Upcoming Conferences - Left hand menu “upcoming conferences by topic”
(Conferences cosponsored by TRB are denoted with an asterisk.)

**Bridging Transportation Researchers Online Conference***
*August 12, 2020*
*Online*

**GeoMEast International Conference 2020: "Sustainable Civil Infrastructures"***
*November 8, 2020*
*Cairo, Egypt*

**2020 International Conference on Resource Sustainability: Sustainable Pavement Technologies***
*May 1, 2021*
*Tirupati, India*

**GeoChina 2021 International Conference***
*July 19, 2021*
*NanChang, Jiangxi, China*

Webinars – View upcoming webinars, suggest a webinar or add registration information

Past Webinars

- Environment

TRB’s Transportation Research Information Services (TRIS)

TRIS includes the **TRB Library** and the **TRIS Databases** (listed below) which are available 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](http://trid.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](http://pubsindex.trb.org)

**Research in Progress (RiP) Database** – Current or recently completed transportation research projects - [rip.trb.org](http://rip.trb.org)
Research Needs Statements (RNS) – Research needs as identified by TRB Technical Activities standing committees - rns.trb.org

Contact the Library at TRBLibrary@nas.edu or 1 (202) 334-2989