Metadata for the

Mn/Model Phase 4

Statewide Landscape Model

Developed by

Minnesota Department of Transportation

These metadata were created using the [Minnesota Geographic Metadata Guidelines](#) .

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Section 1   Identification Information

Originator   Minnesota Department of Transportation (MnDOT)

Title   MnModel Phase 4 Statewide Landscape Model (2017)

Abstract   This layer is the product of the MnModel Phase 4 project's mosaicking of DNR-, MGS-, and MnDOT-derived regional and local surficial geology and geomorphic models. No single data source covered the entire state at a scale (<1:100,000) meaningful to the MnModel project. Different models have been edge-matched where needed. Each of the mosaicked portions were categorized into the following list of data fields: Region, Region Name, Subregion, Subregion Name, Landscape, Landform, and Mantle. Some reinterpretations at and near boundaries with adjoining model segments were made to provide for a more logical transition at the mosaicked seams.

Purpose	To predict the potential for finding unknown archaeological sites early in the planning process, so that impacts on these sites can be avoided.
Time Period of Content Date	1997-2017
Currentness Reference	1997-2017
Progress	Different scales of source models/maps were mosaicked because of incomplete coverage at any meaningful scale.
Maintenance and Update Frequency	Further mapping at more meaningful scales is required to help improve the efficiency of the modeling in future years. 1:24,000 scale mapping is suggested as a minimum scale for all future mapping in areas not already mapped at that scale or larger.
Spatial Extent of Data	Mostly a statewide boundary excluding islands in Lake Superior.
Bounding Coordinates	-97.374 -89.259 49.463 43.310
Place Keywords	Minnesota
Theme Keywords	MnModel, Geomorphology, Landscape, Landform
Theme Keyword Thesaurus	None
Access Constraints	None
Use Constraints	None
Contact Person Information	OES GIS Support Minnesota Department of Transportation (MnDOT) MS 620 Transportation Building, 395 John Ireland Blvd. St. Paul, MN 55155 E-mail: EnvironmentalDataManager.DOT@state.mn.us

Browse Graphic File Name	None available
Browse Graphic File Description	
Associated Data Sets	MnModel's Landform Sediment Assemblage models, DNR's 1:500K Surficial Geology, and the Minnesota Geological Survey's 1:200K, 1:100K, and 1:24K Surficial Geology Maps

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Section 2   Data Quality Information - - - - - - [Go back to top](#)

Attribute Accuracy	Confidence levels have been built into the GIS database, scoring from 1 – Low to No Confidence up to 5 = High Confidence. High Confidence and High to Moderate Confidence Areas usually have ground truth data collected by the original mapping projects mentioned above in Section 1's Associated Data Sets subsection.
Logical Consistency	Data have been topologically structured and verified.
Completeness	Statewide coverage.
Horizontal Positional Accuracy	Accuracy of this data set varies from +/- 50 meters (1:100,000 scale) to 2.5 meters (1:5,000 scale)
Vertical Positional Accuracy	N/A
Lineage	For LfSA (Landform Sediment Assemblage) mapping, landscape or surficial geology units were identified from NAPP aerial photos (1:40,000 scale), USDA historical aerial photos (1:20,000 scale), 10-meter resolution USGS DEM, 1-meter resolution LiDAR DEM (where available), county soil surveys, and gSSURGO soil models were mapped onto various quad maps or digital files. Prior to 2001, maps were digitized in AutoCAD, converted to PC ARC/INFO coverages in ArcCAD, and attributes were attached. Since approximately 2001, maps have been created by heads-up digitizing in ArcMap. Prior to 2001, river valley coverages were mapped for groups of quad sheets, but not whole valleys. These were

joined to create whole valley coverages, which were then clipped by counties for distribution. Edge-matching was performed at a later step, and updated attributes were attached. PC ARC/INFO coverages were converted to ARC/INFO v. 7.0.3 coverages.

The Anoka Sand Plain and Mississippi River Valley from St. Paul to the Iowa border were mapped at approximately 1:5,000 scale by using high resolution LiDAR dating to 2008-2011.

For the remainder of the state, multiple source data sets from the Department of Natural Resources (DNR) and Minnesota Geological Survey (MGS) were reviewed in detail to determine a means to facilitate covering the entire state with the most detailed geomorphic landforms as possible. The only statewide data coverage was at a 1:100,000 scale. More detailed scaled maps were used to replace the DNR 100K coverage wherever possible. The data sources along with their names, scales (e.g., MGS100KAnoka), and year published are provided as separate fields in the GIS tables, as well as in Section 3 below.

Many of these data sources were surface geology maps and not specifically geomorphic in nature. That said, many of these surface geology maps did include geomorphic landforms as part of their mapping process. The upland data sources often conflicted with respect to glacial geology and phases, and it was up to the MnDOT team to make a best judgement case in favor of one data source over the other where the two data sources edge-matched and beyond. Our revision and reclassification of the original data sources did not include reshaping or redrawing any of geospatial data (i.e., lines and polygons). On rare occasion, polygons of like tabular values on either side of an edge-matched seam were joined to help reduce both editing time and the appearances of straight line edges.

Several data sources were apparently mapped at a finer scale than what was eventually published; or, the mappers took more time to capture more geomorphic/geology detail at their current working and published scale. We tried to capture this extra detail in a field labeled "Relative Mapping Detail."

Lastly, our levels of confidence (1 = Low Confidence to 5 = High Confidence) vary across the mosaicked statewide landscape model. These levels of confidence were determined by assigning a point system to each of the following factors: published map scale of source data, relative mapping detail of source data for its respective published scale, available soils data used to help produce the original source data, and metadata quality of the source data.

Source Scale Denominator	Varies from 1:100,000 to 1:5,000, depending on the source scale for any given area.

Section 3   **Spatial Data Organization Information - - - - - - [Go back to top](#)**

Native Data Set Environment	ArcMap 10.3
Geographic Reference for Tabular Data	none
Spatial Object Type	Vector
Vendor Specific Object Types	polygon, label
Tiling Scheme	state

Section 4   **Spatial Reference Information - - - - - - [Go back to top](#)**

Horizontal Coordinate Scheme	UTM
Ellipsoid	GRS80
Horizontal Datum	NAD83
Horizontal Units	Meters

Distance Resolution	30
Cell Width	N.A.
Cell Height	N.A.
UTM Zone Number	15E

Section 5 Entity and Attribute Information - - - - - - [Go back to top](#)

Entity and Attribute Overview	[Detailed Attribute Metadata Table](#)
Entity and Attribute Detailed Citation	[Map Unit Field Code Key Table for Mn/Model v. 7.0](#)

Section 6 Distribution Information - - - - - - [Go back to top](#)

Publisher	Minnesota Department of Transportation (MnDOT)
Publication Date	2017
Contact Person Information	OES GIS Support Minnesota Department of Transportation (MnDOT) MS 620 Transportation Building, 395 John Ireland Blvd. St. Paul, MN 55155 E-mail: EnvironmentalDataManager.DOT@state.mn.us
Distributor's Data Set Identifier	LANDMOD
Distribution Liability	to be determined by MnDOT
Transfer Format Name	ArcMap

Transfer Format Version Number	10.5.1
Transfer Size	301 MB (statewide geodatabase)
Ordering Instructions	E-mail EnvironmentalDataManager.DOT@state.mn.us
Online Linkage	None available

Section 7   Metadata Reference Information - - - - - - - **Go back to top**

Metadata Date	March 31, 2017
Contact Person Information	OES GIS Support Minnesota Department of Transportation (MnDOT) MS 620 Transportation Building, 395 John Ireland Blvd. St. Paul, MN 55155 E-mail: EnvironmentalDataManager.DOT@state.mn.us
Metadata Standard Name	Minnesota Geographic Metadata Guidelines
Metadata Standard Version	1.1
Metadata Standard Online Linkage	

This page last updated 03/28/2019.

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Detailed Attribute Metadata Table

Variable Name	Type	Description	Valid Values	Model_ID	Value
GEOREG	Text	Regional Landscape	Glacial Lake Glacial Lobe Glaciofluvial Valley	REGION	1 2 3
REG_NAME	Text	Regional Landscape Name	Glacial Lake Agassiz Glacial Lake Duluth Glacial Lake Upham/Aitkin Des Moines Lobe Grantsburg Lobe Koochiching Lobe Pre-Wisconsinan Lobe Rainy Lobe Red River Lobe St. Louis Lobe Superior Lobe Wadena Lobe Glacial River Warren Mississippi River Valley Missouri River Valley St. Croix River Valley	RGN_NAME	11 12 13 21 22 23 24 25 26 27 28 29 31 32 33 34
SUBREGION	Text	Subregional Landscape	Beach (Complex) Beach (Level) Glaciolacustrine Basin Bedrock-Controlled Terrain Drumlin Field End Moraine Ground Moraine Outwash Plain Sand Plain Drainage Basin Paleo-Valley River Valley	SUBRGN	101 102 103 201 202 203 204 205 206 301 302 303

SUBRNAME	Text	Subregional Landscape Name with time and place implications (e.g., glacial phases)	Agassiz Koochiching Arm – South Outlet	SUBNAME	00
			Agassiz Koochiching Arm Beach Phase(s)		101
			Agassiz Koochiching Arm Lake Phase		102
			Agassiz Southern Arm – South Outlet		103
			Agassiz Southern Arm – South Outlet Drainage Basin		104
			Agassiz Southern Arm Beach Phase(s)		105
			Agassiz Southern Arm Lake Phase		106
			Altamont Phase		107
			Ann Lake Phase		108
			Anoka Sand Plain		109
			Apple Paleo-Valley		110
			Automba Drumlin Field		111
			Automba Phase		112
			Bemis Phase		113
			Big Fork River Drainage Basin		114
			Big Fork River Paleo-Valley		115
			Big Fork River Valley		116
			Big Sioux River Drainage Basin		117
			Big Stone Phase		118
			Blue Earth River Drainage Basin		119
			Blue Earth River Paleo-Valley		120
			Blue Earth River Valley		121
			Blue Mounds		122
			Bois de Sioux River Drainage Basin		123
			Brainerd Drumlin Field		124
			Brainerd Phase		125
			Buffalo River Drainage Basin		126
			Buffalo River Paleo-Valley		127
			Buffalo River Valley		128
			Cannon River Drainage Basin		129
			Cannon River Paleo-Valley		130
			Cannon River Valley		131
			Cedar River Drainage Basin		132
			Cedar River Paleo-Valley		133
			Cedar River Valley		134
			Chippewa River Drainage Basin		135
			Chippewa River Paleo-Valley		136
			Chippewa River Valley		137
			Clearwater River Drainage Basin		138
			Clearwater River Valley		139
			Cloquet Phase		140
			Cottonwood River Drainage Basin		141
			Cottonwood River Paleo-Valley		142
			Cottonwood River Valley		143
			Crow Wing River Drainage Basin		144

			Crow Wing River Paleo-Valley		145
			Crow Wing River Valley		146
			Culver Phase		147
			Darfur Bedrock Hills		148
			Duluth Bedrock Complex		149
			East Fork Des Moines River Drainage Basin		150
			Ely Greenstone Hills		151
			Erskine Phase		152
			Frazee Phase		153
			Giant's Range		154
			Glacial Lake Aitkin – Southeast Outlet		155
			Glacial Lake Aitkin – Southwest Outlet		156
			Glacial Lake Benson Beach Phase		157
			Glacial Lake Benson Lake Phase		158
			Glacial Lake Duluth Beach Phase		159
			Glacial Lake Duluth Lake Phase		160
			Glacial Lake Grantsburg Beach Phase		161
			Glacial Lake Grantsburg Lake Phase		162
			Glacial Lake Minnesota Beach Phase		163
			Glacial Lake Minnesota Lake Phase		164
			Glacial Lakes Upham/Aitkin Beach Phase(s)		165
			Glacial Lakes Upham/Aitkin Lake Phase(s)		166
			Glacial River Warren Paleo-Valley		167
			Gunflint Range		168
			Guthrie Phase		169
			Hewitt Phase		170
			Highland Phase		171
			Itasca Phase		172
			Kettle River Drainage Basin		173
			Kettle River Paleo-Valley		174
			Kettle River Valley		175
			Lac Qui Parle River Drainage Basin		176
			Lac Qui Parle River Valley		177
			Lake of the Woods		178
			Lake Superior North Drainage Basin		179
			Lake Superior South Drainage Basin		180
			Le Sueur River Drainage Basin		181
			Le Sueur River Paleo-Valley		182
			Le Sueur River Valley		183
			Leech Lake River Drainage Basin		184
			Little Cottonwood River Drainage Basin		185
			Little Cottonwood River Paleo-Valley		186
			Little Cottonwood River Valley		187
			Little Fork River Drainage Basin		188
			Little Fork River Valley		189

			Little Sioux River Drainage Basin		190
			Long Prairie River Drainage Basin		191
			Long Prairie River Valley		192
			Marquette Phase		193
			Marsh River Drainage Basin		194
			Marsh River Valley		195
			Mesabi Drumlin Field		196
			Mesabi Range		197
			Mille Lacs-Highland Phase		198
			Mille Lacs Phase		199
			Minnesota River Drainage Basin		200
			Minnesota River Valley		201
			Mississippi Paleo-Valley – Glacial River Warren Reach		202
			Mississippi Paleo-Valley – Headwaters Reach		203
			Mississippi Paleo-Valley – PillagerGap/CrowWingRiv Reach		204
			Mississippi Paleo-Valley – St. Cloud to MN River Reach		205
			Mississippi Paleo-Valley – St. Croix to Iowa Reach		206
			Mississippi R Drainage Basin-Headwaters Reach		207
			Mississippi R Drainage Basin-L.Aitkin to St. Cloud Reach		208
			Mississippi R Drainage Basin-Lake Aitkin Reach		209
			Mississippi R Drainage Basin-Minnesota River Reach		210
			Mississippi R Drainage Basin-St. Cloud to MN River Reach		211
			Mississippi R Drainage Basin-St. Croix to Iowa Reach		212
			Moland Phase		213
			Mustinka River Drainage Basin		214
			Mustinka River Valley		215
			Nashwauk Phase		216
			Nemadji Beach Phase		217
			Nemadji Lake Phase		218
			Nemadji River Drainage Basin		219
			Nemadji River Valley		220
			Nickerson Phase		221
			North Fork Crow River Drainage Basin		222
			North Fork Crow River Paleo-Valley		223
			North Fork Crow River Valley		224
			Otter Tail River Drainage Basin		225
			Otter Tail River Valley		226
			Outing Drumlin Field		227
			Outing Phase		228
			Paleozoic Plains		229
			Paleozoic Plateau		230
			Pierz Drumlin Field		231
			Pine City Phase		232
			Pine River Drainage Basin		233
			Pine River Valley		234

			Pomme de Terre River Drainage Basin		235
			Pomme de Terre River Paleo-Valley		236
			Pomme de Terre River Valley		237
			Pre-Wisconsinan Phase		238
			Rainy Lake Greenstone Belt		239
			Rainy River Drainage Basin		240
			Rainy River Valley		241
			Rapid River Drainage Basin		242
			Rapid River Valley		243
			Red Eye River Drainage Basin		244
			Red Eye River Valley		245
			Red Lake River Drainage Basin		246
			Red Lake River Paleo-Valley		247
			Red Lake River Valley		248
			Red River Drainage Basin		249
			Red River Valley		250
			Redwood River Drainage Basin		251
			Redwood River Valley		252
			Rich Paleo-Valley		253
			Rock River Drainage Basin		254
			Rock River Paleo-Valley		255
			Rock River Valley		256
			Root River Drainage Basin		257
			Root River Paleo-Valley		258
			Root River Valley		259
			Roseau River Drainage Basin		260
			Rum River Drainage Basin		261
			Rum River Paleo-Valley		262
			Rum River Valley		263
			Saginaw Granitic Hills		264
			Sand Hill River Drainage Basin		265
			Sand Hill River Paleo-Valley		266
			Sand Hill River Valley		267
			Sauk River Drainage Basin		268
			Sauk River Paleo-Valley		269
			Sauk River Valley		270
			Sawtooth Mountains		271
			Shell Rock River Drainage Basin		272
			Snake River Drainage Basin #1		273
			Snake River Drainage Basin #2		274
			Snake River Paleo-Valley #1		275
			Snake River Valley #1		276
			Snake River Valley #2		277
			South Fork Crow River Drainage Basin		278
			South Fork Crow River Paleo-Valley		279

Variable Name	Type	Description	Valid Values	Model_ID	Value
			South Fork Crow River Valley		280
			South Fork Whitewater River Paleo-Valley		281
			Split Rock Phase		282
			St. Croix Phase		283
			St. Croix River Drainage Basin		284
			St. Croix River Paleo-Valley		285
			St. Croix River Valley		286
			St. Louis River Drainage Basin		287
			St. Louis River Paleo-Valley		288
			St. Louis River Valley		289
			Sunrise River Paleo-Valley		290
			Tintah Beach Phase		291
			Toimi Drumlin Field		292
			Two Rivers Drainage Basin		293
			Two Rivers River Valley		294
			Upper and Lower Red Lakes		295
			Upper Iowa River Drainage Basin		296
			Upper Iowa River Paleo-Valley		297
			Upper Iowa River Valley		298
			Upper Mississippi Valley – Glacial River Warren Reach		299
			Upper Mississippi Valley – Headwaters Reach		300
			Upper Mississippi Valley – L. Aitkin to St. Cloud Reach		301
			Upper Mississippi Valley – Lake Aitkin Reach		302
			Upper Mississippi Valley – St. Cloud to MN River Reach		303
			Upper Mississippi Valley – St. Croix to Iowa Reach		304
			Verdi Phase		305
			Vermilion Igneous-Metasedimentary Complex		306
			Vermilion Massif		307
			Vermilion Phase		308
			Wadena Drumlin Field		309
			Watonwan River Drainage Basin		310
			Watonwan River Paleo-Valley		311
			Watonwan River Valley		312
			West Fork Des Moines River Drainage Basin		313
			West Fork Des Moines River Valley		314
			Wild Rice River Drainage Basin		315
			Wild Rice River Valley		316
			Zumbro River Drainage Basin		317
			Zumbro River Paleo-Valley		318
			Zumbro River Valley		319

Variable Name	Type	Description	Valid Values	Model_ID	Value
LANDSCAPE	Text	Local Landscape with Genetic Implications	Active Ice	LSCAPE	10
			Catastrophic Flood		11
			Collapsed Meltwater Trough		12
			Collapsed Outwash Plain		13
			Collapsed Sand Plain		14
			Dissected Bedrock Uplands		15
			Eolian		16
			Floodplain		17
			Glaciofluvial		18
			Glaciolacustrine		19
			Ice Contact		20
			Lacustrine		21
			Meltwater Trough Fan		22
			Peatland		23
			Stagnant Ice		24
			Tributary Fan		25
			Valley Margin		26
			Valley Terrace		27

LANDFORM	Text	Very local Landform that when linked to its Landscape, has a specific genetic origin. This is the smallest mapping unit.	Alluvial Fan	LFORM	10
			Alluvial Fan-Delta		11
			Alluvial Fan-Delta, Distal		12
			Alluvial Fan, Distal		13
			Arterial-Drained Patterned Bog		14
			Bar		15
			Bar, Distal		16
			Beach		17
			Beach Complex		18
			Beach Ridge		19
			Colluvial Slope		20
			Compaction Ridge		21
			Crevasse Splay		22
			Crevasse Splay Bar, Distal		23
			Crevasse Splay Channel		24
			Crevasse Splay Distributary Mouth Bar, Distal		25
			Crevasse Splay Meander Belt		26
			Crevasse Splay, Distal		27
			Delta		28
			Depression		29
			Depression, Ice-Block Ribs		30
			Depression, Kettle		31
			Depression, Rectangular Ice-Block		32
			Disintegration Ridge		33
			Drainageway		34
			Drumlin		35
			Drumlin Field		36
			Dune		37
			Erosional Residual		38
			Erosional Residual/Strath		39
			Erosional Strath		40
			Escarpment Complex		41
			Esker		42
			Floodplain & Terrace		43
			Floodplain, Developing Features		44
			Floodplain, Featureless		45
			Floodplain, Island Braided		46
			Floodplain, Isolated		47
			Floodplain, Stable Features		48
			Floodplain, Undifferentiated		49
			Flute		50
			Flute Field		51
			Hillslope		52
			Hummock		53
			Ice-Block Kame Terrace		54

Variable Name	Type	Description	Valid Values	Model_ID	Value
			Ice-Walled Lake Beach Ridge		55
			Ice-Walled Lake Bed		56
			Inter-Drumlin Trough		57
			Inter-Dunal Depression		58
			Island		59
			Islands & Peninsulas		60
			Isthmus		61
			Kame		62
			Kame or Ice-Walled Lake Bed		63
			Kame Terrace		64
			Lake Basin		65
			Lake Basin, Reservoir		66
			Lake Basin, Riverine		67
			Lake Bed		68
			Levee		69
			Levee, Distal		70
			Linked Depressions		71
			Marginal Channel		72
			Meander Belt		73
			Nickpoint		74
			Nivation Hollow		75
			Nivation Hollow Ramp		76
			Outwash Fan or Apron		77
			Overbank Belt		78
			Ovoid-Shaped Bog		79
			Paleochannel		80
			Paleochannel, Collapsed		81
			Pediment Slope		82
			Peninsula		83
			Plain		84
			Raised Bog		85
			Ribbed Fen		86
			River Channel, Active		87
			Roche Moutonee		88
			Rogen Moraine		89
			Spit		90
			Summit		91
			Summits & Hillslopes		92
			Terrace		93
			Terrace, Collapsed		94
			Thrust Features		95
			Tunnel Valley		96
			V-Shaped Valley		97
			Wave-Cut Platform		98

MANTLE	Text	The Mantle is a thin veneer of sediment, or a surface modification to the main Landform surface.	No Mantle	MNT	0
			Alluvium		1
			Alluvium or Colluvium		2
			Alluvium over Paleosol		3
			Alluvium, Glaciolacustrine or Loess		4
			Alluvium?		5
			Beach		6
			Beach or Outwash		7
			Bedrock		8
			Bemis Phase Till		9
			Braided Pattern		10
			Catastrophic Flood		11
			Collapsed Drift		12
			Collapsed Outwash		13
			Collapsed Supraglacial Drift		14
			Collapsed Supraglacial Drift (Palimpsest)		15
			Colluvium		16
			Delta		17
			Delta Water-Modified Surface		18
			Duluth Bedrock Complex		19
			Dune		20
			Eolian Sand		21
			Flood-Scoured		22
			Flutes		23
			Glacial Lake Brainerd Reworked Outwash & Eolian		24
			Glaciofluvial?		25
			Glaciolacustrine		26
			Glaciolacustrine?		27
			Grantsburg Lobe Drift		28
			Grantsburg Lobe Till		29
			Guthrie Phase Outwash		30
			Historic Beach (untested post reservoir)		31
			Karst Colluvium?		32
			Lacustrine		33
			Lake-Modified		34
			Loess		35
			Loess & Residuum		36
			Lower Red Lake Falls Outwash		37
			Lower Red Lake Falls Till		38
			Marcoux Till		39
			Mining spoil pile?		40
			Modern Lake Superior Sediments		41
			New Ulm Till		42
			Non-Eolian Mantle		43
			Outwash		44

Variable Name	Type	Description	Valid Values	Model_ID	Value
			Outwash or Shallow Lake Sediment		45
			Patchy Eolian Sand		46
			Patchy Glaciolacustrine		47
			Patchy Loess		48
			Patchy Loess over Patchy Pre-Wisconsin Till		49
			Patchy Outwash		50
			Patterned Surface		51
			Peat		52
			Peat over Lacustrine		53
			Post-Settlement Aged Alluvium		54
			Sand & gravel		55
			Split Rock Phase Drift		56
			Split Rock Phase Till		57
			Stream-Modified		58
			Supraglacial Drift		59
			Supraglacial Till		60
			Till		61
			Upper Red Lake Falls Till		62
			Water-Modified		63
			Wave-Modified		64
			Wave-Modified, Glacial Lake		65
CONFIDENCE	Short Integer	Level of Confidence in the source geospatial data, and hence this landscape model. Confidence Level 1 = Low Confidence and Level 5 = High Confidence.	1 2 3 4 5		

SOURCE	Text	The source data publisher, published scale, and published source map location name. The DNR500K_Inserts values were moredetailed polygons taken from the DNR 500K data source and inserted into an MGS data source of supposedly finer scale. The DNR500K_Subtract is the remaining and coarsest portion of the state that was not mapped by the MGS and LfSA at a finer scale; or, the remnant of the statewide 500K data source after being subtracted from by the finer scaled data sources. The MnDOT24K_ LfSAGap value covers areas that were unmapped "Upland" data gaps from the original LfSA data source and that were interpreted and created to fill these data gaps in 2017.	DNR500K_Inserts		
			DNR500K_Subtract		
			MGS100Kanoka		
			MGS100Kaustin		
			MGS100KblueEarth		
			MGS100Kcarlton		
			MGS100Kcarver		
			MGS100Kchisago		
			MGS100Kcrookston		
			MGS100KcrowWing		
			MGS100Kfairbault		
			MGS100Kfillmore		
			MGS100Kfosston		
			MGS100Khastings		
			MGS100Kitasca		
			MGS100KmcLeod		
			MGS100Kmesabi		
			MGS100Kmetro		
			MGS100Kmora		
			MGS100Knicollet		
			MGS100Kpine		
			MGS100Krochester		
			MGS100Ksibley		
			MGS100KSt.Cloud		
			MGS100KSt.Paul		
			MGS100Kstearns		
			MGS100Ktodd		
			MGS100Kwabasha		
			MGS200KfargoMhd		
			MGS200KSWMinn.		
			MGS200KtravGrant		
			MGS200KUpperMNRv		
			MGS24KbellePlneN		
			MGS24KbuffaloW		
			MGS24KcastleDangr		
			MGS24Kduluth		
			MGS24KduluthHts.		
			MGS24KelkRiver		
			MGS24KgullLake		
			MGS24KjordanEast		
			MGS24KjordanWest		
			MGS24KknifeRiver		
			MGS24Klakewood		
			MGS24KtwoHarbors		
			MGS24Kvictoria		

Variable Name	Type	Description	Valid Values	Model_ID	Value
			MGS24Kwaconia MGS24Kwatertown MGS24KwestDuluth MnDOT24K_LfSA MnDOT24K_LfSAGap MnDOT5K_LfSA		
METADATA	Text	Quality of original source data metadata.	POOR FAIR GOOD	LANDQUAL	1 2 3
DETAIL	Text	Relative mapping scale detail for source data.	COARSE FAIR FINE	LANDSCL	1 2 3
SOILS	Text	Available soils data at the time of source data publication. Data was presumably used to help with mapping if metadata was not available to confirm.	LIMITED DATA SCS/NRCS SCS/NRCS/SSURGO SSURGO		
YEAR	Text	Year that the source data was officially published.	1995 1999 1999-2011 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2011/2007? 2017 ca. 2004 ca. 2007? Ca. 2009?		
REGION	Short	Numeric value for Regional landscape	Refer to the Numeric Value column of this table for the GEOREG field.		
RGN_NAME	Short	Numeric value for Region Name	Refer to the Numeric Value column of this table for the REG_NAME field.		
SUBRGN	Short	Numeric value for Subregional Landscape	Refer to the Numeric Value column of this table for the SUBREGION field		

Variable Name	Type	Description	Valid Values	Model_ID	Value
SUBNAME	Short	Numeric value for Subregional Landscape Name	Refer to the Numeric Value column of this table for the SURBRNAME field		
LSCAPE	Short	Numeric value for Local Landscape	Refer to the Numeric Value column of this table for the LANDSCAPE field		
LFORM	Short	Numeric value for LANDFORM	Refer to the Numeric Value column of this table for the LANDFORM field		
MNT	Short	Numeric value for MANTLE	Refer to the Numeric Value column of this table for the MANTLE field		
LANDSCL	Short	Numeric value for relative mapping scale	Refer to the Numeric Value column of this table for the DETAIL field		
LANDQUAL	Short	Numeric value for quality of original metadata	Refer to the Numeric Value column of this table for the METADATA field		