## Summary Table: Characteristics of Ecoregions of Iowa and Missouri

Level IV Ecoregion	<u> </u>	Physiography		Geology		Soil		I	Climat	ը	Potential Natural Vegetation	Land Use and Land Cover
Dever IV Deoregion	Area (square miles)	i nysiogrupny	Elevation/ Local Relief (feet)	Surficial material and bedrock	O rder (Great Groups)	Common Soil Series	Temperature/ Moisture Regimes	Precipitation Mean annual (inches)	Frost Free Mean annual (days)	Mean Temperature January min/max; July min/max, (°F)	1 otentiai Naturai Vegetation	Eand ese and Eand cover
39a. Springfield Plateau		Gently sloping to irregular plain. Karst features. Perennial spring-fed streams.	800-1700 / 50-150	Cherty clay solution residuum and areas of thin loess. Mississippian cherty limestone.	Ultisols (Paleudults, Fragiudults) Alfisols (Fragiudalfs, Hapludalfs, Paleudalfs) Inceptisols (Dystrudepts)	Clarksville, Goss, Doniphan, Viraton, Wilderness, Scholten, Tonti, Hector, Keeno, Creldon, Hoberg, Bolivar	Mesic some Thermic/ Udic, Aquic	40-42	150-180	66-90	Big bluestem/Indiangrass prairie, post- blackjack oak woodland and white- black oak forest.	Mix of woodland, pastureland and limited cropland. Historical lead a zinc mining. Urban and suburban Springfield and Joplin.
39b. Elk River Hills	540	Dissected hills, entrenched valleys and areas ranging from rolling, irregular plains to steep slopes. Karst features. Dendritic, deeply entrenched streams.	900-1400 / 200-300	Cherty clay solution residuum and areas of thin loess. Mississippian cherty limestone, with some Devonian, shales (Chattanooga) and limestone, a few windows of Ordovician dolomite in valleys.	Ultisols (Paleudults, Fragiudults) Alfisols (Paleudalfs)	Clarksville, Noark, Nixa, Goss, Doniphan, Tonti	Mesic/ Udic	41-42	130-180	66-90	Post-blackjack oak woodland, post- black oak woodland, and white-black oak forest.	Forestry, recreation and poultry farms.
39c. White River Hills	3512	Dissected hills and entrenched valleys. Steep slopes and narrow valleys. Karst features. Dendritic, deeply entrenched streams.	600-1600 / 200-600	Thin cherty clay solution residuum in the west and very thin cherty silty to sandy clay solution residuum in the east. Ordovician dolomite, with some Ordovician sandstone. Mississippian limestone on ridgetops. Glades are Ordovician limestone or dolomite.	Ultisols (Paleudults, Fragiudults, Hapludults) Alfisols (Hapludalfs) Mollisols (Hapludolls)	Mano, Captina, Clarksville, Doniphan, Nixa, Arkana, Moko, Gassville, Ocie, Bardley	Mesic/ Udic	42-44	150-180	66-90	Little bluestem-sideoats alkaline glade, post-blackjack oak woodland, white-black oak forest.	Forestry and recreation. Pasturelar in eastern half.
39d. Central Plateau	6820	Irregular plains with broad summits and moderately steep valleys. Karst features are extensive with large sinkhole areas. Intermittent headwater streams, sinkholes, ponds.	800-1600 / 50-150	Thin to thick cherty silty to sandy clay solution residuum and large areas of thin loess. Ordovician dolomite, some outliers of Mississippian-aged limestone in the western area. Pennsylvanian shales and clays in areas with less relief.	Ultisols (Paleudults, Fragiudults, Hapludults) Alfisols (Fragiudalfs, Hapludalfs, Paleudalfs) Mollisols (Hapludolls)	Viraton, Clarksville, Lebanon, Goss, Doniphan, Arkana, Moko, Gassville, Gepp, Agnos, Captina, Union	Mesic/ Udic	40-44	150-180		Little bluestem/Indiangrass prairie, post-blackjack oak woodland, and black-scarlet oak woodland.	Pastureland, forestry, and limited cropland with main crops of forag and feed grains for livestock. Fire clay production.
39e. Osage/Gasconade Hills	5040	Moderately dissected hills. Steep slopes and narrow valleys. Karst features.  Dendritic spring-fed perennial streams.	600-1100 / 150-300	Thin to very thick cherty clay decomposition and solution residuum. Ordovician dolomite with some sandstone (Gasconade Formation), sandstone (Roubidoux Formation), and dolomite (Jefferson City-Cotter Formation). Some scattered Mississippian limestone in the west.	Ultisols (Paleudults, Fragiudults) Alfisols (Hapludalfs) Mollisols (Hapludolls)	Bardley, Goss, Gasconade, Clarksville, Doniphan, Bucklick, Caneyville, Gatewood, Captina, Niangua	Mesic/ Udic	38-42	150-180		Mainly post-blackjack oak woodland to the north with white-black oak forest, white oak forest, and an increase in shortleaf pine-oak forest to the south.	Forestry, recreation and pasturelar
39f. St. Francois Knobs and Basins	1590	Steep, irregular hills, bedrock knobs and intervening basins. Small rivers and perennial streams.	600-1700 / 300-1000	Silty clay loam decomposition and solution residuum mantled with thin loess. Areas of sandy silty saprolite. Precambrian granite, rhyolite, and intermediate rocks. Cambrian dolomites and some sandstones in basins.	Ultisols (Hapludults, Fragiudults, Paleudults) Alfisols (Hapludalfs, Paleudalfs, Fragiudalfs)	Irondale, Killarney, Delassus, Crider, Fourche, Bucklick, Syenite, Clarksville, Wilderness, Captina	Mesic/ Udic	40-44	120-150		Post-blackjack oak woodland with little bluestem prairie and glade areas in valleys and basins.	Forestry in timbered areas and pastureland and grazing in valleys and basins. Historically, areas of extensive lead mining along with associated copper, silver, cobalt, a zinc mining.
39g. Meramec River Hills	1776	Hills and entrenched valleys. Steep slopes, narrow ridges, and narrow valleys. Karst features.  Dendritic spring-fed perennial streams.	500-1300 / 150-300	Thin to thick sandy clay decomposition and solution residuum and thick silty clay and clayey silt solution residuum with loess. Ordovician and Cambrian dolomite and sandstone. Some scattered exposures of Precambrian igneous rocks.	Ultisols (Paleudults, Fragiudults) Alfisols (Paleudalfs, Fragiudalfs)	Goss, Doniphan, Wilderness, Captina, Coulstone, Hobson, Reuter	Mesic/ Udic	38-42	130-160	65-90	Shortleaf pine-oak forest, black-scarlet oak woodland and forest, and white oak forest.	Forestry and recreation with areas iron and barite mining.
39h. Current River Hills		Hills and entrenched valleys. Steep slopes, narrow ridges, and narrow valleys. Karst features. Dendritic, deeply entrenched, springfed perennial streams.	400-1300 / 200-400	Thin to thick sandy clay decomposition and solution residuum and thick silty clay and clayey silt solution residuum. Ordovician and Cambrian dolomite and sandstone. Some scattered exposures of Precambrian igneous rocks.	Ultisols (Paleudults, Fragiudults, Hapludults) Alfisols (Paleudalfs)	Clarksville, Goss, Doniphan, Captina, Macedonia, Gepp, Tonti	Mesic/ Udic	42-45	130-160	64-90	Shortleaf pine-oak forest, black-scarlet oak woodland and forest, and white oak forest.	Forestry and recreation with some areas of lead, zinc, copper, and manganese mining.
39i. Eastern Ozark Border	1835	Moderately dissected hills and bluffs. Some karst features. Dendritic, entrenched perennial streams.	500-1100 / 150-300	Thin cherty clay decomposition and solution residuum and thin to moderate loess mantle on uplands. Ordovician dolomite with some sandstone Mississippian limestone.	Ultisols (Paleudults, Hapludults) Alfisols (Hapludalfs, Fragiudalfs, Paleudalfs)	Bucklick, Caneyville, Gatewood, Hildebrecht, Weingarten, Goss, Lily, Minnith, Jonca, Loring, Poyner, Weingarten	Mesic/ Udic	38-44	130-160		Little bluestem-sideoats alkaline glade, post-black jack oak woodland, and white-black oak woodland.	Pastureland, woodland, and limite cropland with hay and forage crop
39j. Black River Hills Border	1076	Broad, flat inter-stream divides and moderately dissected hills. Karst features.  Perennial streams and local riverine wetlands.	300-900 / 100-300	Thick cherty sandy clay decomposition and solution residuum and thick cherty clay solution residuum. Thin loess mantle on less dissected areas. Ordovician dolomite and sandstone.	Ultisols (Paleudults, Fragiudults) Alfisols (Fragiudalfs)	Clarksville, Wilderness, Captina	Mesic/ Udic	44-46	130-160	66-92	Shortleaf pine-oak woodland, post-blackjack oak woodland, and mixed oak-sweetgum forest.	Forestry, pastureland, and recreati
39k. Prairie Ozark Border	839	Smooth to gently sloping plains. Intermittent headwater streams.	800-1100 / 50-100	Thin to moderate loess mantle. Thin cherty clay solution residuum and thin cherty silty to sandy clay decomposition and solution residuum. Ordovician dolomite and sandstone to the south, and Mississippian limestone to the north. Some areas of Devonian shale and sandstone.	Alfisols (Hapludalfs) Inceptisols (Eutrudepts)	Menfro, Winfield, Haymond	Mesic/ Udic	38-40	150-180	68-91	Big bluestem-Indiangrass prairie, bluestem-Indiangrass prairie, and post- blackjack woodland.	Cropland with hay and forage croand pastureland.

Level IV Ecoregion		Physiography		Geology	Soil			Climate			Potential Natural Vegetation	Land Use and Land Cover
	Area (square miles)		Elevation/ Local Relief (feet)	Surficial material and bedrock	O rder (Great Groups)	Common Soil Series	Temperature/ Moisture Regimes	Precipitation Mean annual (inches)	Frost Free Mean annual (days)	Mean Temperature January min/max; July min/max, (°F)		
40a. Loess Flats and Till Plains	16976	Glaciated. Low hills and smooth plains. Perennial streams with many channelized.	600-1200 / 100-300	Moderate loess over loamy till and clay loam till. Pennsylvanian sandstone, limestone, shale. Also Mississippian limestone in Iowa.	Mollisols (Argiudolls, Hapludolls) Alfisols (Hapludalfs, Epiaqualfs, Paleudalfs)	Lamoni, Shelby, Adair, Grundy, Lagonda, Armster, Snead, Gara, Armstrong, Pershing, Shelby, Kilwinning, Goss	Mesic/ Udic	32-36	150-180	16-36; 66-90	Mosaic of little bluestem-sideoats grama prairie, bur-oak woodland, and chinkapin oak woodland.	Cropland. Corn, soybeans, other feed grains, and hay are princip crops. Historic coal mining. Woodlands along stream reache especially in the Chariton Hills
40c. Wooded Osage Plains	3824	Unglaciated. Low cuestas and gentle undulating plains. Intermittent and perennial streams, some channelized.	700-1100 / 75-150	Sandy clay, silty clay, and clay decomposition residuum. Alternating layers of Pennsylvanian sandstone, limestone, and shale.	Mollisols (Argiaquolls, Argiudolls, Hapludolls, Argialbolls) Alfisols (Epiaqualfs) Entisols (Udifluvents)	Sampsel, Polo, Snead, Hartwell, Kenoma, Deepwater, Pershing, Greenton, Dockery	Mesic, Thermic/ Udic	36-40	150-180	22-42; 68-92	Little bluestem-sideoats grama prairie, big bluestem-Indiangrass prairie, cordgrass wet prairie, and oak woodlands.	Pasture, cropland, and areas of c mining. Winter wheat, soybeans corn, grain sorghum, other feed grains, and hay are the major cro
40d. Cherokee Plains	2509	Unglaciated. Smooth to irregular plains. Intermittent and perennial streams.	700-1000 / 50-125	Clay and sandy decomposition residuum. Alternating layers of Pennsylvanian sandstone, limestone, and shale.	Alfisols (Albaqualfs, Hapludalfs) Ultisols (Hapludults) Mollisols (Argiudolls, Hapludolls) Inceptisols (Dystrudepts)	Parsons, Barden, Dennis, Hector, Bolivar, Mandeville, Barco, Collinsville	Mesic, Thermic/ Udic	38-40	150-180	24-45; 68-92	Little bluestem-sideoats grama prairie, big bluestem-Indiangrass prairie, and cordgrass wet prairie.	Pasture, cropland, and areas of mining. Winter wheat, soybeans corn, grain sorghum, other feed grains, and hay are the major cr
40e. Claypan Prairie	4129	Glaciated. Smooth plains. Perennial streams with many channelized.	700-1000 / 50-100	Loamy till and clay loam till. Well-developed claypan. Pennsylvanian sandstone, limestone, and shale.	Alfisols (Epiaqualfs, Albaqualfs, Hapludalfs)	Mexico, Putnam, Leonard, Armstrong, Lindley	Mesic/ Udic	36-38	150-170	18-38; 66-90	Big bluestem-Indiangrass prairie, little bluestem-sideoats grama prairie, and white oak dry woodland.	Cropland, pasture, and livestock production, especially hogs. Co soybeans, other feed grains, and for livestock are the major crop

Level IV Ecoregion			Physiography	Geology			Soil	C	limate			Potential Natural Vegetation	Land Use and Land Cover
		Area (square miles)		Elevation/ Local Relief (feet)	Surficial material and bedrock	O rder (Great Groups)	Common Soil Series	Temperature/ Moisture Regimes	Precipitation Mean annual (inches)	Frost Free Mean annual (days)	Mean Temperature January min/max; July min/max, (°F)		
47a.	Northwest Iowa Loess Prairies	4385	Irregular plains. Dendritic streams.	1200-1600 / 100-200	Moderate to thick loess over clay-loam till. Cretaceous shale, sandstone, and limestone, some Precambrian Sioux quartzite.	Mollisols (Hapludolls)	Galva, Primghar, Sac	Mesic/ Udic	27-29	140-150	5-27; 62-87	Big bluestem-Indiangrass prairie, little bluestem-Indiangrass prairie, and limited areas of bur-oak woodland.	Cropland with corn, soybeans, alfalfa, and other feed grains.
47b.	<b>Des Moines Lobe</b>	12214	Smooth to irregular plains. Dendritic streams and drained wetlands.	900-1500 / 50-100	Loamy till with no loess cover. Ground, stagnation and end moraines.	Mollisols (Hapludolls)	Clarion, Nicollet, Webster	Mesic/ Udic	28-31	145-160	8-28; 62-87	Big bluestem-Indiangrass prairie, cordgrass wet prairie, and limited areas of bur-oak woodland.	Cropland with corn, soybeans, and other feed grains.
47c.	Iowan Surface	8515	Irregular to smooth plains. Low gradient streams.	900-1200 / 50-100	Thin loess over loamy till. Devonian and Silurian limestone and dolomite.	Mollisols (Hapludolls, Argiudolls)	Kenyon, Flood, Clyde	Mesic/ Udic	31-33	145-155	6-24; 62-84	Big bluestem-Indiangrass prairie, areas of bur-oak-mixed oak savanna and woodlands.	Cropland with corn, soybeans, and other feed grains.
47d.	Missouri Alluvial Plain	2172	Smooth to irregular alluvial plain. Channelized streams.	600-1100 / 0-50	Alluvium over Pennsylvanian and Cretaceous shale, sandstone and limestone.	Mollisols (Hapludolls, Endoaquolls) Entisols (Udifluvents, Fluvaquents)	Haynie, Leta, Waldron, Blake, Booker	Mesic/ Udic	26-36	150-180	6-36; 62-91	Northern floodplain forest, pin oak forest, and cordgrass wet prairie.	Cropland with corn, soybeans, and other feed grains.
47e.	Steeply Rolling Loess Prairies	5753	Open low hills. Intermittent and perennial streams, many channelized.	800-1300 / 100-300	Moderate to thick loess, 25 to 50 feet, over clay loam till. Pennsylvanian shale, sandstone and limestone.	Mollisols (Hapludolls, Argiudolls, Endoaquolls)	Marshall, Exira, Shelby, Colo	Mesic/ Udic	27-34	150-180	14-35; 66-90	Big bluestem-Indiangrass prairie, and white oak-red oak woodland, bur-oak mixed woodland.	Cropland with corn, soybeans, and other feed grains.
47f.	Rolling Loess Prairies	17858	Irregular plains to open low hills. Intermittent and perennial streams, many channelized.	700–1300 / 100–200	Moderate to thick loess, generally less than 25 feet, over clay loam till. Pennsylvanian and Cretaceous shale, sandstone and limestone.	Mollisols (Argiudolls, Endoaquolls, Hapludolls) Alfisols (Hapludalfs)	Sharpsburg, Shelby, Colo, Marshall, Higginsville, Sibley, Exira, Knox	Mesic/ Udic	30-37	160-180	17-38; 66-91	Mosaic of big bluestem-Indiangrass prairie, and bur-oak woodland.	Cropland with corn, soybeans, and other feed grains as main crops. Some pastureland, urban at Kansas City.
47m.	Western Loess Hills	1654	Open hills and bluffs. Intermittent and perennial streams.	1000-1500 / 100-300	Thick loess, 60 to 150 feet over clay-loam till. Pennsylvanian shale, sandstone and limestone in southern half of region; Cretaceous shale, sandstone and limestone in the northern half.	Mollisols (Hapludolls) Entisols (Udorthents)	Monona, Ida, Hamburg, Napier	Mesic/ Udic	27-33	150-180	13-35; 67-91	Mosaic of bur-oak woodland and big bluestem-Indiangrass prairie.	Cropland with corn, soybeans, and other feed grains, and pastureland.

52.	D R	IFTLESS AREA										
Level IV Ecoregion		Physiography		Geology		Soil	С		limate	;	Potential Natural Vegetation	Land Use and Land Cover
	Area (square miles)		Elevation/ Local Relief (feet)	Surficial material and bedrock	Order (Great Groups)	Common Soil Series	Temperature/ Moisture Regimes		Mean annual	Mean Temperature January min/max; July min/max, (°F)		
52b. Paleozoic Plateau/ Coulee Section		Dissected hills, rolling to steep-sided valleys. Perennial streams.	/	Thin loess and patches of glacial drift over Silurian, Ordovician and Cambrian dolomite, shale, sandstone, and limestone.	Alfisols (Hapludalfs)	Fayette, Dubuque	Mesic/ Udic	32-34	140-155		Mosaic little bluestem-Indiangrass prairie, bur-oak and white oak forests, and areas of maple-basswood forests.	Pastureland, cropland, and woodland. Principal crops are feed grains and forage for dairy cattle an other livestock.

Level IV Ecoregion		Physiography		Geology		Soil	C		limate		Potential Natural Vegetation	Land Use and Land Cover
	Area (square miles)		Elevation/ Local Relief (feet)	Surficial material and bedrock	al material and bedrock Order (Great Groups) Common Soil Series Moisture	Temperature/ Moisture Regimes	Precipitation Mean annual (inches)	Frost Free Mean annual (days)	Mean Temperature January min/max; July min/max, (°F)			
72d. Upper Mississippi Alluvial Plain		Smooth to irregular alluvial plains. Channelized streams.	425-550 / 0-50	Alluvium. Brown to gray silt, clay, sand, and gravel. Thickness of alluvial and older fluvial deposits more than 100 feet.		Carlow, Portage, Chequest, Colo, Zook	Mesic/ Udic	34-38	150-180	20-39; 66-90	Cottonwood-willow riparian forest, pin oak forest, cordgrass wet prairie.	Cropland with corn, wheat, soybeans, and feed grains and ha for livestock.
72e. Middle Mississippi Alluvial Plain	207	Smooth to irregular alluvial plains. Channelized streams.	300-425 / 0-50	Alluvium. Brown to gray silt, clay, sand, and gravel. Thickness of alluvial and older fluvial deposits more than 100 feet.	Entisols (Udifluvents, Fluvaquents)	Haynie, Waldron, Blake	Mesic/ Udic	38-44	180-200	26-44; 68-92	Cottonwood-willow riparian forest, green ash-elm-hackberry forest, pin oak and swamp white oak forest.	Cropland with corn, wheat, soybeans, and feed grains and he for livestock.
72f. River Hills	6993	Bluffs, valleys and low hills. Areas of karst features. Perennial streams. Missouri River channelized.	400-810 / 50-300	Thin cherty clay and silty to sandy clay solution residuum. Areas of clay loam till along the northern boundary along the Missouri River and eastern boundary of the upper Mississippi River. Thin loess, 5 to 13 feet, on uplands along bluffs. Alluvium along the Missouri River. Ordovician, Mississippian, and Pennsylvanian limestones, sandstones, and shales with considerable bedrock exposures throughout the region.	Alfisols (Hapludalfs, Paleudalfs) Mollisols (Hapludolls) Inceptisols (Eutrudepts)	Lindley, Keswick, Goss, Bardley, Gasconade, Cedargap, Menfro, Haymond, Winfield, Hatton	Mesic/ Udic	38-44	150-180	24-43; 66-91	White-black oak woodland, white oak woodland, and sugar maple-oak forest.	Cropland on uplands, pastureland woodland, and areas of urban at Louis-St. Charles and Columbia-Jefferson City. Feed grains and h for livestock.

Level IV Ecoregion		e		Geology  Surficial material and bedrock		Soil	C		limat	e	Potential Natural Vegetation	Land Use and Land Cover
	Area (square miles)		Elevation/ Local Relief (feet)		Order (Great Groups)	Common Soil Series	Temperature/ Moisture Regimes	Precipitation Mean annual (inches)		Mean Temperature January min/max; July min/max, (°F)		
73a. Holocene Meander Belts	702	Wide, smooth alluvial plain. Point bars, meander belts, oxbows and abandoned channels.  Extensive channelized streams and drained wetlands.	250-325 / 0-25	Unconsolidated silty, clayey, and sandy alluvium, 5 to 10 feet in depth over older fluvial deposits 70 feet to greater than 100 feet deep. Holocene deposits.	Entisols (Fluvaquents, Udifluvents) Alfisols (Endoaqualfs)	Commerce, Caruthersville, Hayti, Dundee	Thermic/ Aquic, Udic	45-46	180-210	28-48; 68-92	Oak-sweetgum forest, overcup oak- water hickory forest, and tupelo- cypress swamp forest.	Extensive cropland with cotton, ri and soybeans.
73b. Pleistocene Valley Trains	2940	Wide, smooth to irregular alluvial plain. Interfluves, relict channels, and terraces.  Extensive channelized streams and drained wetlands.		narrow sandy areas as deep as 50 feet. Older	Alfisols (Epiaqualfs, Endoaqualfs, Hapludalfs) Entisols (Fluvaquents, Udipsamments) Mollisols (Endoaquolls)	Sharkey, Gideon, Sikeston, Lilbourn, Wardell, Dundee, Maldin, Dubbs, Clana	Thermic/ Aquic, Udic	44-48	180-210	28-48; 68-92	Oak-sweetgum forest, overcup oak- water hickory forest, and tupelo- cypress swamp forest.	Extensive cropland with cotton, rand soybeans.

Level IV Ecoregion	Physiography		Geology		Soil	C		limate		Potential Natural Vegetation	Land Use and Land Cover
	Area (square miles)	Elevation/ Local Relief (feet)	Surficial material and bedrock	O rder (Great Groups)	Common Soil Series	Temperature/ Moisture Regimes			Mean Temperature January min/max; July min/max, (°F)		
74a. Bluff Hills	357 Isolated low ridges. Intermittent streams.	/	Alluvial sand, silt, and clay on terraces. Bedrock exposures of Tertiary sands, gravels,	Alfisols (Hapludalfs, Fragiudalfs, Albaqualfs) Entisols (Fluvaquents, Udifluvents)	Memphis, Loring, Falaya, Adler, Zachary, Crowley	Thermic/ Udic	45-46	180-210	68-92	Post-blackjack oak woodland, southern red oak-white oak woodland, and beech-maple woodland.	Some woodland areas, pasturelar and limited cropland of hay and forage crops.

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