

## LAKE County 2021

### INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

2/9/2021

(November Data Update)

### Inventory Data - NBIS Bridges Only

				NBIS COUNT	
NBIS Bridges > 20'				66	
Bridges 10'-20'				35	
				101	
<b>Item 22 Inspection Responsibility</b>		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>	
Data Tab	Col BV,B'w County	2	66	101	
<b>Item 21 Maintenance responsibility</b>		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>	
Data Tab	County	2	66	101	
Col D	City or other local	4	0	0	
	Railroad	27	0	0	
	Private (other than RR)	26	0	0	
	State Park	11	0	0	
	Local Park	23	0	0	
	Township	3	0	0	
				66	101
<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	63	97	
	Railroad	2	0	0	
	Ped/Bikeway	3	0	0	
	Hwy/RR	4	0	0	
	Hwy/Ped	5	3	4	
				66	101
<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	66	101	
	Hwy/waterway	6	0	0	
	RR/waterway	7	0	0	
	Hwy/waterway/RR	8	0	0	
	Relief (for waterways)	9	0	0	
				66	101

<b>ITEMS 43A,B,C Structure Type</b> (Col M,N,O)		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Concrete Slab		101	4	11
Concrete Box Beam/Girder Multiple		105	1	1
Concrete Frame		107	1	3
Concrete Culvert (incl frame culverts)		119	12	22
Concrete Continuous Slab		201	2	2
Steel Beam or Girder		302	7	8
Steel Thru Truss (includes Pony)		310	4	4
Steel Culvert (incl frame culverts)		319	0	4
Steel Continuous Beam or Girder		402	6	6
Prestressed Concrete Slab		501	1	1
Prestressed Concrete Thru Arch		502	1	1
Prestr. Conc. Cont. Box Beam/Girder Multiple		505	19	22
Prestressed Concrete Continuous Thru Arch		602	2	2
Timber Slab		701	1	1
Timber Thru Arch		702	2	2
Timber Culvert (incl frame culverts)		719	2	3
Timber Culvert (incl frame culverts)		819	0	1
Aluminum or Iron Culvert (incl frame culverts)		919	1	7
			66	101

<b>Item 92 Fracture Critical</b>		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab	Requires FC Inspection	Y	4	n/a
Col U,V,Y	Requires FC Inspection	N	62	n/a
			66	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	4	4
	stable above footing	8	12	15
	countermeasures installed	7	26	46
	no scour evaluation made	6	0	0
	stable within footer limits	5	24	36
	stable action needed	4	0	0
	scour critical - unstable	3	0	0
	scour critical - scour present	2	0	0
	scour critical - failure imminent	1	0	0
	scour critical - bridge failed	0	0	0
			66	101

<b>Item 63 Documented Engineering Judgment</b>			<b># NBIS</b>	<b># ALL</b>
	Field Eval & Doc EJ		2	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	63	n/a
Col W,X,Z	requires dive inspection	Y	3	n/a
			66	
	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	2	5
Col. AV	plan avail	1	60	91
	field measured	2	2	3
	Field Testing	3	2	2
	not applicable	N	0	0
			66	101

<b>Item 63 Method of Analysis</b>		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab	Field Eval & Doc. Eng Judgme	0	2	5
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	12
	Load Factor (LF)	6	48	61
	WS or AS	7	8	11
	Load & Resistance Factor	8	8	12
	Assigned Rating (LFR) HS20	D	0	0
	Assigned Rating (LRFR) HL90	F	0	0
	Not applicable (Ped, RR, Bldg)	X	0	0
			66	101

**REMINDER:**

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

## 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	61	95
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	1
	Posted for load capacity	P	5	5
	Posted for other than load	R	0	0
	Closed for other than load	X	0	0
			66	101

<b>Load Rating Data</b>		
<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

## 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 Qu (from files examination)

From Files review	Missing	#sampled	% PASS	COMPLIANCE
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)

From Files review	Missing	#sampled	% PASS	COMPLIANCE
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

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

### METRIC 6 Insp. Frequency Routine

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

### METRIC 8 - Insp. Frequency Underwater

Dive Inspections Overdue	# OVERDUE	# UW	% PASS	COMPLIANCE
Data Tab Col. Z 60 months	0	3	100.0%	(C)

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

<b>FC Inspections Overdue</b>		<b># OVERDUE</b>	<b># FC</b>	<b>% PASS</b>	<b>COMPLIANCE</b>
Data Tab Col. Y	24 months	0	4	100.0%	(C)

**METRIC 12 - Routine Inspection** \*\* (from files examination)

<b>Field Ratings</b>		<b># &gt; +/-1</b>	<b># Ratings</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	66	100.0%	(C)
	Inadequate comments**	0	6	100.0%	(C)
		<b>Error</b>	<b>total Score</b>	<b>% PASS</b>	
Comment	Rating should be = Scour	0	66	100.0%	within tolerance +/- 1
Tab	Noncompliant Scour Rating E	0	66	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 B	0	66	100.0%	(C)
Op RF = 0 but not closed	Column B	0	66	100.0%	(C)
% Legal < 100 but not posted	Column B	0	66	100.0%	(C)
Item 41 = B	Column B	0	66	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 Inspecti** (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)

## 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