TRB Snap Search: Hydraulics & Hydrology

TRB’s involvement in research on Hydraulics & Hydrology from 2019-2021

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 on Hydraulics & Hydrology within the past two years.

Subject Webpage

- Hydraulics & Hydrology Research at TRB

Recent Reports & Publications

- Airport Cooperative Research Program (ACRP)

- National Cooperative Highway Research Program (NCHRP)
  - NCHRP 25-25/Task 120 - Use of the State Department of Transportation Portal to the International Stormwater BMP Database
  - NCHRP 15-61 - Applying Climate Change Information to Hydrologic and Hydraulic Design of Transportation Infrastructure
  - Report 918 - Approaches for Determining and Complying with TMDL Requirements Related to Roadway Stormwater Runoff
  - Synthesis 551 - Highway Hydraulic Engineering State of Practice
  - Web-Only Document 265 - Field Test of BMPs Using Granulated Ferric Oxide Media to Remove Dissolved Metals in Roadway Stormwater Runoff

Current & Upcoming Projects

- Current Projects
  - NCHRP 14-39 - Using Vegetated Compost Blankets to Achieve Highway Runoff Volume and Pollutant Reduction
  - NCHRP 20-44(15) - Consultant Support for implementation of Design Hydrology for Stream Restoration and Channel Stability at Stream Crossings
  - NCHRP 20-44(23) - Pilot Test of Climate Change Design Practices Guide for Hydrology and Hydraulics
  - NCHRP 24-47 - Revised Clear-Water and Live-Bed Contraction Scour Analysis
  - 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 25-60 - Watershed Approach to Mitigating Hydrologic Impacts of Highway Projects
  - NCHRP 25-61 - Development of On-Bridge Stormwater Treatment Practices
• **Upcoming Projects**
  - **ACRP 02-96** - Update ACRP Report 99: Guidance for Treatment of Airport Stormwater Containing Deicers
  - **NCHRP 15-61A** - Updates to the Design Practices Guide for Applying Climate Change Information to Hydrologic and Coastal Design of Transportation Infrastructure
  - **NCHRP 24-50** - Rewrite of the AASHTO Drainage Manual
  - **NCHRP Synthesis 20-05/Topic 53-05** - Practices for Stormwater Bioretention
  - **NCHRP Synthesis 20-05/Topic 53-09** - Use of Unmanned Aerial Systems for Highway Stormwater Inspections
  - **NCHRP Synthesis 20-05/Topic 53-11** - Resilient Design with Distributed Rainfall Modeling

**Reports from the National Academies Press on Hydraulics & Hydrology**

- Progress Toward Restoring the Everglades
- Effectiveness and Impacts of Dust Control Measures for Owens Lake
- Management of Legionella in Water Systems
- The Use of Dispersants in Marine Oil Spill Response
- A Vision for NSF Earth Sciences 2020-2030
- Final Review of the Study on Supplemental Treatment Approaches of Low-Activity Waste at the Hanford Nuclear Reservation
- Offshore Well Completions and Stimulation - Using Hydraulic Fracturing and Other Technologies
- Management of Legionella in Water Systems
- Framing the Challenge of Urban Flooding in the United States
- 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
  - **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**
  - Project Panels Related to Hydraulics & Hydrology

**Councils**
  - **A001C** – Young Members Coordinating Council

**Upcoming and Upcoming Events**

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

**TRB Annual Meeting**
*January 9-13, 2022*
Washington, DC

**American Society of Civil Engineers (ASCE) Geo-Congress 2022***
*March 20, 2022*
Charlotte, NC

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

**Past Webinars**
  - Hydraulics and Hydrology

**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](http://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](http://trt.trb.org) - A tool to improve the indexing and retrieval of transportation information.
- **Research in Progress (RiP) Database** – [rip.trb.org](http://rip.trb.org) - Current or recently completed transportation research projects
- **Research Needs Statements (RNS)** – [rns.trb.org](http://rns.trb.org) - Research needs as identified by TRB Technical Activities standing committees
- **Publications Index (PubsIndex) Database** – [pubsindex.trb.org](http://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](mailto:TRBLibrary@nas.edu)