

NRSA Comments

South Dakota Department of Environment and
Natural Resources

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NRSA Technical Document

Table F-1. Nutrient and Salinity Category Criteria for NRSA Assessment

Ecoregion	Salinity as Conductivity (µS/cm) Good-Fair	Salinity as Conductivity (µS/cm) Fair-Poor	Total N (µg/L) Good-Fair	Total N (µg/L) Fair-Poor	Total P (µg/L) Good-Fair	Total P (µg/L) Fair-Poor
CPL	500	1000	1092	2078	56.3	108
NAP	500	1000	329	441	8.2	15.7
SAP	500	1000	296	535	17.8	24.4
UMW	500	1000	716	1300	21.6	44.7
TPL	1000	2000	1750	3210	165	338
NPL	1000	2000	948	1570	91.8	183
SPL	1000	2000	698	1570	52.0	95.0
WMT	500	1000	131	229	14.0	36.0
XER	500	1000	246	462	35.5	70.0

Assigning Conditions to Sites

SITE_ID	FW_ECO9	PTL	PTL_COND	WGTNRSA09
FW08TX045	CPL	50.095	Good	2856.86321
FW08MS038	CPL	50.16	Good	1797.020464
FW08AR088	CPL	50.199	Good	1217.875312
FW08FL032	CPL	50.53	Good	95.71833047
FW08FL075	CPL	52.226	Good	1443.405585
FW08FL006	CPL	52.704	Good	74.90203981
FW08FL025	CPL	53.109	Good	77.20109705
FW08DE011	CPL	55.071	Good	123.4970313
FW08AR017	CPL	55.948	Good	219.8559518
FW08LA006	CPL	56.31	Fair	1252.656303
FW08AR084	CPL	56.477	Fair	714.6330036
FW08LA039	CPL	57.006	Fair	103.7228523

SITE_ID	FW_ECO9	PTL	PTL_COND	WGTNRSA09
FW08MS010	CPL	103.881	Fair	970.8940624
FW08FL064	CPL	104.863	Fair	1443.405585
FW08AR052	CPL	105.034	Fair	146.6308015
FW08SC014	CPL	105.565	Fair	123.8125791
FW08GA054	CPL	106.173	Fair	3535.217565
FW08DE001	CPL	106.271	Fair	866.430957
FW08AR013	CPL	108.661	Poor	1217.875312
FW08GA018	CPL	110.106	Poor	252.7802905
FW08AR012	CPL	111.559	Poor	142.26412
FW08SC019	CPL	113.773	Poor	333.7616676
FW08GA006	CPL	114.014	Poor	252.7802905
FW08TN028	CPL	114.119	Poor	3686.689357

What Happened?

Northern Plains Example
Published Threshold
Good/Fair - Total P – 91.8 ug/L

SITE_ID	FW_ECO9	PTL	PTL_COND	WGTNRSA09
FW08WY061	NPL	13.6969	Good	355.4242971
FW08SD017	NPL	16.0913	Good	292.3687298
FW08MT090	NPL	16.6375	Good	311.6537221
FW08MT071	NPL	17.1944	Good	311.6537221
FW08WY038	NPL	17.7681	Good	34.71345642
FW08MT049	NPL	19.29	Fair	335.7143341
FW08SD091	NPL	19.725	Fair	40.51438747
FW08MT066	NPL	20.2531	Fair	362.3787377
FW08ND142	NPL	20.2788	Fair	87.06703563

Published Threshold
Fair/Poor - Total P – 183 ug/L

SITE_ID	FW_ECO9	PTL	PTL_COND	WGTNRSA09
FW08SD039	NPL	20.4125	Fair	109.7145575
FW08WY058	NPL	21.5263	Fair	34.71345642
FW08SD006	NPL	22.0513	Fair	88.75744281
FW08MT014	NPL	23.105	Fair	385.1368345
FW08SD067	NPL	23.5975	Fair	40.51438747
FW08ND002	NPL	25.115	Poor	172.5853193
FW08SD052	NPL	25.3406	Poor	109.7145575
FW08WY054	NPL	26.8038	Poor	355.4242971
FW08SD040	NPL	27.5481	Poor	40.51438747
FW08SD046	NPL	28.6338	Poor	78.68567174

Threshold Value Errors

Water Quality

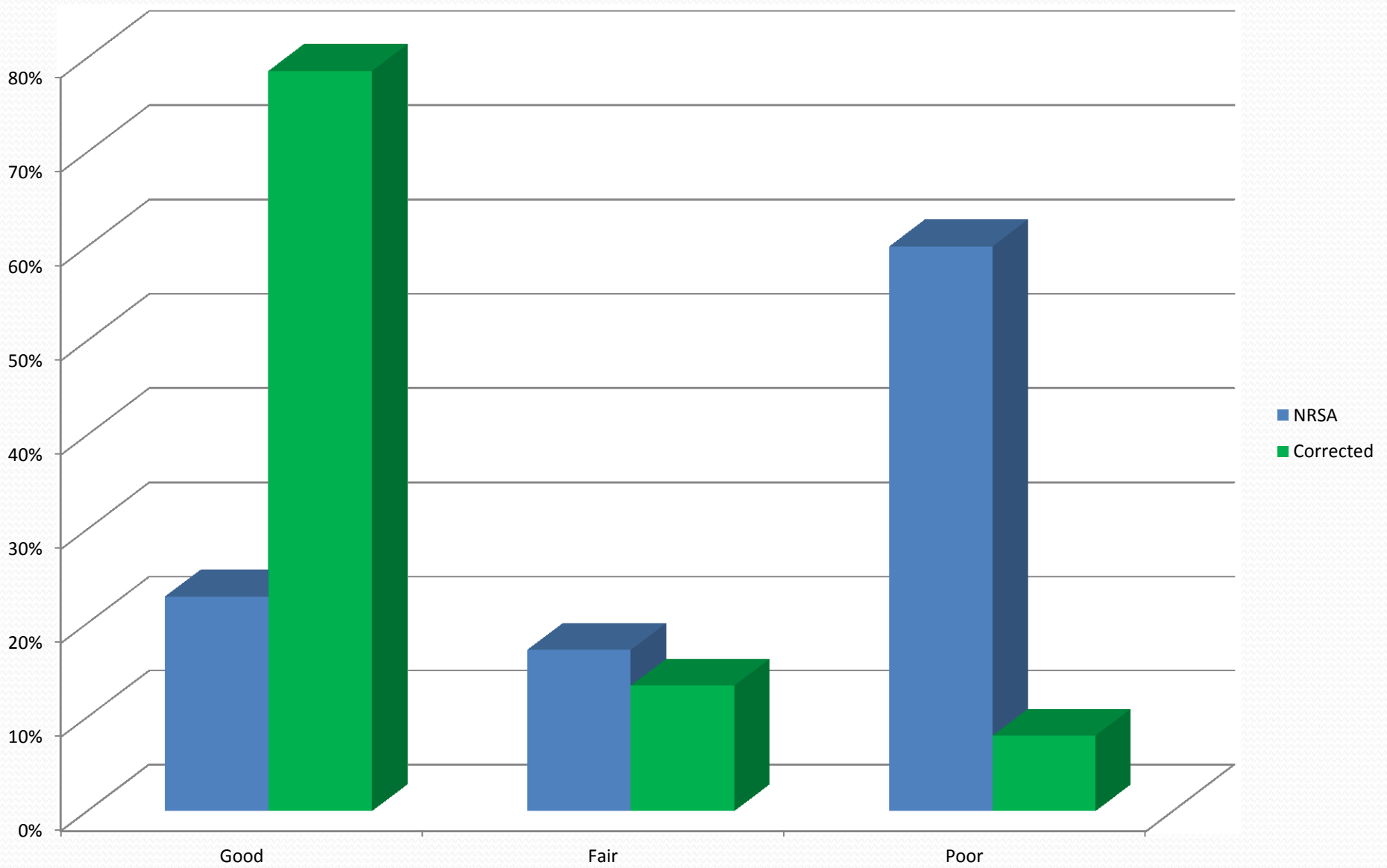
- Southern Appalachians -> Northern Plains
- Northern Plains-> Temperate Plains
- Southern Plains-> Upper Midwest
- Upper Midwest -> Southern Appalachians
- ????? -> Southern Plains

Threshold Values Errors

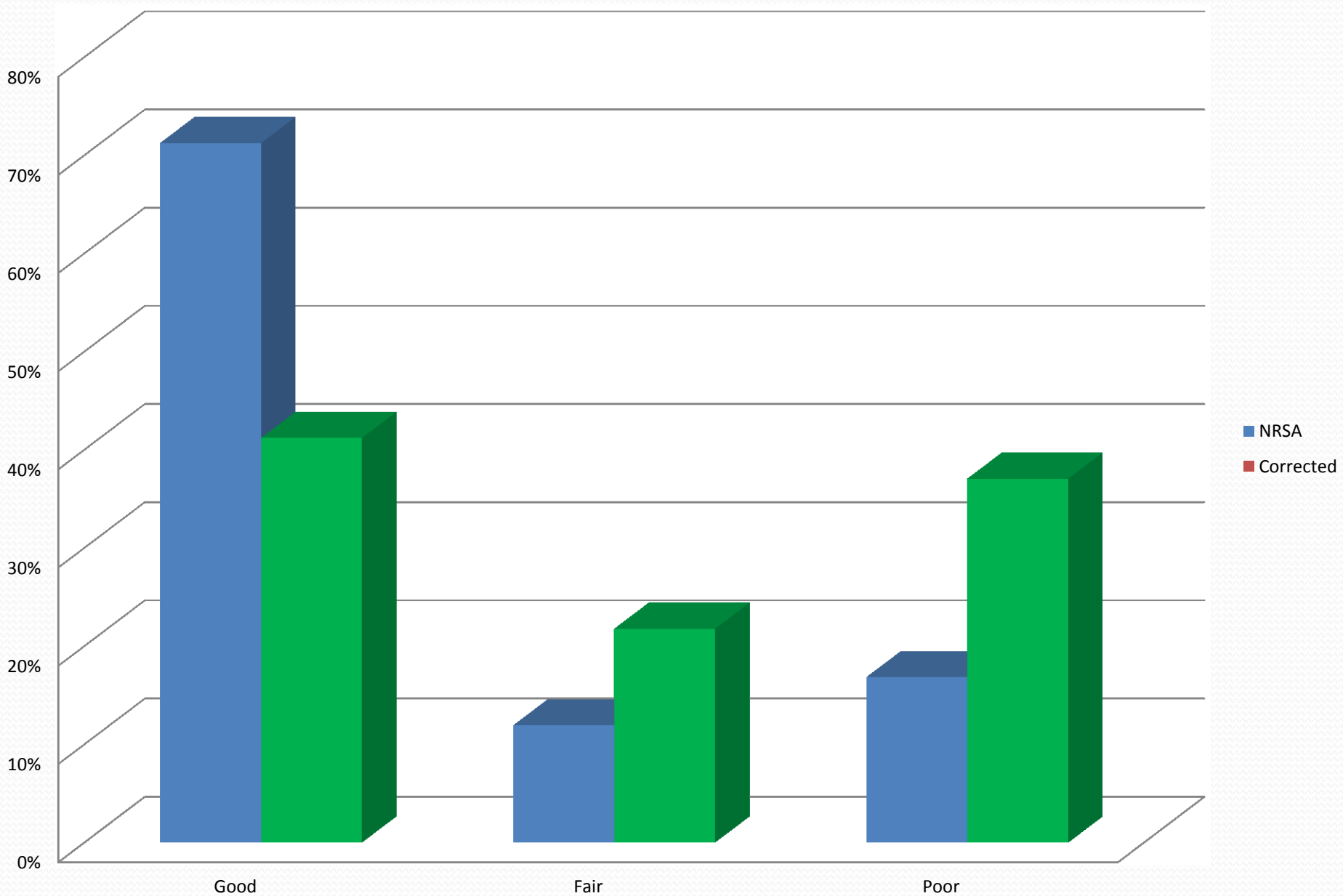
Fish MMI

- ?????? -> Southern Appalachians
- ?????? -> Western Mountains
- ?????? -> Xeric West

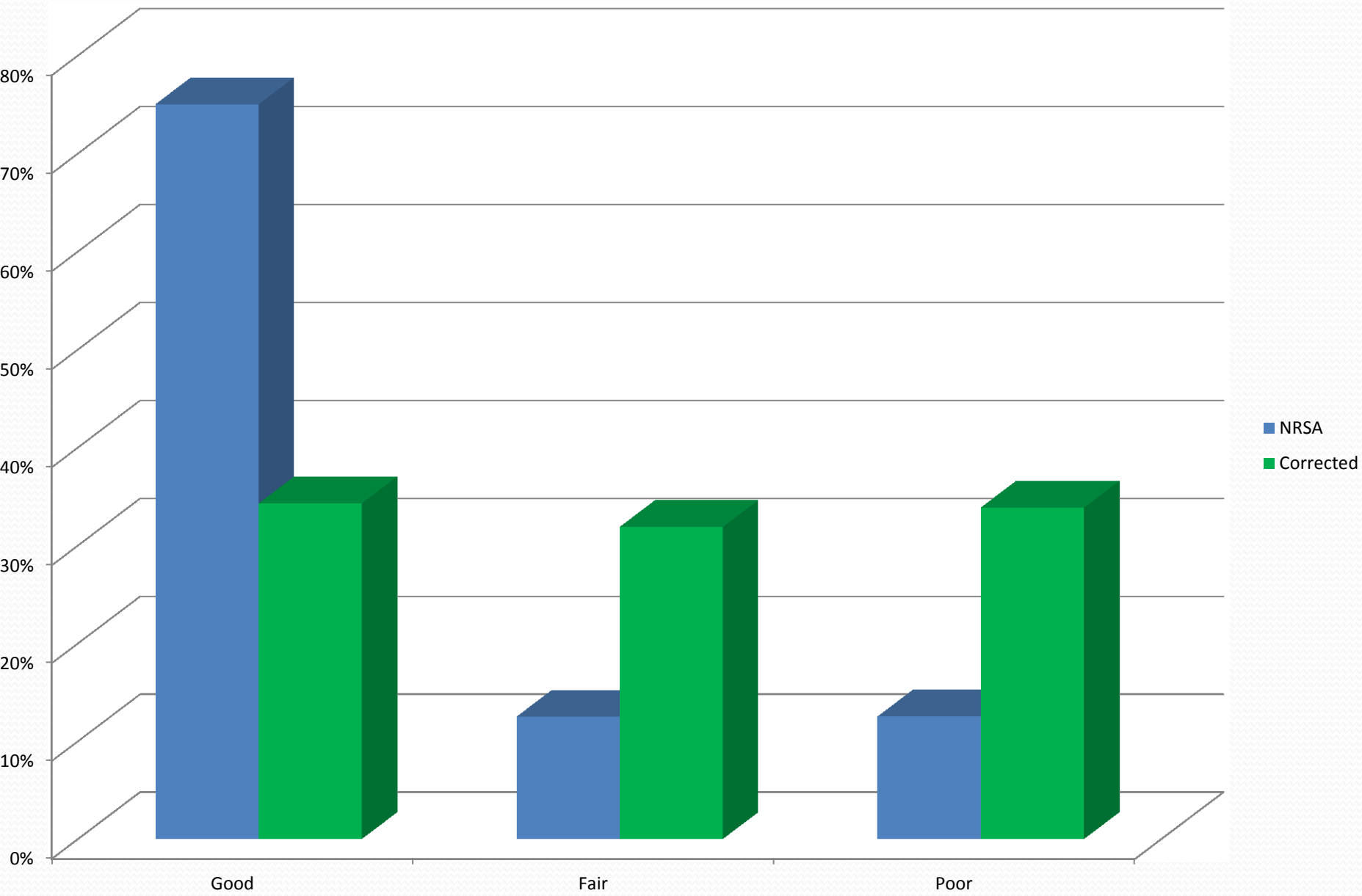
Northern Plains Total N



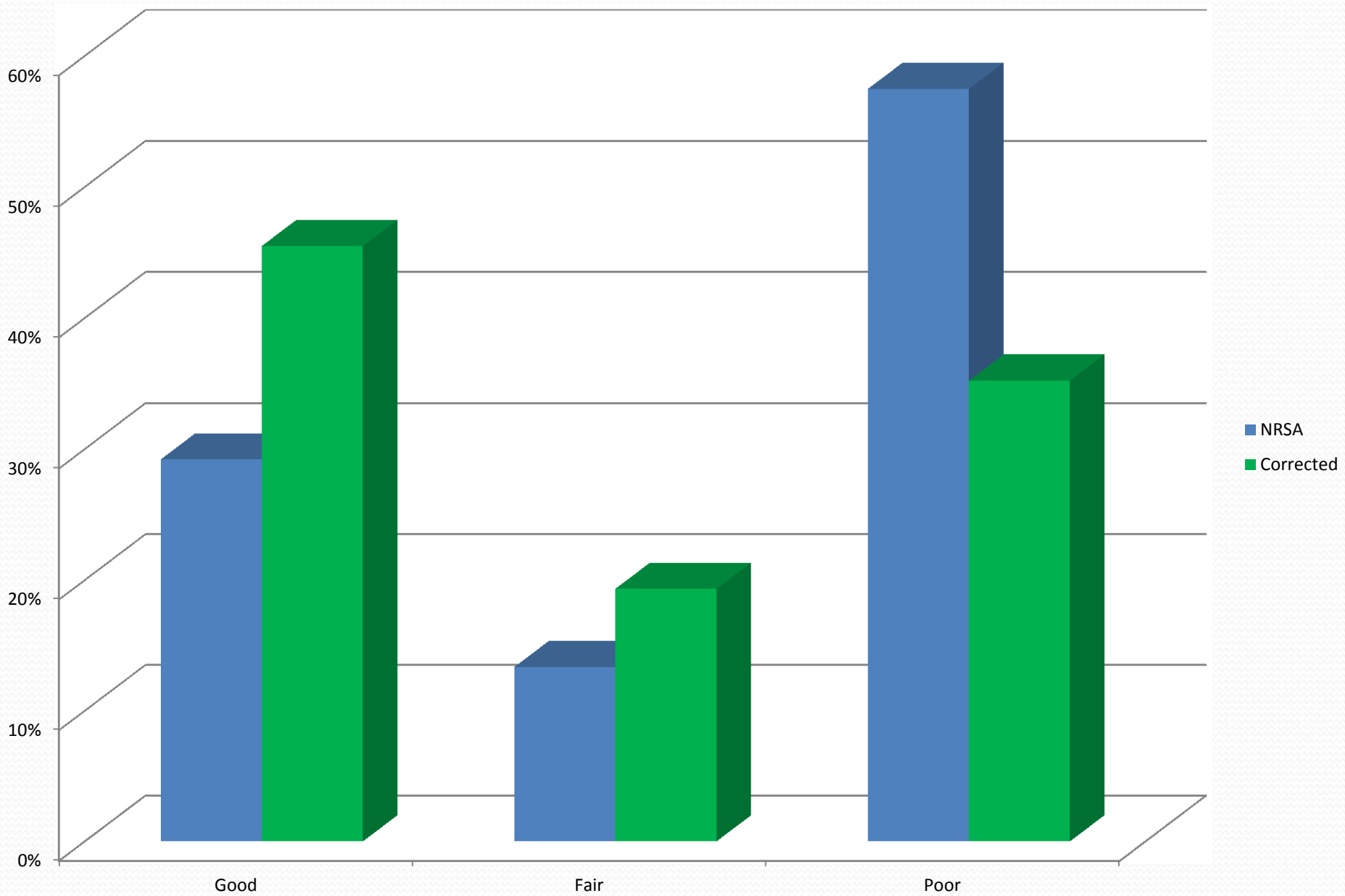
Southern Appalachian Total N



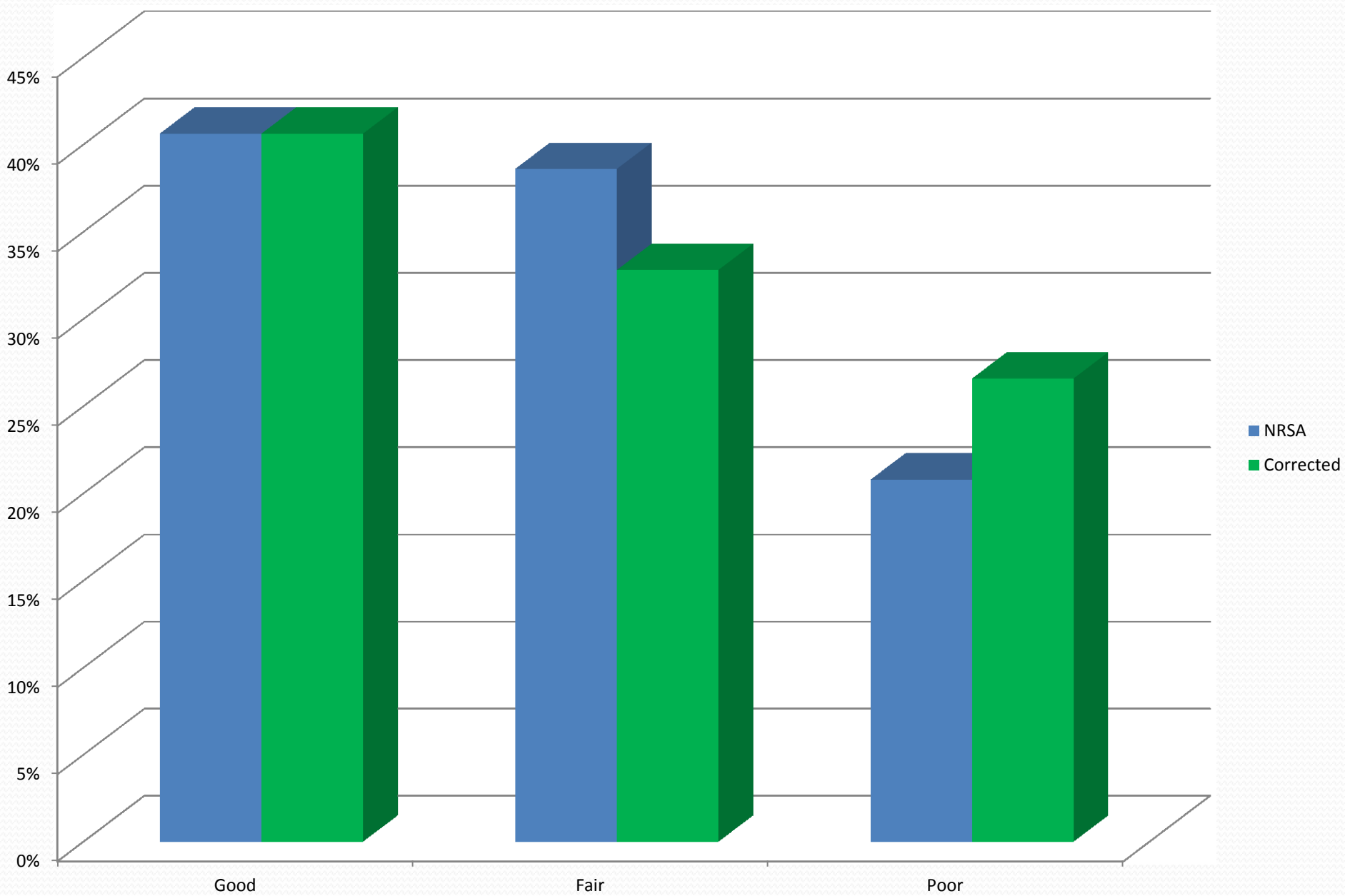
Southern Plains Total N



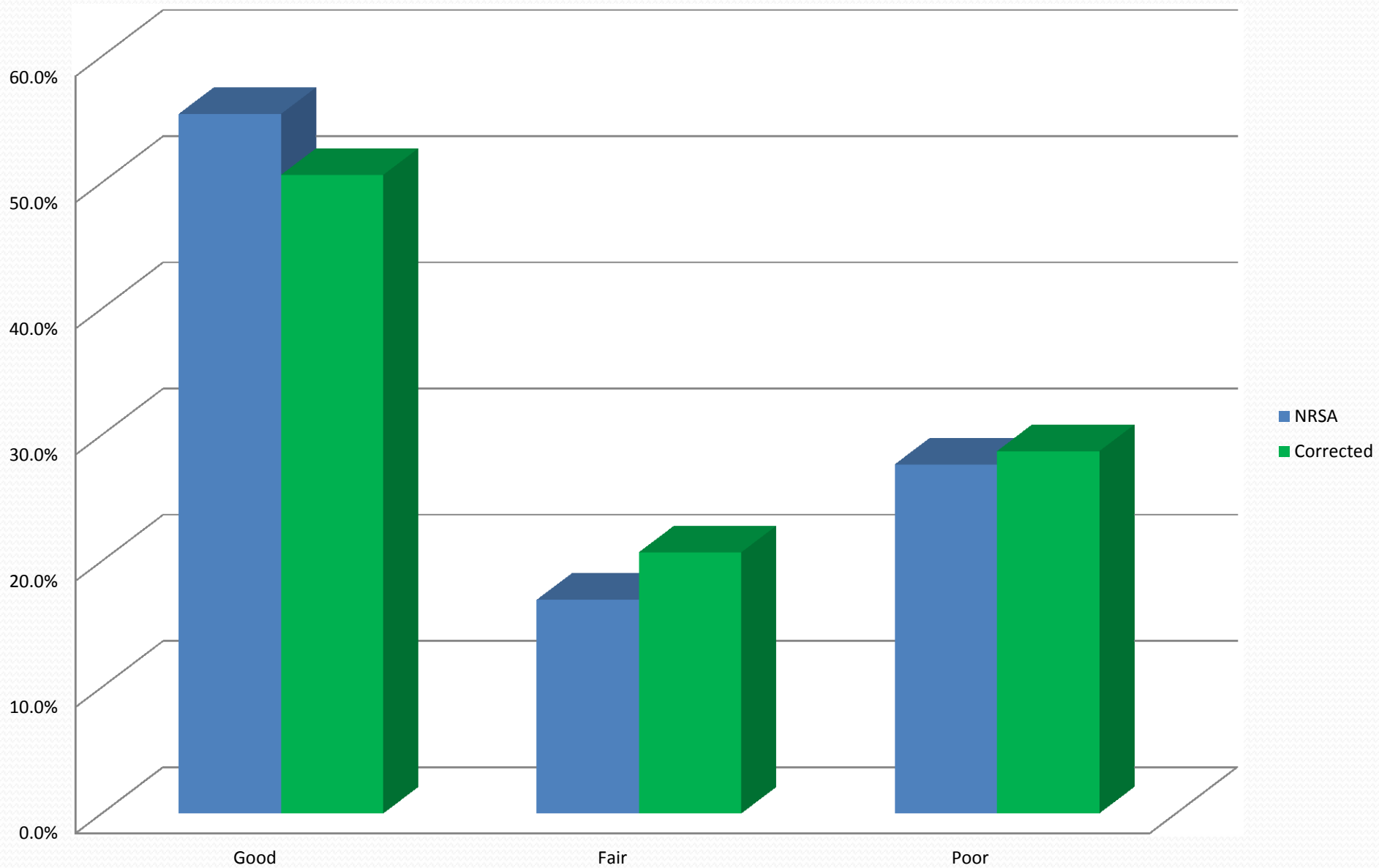
Temperate Plains Total N



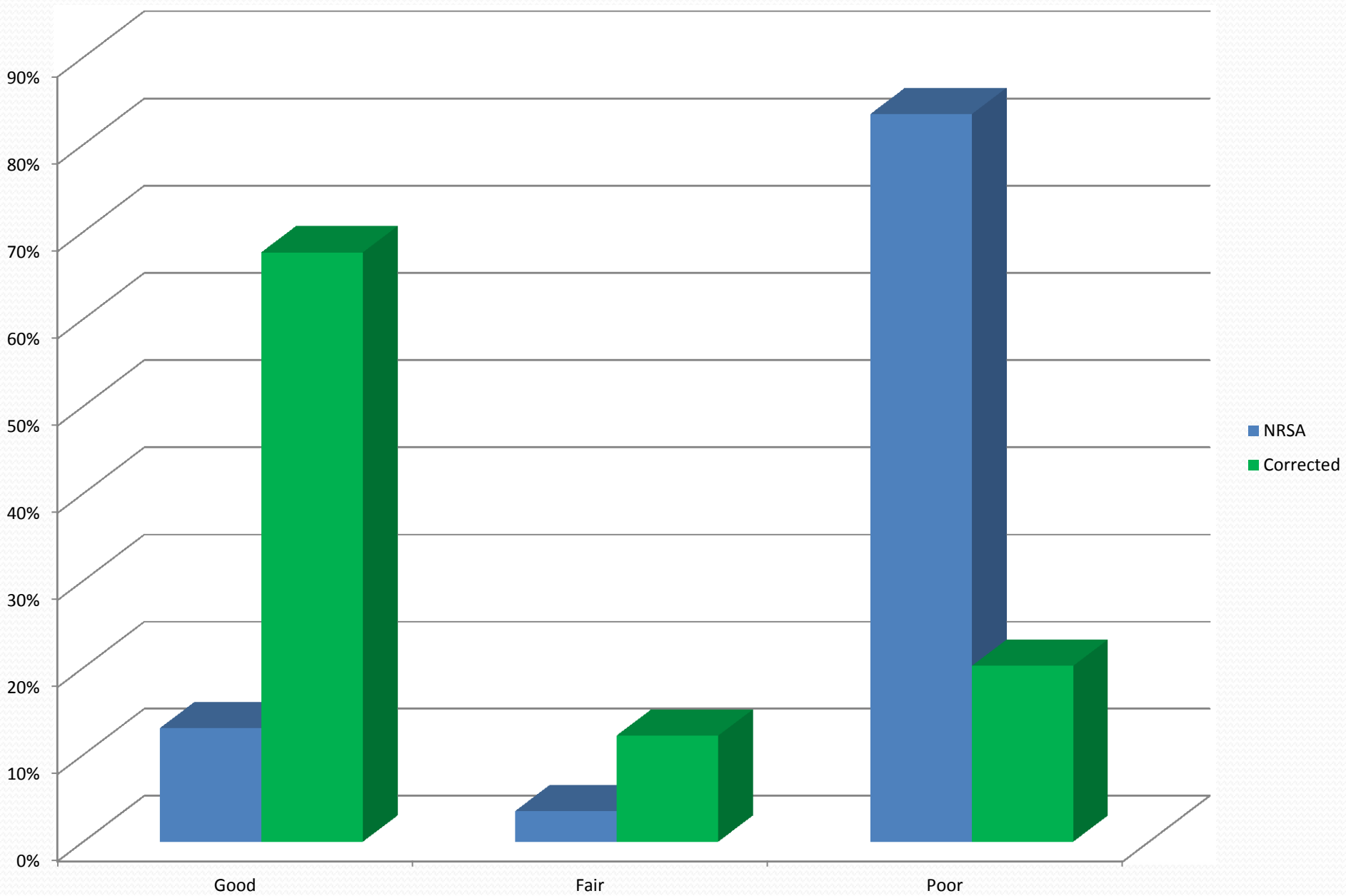
Upper Midwest Total N



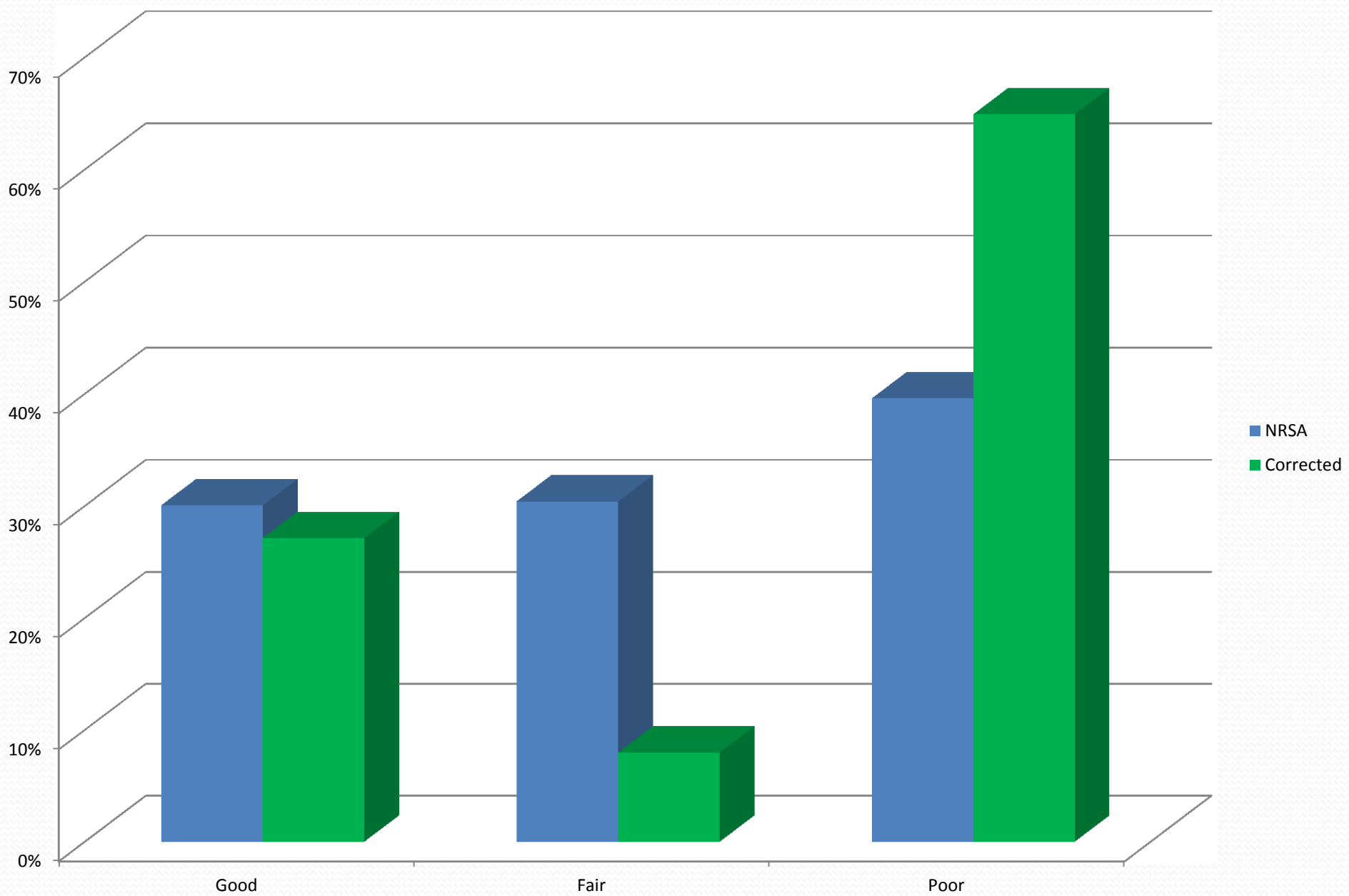
National Total N



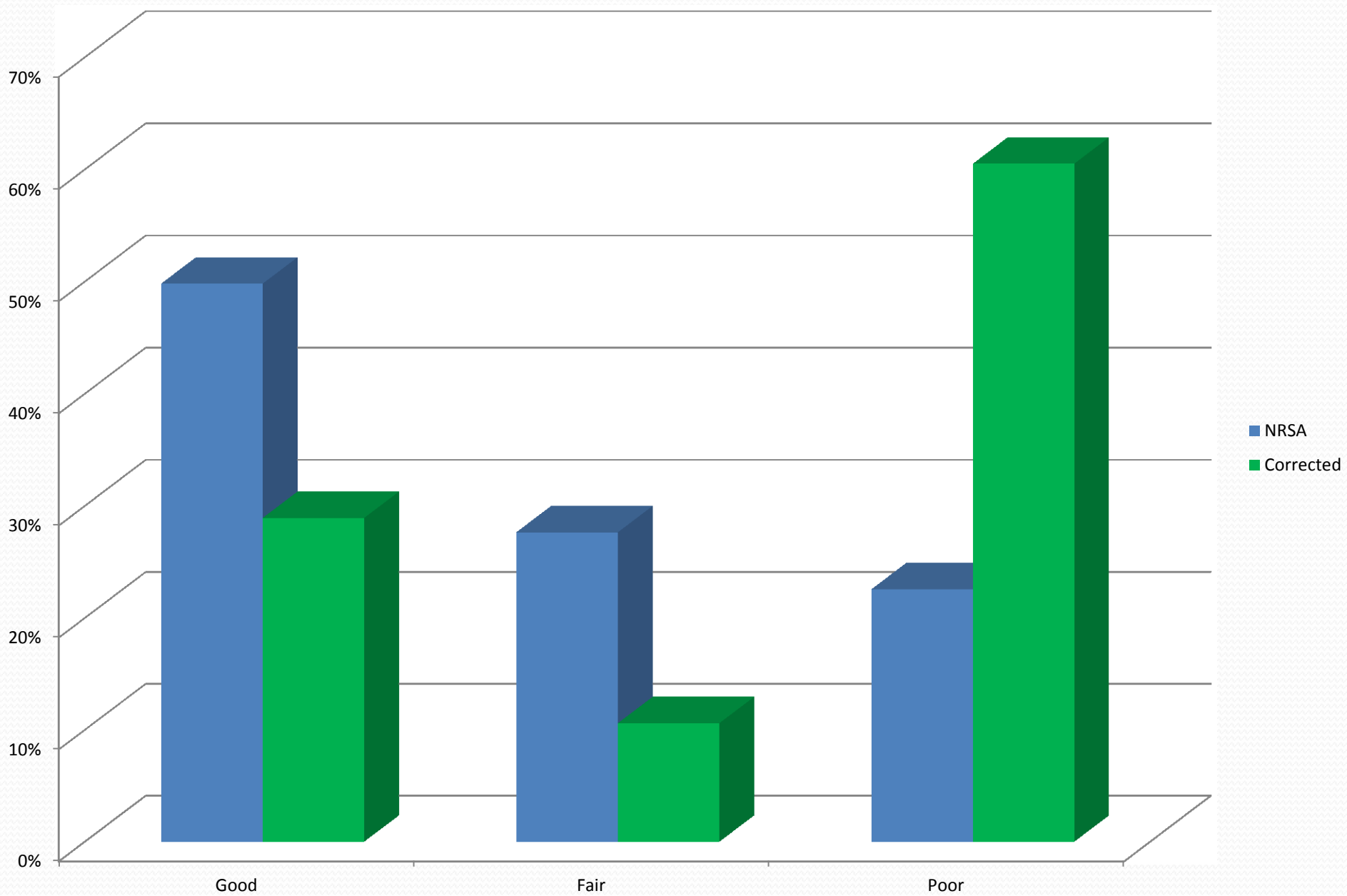
Northern Plains Total P



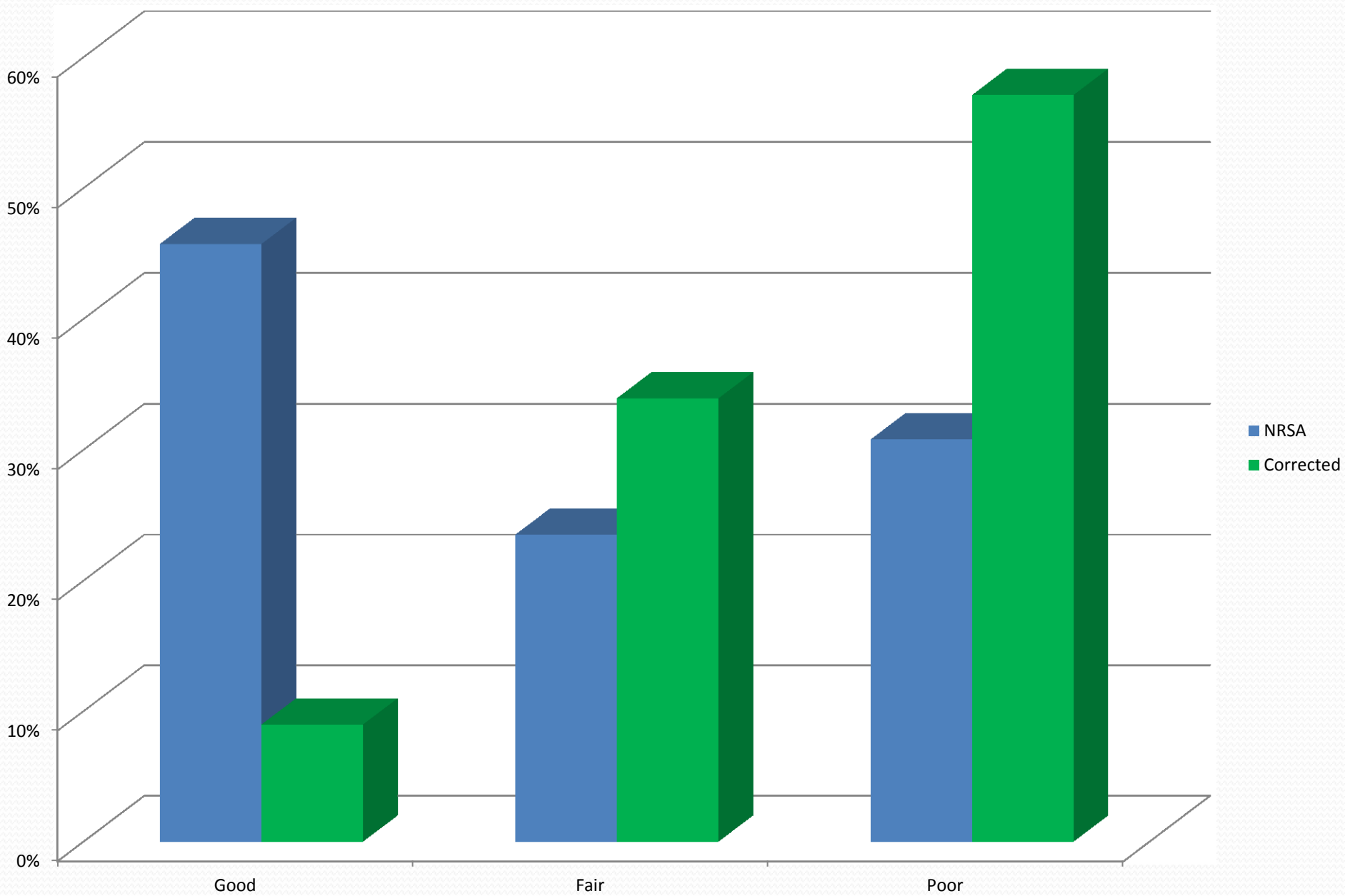
Southern Appalachians Total P



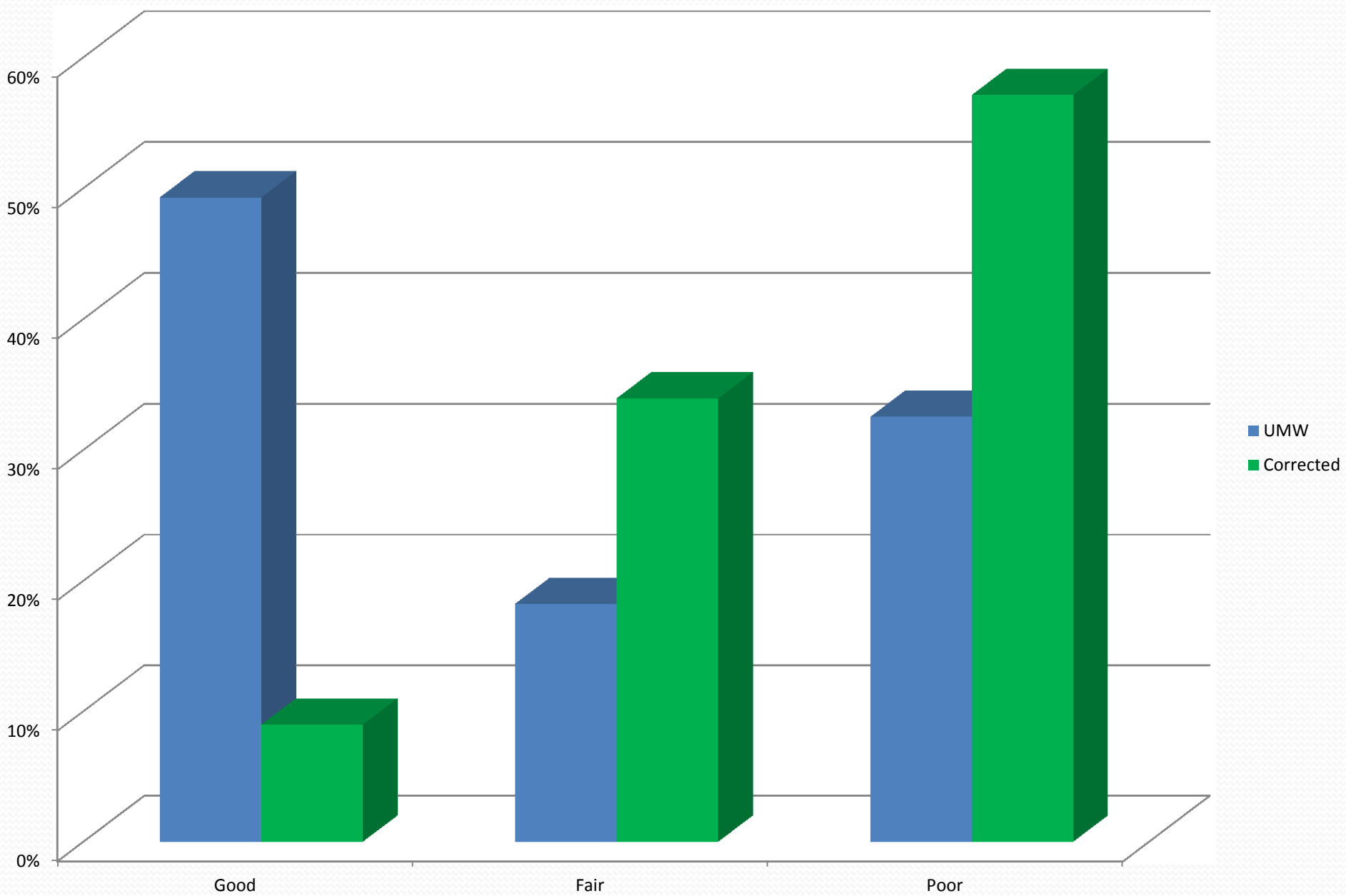
Southern Plains Total P



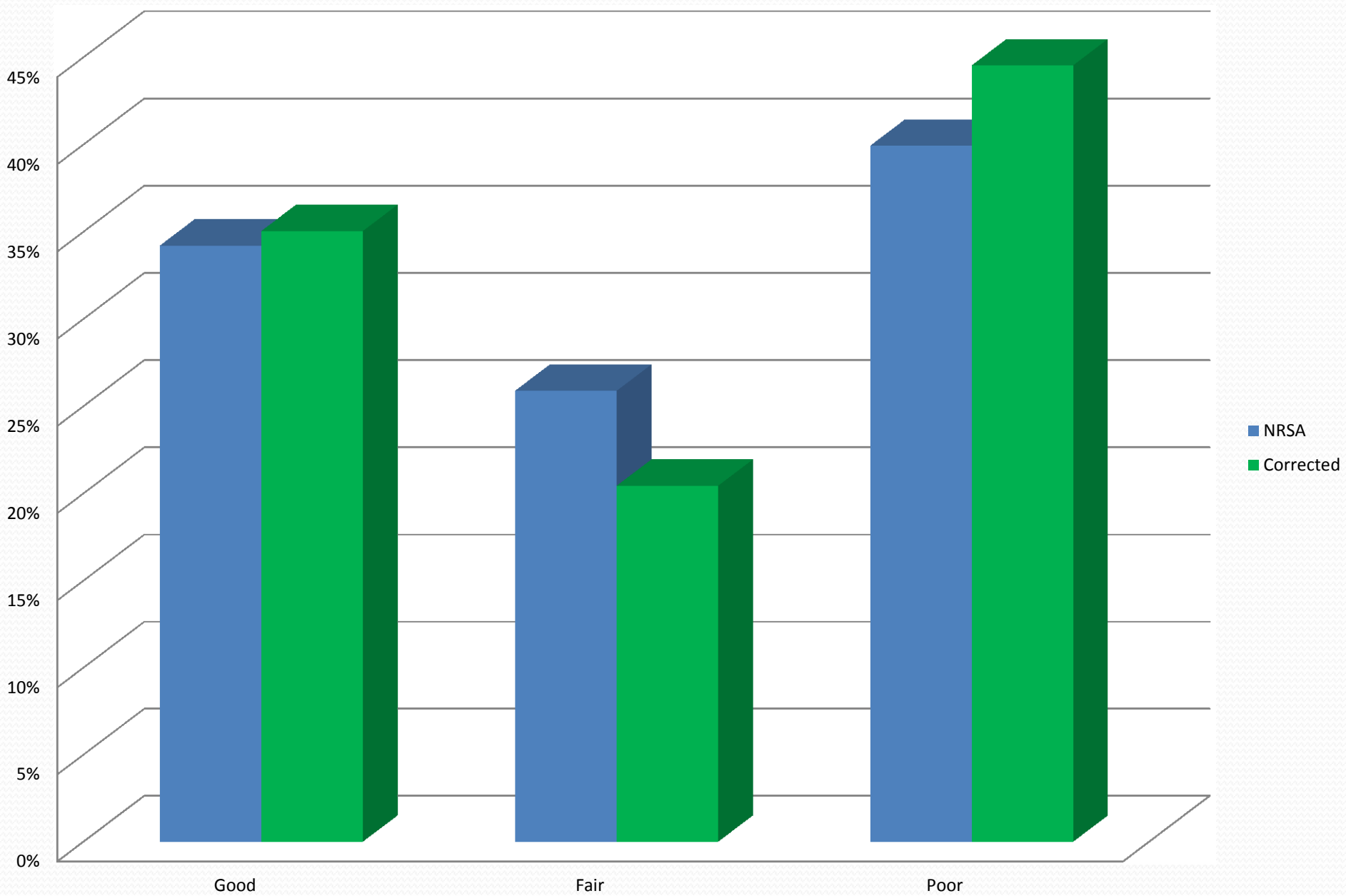
Temperate Plains Total P



Upper Midwest Total P



National Total P



Number of Site Condition Errors Water Quality

Ecoregion	Conductivity	Nitrogen	Phosphorus
CPL	0	2	0
NAP	0	0	0
NPL	78	125	119
SAP	0	170	82
SPL	0	81	76
TPL	0	85	103
UMW	55	10	89
WMT	0	0	0
XER	0	0	0
Grand Total	133	473	469



Questions?