



Midwest Bridge Preservation Partnership

Agenda – Monthly Teleconference

Tuesday, December 6, 2022

Business Meeting: 12:30 pm – 1:00 pm Central

Technical Session 1:00 – 2:00 pm Central

12:30 pm – Business Meeting.

1. 2022 – 2023 Officers / Directors

Black = original agenda

Red = meeting notes

Green = important deadline

Officers			
Name	Organization	Role	Email
Sarah Wilson	Illinois DOT	Chair (State Rep)	sarah.wilson@illinois.gov
Jason DeRuyver	Michigan DOT	Vice-Chair (State Rep)	DeRuyverJ@michigan.gov
Drew Storey	Clark Dietz	Vice-Chair (Industry)	Drew.Storey@clarkdeitz.com
Mike Brokaw	Ohio DOT	Secretary / Treasurer (State Rep)	mbrokaw@dot.ohio.gov
Directors			
Name	Organization	Representation	Email
Jason DeRuyver	Michigan DOT	State Agency Director	DeRuyverJ@michigan.gov
Joe Stanisiz	Iowa DOT	State Agency Director	Joseph.Stanisiz@iowadot.us
Katrina Davidson	South Dakota, DOT	State Agency Director	Katrina.Davidson@state.sd.us
Mike Brokaw	Ohio DOT	State Agency Director	mbrokaw@dot.ohio.gov
Sarah Wilson	Illinois DOT	State Agency Director	sarah.wilson@illinois.gov
Patrick Conner	Indiana LTAP (Purdue)	Local Agency Director	connerp@purdue.edu
Glenn Washer	University of Missouri – Columbia	Academic Director	washerg@missouri.edu
Andy Castillo	Emseal	At-Large Director	acastillo@emseal.com
Drew Story	Clark Dietz	Industry Director	Drew.Storey@clarkdeitz.com
Nick Graziani	Watson Bowman	Industry Director	nicholas.graziani@watsonbowmanacme.com
Scott Stotlemeyer	FHWA, Missouri Division	FHWA Ex-Officio, Advisory	Scott.Stotlemeyer@dot.gov
Sarah Sondag	Mn DOT	Past Chair Ex-Officio, Advisory	Sarah.sondag@state.mn.us

- a) **Confirm / Replace Andy Castillo?** Decision to replace and invite nominations. This person can be industry or State Agency. Nominate now and we will elect next meetings in January.

2. MWBPP Annual Meeting 2023 Deadwood, South Dakota

- a.) Date: **October 17-19, 2023**
- b.) Agenda Planning Committee Monthly Teleconference – 3rd Wednesdays.
- c.) Membership? Open to all, but...should include all officers, and Agency Directors... The more the merrier. We are looking for a few good folks to help/work on making this annual meeting a success. At a minimum the current officers and the host agency should join. It is open to all.
- d.) Timeline for Presentations?

3. Goals for 2023

- a.) Discussion Topics for Teleconferences. Contact Sarah Wilson with your topic ideas. We need some to ensure the meetings are valuable and interesting.
- b.) Active Working Groups – MWBPP Membership. Midwest group members are encouraged to seek out a working group. Looking for groups to have a Midwest presence.
- c.) Peer Exchange Sessions/Panel Sessions – If joining a working group is too much of a commitment then consider joining a peer exchange or panel session. Ex. Tunnels, how states are dealing with their inventory.

4. 2023 Bridge Maintenance Related Meetings – opportunity to send Midwest people to other meetings. It is very interesting to join a meeting and see how other states handle similar issues. Cost of attendance is a follow-up presentation at the next MWBPP meeting. Contact with Sarah W if you are interested in joining or participating in another states annual meeting.

- a.) TSP-2 Partnership Meetings
 - i. WBPP, March 14-16, Albuquerque NM
 - ii. SEBPP, April 4-6, Atlanta GA
 - iii. NEBPP, August 22-24, Wilmington DE. Jason interested in joining this meeting.
- b.) COBS, May 22-25, 2023 – Kansas City, Missouri. Sarah W interested this meeting.
- c.) MaC Meeting, July 2023 Normally Chair & Past Chair attend. AASHTO committee on Maintenance. Parent committee of TSP2. Date is not set.

5. NCHRP Synthesis Topics

Propose New Topics for the NCHRP Synthesis Program

These are smaller-scans for gathering information.

>>>Submissions Due February 17, 2023>>>

Need to show widespread interest across the country. The TSP2 MWBPP group is helpful for garnering widespread interest. Reach out to Nancy if you are interested. TRB is seeking potential synthesis study topics for the upcoming NCHRP Synthesis Program. Topic statements may be submitted at any time; however, the deadline for the upcoming submission cycle is February 17, 2023.

In the coming year, NCHRP will fund 21 new synthesis topics. Anyone may propose topics.

A synthesis study documents current practice and experience for specific highway topics. The following factors are considered in the selection of new topics.

- The objective of the scope of work is to document current highway practice in state departments of transportation (DOTs);
- The synthesis documents current practice, not *best practice*; it is not a research project or a guidebook;
- The topic addresses an area of practice that is widespread and of general interest to state DOTs; and
- The topic should be timely and critical for expediting delivery, improving the quality, or lowering the cost of highway programs.

1:00 pm – Technical Session.

1. Roll Call

A Jones	Donald Whisler	Kevin Stumpff	Scott Neubauer
Adam Post	Dora Alexander	Lawrence Kirchner	Stakston, Anthony -
Al Kenz	Drew Garceau	Matthew Keilson	DOT
Allen Scarborough-	Dustin Vaughan	Matthew Kurlle	Todd Shields (NCPD)
CMC	Greg Heilman	Mike Brokaw, Ohio	Todd Thompson
Bobby Scarpitto	Ida Narbuvoil	DOT	Walt Peters
Brian Johnson	Jason DeRuyver	Miller, Kent	paul jensen
Chad Skrocki	Jerry Goodman	Nancy Huether	
Darlene Lane	Jim Leaden	Paige Day	
Dave Juntunen	Joe Stanisz	Patrick Conner	
David Coley	Jonathan Sirianni	Philip Meinel	
David Juntunen	Julie Brooks	Ryan Bowers	
Derrick Castle	Katrina	Sarah Wilson	

2. Approval of Minutes

a.) October 4, 2022

- i. *Motion to approve – Jason Deruyver*
- ii. *Second – Patrick Connor*
- iii. *Opposed - None*

b.) October 27, 2022 Annual Business Meeting – Sarah went over the meeting minutes from the last Annual Meeting in Lexington, KY.

- i. *Motion to approve – Jim Leaden*
- ii. *Second – Bobby Scarpitto*
- iii. *Opposed – None*

3. Emily Sonar Boat - <https://www.emilyrobot.com/>

Presenters –Paige Day (Hydronalix) & Chad Skrocki (MiDOT)

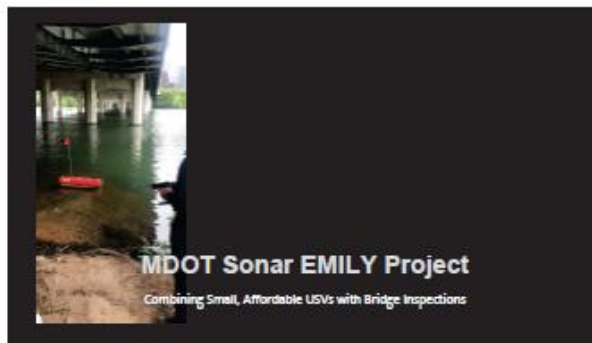
In 2019, the [Michigan Department of Transportation](#) (MDOT) commissioned a study to look at various techniques to monitor bridge scour during high-flow events. Scour occurs when swift water flow from rain or snow melt erodes sediment away from the bridge substructure causing large holes to form, which in turn can cause undermining of footings and exposure of piles. Scouring is a leading cause of bridge failure.

The study was conducted by Ayres Associates, an architectural and engineering services firm based in Eau Claire, Wisconsin, under contract to the MDOT Research Administration. The study examined alternatives for monitoring and mitigating [bridge scour](#), evaluating cost, performance specifications, sensors, data retrieval, processing and post-processing software, and quality.

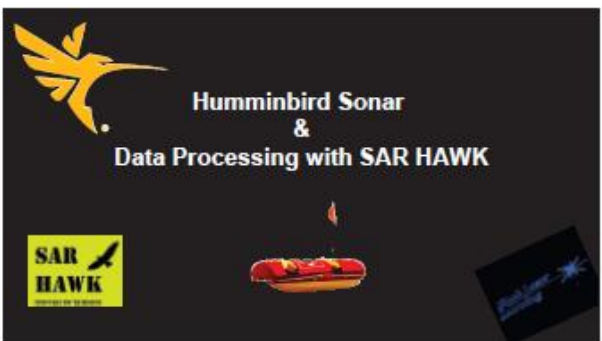
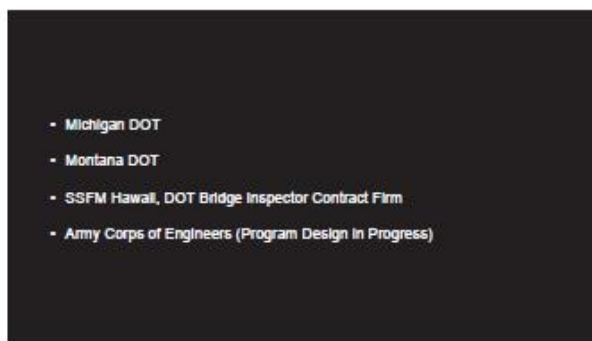
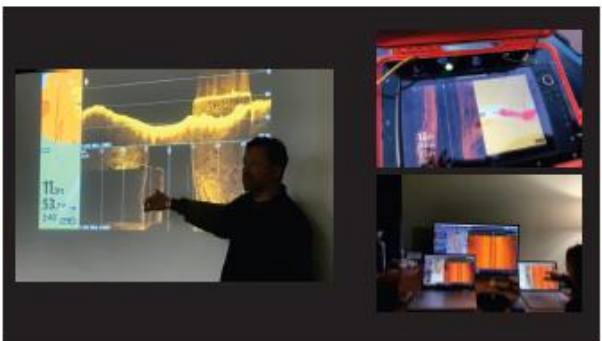
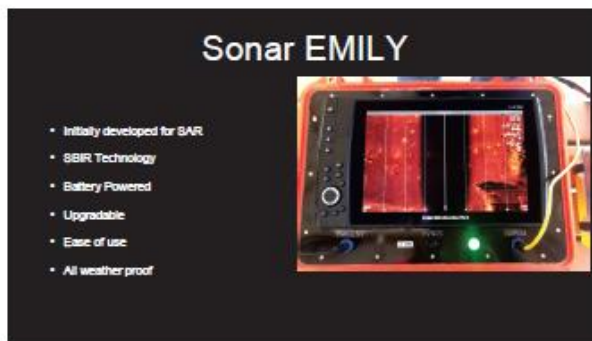
The study, published in 2019, recommended using a remotely operated, sensor-equipped unmanned surface vessel (USV) to support MDOT's [bridge inspections](#). The study looked at sonars and unmanned surface vehicles, and recommended a combination of the Hydronalix Sonar EMILY (EMergency Integrated Lifesaving IanYard) USV equipped with the Humminbird sonar and SAR Hawk software.

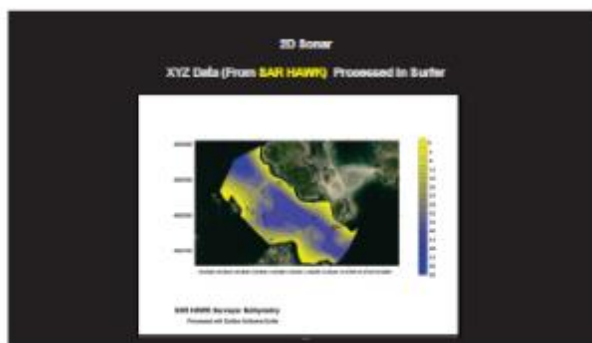
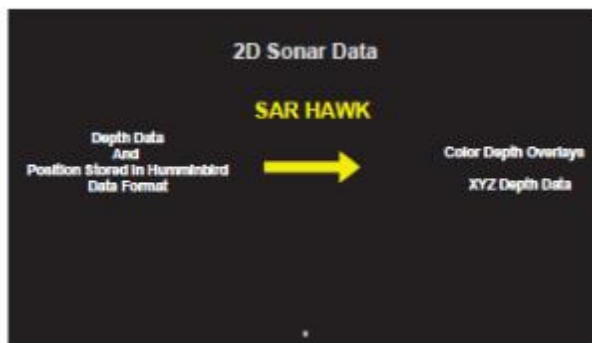
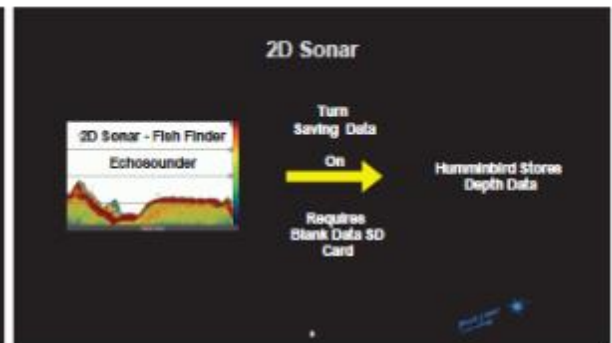
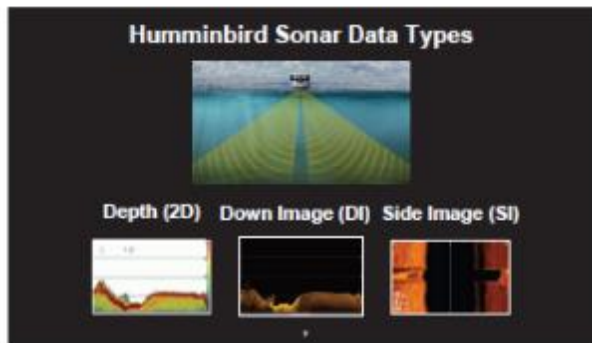
Paige Day
(404) 990-1046
paige.day@hydronalix.com

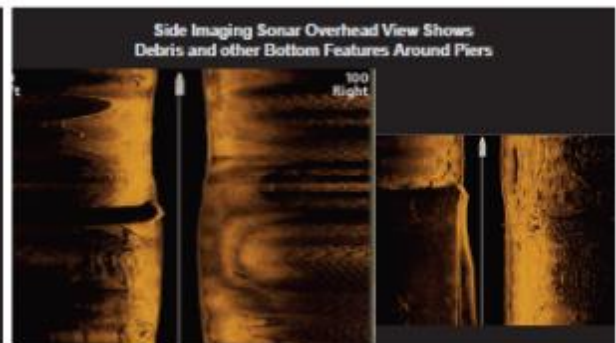
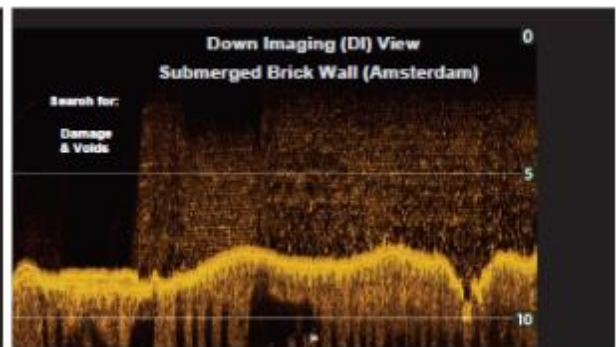
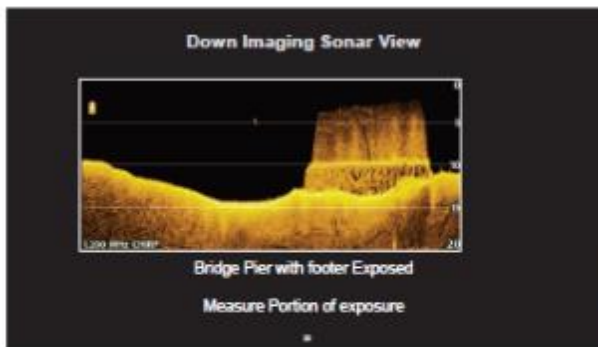
Introduction and background. Sonar is easy to use. Small footprint, battery powered. Accuracy comes from GPS on the system. Environmentally friendly. Initially developed through search and recovery industry. Weather proof.



- Small Footprint
- Easy to access bridge footings and culverts
- Real time sonar data feed
- Accuracy of Information
- Record keeping and data files for reference
- Environmentally Compliant with no byproducts of combustion for delicate waterways, estuaries and fisheries







Chad Skrocki, P.E.
Assistant North Region Bridge Engineer
1088 M-32, Gaylord, MI 49735
Mobile: (989) 220-9633
SkrockiC@michigan.gov

We want to put a tool in the inspectors hand to make a judgement during a flood event. Should we open or close the bridge? Looked for a platform we could put in the water to make onsite decisions. It's fast and durable, relatively easy to use. Battery life is 45 minutes. More details are in the attached presentation.

Plan-level design is not the target. Price range for entire system with training is \$45,000.



Chad Slesicki, PE
MDOT - North Region Assistant
Region Bridge Engineer





Background

- Sonar is a leading cause for bridge closures
- Multiple sonar critical bridges across the state
 - MDOT: 437 Bridges
 - Local Agency: 1,337 Bridges



Scour monitoring during high flow events

- Main Objective:
 - Determine whether the bridge can remain open or if it needs to be closed
- Difficulties for inspectors:
 - Strong currents
 - Access becomes difficult
 - Can't see what is going on below the waterline
 - Probing in deep water and strong currents can be difficult or impossible
 - Debris

Research

- Ayras Associates
- Vessel Types:
 - Catamaran
 - Mono Hull
 - Tether versus un-tethered
 - Stationary Scanning Sonar
- Multi beam and single beam sonar systems





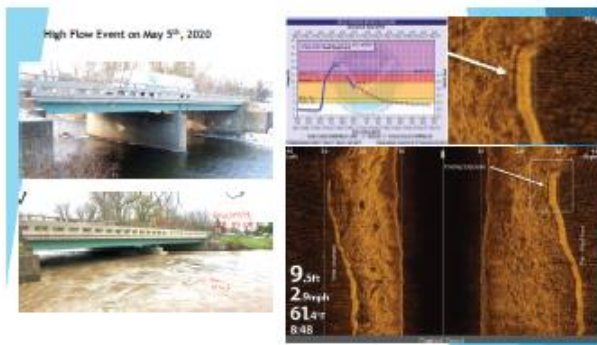
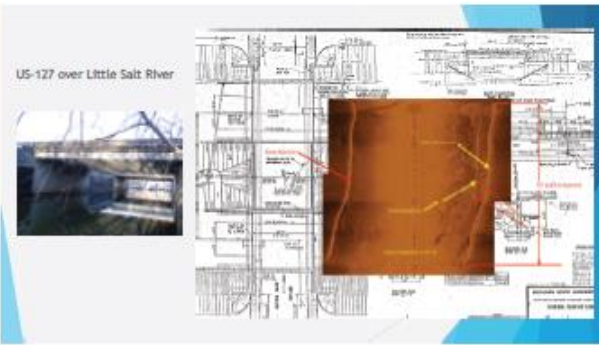
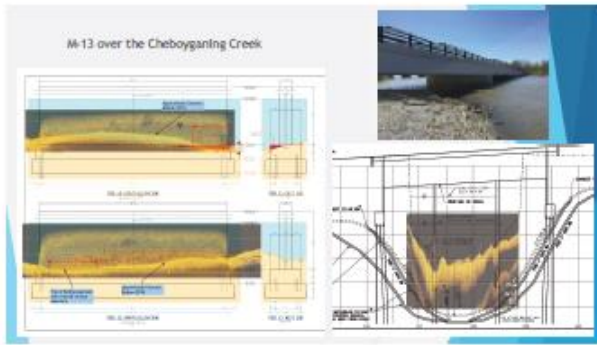

MDOT's Solution

- Sonar DAILY
 - Safe
 - Robust
 - Easy to use
 - Able to gather information below and above the water
- 4 USV's strategically located throughout the state







Sonar EMILY

- Other application
 - Routine and Other Special Inspections
 - Supplement underwater inspections
 - Culvert/bridge inspections with limited clearance
 - Verify limits of scour countermeasures



- Limitations:
 - Eddies around piers makes for difficult driving conditions
 - Large amounts of debris in the channel
 - Can be a challenge to operate the sonar DAILY
 - Difficult to operate when outside the line of site



4. Vacancy for the At-Large Director – Email Sarah Wilson if interested. Two volunteers during the meeting. Vote will occur at the next teleconference in January:

- a.) Matthew Keilson
- b.) Bobby Scarpitto

5. NCHRP is seeking potential Synthesis topics

- a.) Purpose is not research or best practices
- b.) Purpose is to document current practices around the DOT's
- c.) The more support you have the better chance you have of approval

6. TSP2 Updates – Nancy Huether.

- a.) Good, all but 2 so far, states have paid voluntary contributions
- b.) Working Groups – two, ITD and Local Agency working groups, would benefit from a Midwest presence. Others as well, please reach out and investigate and participate in a working group.

7. Meeting Chat Log

Bobby Scarpitto (to Everyone): 1:00 PM: Nancy,

Bobby Scarpitto (to Everyone): 1:00 PM: Please add me to the meeting...I would love to help.

Matthew Keilson (to Everyone): 1:05 PM: I would like to fill in for Andy and take on the role of At-Large Director to

Bobby Scarpitto (to Everyone): 1:05 PM: I would like to be an at large director!

Paige Day: 1:40 PM: paige.day@hydronalix.com

Mike Brokaw, Ohio DOT (to Everyone): 1:40 PM: Paige and Chad please email me your presentations: mbrokaw@dot.ohio.gov

Bobby Scarpitto (to Everyone): 1:44 PM: I also would like to be considered for the AT LARGE DIRECTOR - Bobby Scarpitto

Lawrence Kirchner (to Everyone): 1:48 PM: are working groups open to industry?

8. Next Monthly Meeting

- a.) January 3rd, 2023 Basak Bektas **to present**

Overview of the Scan 20-01 findings and recommendations

Successful Approaches to Utilizing Bridge Management Systems (BMS) for Strategic Decision Making in Asset Management Plans: Explored how agencies effectively integrated BMS data into their transportation asset-management plans (TAMP) to preserve and improve the condition of the assets and the performance of their system.

<https://onlinepubs.trb.org/onlinepubs/nchrp/docs/SCAN20-01.pdf>