

07/08/98

UNITED STATES DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

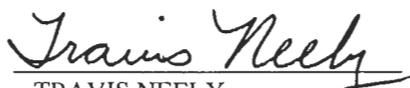
MLRA REGION 11

Indianapolis, Indiana 46278

THIRD AMENDMENT
TO THE
CLASSIFICATION AND CORRELATION
OF THE SOILS OF
ELKHART COUNTY, INDIANA

This amendment results from the preparation of the manuscript and SSURGO certification. Please refer to the attached document with additional and corrected symbols in bold text.

Approval Signatures


TRAVIS NEELY
State Soil Scientist/MLRA Leader


ROBERT L. EDDLEMAN
State Conservationist

ACTING FOR

**SOIL CORRELATION OF
ELKHART COUNTY, INDIANA**

Field symbols	Field map unit name	Publication symbol	Approved map unit name
AbA	Abscota loam, 0 to 2 percent slopes, occasionally flooded	AahAK	Abscota loamy sand, 0 to 2 percent slopes, occasionally flooded brief duration
AnA, PbA	Adrian muck, 0 to 1 percent slopes, undrained	AbhAU	Adrian muck, 0 to 1 percent slopes, undrained
AdA, UdaA Ad	Adrian muck, 0 to 1 percent slopes, drained	AbhAN	Adrian muck, 0 to 1 percent slopes, drained
BeA, DoA, LoA	Bainter sandy loam, 0 to 1 percent slopes	BaaA	Bainter sandy loam, 0 to 1 percent slopes
BeB	Bainter sandy loam, 1 to 4 percent slopes	BaaB	Bainter sandy loam, 1 to 4 percent slopes
WkA, WkB, WtA	Baugo silt loam, 0 to 1 percent slopes	BbmA	Baugo silt loam, 0 to 1 percent slopes
BlA, HaA	Blount loam, 0 to 1 percent slopes	BlaA	Blount loam, 0 to 1 percent slopes
BlB, HaB	Blount loam, 1 to 4 percent slopes	BleB	Blount loam, 1 to 4 percent slopes
BrA, Br	Brady sandy loam, 0 to 1 percent slopes	BshA	Brady sandy loam, 0 to 1 percent slopes
BuA	Brems loamy sand, 0 to 2 percent slopes	BteA	Brems loamy sand, 0 to 1 percent slopes
BuB	Brems loamy sand, 1 to 4 percent slopes	BteB	Brems loamy sand, 1 to 4 percent slopes

ELKHART COUNTY, INDIANA Continued

Field symbols	Field map unit name	Publication symbol	Approved map unit name
OmA, OsA, OuA, OrA , SpA	Bristol loamy sand, 0 to 2 percent slopes	BtxA	Bristol loamy sand, 0 to 2 percent slopes
OmB, OsB, SpB, DkB, Omb2 , Osc2 , Osc3 , OcB	Bristol loamy sand, 2 to 5 percent slopes	BtxB	Bristol loamy sand, 2 to 5 percent slopes
OmC, BoC, Ksc2, FoC, OsC, SpC, TuC, BoC3, OmC2, BoC2 , FoC2	Bristol loamy sand, 5 to 10 percent slopes	BtxC	Bristol loamy sand, 5 to 10 percent slopes
OmD2, BoD, OsD, FoD, OmD, OmD3, BoD3	Bristol loamy sand, 10 to 18 percent slopes, eroded	BtxD2	Bristol loamy sand, 10 to 18 percent slopes, eroded
OmE, BoE, BoF, CoE, CoF , OmF	Bristol loamy sand, 18 to 30 percent slopes	BtxE	Bristol loamy sand, 18 to 30 percent slopes
BsA, BvA, Bv	Bronson loamy sand, 0 to 1 percent slopes	BuFA	Bronson sandy loam, 0 to 1 percent slopes
BaA, Bw, BwA, Ba	Brookston loam, 0 to 1 percent slopes	BuuA	Brookston loam, 0 to 1 percent slopes
CoA, ChA	Coloma sand, 0 to 2 percent slopes	CnbA	Coloma sand, 0 to 2 percent slopes
CoB, ChB	Coloma sand, 2 to 5 percent slopes	CnbB	Coloma sand, 2 to 5 percent slopes
CoC, CoC2, ChC	Coloma sand, 5 to 10 percent slopes	CnbC	Coloma sand, 5 to 10 percent slopes
MrsA , RaA	Cosperville loam, 0 to 2 percent slopes	CosA	Cosperville loam, 0 to 2 percent slopes
MsrB	Cosperville loam, 2 to 5 percent slopes	CosB	Cosperville loam, 2 to 5 percent slopes

ELKHART COUNTY, INDIANA Continued

Field symbols	Field map unit name	Publication symbol	Approved map unit name
CrA, AuA, CsA, CtA	Crosier loam, 0 to 2 percent slopes	CvdA	Crosier loam, 0 to 1 percent slopes
AuB, CrB, CtB, CrB2 CsB, CtB2	Crosier loam, 2 to 4 percent slopes	CvdB	Crosier loam, 1 to 4 percent slopes
DeA, HaA, HaB, DeB	Del Rey silt loam, 0 to 1 percent slopes	DcrA	Del Rey silty clay loam, 0 to 1 percent slopes
FoA, BoA	Desker sandy loam, 0 to 2 percent slopes	DdeA	Desker sandy loam, 0 to 1 percent slopes
FoB, BoB, KsB, BoB2	Desker sandy loam, 2 to 6 percent slopes	DdeB	Desker sandy loam, 1 to 6 percent slopes
EcA	Edwards muck, 0 to 1 percent slopes, undrained	EchAU	Edwards muck, 0 to 1 percent slopes, undrained
EdA, Ed	Edwards muck, 0 to 1 percent slopes, drained	EchAN	Edwards muck, 0 to 1 percent slopes, drained
GfA, Gf	Gilford sandy loam, 0 to 1 percent slopes	GczaA	Gilford sandy loam, 0 to 1 percent slopes
GmA	Gilford mucky sandy loam, gravelly substratum, 0 to 1	GdnA	Gilford mucky sandy loam, 0 to 1 percent slopes
GnB, GnB2, RaB	Glynwood loam, 1 to 5 percent slopes	GlaB	Glynwood loam, 1 to 5 percent slopes
GnC, GnC2, RaC2, RaC3	Glynwood loam, 5 to 10 percent slopes	GlaC	Glynwood loam, 5 to 10 percent slopes
GrA	Granby loamy sand, 0 to 1 percent slopes	GndA	Granby loamy sand, 0 to 1 percent slopes

ELKHART COUNTY, INDIANA Continued

Field symbols	Field map unit name	Publication symbol	Approved map unit name
GvA	Gravelton loam, 0 to 1 percent slopes, occasionally flooded	GocAK	Gravelton loam, 0 to 1 percent slopes, occasionally flooded, brief duration
CnA, FnA, SlA, CuA	Gravelton loam, 0 to 1 percent slopes, frequently flooded	GodAI	Gravelton loam, 0 to 1 percent slopes, frequently flooded, long duration
HmA, MhA, Mh	Histosols, 0 to 1 percent slopes, ponded	HhaAP	Histosols, 0 to 1 percent slopes, ponded
HtA	Houghton muck, 0 to 1 percent slopes, undrained	HtbAU	Houghton muck, 0 to 1 percent slopes, undrained
HxA, Hx	Houghton muck, 0 to 1 percent slopes, drained	HtbAN	Houghton muck, 0 to 1 percent slopes, drained
ShA, JaAK, JaAK	Jamestown silt loam, 0 to 1 percent slopes, occasionally flooded	JaaAK	Jamestown silt loam, 0 to 1 percent slopes, occasionally flooded, brief duration
BmA, GnA, BmB	Kimmell loam, 0 to 2 percent slopes	KimA	Kimmell loam, 0 to 2 percent slopes
Ma, UdA, Ud, Sa	Madeland	Usl	Udorthents, loamy
MlA	Martisco muck, sandy substratum, 0 to 1 percent slopes	MfrAN	Martisco muck, sandy substratum, 0 to 1 percent slopes, drained
HoA, Mdta	Matherton loam, 0 to 1 percent slopes	MftA	Matherton loam, 0 to 1 percent slopes

ELKHART COUNTY, INDIANA Continued

Field symbols	Field map unit name	Publication symbol	Approved map unit name
MmA	Maumee loamy sand, 0 to 2 percent slopes	MgcA	Maumee loamy sand, 0 to 1 percent slopes
MoC2, MoC, MrC2, MrC	Miami loam, 5 to 10 percent slopes, eroded	MmdC2	Miami loam, 5 to 10 percent slopes, eroded
MoD2, MoC3	Miami loam, 10 to 18 percent slopes, eroded	MmdD2	Miami loam, 10 to 18 percent slopes, eroded
MrC3, MoD3	Miami clay loam, 5 to 10 percent slopes, severely eroded	MmdC3	Miami clay loam, 5 to 10 percent slopes, severely eroded
MrD3	Miami clay loam, 10 to 18 percent slopes, severely eroded	MmdD3	Miami clay loam, 10 to 18 percent slopes, severely eroded
MsA	Milford silt loam, 0 to 1 percent slopes, drained	MouAN	Milford silty clay loam, 0 to 1 percent slopes, drained
DkA	Mishawaka sandy loam, 0 to 1 percent slopes	MsaA	Mishawaka sandy loam, 0 to 1 percent slopes
MtA, BnA, TeA	Morocco loamy sand, 0 to 1 percent slopes	MvkA	Morocco loamy sand, 0 to 1 percent slopes
MuA, MxA	Muskego muck, 0 to 1 percent slopes, undrained	MwzAU	Muskego muck, 0 to 1 percent slopes, undrained
MwA, MyA	Muskego muck, 0 to 1 percent slopes, drained	MwzAN	Muskego muck, 0 to 1 percent slopes, drained
TzA	Osolo loamy sand, 0 to 2 percent slopes	OmgA	Osolo loamy sand, 0 to 1 percent slopes

ELKHART COUNTY, INDIANA Continued

Field symbols	Field map unit name	Publication symbol	Approved map unit name
TzB, BsB, OoB	Osolo loamy sand, 2 to 5 percent slopes	OmgB	Osolo loamy sand, 1 to 5 percent slopes
PaA, Lm	Palms muck, 0 to 1 percent slopes, drained	PaaAN	Palms muck, 0 to 1 percent slopes, drained
PeA, MeA	Pewamo clay loam, 0 to 1 percent slopes	PkdA	Pewamo clay loam, 0 to 1 percent slopes
Gp	Pits, gravel	Pmg	Pits, gravel
ReA, GoA, RmA	Newparis sandy loam, 0 to 1 percent slopes, drained	ReyAN	Rensselaer loam, 0 to 1 percent slopes, drained
RuA, RsA, RtA, MkA, KaA, MnA, Mo	Rockrun-Barkey complex, 0 to 1 percent slopes	RopA	Riddles-Oshtemo complex, 0 to 1 percent
RuB, RsB, RtB2, MkB, MnB, KaB, RsB2, RtB, RuB2, MnB2	Rockrun-Barkey complex, 1 to 5 percent slopes	RopB	Riddles-Oshtemo complex, 1 to 5 percent slopes
RuC2, RsC, RtC2, RtC3, MnC, KaC2, RSC2, RuC, RtC, MkC, MkC2, MnC2, RuC3, RsC3	Rockrun-Metea complex, 5 to 12 percent slopes, eroded	RoqC2	Riddles-Metea complex, 5 to 12 percent slopes, eroded
RuD2, RsD, RsD3, RtD2, MnD, RtD3, RsD2, RtD, RuD, MnD2, MoE, RsE2	Rockrun-Metea complex, 12 to 18 percent slopes, eroded	RoqD2	Riddles-Metea complex, 12 to 18 percent slopes, eroded

ELKHART COUNTY, INDIANA Continued

RuE, RsE, RtE, RuF, MoE2, MnE2, RuE2, RsF, Mnf, RtF F	Rockrun-Tyner complex, 18 to 30 percent slopes	RosE	Riddles-Tyner complex, 18 to 30 percent slopes
SeA	Sebewa loam, 0 to 1 percent slopes	ScuA	Sebewa loam, 0 to 1 percent slopes
SbA	Sebewa mucky loam, 0 to 1 percent slopes	SdnA	Sebewa mucky loam, 0 to 1 percent slopes
SdzA, BtA, BxA SfA	Selfridge-Crosier complex, 0 to 1 percent slopes	SdzA	Selfridge-Crosier complex, 0 to 1 percent slopes
SfB, BxB, BtB, BuTB	Selfridge-Brems complex, 1 to 4 percent slopes	SdzaB	Selfridge-Brems complex, 1 to 4 percent slopes
WhA, CpA, Wh	Southwest silt loam, 0 to 1 percent slopes	Sn1A	Southwest silt loam, 0 to 1 percent slopes
TyA, PlA, OsA	Tyner loamy sand, 0 to 2 percent slopes	TxuA	Tyner loamy sand, 0 to 1 percent slopes
TyB, PlB, OsB	Tyner loamy sand, 2 to 6 percent slopes	TxuD	Tyner loamy sand, 1 to 5 percent slopes
TyC, PlC	Tyner loamy sand, 5 to 10 percent slopes	TxuB	Tyner loamy sand, 5 to 10 percent slopes
TyD, CoD	Tyner loamy sand, 10 to 18 percent slopes	TxuC	Tyner loamy sand, 5 to 10 percent slopes
TyF, TyE	Tyner loamy sand, 18 to 45 percent slopes	TxuE	Tyner loamy sand, 10 to 18 percent slopes
Ud, UdA, UdB UdC, Ma	Udorthents, loamy	TxuF	Tyner loamy sand, 18 to 45 percent slopes
Ud, UdC, UdB, UdA	Udorthents, sandy	Uam	Udorthents, loamy
		Uaz	Udorthents, sandy

ELKHART COUNTY, INDIANA Continued

Field symbols	Field map unit name	Publication symbol	Approved map unit name
UpA	Urban land-Morocco complex, 0 to 2 percent slopes	UgaA	Urban land-Morocco complex, 0 to 1 percent slopes
BpA, Bp	Udorthents, sandy, wet substratum, 0 to 1 percent slopes	Uba	Udorthents, sandy, wet substratum, 0 to 1 percent slopes
UdBA, U1A	Urban land-Bainter complex, 0 to 1 percent slopes	UdeA	Urban land-Bainter complex, 0 to 1 percent slopes
UeA	Urban land-Brady complex, 0 to 2 percent slopes	UdkA	Urban land-Brady complex, 0 to 1 percent slopes
UfA	Urban land-Brems complex, 0 to 2 percent slopes	UdoA	Urban land-Brems complex, 0 to 1 percent slopes
UgA	Urban land-Bronson complex, 0 to 1 percent slopes	UdrA	Urban land-Bronson complex, 0 to 1 percent slopes
UpmA, UbA UrA	Urban land-Bristol complex, 0 to 1 percent slopes	UdpA	Urban land-Bristol complex, 0 to 1 percent slopes
UpmB, UpmC UrB, UrC	Urban land-Bristol complex, 1 to 5 percent slopes	UdpB	Urban land-Bristol complex, 1 to 5 percent slopes
UhA, UoA	Urban land-Crosier complex, 0 to 4 percent slopes	UeaA	Urban land-Crosier complex, 0 to 3 percent slopes
UnA	Urban land-Gilford complex, 0 to 2 percent slopes	UeqA	Urban land-Gilford complex, 0 to 1 percent slope

ELKHART COUNTY, INDIANA Continued

Field symbols	Field map unit name	Publication symbol	Approved map unit name
UkA	Urban land-Mishawaka complex, 0 to 1 percent slopes	UfzA	Urban land-Mishawaka complex, 0 to 1 percent slopes
UuA	Urban land-Osolo complex, 0 to 2 percent slopes	UglA	Urban land-Osolo complex, 0 to 1 percent slopes
UgBA, UwA, UkfA	Urban land-Newparis complex, 0 to 1 percent slopes	UgrA	Urban land-Rensselaer complex, 0 to 1 percent slopes
UsB, Usa, Usc	Urban land-Rockrun-Barkey complex, 1 to 5 percent slopes	UgsB	Urban land- Riddles-Oshtemo complex, 1 to 5 percent slopes
UtA	Urban land-Tyner complex, 0 to 2 percent slopes	UgvA	Urban land-Tyner complex, 0 to 1 percent slopes
UtB, UtC	Urban land-Tyner complex, 1 to 5 percent slopes	UgvB	Urban land-Tyner complex, 1 to 5 percent slopes
UpaA, UrwA, UkaA, UraA	Urban land-Vistula complex, 0 to 1 percent slopes	UgwA	Urban land-Vistula complex, 0 to 1 percent slopes
UvA	Urban land-Volinia complex, 0 to 1 percent slopes	UhbA	Urban land-Volinia complex, 0 to 1 percent slopes
OoA, BfA, Ota	Vistula loamy sand, 0 to 1 percent slopes	VnxA	Vistula loamy sand, 0 to 1 percent slopes
VoA, Tra	Volinia loam, 0 to 1 percent slopes	VolA	Volinia loam, 0 to 1 percent slopes

ELKHART COUNTY, INDIANA Continued

Field symbols	Field map unit name	Publication symbol	Approved map unit name
CeA, ShA	Waterford loam, 0 to 2 percent slopes, frequently flooded	WcnAI	Waterford loam, 0 to 2 percent slopes, frequently flooded, long duration
WaA, Wa	Wunabuna silt loam, 0 to 1 percent slopes, drained	WrxAN	Wunabuna silty clay loam, 0 to 1 percent slopes, drained
W, Mw	Water	M-W	Miscellaneous water
W	Water	W	Water, noncensus
W	Water	W	Water, census
WmA	Williamstown loam, 0 to 1 percent slopes	WoaA	Williamstown loam, 0 to 1 percent slopes
WmB, MoB2, RaB, WmB2 MoB, MrB2	Williamstown-Crosier complex, 2 to 4 percent slopes	WobB	Williamstown-Crosier complex, 1 to 5 percent slopes
WmC2, CrC, CrC2, CrC3, WmC, RaC	Williamstown-Crosier complex, 4 to 8 percent slopes, eroded	WocC2	Williamstown loam, 5 to 10 percent slopes, eroded
WoC3, WoD3, WmC3	Williamstown clay loam, 5 to 10 percent slopes, severely eroded	WodC3	Williamstown clay loam, 5 to 10 percent slopes, severely eroded

07/08/98

Prior Soil Survey Publications

The last soil survey of Elkhart County was completed in 1968 and published by the United States Department of Agriculture, Soil Conservation Service in April 1974. Reference to the prior soil survey will be included in the literature citation of the manuscript. This survey replaces the April 1974 soil survey, and provides additional data, updated soil interpretations and 1:12,000 scale soil maps on an orthophotographic base.

Also a soil survey was completed and published in 1914 by the United States Department of Agriculture and the Indiana Department of Geology.

Instructions for Map Compilation, Map Finishing, and Digitizing

Map compilation has been completed by the Elkhart County soil survey project members. Selected county roads will be numbered. The soil maps are being digitized by the Region 11 MLRA office. The conversion legend in the final correlation report will be used for the conversion of all symbols that appear on compiled maps. **Ud, UdB, ShA, HaA, HaB, UdA, UdC, RaC, RaC2, RaC3** RaB, OsA, OsB and W map symbols will be on compiled maps and converted to the approved symbols based on geographic locations in the county. The areas are shown on general soils map provided to the digitizing unit in Indianapolis, IN.

Conventional and Special Symbols Legend

Only those symbols indicated on the NRCS-SOILS-37A (3/95) will be shown on the legend and placed on the soil maps. The definition of the Marsh special symbol is not defined as is stated in Part 647 of the National Soil Survey Handbook. Perennial water also includes miscellaneous water in Elkhart County. All drainage ditches in the county are labeled as perennial, and includes intermittent ditches.

The following special features are shown on the compilation document with these numerical symbols.

Label	Numerical Symbols for Compilation Efforts	Features
ESO	2	Escarpment, other
GPI	8	Gravel pits
GRA	13	Gravelly spots
MAR	15	Marsh spots
ERO	19	Severely eroded spots
SLP	3	Short steep slopes
WET	25	Wet spots