

**COSHOCTON County 2021**  
**INVENTORY, APPRAISAL & INSPECTION SNAPSHOT**

11/9/2021

**Inventory Data - NBIS Bridges Only**

				<u>NBIS COUNT</u>	
		NBIS Bridges > 20'		127	
		Bridges 10'-20'		142	
				269	
<b>Item 22 Inspection Responsibility</b>					
		<b>CODE</b>		<b># NBIS</b>	<b># ALL</b>
Data Tab	Col BV, BW	County	2	127	269
<b>Item 21 Maintenance responsibility</b>					
		<b>CODE</b>		<b># NBIS</b>	<b># ALL</b>
Data Tab		County	2	127	269
Col D		City or other local	4	0	0
		Railroad	27	0	0
		Private (tohter than RR)	26	0	0
		State Park	11	0	0
		Local Park	23	0	0
		Township	3	0	0
				127	269
<b>Item 42 Type service on bridge</b>					
		<b>CODE</b>		<b># NBIS</b>	<b># ALL</b>
Data Tab		Other	0	0	0
Col Q		Highway	1	126	268
		Railroad	2	0	0
		Ped/Bikeway	3	0	0
		Hwy/RR	4	0	0
		Hwy/Ped	5	1	1
				127	269
<b>Item 42 Type service under bridge</b>					
		<b>CODE</b>		<b># NBIS</b>	<b># ALL</b>
Data Tab		Other	0	0	0
Col R		Hwy w/ or w/o Ped	1	0	0
		Railroad	2	0	0
		Ped/Bkwy	3	0	0
		Hwy w/ RR	4	0	0
		Waterway	5	127	269
		Hwy/waterway	6	0	0
		RR/waterway	7	0	0
		Hwy/waterway/RR	8	0	0
		Relief (for waterways)	9	0	0
				127	269

## Inspection Condition Data - NBIS Bridges Only

<b>Item 41 Operating Status</b>		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab	Open, No restriction	A	112	249
Col AM	Open, posting recommended	B	0	0
	Open, Half width constr.	C	0	0
	Open because of temp. fix	D	0	0
	Open using temp. structure	E	0	0
	New structure not yet open	G	0	0
	closed for load cap. reason	K	0	0
	Posted for load capacity	P	15	20
	Posted for other than load	R	0	0
	Closed for other than load	X	0	0
			127	269

### Load Rating Data

<b>Load Rating Tab</b>		<b># OF ERRORS</b>
Col. AN	Op RF greater than Inv RF?	0
Col. AO	Posting and % Legal OK?	0
Col. AP	"0" used instead of blank	0
Col. AT	% legal <> lowest RF	0
Col. AV	Item 70 correct?	0
Col. AW	Method of Rating Alike?	0
Col. AX	Op & Inv RF in Tons as req'd?	0
Col. AY	Item 575 correct?	0
Col. AZ	Depth of fill completed?	0

<b>METRIC 12 - Routine Inspection</b> ** (from files examination)						
<b>Field Ratings</b>		<b># &gt; +/-</b>	<b># Rating</b>	<b>% PASS</b>	<b>COMPLIANCE</b>	
	field ratings	0	30	100.0%		(C)
<b>Comments</b>		<b>Missing</b>	<b># &lt; 6</b>	<b>% PASS</b>		
Tab	Comments when Rating < 6	0	128	100.0%		(C)
	Inadequate comments**	0	6	100.0%		(C)
		<b>Error</b>	<b>total Score</b>	<b>% PASS</b>		
Comments	Rating should be = Scour	0	128	100.0%	within tolerance +/- 1	
Tab	Noncompliant Scour Rating E	0	128	100.0%		(C)

**METRIC 14 - Posting** Load rating data tab

<b>From Files review</b>		<b># errors</b>	<b># sampled</b>	<b>% PASS</b>	<b>COMPLIANCE</b>	
Op RF < 3 tons but not close	Column BB	0	127	100.0%		(C)
Op RF = 0 but not closed	Column BC	0	127	100.0%		(C)
% Legal < 100 but not posted	Column BD	0	127	100.0%		(C)
Item 41 = B	Column BE	0	127	100.0%		(C)

**METRIC 16 - Fracture Critical Ins:** (from files examination)

<b>From Files review</b>		<b>Missing</b>	<b># FC</b>	<b>% PASS</b>	<b>COMPLIANCE</b>	
Fract Critical Member ID		0	2	100.0%		(C)
Fatigue Prone Detail		0	2	100.0%		(C)
Gusset Plate Calculations		0	2	100.0%		(C)
FC Inspection Procedure		0	2	100.0%		(C)

**METRIC 17 - Underwater Inspect:** (from files examination)

<b>From Files review</b>		<b>Missing</b>	<b># UW</b>	<b>% PASS</b>	<b>COMPLIANCE</b>	
UW Inspection Procedure		0	1	100.0%		(C)
Location of UW elements		0	1	100.0%		(C)
UW frequency identified		0	1	100.0%		(C)

## KEY METRICS

<b>(C)</b>	<b>Compliant</b>	<b>(CC)</b>	<b>Conditionally Compliant</b>
<b>(SC)</b>	<b>Substantially Compliant</b>	<b>(NC)</b>	<b>Non- Compliant</b>
		<b>(NC)</b>	<b>(SC) If corrected within 6/12 months</b> <b>Refresher=6 mo, Comprehensive=12 mo</b>

### **METRIC 2 - Program Manager Q** (from files examination)

<b>From Files review</b>	<b>Missing</b>	<b>#sampled</b>	<b>% PASS</b>	<b>COMPLIANCE</b>
PE /Experience	0	1	100.0%	(C)
Comprehensive	0	1	100.0%	(C)
Refresher	0	1	100.0%	(C)

### **METRIC 3 - Team Leader Qualifi** (from files examination)

<b>From Files review</b>	<b>Missing</b>	<b>#sampled</b>	<b>% PASS</b>	<b>COMPLIANCE</b>
Degree /Experience	0	2	100.0%	(C)
Comprehensive	0	2	100.0%	(C)
Refresher	0	2	100.0%	(C)

### **METRIC 6 FC Insp. Frequency Routine**

<b>Bridge Inspections</b>	<b>Overdue</b>	<b>Overdue</b>	<b>% PASS</b>	<b>COMPLIANCE</b>
Data Tab NBIS -	24 months	0	100.0%	(C)
Col. Y ORC -	Calendar Year	0	100.0%	(C)
BIM -	18 months	0	100.0%	(C)

### **METRIC 6 Insp. Frequency Routine**

<b>Bridge Inspections</b>	<b>Overdue</b>	<b># OVERDUE</b>	<b>% PASS</b>	<b>COMPLIANCE</b>
Data Tab NBIS -	24 months	0	100.0%	(C)
Col. AB ORC -	Calendar Year	0	100.0%	(C)
BIM -	18 months	0	100.0%	(C)

### **METRIC 8 - Insp. Frequency Underwater**

<b>Dive Inspections</b>	<b>Overdue</b>	<b># OVERDUE</b>	<b># UW</b>	<b>% PASS</b>	<b>COMPLIANCE</b>
Data Tab Col. Z	60 months	0	0	100.0%	(C)

### **METRIC 10 - Insp. Frequency FC Member**

<b>FC Inspections</b>	<b>Overdue</b>	<b># OVERDUE</b>	<b># FC</b>	<b>% PASS</b>	<b>COMPLIANCE</b>
Data Tab Col. Y	24 months	0	5	100.0%	(C)

<b>Item 63 Documented Engineering Judgment</b>			<b># NBIS</b>	<b># ALL</b>
	Field Eval & Doc EJ		4	n/a

**BR\_100 for these bridges?**

<b>Item 92 Underwater</b>		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab	requires dive inspection	N	127	n/a
Col W,X,Z	requires dive inspection	Y	0	n/a
			127	
	dive insp date blank		0	

<b>Item 70 Plan Information</b>		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab	plans not avail	0	7	64
Col. AV	plan avail	1	93	167
	field measured	2	27	38
	Field Testing	3	0	0
	not applicable	N	0	0
			127	269

<b>Item 63 Method of Analysis</b>		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab	Field Eval & Doc. Eng Judgm	0	4	58
Col. AV	Work Stress	1	0	0
	LFR	2	0	0
	LRFR	3	0	0
	Load testing	4	0	0
	No Rating done	5	0	21
	Load Factor (LF)	6	95	125
	WS or AS	7	9	16
	Load & Resistance Factor	8	19	46
	Assigned Rating (LFR) HS20	D	0	3
	Assigned Rating (LRFR) HL9	F	0	0
	Not applicable (Ped, RR, Bld	X	0	0
			127	269

**REMINDER:**

**Load Factor required for bridges built aft (exceptions: timber, etc.)**  
**LRFR required for bridges built after 2010**

<b>ITEMS 43A,B,C Structure Type</b> (Col M,N,O)		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
	Concrete Slab	101	1	17
	Concrete Box Beam/Girder Multiple	105	1	1
	Concrete Frame	107	2	28
	Concrete Culvert (incl frame culverts)	119	3	55
	Steel Beam or Girder	302	35	70
	Steel Thru Truss (includes Pony)	310	2	2
	Steel Continuous Beam or Girder	402	5	5
	Prestressed Concrete Thru Arch	502	1	1
	Prestr. Conc. Cont. Box Beam/Girder Multiple	505	68	79
	Prestr. Conc. Cont. Box Beam/Girder Multiple	605	8	8
	Timber Slab	701	0	1
	Timber Thru Truss (includes Pony)	710	1	1
	Timber Deck Arch	811	0	1
			127	269

<b>Item 92 Fracture Critical</b>		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab	Requires FC Inspection	Y	5	n/a
Col U,V,Y	Requires FC Inspection	N	122	n/a
			127	n/a
	FC Switch Y/N is Blank		0	n/a

<b>Item 11: Scour</b>			<b># NBIS</b>	<b># ALL</b>
Data Tab	Bridge not over waterway	N	0	0
Col AA	unknown foundation	U	0	0
	over tidal waters	T	0	0
	foundations on dry land	9	0	0
	stable above footing	8	56	121
	countermeasures installed	7	3	8
	no scour evaluation made	6	0	0
	stable within footer limits	5	61	119
	stable action needed	4	7	21
	scour critical - unstable	3	0	0
	scour critical - scour present	2	0	0
	scour critical - failure immine	1	0	0
	scour critical - bridge failed	0	0	0
			127	269

## PRELIMINARY FHWA 23 Metric Matrix

23 metrics used by FHWA to measure NBIS compliance

### Compliance Codes for the following Metrics:

<b>(C)</b>	Compliant
<b>(SC)</b>	Substantially Compliant
<b>(CC)</b>	Conditionally Compliant (Adhering to approved PCA)
<b>(NC)</b>	Not Compliant

Metric	Description	(C)	(SC)	(CC)	(NC)
1	State Bridge Inspection Organization				
2	Program Manager Qualification				
3	Team Leader Qualification				
4	Load Rating Engineer Qualification				
5	UW Bridge Inspection Diver Qualification				
6	Routine Inspection Frequency - Low Risk				
7	Routine Inspection Frequency - High Risk				
8	UW Inspection Frequency - Low Risk				
9	UW Inspection Frequency - High Risk				
10	FC Inspection Frequency				
11	Frequency Criteria				
12	Inspection Quality				
13	Load Rating				
14	Posted or Restricted Bridges				
15	Bridge Files				
16	FC Bridges				
17	UW inspection procedures				
18	Scour Critical Bridges				
19	Complex Bridges				
20	QC/QA				
21	Critical Findings				
22	Inventory **				
23	Updating of Data				

\*\* based on results of Field Review

Metric	Action Needed
14	18 bridges are coded as posted but no date for sign installation is coded in Column AM