

Q1 - Does your agency collect bridge element condition data?

- a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program?
- b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect?
- c) If no, how are your bridge preservation needs identified and managed?

Q2 - How are the bridge preservation (BP) needs funded?

- a) Does your state have a separate program for Bridge Preservation activities?
- b) What programs(s) are used to fund BP activities?

Q3 – What is the impact of the current funding on your bridge program in general and on your bridge preservation program in particular? Please explain.

Q4 – Does your agency have an approved Systematic Preventive Maintenance process for use of Federal-Aid funds?

- a) If you answered no, has your agency submitted a request to your local FHWA office? What is the status of the request?
- b) If you answered no, does your agency have any plans for pursuing an agreement?
- c) If you answered yes, would you be willing to share a copy of the agreement with others?

Q5 – Please provide details of the preservation activities performed during the last few years?

- a) Deck Overlays – What kind of overlays have you applied?
- b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system.
- c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"?

Q6 - In your opinion, what are the top three priorities that you would like to see the WBPP pursue in the future and why?

Q1 - Does your agency collect bridge element condition data?

Illinois	Yes a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? IDOT is currently collecting both NBIS condition ratings and CoRe Element data with additional Illinois specific elements. With the MAP-21 requirements, IDOT will be transitioning to the new AASHTO Elements. Element Level data is used as supplementary information in the overall assessment of a bridge's condition. During an Element Level Inspection, the inspector identifies and records necessary maintenance work termed as "Work Candidates". These recommendations for maintenance are reviewed by the Program Manager (District Bridge Maintenance Engineer (BME)) before they are entered in the Illinois Structure Information System (ISIS). The BME develops the initial scope for preservation and maintenance projects, incorporating Work Candidates where applicable. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? The initial identification of elements in each bridge took considerable effort. IDOT collects both NBIS and Element Level data during most routine inspections. The added effort has not added considerably to the overall time of an inspection. Probably no more than a 5-10% increase in time for an experienced inspector.
Indiana	Yes. a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? Only NBI data! NBI have been used extensively to identify, select and prioritize candidate projects. NBI condition ratings with trigger values are also incorporated into the BMS to identify and recommend projects. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? For Indiana will take significant time and resources to adjust to the new system of data collection. As far as time require to inspect, it will require more time! c) If no, how are your bridge preservation needs identified and managed? Bridge Preservation needs are identified initially through set criterion agreed with the FHWA (Local Office) using NBI condition ratings. Then, the candidate list will be sent to districts for review /screening and be further scrutinized.

Iowa	Yes a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? We are currently using Core elements and are planning to switch to the new AASHTO elements next spring. We are working on developing Pontis to provide bridge preservation projects. We are not currently using the elements for programming purposes. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? We have been collecting element level data for over 20 years. We have always collected more information than just element level data. Collecting the data won't slow down the inspection but using Pontis to enter the data is time consuming. In 2010, we purchased a new inspection software package that incorporated elements along with all the additional data we collect so the inspectors don't need to use Pontis at all. This is a time saver. We have not tracked the time savings, but it will allow us to do additional documentation at inspections in the coming year.
Kansas	Yes. a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? We are currently collecting core elements as well as rating the original NBIS condition ratings. We hope to convert to the new AASHTO Elements at the start of the 2013 bridge inspections season. If all conversions go well we should meet this goal. Core element information is used in our decision making programs as part of our Bridge Management System. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? The main difference between element based condition assessment ratings to the defect condition assessment ratings: i. Defect condition assessment ratings tell you exact how bad the overall component is (Superstructure = 4 is bad, either it is posted or is being considered, etc.). What is doesn't tell you is how much or what part of the component is bad. ii. Element based condition assessment ratings tell you exact how much is bad and what part of the component is bad. What is doesn't tell you is exactly how bad the overall rating for that component is. The initial time to determine each element quantities is somewhat costly. We made a number of assumptions and used a computer programs that reduced are efforts greatly and had very little effect on accuracy to complete the initial quantity assessments. As stated before, we collect both core elements as well as rating the original NBIS condition ratings in the field. Adding the core elements at first probably cost us 5% more field time. Getting our inspectors to buy in is what real took some time. Today (after 18 years of collecting both) I would guess it cost us maybe 1% to do both. Once you get over doing it, you realize that you're still going through basically the same

	deterioration process as an inspector, you just recording a little more information. c) If no, how are your bridge preservation needs identified and managed? We answered yes but I will still add to this. Our Bridge Management System and Bridge Replacement Programs rely heavily on the information collected from our bridge inspections. The element information provides us with a vast amount of data that we identify needs and use greatly for requesting needed budget amounts to meet our set performance goals. We still rely greatly on our inspection review process to determine actual preservation projects. i. Inspectors find & identify preservation needs. ii. Inspector findings are reported to the Area at the Area Review Meeting. iii. Area prioritizes their needs & then sends the information to their Districts. iv. District prioritizes the overall needs of the District & submits the information to the Bridge Office (Bridge Management). v. A field review is then conducted with each District & Bridge Management. The Districts needs are then prioritized and defined. Bridge Management reviews the needs of all six Districts and prioritizes the overall States needs that meets the amount of funds budgeted.
Kentucky	Yes a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? They are being used to develop estimated quantities for repairs. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? It takes more time.
Michigan	Yes a) If yes, are you using Core Elements or the new AASHTO Elements? Modified CoRe elements but we plan to start collecting new AASHTO elements as soon as spring 2013. How and to what extent is the data being used in your bridge preservation program? We monitor element deterioration rates. We run Pontis scenario that tells us what type of project work needs with an estimate of cost for every bridge that is not already in our five year call for projects. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? Don't know. Of course it is going to be more work the first time around to make the conversion, but afterwards I expect it will be about the same amount of time, and we may someday only collect the AASHTO elements and calculate NBI ratings with the translator, and this will be a time savings because today we collect two sets of data (NBI and Pontis). c) If no, how are your bridge preservation needs identified and managed? We also use in-house developed applications including the Michigan Bridge Condition Forecast System (BCFS) and Michigan Bridge Reporting System (MBRS) in coordination with our annual call for projects.

Minnesota	Yes a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? We haven't implemented the new AASHTO Elements yet. We use CORE elements and NBIS condition ratings to assess bridge condition. Assessment data is used to identify, plan and prioritize bridge maintenance activities. It is also used to program capital investments in major rehabilitation and replacement. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? We believe the bridge inspection effort will be the same when the new AASHTO Elements are implemented.
Missouri	No. We use the NBIS condition ratings and assign ratings based on the worst case (i.e., deck condition rating based on condition in worst span). a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? N/A b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? N/A c) If no, how are your bridge preservation needs identified and managed? We don't consider condition ratings in our bridge preservation program. In fact, we don't really have a "program" since we don't have a dedicated budget for bridge preservation or a list of projects. We preserve our bridges through 1) routine preventive maintenance activities (e.g., clean/flush, seal deck) programmed at certain intervals and need-based maintenance work (e.g., deck repair, timber pile replacement) identified during the inspection or that comes to our attention and 2) rehabilitation projects prioritized by the districts.
Nebraska	No. Nebraska will soon be hiring a consultant to set up our bridge files, train our personnel, and write a new chapter in our Bridge Inspection Manual for element inspections. c) If no, how are your bridge preservation needs identified and managed? Our preservation needs are identified by our Bridge Management Section by using inspection reports (NBIS condition ratings), Structure Repair Reports issued by our inspectors, inventory data, and inspection photos. Nebraska has historically been a "worst first" State when it came to bridge needs. We have recently begun to schedule Systematic Preservation Projects.
North Dakota	Yes a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? We are currently collecting Core Elements. It's a tool in helping to develop overall bridge program.

Ohio	Ohio does not collect element level condition states data based upon a per quantity unit. Ohio does gather condition information on bridge elements as one complete item. As an example; bearings are rated as one lump item, so a bridge with 20 rockers and 5 bolsters will have one condition rating. ODOT monitors bridge performances using 4 performance indices or OPIs: General Appraisal (GA), Floor Condition Rating (FR), Wearing Surface Rating (SR) and Paint Rating (PR). All items are collected during the inspection program. If the condition rating of a bridge drops below deficiency level on any of the OPI, the bridge is considered deficient on that OPI & is programmed to remove the relevant deficiency. Once the bridge maintenance work is completed, improvement in the deficient OPI will be observed during the subsequent inspections. Bridge work costs to remove any OPI deficiency are tracked. Bridge OPIs based on the bridge deck area are monitored for each District every month. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? Yes, inspection will require more time ODOT is currently in the process of re-writing the current Ohio DOT's Bridge Management System. Ohio Dot will be making the switch from it's current condition assessment to the element level condition state stating in the 2013 bridge inspection cycle. Ohio Dot is expecting a major time investment to get the new rating system fully operational. The original question is very short sighted, Ohio Dot is very data driven. This data supports many of the decision from major programs to maintenance needs. How information is collected has a very big effect on other applications and reporting processes. c) If no, how are your bridge preservation needs identified and managed? The Bridge Engineer reviews all bridge inspections along with related field reviews and develops, 1st, a bridge replacement program that consists of a four year window. As this program is being set, bridge maintenance needs are identified, categorized and prioritized. The basic (PM) items are set and placed on the County Managers list to complete. The more extensive, complex and costly repairs are identified as contract PM.
Oklahoma	Yes a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? Presently, we are using the Core elements, but our new PONTIS Manual with the AASHTO elements will be out in December and we have scheduled a training session for all our bridge inspectors. This will be a significant change as there will be four condition states for all the PONTIS elements. We get \$5 million BR funds for bridge preservation. Our bridge preservation program is based on bridge management using the PONTIS data base. The focus of our bridge preservation is to seal joints, paint structural steel, repair bearings, repair beam ends, and do overlays. Using State funds, we are also replacing a lot of bridge decks which seals the roof and ensures bridge preservation. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes

	more time, about the same, or less time to inspect? Oklahoma is doing NBI ratings for the deck, superstructure, substructure, culvert, and scour in addition to all required PONTIS ratings (we have some of our own PONTIS items in addition to the Core elements). There was a time when we used the PONTIS converter to get our NBI ratings, but this produced inconsistent results. We have been doing both NBI and PONTIS for many years. In our opinion, little if any extra time is needed to do both. c) If no, how are your bridge preservation needs identified and managed? We are using the PONTIS data and bridge management to determine our bridge preservation needs.
South Dakota	Yes a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? we have been collecting CORE elements since 1998. We use it within Pontis to help create projects in our 5 year bridge program. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? Might be a slight increase in time but will be somewhat insignificant overall.
Wisconsin	Yes a) If yes, are you using Core Elements or the new AASHTO Elements? How and to what extent is the data being used in your bridge preservation program? We have been collecting core elements, Agency Specific elements and NBIS condition ratings. Core element information is used as part of our decision making in Bridge Management. b) With what you have seen so far: shifting from element based condition assessment ratings to the defect condition assessment ratings, do you think it takes more time, about the same, or less time to inspect? We anticipate more time to shift to defect condition assessment. The first iteration is anticipated to be as much as twice the time to develop the initial benchmarks of quantities (Surface Area of Coating and other), to perform and document inspections utilizing new AASHTO elements. Also there is a significant increase in the number of elements. c) If no, how are your bridge preservation needs identified and managed? By regional Bridge Maintenance Engineers identifying and managing needs with assistance from central office bridge management using our Highway Structures Information System (HSIS). Our Regional Staff have the highest level of awareness of preservation needs.

Q2 - How are the bridge preservation (BP) needs funded?	
Illinois	Bridge preservation is done primarily by State funds only. There are multiple sources, including item specific funding as well as general maintenance programs. a) Does your state have a separate program for Bridge Preservation activities? Deck Sealing Program: \$7,000,000/yr to seal approximately 25% of the bare concrete and concrete overlaid bridge deck inventory on a 4-year cycle. Major Bridge Preventive Maintenance Program: \$3,000,000/yr for general preservation of approximately 236 bridges with a length of 1000 ft or greater. These limited funds are used primarily for deck/bridge washing contracts. Contract Maintenance Program: \$12,000,000/yr for general bridge maintenance. Typical projects include deck patching, deck overlays, joint maintenance, and bearing repairs. Day Labor Program: \$3,500,000/yr for general maintenance and emergency repairs. Funding criteria and labor agreements typically restrict this program to small projects. Projects typically are for bridge impact repairs and emergency repairs of defects found during routine or in-depth inspections. Bridge Painting: IDOT does not have a bridge paint preservation program. Painting is restricted to only projects where a major rehabilitation has taken place. Painting for these projects is separated from the construction project and let as a paint-only project. b) What programs(s) are used to fund BP activities? See above
Indiana	a) Does your state have a separate program for Bridge Preservation activities? Yes, “Bridge and Culvert Preservation Initiatives” BCPI. b) What programs(s) are used to fund BP activities? Federal Highway Bridge Program (HBP) funds for bridge preservation and Surface Transportation Program (STP) for culvert projects.
Iowa	Through State funds. a) Does your state have a separate program for Bridge Preservation activities? We have a Bridge Maintenance fund that is used for some of our preservation activities. The remaining preservation needs are funded through our 5 year program. b) What programs(s) are used to fund BP activities? See “a” above.
Kansas	Currently, all bridge preservation funds are funded with just State Funds. We have developed a Bridge Preservation Policy Manual that we are going to submit to our local FHWA office for review and approval to use future bridge funds for bridge preservation. The effects of MAP21 are unclear to whether this will be a future problem or not. We currently have a budget of \$21 M a year for bridge preservation. Are currently highway program which extends through 2020 allows this to go up to \$25 M per year as the program goes along. a) Does your state have a separate program for Bridge Preservation activities? We have a bridge re-deck program, a bridge paint program, a bridge repair program

	and a culvert repair/replacement program (for 20 feet or less structures). The bridge repair program is the largest funded program of them all. The really nice thing about this system is that there is an original set percentage for each program but that money can be moved around to the other programs as needed each year (a large amount of flexibility). b) What programs(s) are used to fund BP activities? Already answered above.
Kentucky	We use both state and federal funds. a) Does your state have a separate program for Bridge Preservation activities? Yes b) What programs(s) are used to fund BP activities? Mostly we use state bridge maintenance funds.
Michigan	Using Federal Aid to Highway Program funds and Michigan Transportation funds (MTF) a) Does your state have a separate program for Bridge Preservation activities? Yes. It is a subset of our Bridge Template b) What programs(s) are used to fund BP activities? Using Federal Aid to Highway Program funds and Michigan Transportation funds (MTF)
Minnesota	Bridge Preservation activities are primarily funded with State funds allocated to each District's operating budget. We have dedicated bridge maintenance crews in each District who perform preventive and reactive maintenance activities. We will occasionally hire a contractor to perform Preservation activities (e.g. deck overlays, painting). This contract work is sometimes done with Federal funds. We also have a Highway Systems Operations Plan (HSOP) that dedicates State funds to system operations (including bridge maintenance).
Missouri	Bridge preservation activities are either performed by maintenance personnel or through STIP projects. Those activities performed in-house and through job order contracts contained in our STIP are paid for by the districts using state funds. In FY'11, the last year I have information for, we spent about \$14M on such activities. The STIP projects, other than the JOCs, are funded through a combination of state and federal funds. These projects are prioritized by district staff and funded from their allotment of construction funds. The amount spent on this type of work averages about \$70M per year. a) Does your state have a separate program for Bridge Preservation activities? No. We don't have a bridge preservation program or dedicated budget. b) What programs are used to fund Bridge Preservation activities? We use HBP, etal. to fund the federal portion of the bridge preservation work in our STIP.
Nebraska	The FHWA Bridge Preservation Guide separates bridge preservation in two parts; Rehabilitation and Preventive Maintenance (cyclical and condition based). Preventive Maintenance needs have been funded using State funds, but due to our recent FHWA approved Systematic Preventive Maintenance Program, and MAP-21, we will soon also be using Federal funds for preventive maintenance. a) Does your state have a separate program for Bridge Preservation activities? Not yet, but we hope to in the future. b) What programs(s) are used to fund BP activities?

	Preservation activities are funded with the same program, or pool of money as our replacements, rehabs, re-decks, etc...
North Dakota	BR Funds a) Does your state have a separate program for Bridge Preservation activities? No b) What programs(s) are used to fund BP activities? HBPRR
Ohio	All bridge maintenance and preservation activities are funded through the district allocated funds using state dollars. The Districts allocation is set by the Funds Management Committee. The Funds Management Committee is an advisory body created to make fact-based recommendations on how the department should best allocate available funding based on the goals, conditions, and needs of Ohio's transportation network. a) Does your state have a separate program for Bridge Preservation activities? No.
Oklahoma	a) Does your state have a separate program for Bridge Preservation activities? Yes, we get \$5 million Federal BR funds a year for bridge preservation activities. b) What programs(s) are used to fund BP activities? Presently, we are using BR funds.
South Dakota	a) Does your state have a separate program for Bridge Preservation activities? No – we don't have a separate program but we have doing bridge preservation activities for 30+ years now. b) What programs(s) are used to fund BP activities? Replacements and bridge preservation activities.
Wisconsin	a) Does your state have a separate program for Bridge Preservation activities? If we had a both a Preventive Maintenance of Structures Agreement with FHWA and Systematic approach in place for identifying needs we could use Federal Highway Bridge Funds for PM activities. Currently, mostly State funds are used for Preservation activities. b) What programs(s) are used to fund BP activities? State SHR and State Highway Maintenance and repair funds.

Q3 – What is the impact of the current funding on your bridge program?	
Illinois	The FY 2013 Program is down considerably. On the State system, there are approximately 7,800 bridges. The FY 2013 Program will rehabilitate or replace 64 bridges. That calculates out to 122 years to touch every bridge in the inventory. From FY 2006 to FY 2012, IDOT has averaged approximately 147 bridge rehabs/replacements per year or a touch every 53 years. IDOT's FY 2013 Annual Bridge Program totals approximately \$124 million. IDOT's FY 2006 through FY 2012 Annual Bridge Program has averaged approximately \$367 million/yr. The total funds identified for preservation, as indicated in Question # 2 amount to about \$25 million or 20% of the FY 2013 Annual Bridge Program but have averaged around 7% over the past 7 years. The Bridge Preservation funds are typically annual line item funds that are taken out of the total available funds before distribution to the Districts. The FY 2013 percent toward preservation therefore appears relatively high, but only because the overall total funds available is down severely. The average level dedicated to Bridge Preservation over the past decade (+/-7%) falls far short of funds required to actually maintain the existing inventory and prevent most from eventually becoming Structurally Deficient. A majority of the remaining budgeted funds was dedicated to major rehabilitation and replacement projects.
Indiana	Generally funding needs are more than what is available, but with Asset Management in place where funds are directed/redirected where most needs are between different assets (bridge, pavement, safety, mobility) and the five years program we are meeting the needs.
Iowa	We are not able to keep up with the growing number of repair needs at the current funding levels. The Bridge Maintenance fund has been increased over the past few years and will increase again in 2014. This is not new money but a shift in funds from other highway projects. The increase is due to the wave of bridges that will be starting to need repairs that were built in the 50's, 60's and 70's. Over half of Iowa's bridges were built in these time frames. The extra money for bridge maintenance will be beneficial but the overall impact is hard to quantify. Our current funding level of \$104 million per year will not be enough to maintain or decrease the number of Structurally Deficient bridges. An estimated \$141 million per year will be needed to keep our number of Structurally Deficient bridges constant.
Kansas	We are actually in pretty good shape since we passed your last highway bill. The \$21 M a year for preservation and another \$40 M for bridge replacement is making it possible for us to currently meet our performance goals. There were a couple of years prior where they cut so much that they finally got to us and took about half of our preservation funds to maintain operations. The math & the future---We have 5000 bridges on our state system, bridges don't generally last a 100 years. Just to meet the 100 year rule, we would have to replace 50 structures per year. Currently, we are not even close to this requirement. It more like

	30 to 35 bridges a year is being replaced. We have a future hump that is going to come and when it hits I hope our current preservation efforts help us through this challenge. The funding levels for replacement will have to be increased at some time to nearly \$75 M a year or we will fail.
Kentucky	Our funding has remained the same for the past several years yet the bridge preservation costs have increased.
Michigan	Our Leadership provides adequate funds for us to work towards our preservation goals, but we need a little more funding to meet our goals; 95 percent of freeway bridges in good or fair condition.
Minnesota	We receive dedicated State transportation funds to supplement Federal funding. We are not reliant on federal funding to execute our Bridge Preservation and Improvement programs.
Missouri	While we don't have a bridge program, the reduction in our STIP program from \$1.2B to \$700M annually will undoubtedly reduce the number of bridges we will rehabilitate and, thus, the overall condition of our bridges. However, the maintenance expenditures should remain somewhat constant.
Nebraska	As we continue into our preventive maintenance program we expect to see a benefit to our State's bridges and hope to develop separate funding so prevention does not have to compete with replacements and rehabs. Nebraska's current annual funding for bridges needs is \$30 million. Similar to most States, our needs are greater than our budget.
North Dakota	Sufficient to bring Deficient Bridges to less than 5% on State System. Past legislative assemblies designated funds for state aid. This in combination with Federal Funds will help maintain Bridge System.
Ohio	The General bridge fund is based upon funding allocated based on Districts total sq. ft. of deck area for OPI. The funds are directed to meet performance goals, These include areas include the General Appraisal (GA), Floor Condition (FC), Wearing Surface (WS), and Paint Condition (PC). Other funding sources are used for Major Bridge and new construction. The allocated funding is adjusted an additional 33% of total bridge budget – for maintenance, bridge agreements, etc.
Oklahoma	While the percentage of funds is small, the bridge preservation program is making a significant impact on our bridge preservation needs.
South Dakota	With MAP-21, unknown at this point.
Wisconsin	There is generally good funding of the bridge program (3R). However, additional funding of the preservation and maintenance program would be desirable to meet identified needs.

Q4 – Does your agency have an approved Systematic Preventive Maintenance process for use of Federal-Aid funds?	
Illinois	No a) If you answered no, has your agency submitted a request to your local FHWA office? What is the status of the request? No b) If you answered no, does your agency have any plans for pursuing an agreement? With the new MAP-21 requirements, IDOT will be developing and implementing an FHWA certified Asset Management Plan which will include a systematic, risk-based Bridge Management system.
Indiana	Yes
Iowa	Yes We have one preservation activity that has been approved. We can use federal funds for our dense concrete overlays. This has not been implemented because the extra effort needed to utilize federal funds is not worth the staff time for these relatively small projects. Our agreement is an informal approval that was predicated on using Pontis as the systematic process in the near future.
Kansas	No. a) If you answered no, has your agency submitted a request to your local FHWA office? What is the status of the request? Not yet. b) If you answered no, does your agency have any plans for pursuing an agreement? We are currently working on this and hope to submit something by the end of the year.
Kentucky	No a) If you answered no, has your agency submitted a request to your local FHWA office? What is the status of the request? No b) If you answered no, does your agency have any plans for pursuing an agreement? Not yet.
Michigan	Yes, but with MAP-21 isn't this irrelevant?
Minnesota	No a) If you answered no, has your agency submitted a request to your local FHWA office? What is the status of the request? No b) If you answered no, does your agency have any plans for pursuing an agreement? Not yet.
Missouri	No. a) If you answered no, has your agency submitted a request to your local FHWA office? What is the status of the request? No. b) If you answered no, does your agency have any plans for pursuing an agreement? No.

Nebraska	Yes
North Dakota	No a) If you answered no, has your agency submitted a request to your local FHWA office? What is the status of the request? No b) If you answered no, does your agency have any plans for pursuing an agreement? Currently Under Discussion
Ohio	No a) If you answered no, has your agency submitted a request to your local FHWA office? What is the status of the request? No, Ohio Dot and the Ohio division Office of FHWA have a draft copy of Bridge Preservation activities ready to be signed. However, the effects of MAP 21 are unclear as to why a memorandum of understating is still required for bridge preservation
Oklahoma	Yes
South Dakota	No
Wisconsin	Yes. We have an approved Preventive Maintenance of Structures agreement with FHWA. However, we have issues with Systematic Process for identifying and programming needs for Preservation and Maintenance that limits funding availability.
Q5 – Please provide details of the preservation activities performed during the last few years?	
Illinois	a) Deck Overlays – What kind of overlays have you applied? Predominately Latex and Microsilica overlays. b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. <u>New Steel – Shop and Field Painting</u> Inorganic Zinc Rich Primer / Acrylic / Acrylic <u>New Steel – Entire system shop applied</u> Organic Zinc Rich Primer / Epoxy / Urethane <u>Cleaning and Painting Existing Steel Structures</u> <u>System 1</u> – for Bare Steel: Organic (Epoxy) Zinc-rich Primer / Epoxy / Aliphatic Urethane. <u>System 2</u> – for Overcoating an Existing System: Epoxy Penetrating Sealer / Aluminum Epoxy Mastic / Aliphatic Urethane. <u>System 3</u> – for Bare Steel: Aluminum Epoxy Mastic / Aluminum Epoxy Mastic / Waterborne Acrylic. <u>System 4</u> – for Overcoating an Existing System: Epoxy Penetrating Sealer / Aluminum Epoxy Mastic / Waterborne Acrylic. <u>System 5</u> – for Bare Steel: Moisture Cure Urethane Zinc Primer / Moisture Cure Urethane Zinc intermediate / Moisture Cure Urethane Zinc finish.

	System 6 – for Overcoating an Existing System: Moisture Cure Urethane Penetrating Sealer, Moisture Cure Urethane intermediate / Moisture Cure Urethane finish. c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? Strip Seals up to 4" movement Finger Joint with trough for movements greater than 4" Modular Joints for movements greater than 4"
Indiana	a) Deck Overlays – What kind of overlays have you applied? The approved/agreed preservation program projects started in 2011. Lightweight overly (Flexogrid) is a qualified treatment under the agreement. b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. Spot painting is qualified, not sure about the kinds and number of coating! c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? For a 1" joint, typically we use a silicone based sealant. For 1"-3" we can also use a rubberized strip seal with metal extrusions. And for joints with over 3" in movement, we will call for the use of a modular joint.
Iowa	a) Deck Overlays – What kind of overlays have you applied? We have exclusively used dense concrete or HPC for overlays for many years. b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. A Zinc-rich Epoxy primer, a High-solids Aluminum Epoxy Mastic intermediate coat, and an Aliphatic Polyurethane top coat. c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? In general, expansion joint types are selected based on the amount of movement to be accommodated. Compression seals are rated for movements to 2 or 3 inches (50 or 75 mm), strip seals are rated for movements to 4 or 5 inches (100 or 125 mm), and finger joints are rated for movements to 10 inches (250 mm) or more. As the office has extended the policy limits for use of integral abutments there has been less need for expansion joints that accommodate small movements. Therefore, for new bridges the office has eliminated use of compression seals in favor of strip seals. At skews above 30 degrees, strip seals lose movement capacity and may not be practical. For movements larger than strip seals can accommodate the office designs and specifies finger joints. Except in unusual cases, strip seals or finger joints are adequate for expansion joints in Iowa bridges. Expansion joints other than strip seals or finger joints require approval of the supervising Section Leader.

Kansas	a) Deck Overlays – What kind of overlays have you applied? We generally use silica fume concrete overlays and polymer overlays. We do use latex overlays in some locations. b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. Two coat system---organic zinc primer with a water-borne acrylic top coat. c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? 1" Joints = compression seals 1"-4" Joints = strip seals >4" Joints = finger joints with a diaper system
Kentucky	a) Deck Overlays – What kind of overlays have you applied? Mostly modified latex overlays. State crews have done some asphalt with a waterproofing membrane. b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. Our main system is a zinc primer, epoxy intermediate coat, and urethane top coat. c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? 1" joints = pourable joints such as two part silicone sealant, 1" – 3" joints = strip seals or compression joints, over 3" joints = modular joints
Michigan	Please see attached Michigan work type activities list. <u>Capital Scheduled Maintenance (CSM):</u> (sustain current condition longer) • superstructure washing • vegetation control • drainage system cleaning / repair * • spot painting * • joint repair / replacement * • concrete sealing * • minor concrete patching and repair * • concrete crack sealing * • approach pavement relief joints * • slope paving repair * <u>Capital Preventive Maintenance (CPM):</u> (address the needs of the "fairs") • joint replacement *pin & hanger replacement * • complete painting * • zone painting * • epoxy overlays * • deck patching * • scour countermeasures * • HMA overlay with waterproofing membrane * • HMA cap (no membrane) *

	<u>Rehabilitation:</u> (improve “poor” or “fair” to “good”) • concrete overlay - shallow • concrete overlay - deep • superstructure repairs • extensive substructure repair • substructure replacement a) Deck Overlays – What kind of overlays have you applied? Latex modified concrete rigid overlays, silica fume modified concrete rigid overlays, both done deep or shallow, epoxy overlays, HMA overlays with and without water proofing membrane. Please see attached deck preservation matrix for list of overlays. b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. We use a three coat zinc based primer paint system. c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1”, 1”-3”, and over 3”? 1” – 3” strip seal expansion joints. Large – assembly (modular) joint seals.																		
Minnesota	a) Deck Overlays – What kind of overlays have you applied? Our most common overlay is a 2” low slump concrete overlay. We have also applied several thin polymer (chipseal) overlays. These thin polymer overlays have become more common in our department in recent years. b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. We use a three-coat system: epoxy zinc-rich primer, epoxy or urethane intermediate coat, and aliphatic urethane finish coat. c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1”, 1”-3”, and over 3”? less than 1” Joints = poured joint, hot rubber 1”-4” Joints = strip seals >4” Joints = finger joints with a diaper system or modular joints																		
Missouri	a) Deck Overlays – What kind of overlays have you applied? We’ve used asphaltic, calcium sulfoaluminate, epoxy polymer, high-early latex, latex, latex modified, low slump, and silica fume overlays. We are also adding a polyester polymer overlay in the coming year. b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. We have four paint systems: Systems G, H, I, and S. <table><tr><th>System</th><th>Primer</th><th>Intermediate Coat</th><th>Top Coat</th><th>Application</th><th>Use</th></tr><tr><td>G</td><td>Inorganic Zinc</td><td>Epoxy</td><td>Polyurethane</td><td>New and Recoat</td><td>45%</td></tr><tr><td>H</td><td>Inorganic Zinc</td><td>Waterborne Acrylic</td><td>Waterborne Acrylic</td><td>New and Recoat</td><td>5%</td></tr></table>	System	Primer	Intermediate Coat	Top Coat	Application	Use	G	Inorganic Zinc	Epoxy	Polyurethane	New and Recoat	45%	H	Inorganic Zinc	Waterborne Acrylic	Waterborne Acrylic	New and Recoat	5%
System	Primer	Intermediate Coat	Top Coat	Application	Use														
G	Inorganic Zinc	Epoxy	Polyurethane	New and Recoat	45%														
H	Inorganic Zinc	Waterborne Acrylic	Waterborne Acrylic	New and Recoat	5%														

		I	Inorganic Zinc		Polysiloxane	New	0%
		S	Calcium Sulfonate		Calcium Sulfonate	Overcoat	40%
	c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? <1" Joints = preformed compression seals & silicone sealant (maintenance only); 1"-3" Joints = preformed compression seals, preformed silicone, strip seals, & silicone sealant (maintenance only); >3" Joints = finger joints, flat plates with a diaper system						
Nebraska	a) Deck Overlays – What kind of overlays have you applied? Silica fume concrete, asphalt with membrane, just a few polymer/epoxy. b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. We have not done much painting in the last couple years. c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? Less than 2.5" – Precompressed Polyurethane Foam or Preformed Silicone 2.5" to 4" – Strip Seals Over 4" – Modular Joints						
North Dakota	a) Deck Overlays – What kind of overlays have you applied? Low Slump Concrete Overlays b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. In the past we have used a two coat Paint System consisting of an Inorganic Zinc Silicate Primer and a compatible High-Build, Aliphatic Polyurethane finish coat. We have recently rewritten the spec to now require a three-coat paint system. The three coat paint system consists of an epoxy zinc-rich primer, a polyamide epoxy intermediate coat, and an aliphatic polyurethane finish coat. c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? 1" - Strip Seal (almost all structures with small movements use integral abutments), 1" to 3" – Strip Seal, >3" – Strip Seal or Finger Joint.						
Ohio	a) Deck Overlays – What kind of overlays have you applied? SUPERPLASTICIZED DENSE CONCRETE OVERLAY \$69.37 Sq Yd MICRO SILICA MODIFIED CONCRETE OVERLAY \$66.00 Sq Yd EPOXY WATERPROOFING OVERLAY (1/4" THICK) \$75.00 Sq Yd b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. Currently Ohio Dot is using a three coat system OZEU for existing structures for approximately \$17.50 sq ft includes removal.						

Oklahoma	a) Deck Overlays – What kind of overlays have you applied? Latex modified, high density, asphalt membrane, and thin bonded polymer concrete overlays. b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages Inorganic zinc, epoxy, urethane (IZ, E, U) (90%) Organic zinc, epoxy, urethane (OZ, E, U) (5%) Single-Component Moisture-Cured Urethane System (SC-MC-U) (5%) c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? In general, joints are as follows: 1" movement: XJS 1"-3" movement: Strip seal, sometimes XJS system Over 3" movement: Strip seal or CIPEC (very expensive)
South Dakota	a) Deck Overlays – What kind of overlays have you applied? Low Slump Dense Concrete Overlays and Epoxy Chip Overlays and Membrane and Asphalt Overlays b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. Have done insignificant painting but starting to do more. 75% are Alkyd (2 coat system) and 25% are Polyurethane with Zinc Primer (2-3 coat system) c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? <1" Membrane Sealant Joint, Compression Seal 1"-3" Membrane Sealant Joint, Strip Seal >3" Strip Seal, Steel Fingers or Sliding Plates
Wisconsin	a) Deck Overlays – What kind of overlays have you applied? Asphalt and Asphalt modified Polymer. Concrete overlay Thin Epoxy/Polymer b) Steel Superstructure Painting – What kinds of coating systems have you applied? Show percentages if you use more than one type of system. (100% of Maintenance) 3-Coat system on approved products list for Wisconsin. We have current research (WHRP) to identify additional paint systems and appropriate application criteria. c) Deck Joints – What kind of joint seals do you use for movement ratings less than 1", 1"-3", and over 3"? For 1" joints – Strip Seal (Minimal use of compression joint) Joints 1" – 3" – Strip Seal Joints over 3" Strip Seals and Modular Expansion Device

Q6 - What are the top three priorities that you would like to see the WBPP pursue?	
Illinois	1. Discussion on the impacts of the new MAP-21 Highway Bill. With passage of MAP-21, the focus of every DOT must turn to Bridge (and Pavement) preservation. Funding and eligibility rules have been extensively changed. a) Impacts of MAP-21 requirements for development, FHWA certification, and implementation of Asset Management Plans and Bridge Management Systems b) Early coordination and participation with FHWA in the development of Performance Measures and State Targets as required by the new MAP-21 Highway Bill c) Potential for Element Level Inspection of non-NHS structures d) FHWA requirements for collection of National Bridge Elements in addition to NBIS Inspection data 2. Participation in the TSP2 Bridge Preservation Forums http://www.tsp2.org/forums-tsp2/viewforum.php?f=32 This forum could be a central focal point for sharing information. However, many of the discussion topics remain empty or contain dated material. Even the Oversight Panel Directory was last updated in 2008. 3. Potential for a National Bridge Preservation Partnership Meeting
Indiana	1. Gather and provide case studies from your partners about preservation projects (design and construction). Successes and failures. - This will give others the opportunity to learn from the mistakes and try and duplicate the successes in their own states. 2. Discussions about new products in the preservation arena. The more we know about the tools that we have available to us, the better equipped we are to fit the tool to the condition or project.
Iowa	1. Work with FHWA to establish funding mechanisms to make using Federal funds for preventive maintenance less cumbersome. Local public agencies that own bridges aren't always able to fund bridge maintenance projects with 100% of their own money. They tend to wait until a bridge becomes Deficient before they are able to fund a project, which normally means replacement because repair options are no longer feasible. Local public agencies in Iowa don't collect element level data to use in a Bridge Management System. 2. Be a resource for best practices.
Kansas	1. To get better participation from all of the states with in MWBPP. A voice from every state is needed to maintain the focus of the group to meet the needs of all. 2. Continue the development of the group as a network of resources. 3. Continue the work already started on the groups Action Items until completed.
Kentucky	1. Good performance measures so we can better determine which bridges should be addressed in the proper priority. 2. A list of reliable bridge preservation products so we can get the most out of our money. 3. A good schedule of bridge preservation activities such as when to apply concrete deck sealants. This will help the bridges last longer at an acceptable level.

Michigan	1. Sharing of best practice in bridge preservation, so we can learn from each other and identify trends. 2. Share management practice and identification of need. 3. Show the value of bridge preservation in order to secure funding when competing with other programs, especially as the states are required to develop “risk based asset management programs.”
Minnesota	1. Quantify the life-cycle-cost / benefit of bridge preservation activities. We need to convince our department leadership (and the public) that this money is well-spent. 2. Work with member states to establish a manual of preventive maintenance best practices. The FHWA’s Bridge Preservation Guide is a good start, but more detailed guidance would be helpful.
Missouri	1. A joint meeting with other BPPs to share best practices, experiences, information, etc. within a larger group. 2. Outreach efforts to our state BPP members and city/county representatives to share best practices, experiences, information, etc. with them and encourage their participation in the BPP. 3. Completion of action items to show our worth.
Nebraska	1. Continue topics on bridge deck preservation: a. Sealants b. Washing techniques c. Long lasting joints d. Thin overlays e. Preservation for decks with high chloride infiltration levels 2. Practical, accurate, and repeatable use of non-destructive test methods for bridge decks 3. Active participation from all States within the MWBPP group
North Dakota	1. Education on the Importance of Preservation 2. Guidance on When Various Preservation Activities should be employed. What is Cost Benefit. 3. Make sure there is a data transfer of information from meetings like LTBP that have parallel tracks.
Ohio	No Response
Oklahoma	1. Communicate technologies for bridge preservation (success stories) 2. Share different ideas for bridge preservation (new technologies) 3. Develop resources for bridge preservation, easy access to preservation activities in other States
South Dakota	No Response
Wisconsin	1. Insight and sharing of ideas for Best Practices for Bridge Preservation. 2. Improvement of deck life. 3. Access to information from other states that relates to Maintenance Manuals, Products, Special Provisions and Specifications, Paint Systems, Cost of Paint Systems, Qualifications of Paint Inspectors. 4. Information about other State DOT’s preservation programs including inventory

	size, program funding levels, and policies.
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