2013 INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

CLINTON COUNTY ENGINEER

Inventory Data - BR 87 NBIS Bridges Only

	NBIS COUNT
NBIS Bridges > 20'	**134**
Bridges 10'-20'	**163**
	297

Possible NBIS length errors **1** *

Item 95	Inspection Responsibility	CODE	COUNT	%
	County	3	134	100.0%
Item 97	**Maintenance responsibility**			
	County	3	130	97.0%
	City or other local	4	0	0.0%
	Railroad	6	2	1.5%
	Private	7 (Runway)	2	1.5%
	Combination	8	0	0.0%
	ODNR	A	0	0.0%
	Park District	C	0	0.0%
	Township	F	0	0.0%
			134	100.0%
Item 100	**Type service on bridge**			
	Other	0	2	1.5%
	Highway	1	130	97.0%
	Railroad	2	2	1.5%
	Ped/Bikeway	3	0	0.0%
	Hwy/RR	4	0	0.0%
	Hwy/Ped	5	0	0.0%
	RR Abnd. rails rem'vd	A	0	0.0%
			134	98.5%

Item 100	Type service under bridge				
	Hwy w/ or w/o Ped	1		4	3.0%
	Railroad	2		0	0.0%
	Ped/Bkwy	3		0	0.0%
	Hwy w/ RR	4		0	0.0%
	Waterway	5		129	96.3%
	Hwy/Waterway	6		0	0.0%
	RR/Waterway	7		0	0.0%
	Hwy/Wtrway/RR	8		0	0.0%
	Relief (RR w/o tracks)	9		0	0.0%
	Other	0	(Quarry)	1	0.7%
				134	100.0%

	Structure Type	CODE		COUNT	%	
	concrete slab continuous	112		1	0.7%	
	concrete frame simple	171		2	1.5%	
	concrete culvert filled	195		3	2.2%	
	prestressed conc. slab continuous	212		1	0.7%	
	prestressed conc. box beam simple	231		92	68.7%	
	prestressed conc. box beam continuous	232		15	11.2%	
	steel beam simple	321		10	7.5%	
	steel beam continuous	322		1	0.7%	
	steel truss thru	344	**	3	2.2%	*
	steel culvert filled	395		6	4.5%	
				134	100.0%	

** should be pony trusses 34A

Item 188	Fracture Critical	CODE		COUNT	%
	fracture critical member	Y		3	2.2%
	fracture critical member	N		131	97.8%
				134	100.0%
	No. of steel trusses and girders	34_, 36_	Struct. Type	3	

	Fracture Critical File	to be completed by April 1, 2013		COUNT
	Required Fracture Critical Files	3	truss/girde	3
	(including written Procedure and FPD)	0	bridges should not be FC	

	Gusset Pl. Analysis	to be completed by December 31, 2011		COUNT
	Required Gusset Plate Analysis	3	trusses	3
		0	riveted truss	

Item 189	Underwater	CODE	COUNT	%
	requires dive inspection	N	134	100.0%
	requires dive inspection	Y	0	0.0%
	dive inspection dates		0	0.0%
Item 74	**Scour**			
	Bridge not over waterway	N	5	3.7%
	unknown foundation	U	0	0.0%
	over tidal waters	T	0	0.0%
	foundations on dry land	9	0	0.0%
	stable above footing	8	22	16.4%
	countermeasures installed	7	1	0.7%
	no scour evaluation made	6	0	0.0%
	stable within footer limits	5	106	79.1%
	stable action needed	4	0	0.0%
	scour critical - unstable	3	0	0.0%
	scour critical - scour present	2	0	0.0%
	scour critical - failure imminent	1	0	0.0%
	scour critical - bridge failed	0	0	0.0%
			134	100.0%
Item 71	**Foundation Type**			
	Compare with Scour "Unkown Foundation"			
	Forward Abutment	U	2*	1.4%
	Rear Abutment	U	2*	1.4%
	Predominate Pier	U	0	0.0%

* OK - RR bridges over Hwy

Item 87	Plan Information	CODE	COUNT	%
	no plans	0	0	0.0%
	plans available	1	130	97.0%
	field information	2	0	0.0%
	not applicable	N	4	3.0%
			134	100.0%

	Load Factor	COUNT	%
	Operating RF and Inventory RF equal to each other	0	0.0%

	Good 5's	from culverts	COUNT	%	
		Culvert fill>6.5'	4	3.0%	*
			(3 Non-NBIS)		

	195 Culvert vs 171 Frame	COUNT	%
	# that do NOT meet the 2' Rule	0	0.0%

Item 84	Method of Analysis	CODE	COUNT	%
	WS or AS	1	8	6.0%
	Load Factor (LF)	2	117	87.3%
	Load & Resistance Factor	3	5	3.7%
	Combination of methods	4	0	0.0%
	Engineering Judgment Superstr	5	0	0.0%
	Load testing	6	0	0.0%
	Engineering Judgment Substr	7	0	0.0%
	Not applicable (Ped or RR bridges)	X	4	3.0%
			134	100.0%

REMINDER:

Load Factor required for bridges built after 1993 (with certain exceptions)

LRFR required for bridges built after 2010

Inspection Condition Data - BR 86 NBIS Bridges Only

General Appraisal	CODE	COUNT	%
9 Excellent	9	13	9.7%
8 Very good	8	84	62.7%
7 Good	7	25	18.7%
6 Satisfactory	6	10	7.5%
5 Fair	5	2	1.5%
4 Poor	4	0	0.0%
3 Serious	3	0	0.0%
2 Critical	2	0	0.0%
1 Imminent Failure	1	0	0.0%
0 Closed	0	0	0.0%
		134	100.0%

Rating Consistency	COUNT	%	
GA <> Summary Items	1	0.7%	
1-4 codes <> Summary	7	0.3%	*

INSPECTION FREQUENCY		COUNT	
Number inspections per day		Gary S	Adam F
	Avg.	5.9	10.7
	High	16	14
Recommended Max. 10 per day	# days over 10	7	5
Maximum 50 reviews per day			

Operating Status	CODE	COUNT	%
Open, No restriction	A	134	100.0%
Open, posting recommended	B	0	0.0%
Open, Half width construction	C	0	0.0%
Open because of temporary fix	D	0	0.0%
Open using temporary structure	E	0	0.0%
New struture not yet open	G	0	0.0%
closed for load capacity reason	K	0	0.0%
Posted for load capacity	P	0	0.0%
Posted for other than load	R	0	0.0%
Closed for other than load	X	0	0.0%
		134	100.0%

Item 41 AGE of BRIDGES	YEAR (built or rehab)	COUNT	
	-1900	1	0.7%
	1901-1910	0	0.0%
	1911-1920	0	0.0%
	1921-1930	0	0.0%
	1931-1940	0	0.0%
	1941-1950	0	0.0%
	1951-1960	1	0.7%
	1961-1970	0	0.0%
	1971-1980	13	9.7%
	1981-1990	50	37.3%
	1991-2000	44	32.8%
	2001-2010	21	15.7%
	2011-2020	4	3.0%
		134	100.0%

(C)	Compliant
(SC)	Substantially Compliant
(CC)	Conditionally Compliant (Adhering to approved pan of corrective action)
(NC)	Not Compliant

METRIC 6 Insp. Frequency Routine

Bridge Inspections Overdue		ACTUAL COUNT	% COMPLIANT	COMPLIANCE
NBIS -	24 months	0	100.0%	(C)
ORC -	18 months	0	100.0%	(C)

METRIC 8 - Insp. Frequency Underwater

Dive Inspections Overdue	ACTUAL COUNT	% COMPLIANT	COMPLIANCE
60 months	0	N/A	(C)

METRIC 10 - Insp. Frequency FC Member

FC Inspections Overdue	ACTUAL COUNT	% COMPLIANT	COMPLIANCE
24 months	0	100.0%	(C)

METRIC 13 - Load Rating

Type of Metric check	Need for compliance	# Not Rated	% of NBIS Rated	COMPLIANCE
Deck, Super, Sub, Culvert Summary <=4	100%	0	100.0%	(C)
Operating Status = D or E	100%	0	100.0%	(C)
FC=Y	100%	0	100.0%	(C)
Operating Status = P or R	100%	0	100.0%	(C)
Bridges with no restrictions	100%	0	100.0%	(C)

METRIC 14 - Post or Restrict

Bridge posting/closing Follow-through	COUNT	% COMPLIANT	COMPLIANCE
Bridges below 10% legal but not closed	0	100.0%	(C)
Operating Rating Factor = 0 but not closed	0	100.0%	(C)
Bridges below 100% legal but not posted	0	100.0%	(C)
Bridges to be posted but aren't (GA code B)	0	100.0%	(C)

METRIC 22 - Inventory (partial review)

Structure Length	ACTUAL COUNT	COMPLIANCE	
Number of bridges with length or span difference	1	depends on sample size	*
LAT/LONG			
missing coordinates	0	depends on sample size	

PRELIMINARY FHWA 23 Metric Matrix

23 metrics used by FHWA to measure NBIS compliance

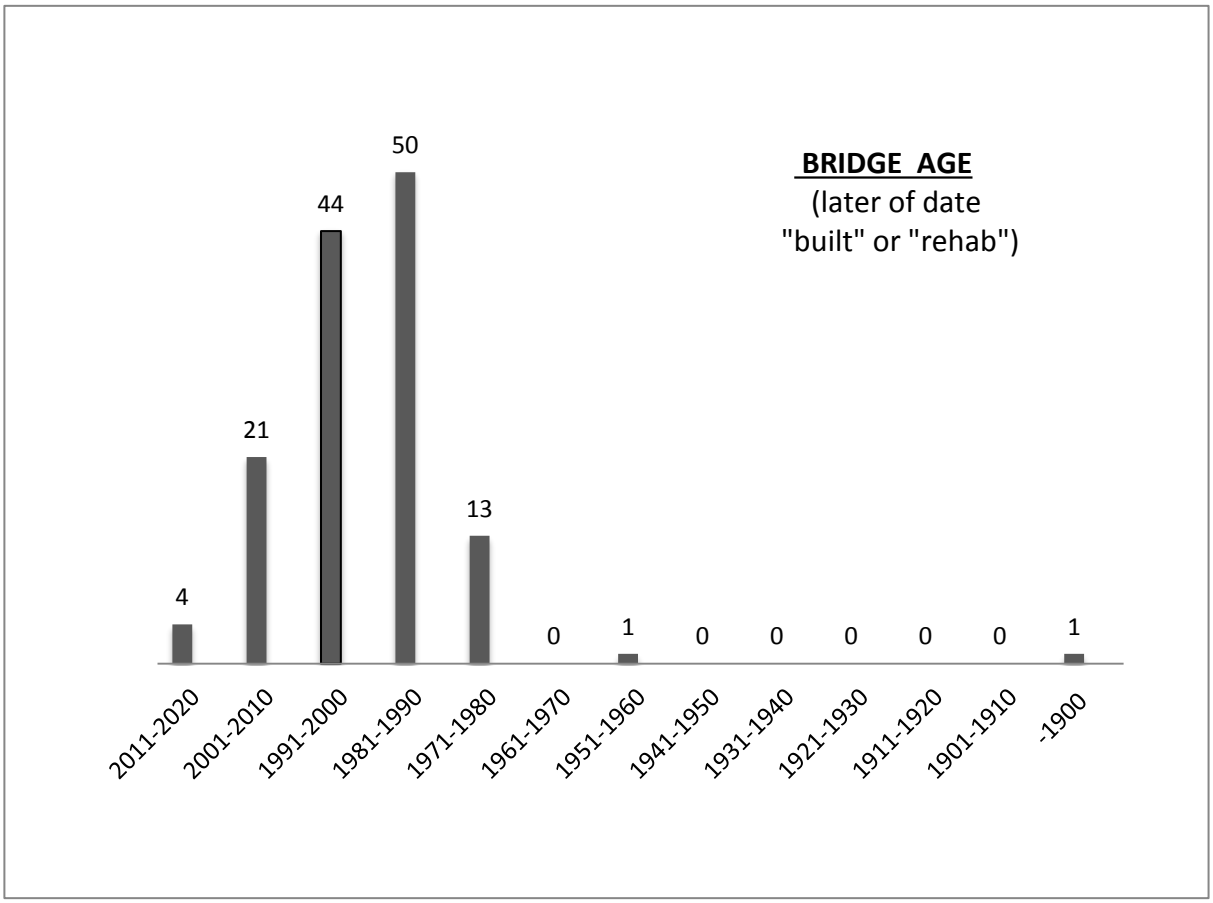
Compliance Codes for the following Metrics:

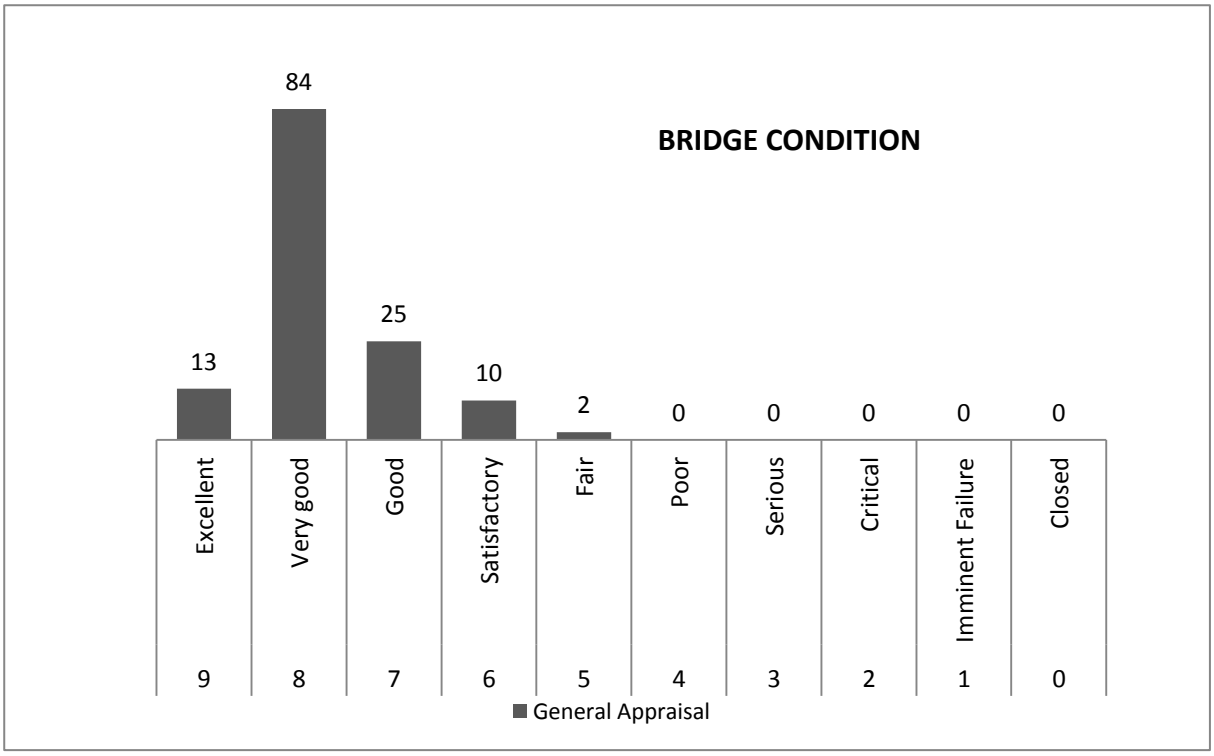
(C) Compliant
(SC) Substantially Compliant
(CC) Conditionally Compliant (Adhering to approved PCA)
(NC) Not Compliant

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** 100%				
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 ** 98%				
23	Updating of Data				

** based on results of Field Review

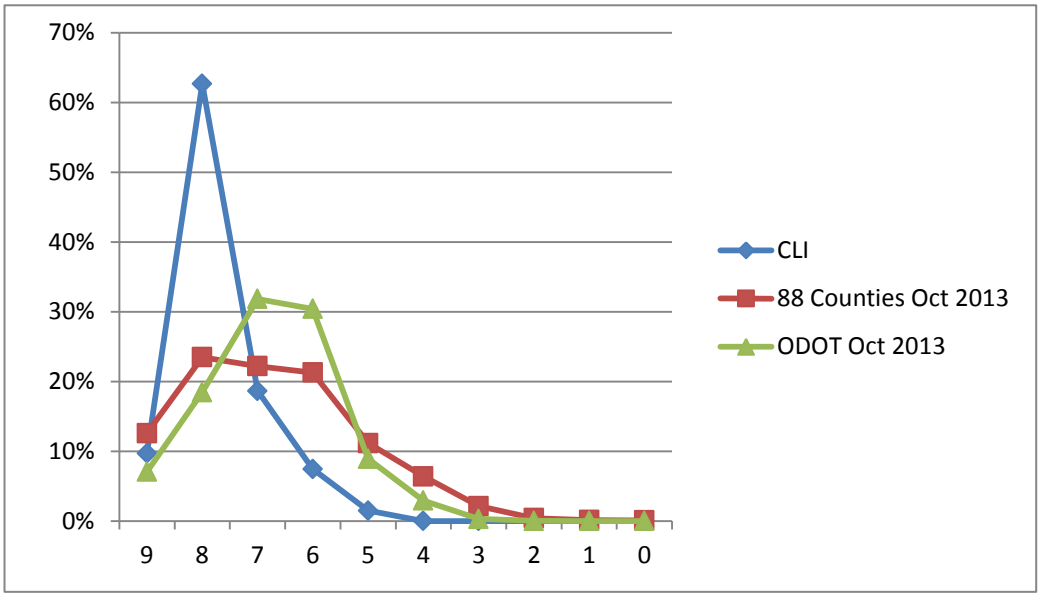
Metric	Action Needed


BRIDGE AGE
(later of date
"built" or "rehab")
4
21
44
50
13
0
1
0
0
0
0
0
1
2011-2020
2001-2010
1991-2000
1981-1990
1971-1980
1961-1970
1951-1960
1941-1950
1931-1940
1921-1930
1911-1920
1901-1910
-1900


BRIDGE CONDITION
13
84
25
10
2
0
0
0
0
0
Excellent
Very good
Good
Satisfactory
Fair
Poor
Serious
Critical
Imminent Failure
Closed
9
8
7
6
5
4
3
2
1
0
General Appraisal

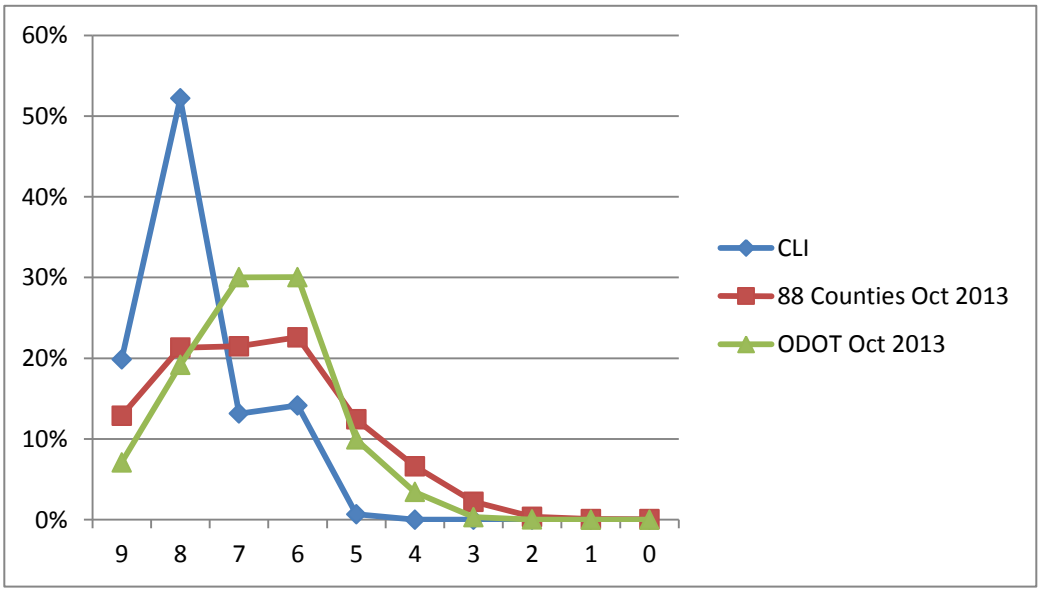
GENERAL APPRAISAL COMPARISON

NBIS Bridges



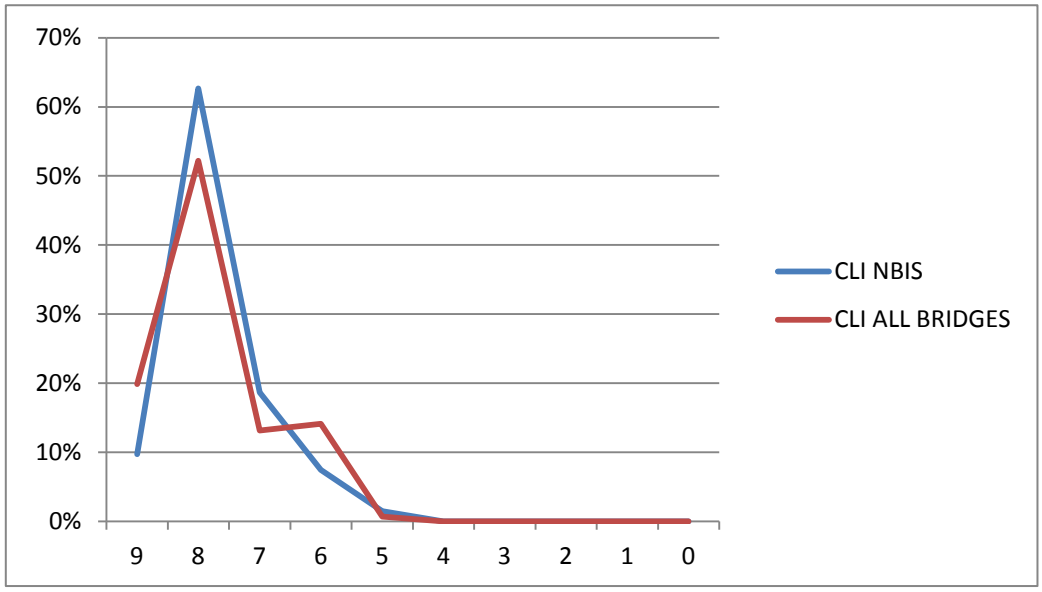
GENERAL APPRAISAL COMPARISON

All Bridges



GENERAL APPRAISAL COMPARISON

County NBIS vs. All Bridges



	23	23	24	23	24	24	24	
24	24	24	24	24	24	24	24	
0	0.958333	0.958333	1	0.958333	1	1	1	0.859375