TRB Snap Search: Hydraulics & Hydrology

TRB's involvement in research on Hydraulics & Hydrology from 2021-2023

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](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 on Hydraulics & Hydrology within the past two years.

Specialty Reports

- [Critical Issues in Transportation for 2024 and Beyond](#)
- [Critical Issues in Transportation 2019](#)
- [COVID-19 Addendum to Critical Issues in Transportation](#)
- [Racial Equity Addendum to Critical Issues in Transportation](#)

Recent Reports & Publications

- National Cooperative Highway Research Program (NCHRP)
  - [IDEA Report 211](#) - Reducing Stormwater Runoff with Biochar Addition to Roadway Soils
  - [Report 1011](#) - Watershed Approach to Mitigating Hydrologic Impacts of Transportation Projects: Guide
  - [Report 971](#) - Revised Clear-Water and Live-Bed Contraction Scour Analysis
  - [Synthesis 573](#) - Practices for Integrated Flood Prediction and Response Systems

Current & Upcoming Projects

- Current Projects
  - [ACRP 02-96](#) - Update ACRP Report 99: Guidance for Treatment of Airport Stormwater Containing Deicers
  - [NCHRP 14-39](#) - Using Vegetated Compost Blankets to Achieve Highway Runoff Volume and Pollutant Reduction
  - [NCHRP 20-44(23)](#) - Pilot Test of Climate Change Design Practices Guide for Hydrology and Hydraulics
  - [NCHRP 24-48](#) - A Methodology for Determining Scour Depth around Structures in Gravel-bed Rivers
  - [NCHRP 24-49](#) - Guidelines for Selection and Application of Manning’s Roughness Values in Two-Dimensional Hydraulic Models
  - [NCHRP 24-50](#) - Rewrite of the AASHTO Drainage Manual
  - [NCHRP 25-61](#) - Development of On-Bridge Stormwater Treatment Practices
  - [NCHRP Synthesis 20-05/Topic 53-05](#) - Practices for Bioretention Stormwater Control Measures
  - [NCHRP Synthesis 20-05/Topic 53-11](#) - Resilient Design with Distributed Rainfall Modeling
  - [NCHRP Synthesis 20-05/Topic 54-02](#) - Outsourcing Stormwater Best Management Practice Inspection & Maintenance Activities
- **NCHRP Synthesis 20-05/Topic 54-19** - Practices for Controlling Tunnel Leaks

- **Upcoming Projects**
  - **NCHRP 15-61A** - Updates to the Design Practices Guide for Applying Climate Change Information to Hydrologic and Coastal Design of Transportation Infrastructure
  - **NCHRP 20-44(44)** - Implementation of the research results of NCHRP Project 15-61: “Applying Climate Change Information to Hydrologic and Hydraulic Design of Transportation Infrastructure”

Reports from the [National Academies Press](https://nationalacademies.org) on Hydraulics & Hydrology

- Transportation and Infrastructure » Hydraulics and Hydrology
- Oil in the Sea IV: Inputs, Fates, and Effects
- Reckoning with the U.S. Role in Global Ocean Plastic Waste
- Leveraging Commercial Space for Earth and Ocean Remote Sensing
- Investing in Transportation Resilience: A Framework for Informed Choices
- Mid-Term Assessment of Progress on the 2015 Strategic Vision for Antarctic and Southern Ocean Research
- Next Generation Earth Systems Science at the National Science Foundation
- Global Change Research Needs and Opportunities for 2022-2031
- Progress Toward Restoring the Everglades

**Committees & Panels**

**Sign-up to be a committee "Friend"**

### TRB Standing Committees – Search by transportation mode and committee topic

- **AKB70** – Culverts, Buried Bridges and Soil Structure Interaction
- **AKD50** – Hydrology, Hydraulics, and Stormwater
- **AKG40** – Mechanics and Drainage of Saturated and Unsaturated Geomaterials

### Task Forces - Search for task force under committee here

**CRP Panels**

- **D1561** - Applying Climate Change Information to Hydrologic and Hydraulic Design of Transportation Infrastructure
- **D1820** - Structured Design Methodology for Cured In Place Pipe (CIPP) Liners in Gravity Stormwater Conveyance Conduits
- **D2449** - Guidance on the Selection and Use of Flow Resistance Values in Two-Dimensional (2D) Hydraulic Models
- **D2561** - Effective On-Bridge Treatment of Stormwater
- **DA0287** - Determining Airfield Pavement Deicer and Anti-Icer Contributions to Airport Stormwater
- **SN4805** - The Renewal of Stormwater Systems Using Trenchless
- **SN5305** - Practices for Stormwater Bioretention
- **SN5309** - Use of Unmanned Aerial Systems for Highway Stormwater Inspections
- **SN5402** - Outsourcing Stormwater Best Management Practice Inspection & Maintenance Activities

**Councils**

- **A001C** – Young Members Coordinating Council

**Recent and Upcoming Events**

**Upcoming TRB Conferences** – Use left hand menu to filter events

- **Marine Transportation System Innovative Science and Technologies Toward Greater Sustainability**
  - June 19-22, 2023
  - Washington, D.C.

- **National Conference on Transportation Asset Management**
  - July 8-11, 2023
  - Boston, MA
Upcoming Events – In the Upcoming Events tab under Types, choose what event you are interested in, search titles by keyword

Past Events - In the Past Events tab under Types, choose what event you are interested in, search titles by keyword

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:

- Transportation Research International Documentation (TRID) – trid.trb.org - The world’s largest and most comprehensive bibliographic source on all modes and disciplines of transportation
- Transportation Research Thesaurus (TRT) – trt.trb.org - A tool to improve the indexing and retrieval of transportation information.
- Research in Progress (RiP) Database – rip.trb.org - Current or recently completed transportation research projects
- Publications Index (PubsIndex) Database – pubsindex.trb.org - The papers, articles and reports published by the Transportation Research Board, Strategic Highway Research Programs or the Marine Board

Contact or Questions: TRBLibrary@nas.edu