

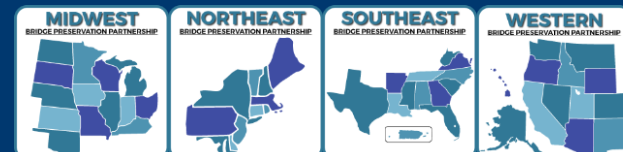
National Bridge Deck Preservation Working Group

Sarah Sondag | Co-Chair | Minnesota DOT

Pat Martens | Co-Chair | Bridge Preservation and Inspection Services

Andy Nanneman | Vice-Chair | Arkansas DOT

Steven Austin | Secretary | Texas DOT





Flushing/Washing



Sealing



Joint Maintenance



Concrete Repair



Overlays



Other Actions

Concrete Bridge Deck Preservation Resource Guide

- Cathodic Protection
- Chloride Extraction
- Joint Elimination
- Preserving Bridge Decks with Traffic Induced Distress

Bridge Deck Flushing and Washing

Description

Bridge deck flushing and washing are cyclical preventive maintenance activities performed to clean the bridge deck, joints, and drains. Deck washing consists of applying water under high pressure and deck flushing consists of applying water at a low pressure, but high volume. The process and water pressure allowed will depend on agency environmental regulations.

Benefits

Flushing and washing reduce the potential for waste, debris, deicing chemical residue, bird droppings, and other contaminants to accumulate, which can hinder drainage and joint function and, according to the FHWA Bridge Preservation Guide, lead to accelerated deterioration of concrete and steel elements. In addition, elements that are free of debris are easier to inspect.

Best Practices

- Follow all agency guidelines, state and federal environmental regulations, best management practices and time of year restrictions.
- Be aware of hazardous materials on the bridge that may require special procedures and Personal Protective Equipment (PPE) for the safety of the workers and the environment.
- Sweep and collect debris from the bridge deck within two weeks prior to the flushing or washing operation.
- Consider flushing or washing other bridge elements, such as joints, drains, sidewalks, medians, curbs, barrier and parapet walls, abutment seats, back walls, bearing seats, bearings, pier columns in the splash zone, beam ends, end diaphragms and truss members in the splash zone with an emphasis on panel points, in order to more effectively preserve the life of the entire bridge.
- Perform flushing or washing on a cycle. Example agency recommendations include flushing or washing every 0.5 to 2 years or as often as constraints allow.

Resources

- [A User's Guide to Bridge Cleaning](#)
- [AASHTO TC3 Training on Bridge Cleaning \(Item Code TC3MN037-19-T1, 1 PDH\)](#)
- [\(2013\) Standard Practice for Washing and Cleaning Concrete Bridge Decks and Substructure Bridge Seats including Bridge Bearings and Expansion Joints to Prevent Structural Deterioration, Washington State Transportation Center](#)
- [\(2013\) Evaluation of Bridge Cleaning Methods on Steel Structures, Pennsylvania Department of Transportation](#)

Description

Benefits

Best Practices

Resources

024

TSP 2

TRANSPORTATION SYSTEM PRESERVATION TECHNICAL SERVICES PROGRAM

AASHTO

BRIDGE PRESERVATION

Home Technical Bridge Special Provisions Research Legislative Training Library Industry Bridge News Site Map

Deck

Index

1 – Ass

AASHTO

Administrative

Coatings

General

Concrete

Decks & Joints

Guide [2020-04-01]

ng – Relative Humidity Probes per ASTM F2170

Bridge Decks and Tunnel Linings

TSP 2 HOMEPAGE



2 – Bridge Deck Preservation Guidance

[Successful Approaches for the Use of Hydrodemolition for Partial Depth Removal of Bridge Decks](#)
[Concrete Bridge Deck Preservation Resource Guide](#)

2022 NEDT 8/15-9/17

Harrisburg, PA

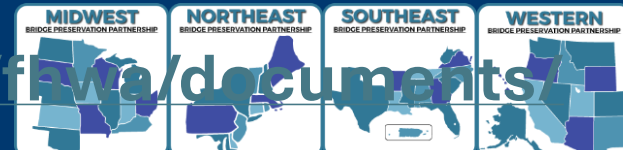
2022 SEBPP 8/30-9/01

Raleigh, NC



<https://tsp2bridge.pavementpreservation.org/technical/fhwa/documents>

Preserving Our Nation's Transportation Assets

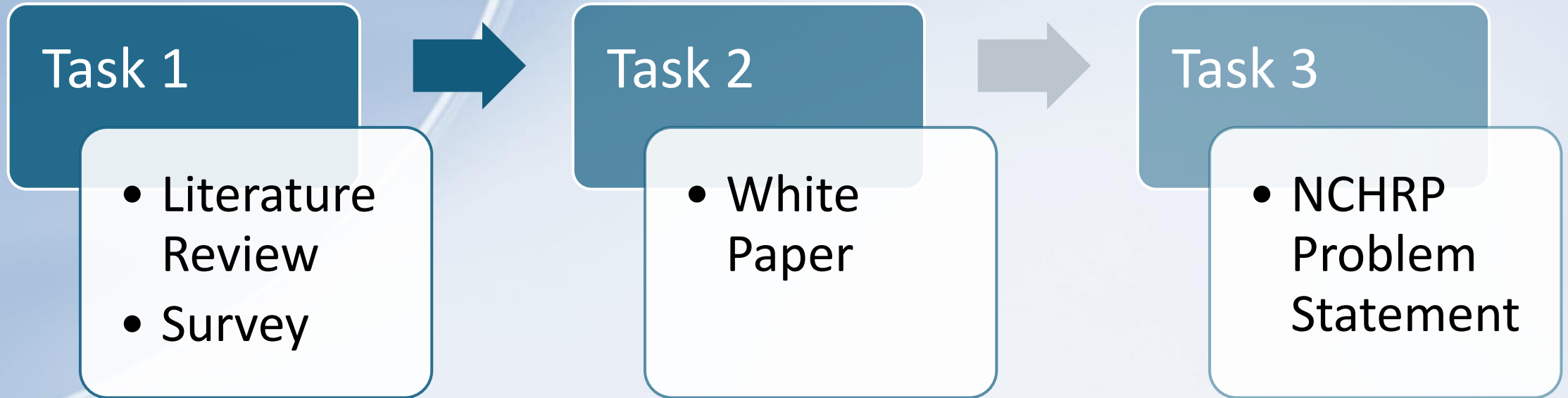


Bridge Product Database

The screenshot shows the TSP2 Bridge Preservation website. At the top, there is a navigation menu with links for HUB, BMS, SIMS Test, SIMS, Class Specs, Br-iHUB, Br-Ext, Bentley SR, BI, Br Rpts, Web Rpts, LMS Rpts, Proj Log, TSP2, Policies, and MKEG-BI Manual. Below the navigation menu, there are four regional partnership logos: MIDWEST BRIDGE PRESERVATION PARTNERSHIP (MWBPP), NORTHEAST BRIDGE PRESERVATION PARTNERSHIP (NEBPP), SOUTHEAST BRIDGE PRESERVATION PARTNERSHIP (SEBPP), and WESTERN BRIDGE PRESERVATION PARTNERSHIP (WBPP). The main content area features a search bar, a banner for 'TSP2 AASHTO 2020 BRIDGE PRESERVATION WEBINAR SERIES', and a 'Partnership Meetings' section with a list of events: 2021 SEBPP Mar 23-25, 2020 SEBPP Cancelled, 2021 WBPP Apr 20-22, 2020 WBPP Cancelled, MWBPP Dates in 2021 TBA, 2020 MWBPP Cancelled, NEBPP Dates in 2021 TBA, and 2020 NEBPP Cancelled. Below this is a 'PRESERVATION BLOG' section, followed by 'TECHNICAL EXCHANGE' and 'REGIONAL / NATIONAL WORKING GROUPS'. At the bottom of the main content area, the 'BRIDGE PRODUCT DATABASE' button is highlighted with a red border. To the left of the main content area, there are links for 'NATIONAL BRIDGE INDUSTRY MEMBERS', 'TSP2 BRIDGE VIDEO LIBRARY', and 'UPCOMING TECHNICAL BRIDGE PRESENTATIONS'. Below these, there is a section for 'AASHTO Program Invoices, Receipts, and FHWA's SP&R Waiver Letter' with buttons for '2020-2021 PROGRAM INVOICES', '2020-2021 PROGRAM RECEIPTS', and a link for 'FHWA's SP&R Waiver Letter (.pdf)'.

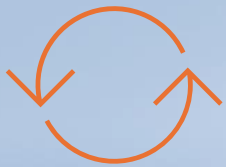
- Sealers
- Overlays
- Deck Patching Products

Sealer Synthesis Study



Principal Investigator: Dr. Qingxu “Bill” Jin, Michigan State University

Next Steps



Update Resource
Guide



Advance sealer
research



Update “Decks &
Joints” Webpage



Identify topics and
develop resources

Construction Inspection Training

Product/Technology Evaluation

Treatment Frequency

Epoxy Injection, Flushing, Joint Surface Prep

Training/Video Guides

Case Studies/Research

TSP 2

TRANSPORTATION SYSTEM PRESERVATION TECHNICAL SERVICES PROGRAM

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BRIDGE PRESERVATION

Thank you!

National Bridge Deck Preservation Working Group Update
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