

Table Name	Field Name	Definition	Valid Values	Descriptions
kana_fobs.dbf	FIELD_ID	Text, 8	Ex: kana_1	Unique identifiers used in the field.
	SITETYPE_1	Text, 25	See Below	
			Excavation	Badger holes, trenches, construction areas, or foundations.
			Exposure	Outcrop of material from erosional processes.
			Gravel Pit	Gravel pits exposing sand and gravel material.
			Other	Based on communication or observation.
			Rock Pile	Conspicuous pile of rocks, generally ranging in size from cobble to boulder.
	SITETYPE_2	Text, 25	See Below	Further description of the observation site specified in SITE_TYPE1.
			Animal Hole	A hole dug by an animal which exposes sediment.
			ATV Trail	Sediment exposed within trail for ATVs.
			Communication	Contact with landowners, drillers, and experts verifying well records.
			Construction	Mining or digging due to construction.
			Ditch	Material exposed in a ditch due to a slump or landscaping that has removed vegetation.
			Drainage	Material exposed in a small water drainage feature.
			Driveway	Surficial material exposed in driveway.
			Embankment	Sediment exposed in a slope or hill where vegetation is patchy or lacking.
			Gravel Pit	Materials exposed in gravel pit.
			Observation	Sediment or vegetation observed
			River Cut	Sediment exposed by river erosion.
			Road Cut	Materials exposed in a road cut.
			Rock Pile	Conspicuous pile of rocks, generally ranging in size from cobble to boulder.
			Surface	Exposures of bedrock/material on the ground surface.

			Stream	Sediment visible in the bottom of a stream
			Telephone Pole	Sediment exposed due to drilling and installation of new telephone poles.
			Tree Tip	Exposure after a tree blows over and roots are tilted out of the ground revealing underlying sediment.
			Trench	Exposure of sediment viewed in human-made linear trench excavation
			Vegetation	Vegetation type that is indicative of a certain soil texture
	MATERIAL_1	Text, 25	See Below	Describes the primary type of material encountered at each observation site and does not necessarily reflect stratigraphic order.
			Boulders	Presence of bedrock boulders.
			Clay	Clay is a very fine-grained sediment that is less than 0.004 mm in size.
			Cobbles	Clasts that range in size from 3 inches to 10 inches.
			Did not Observe	Sediment texture was not observed
			Gravel with Sand	Sediment that contains a mixture of rocks in varying sizes ranging from 0.0625 to 64 mm. This description is given to sediment that contains greater than 50% by volume gravel.
			Organics	Soil that contains decaying organic matter.
			Rocky Soil	Observation based on surficial exposure usually within tilled field or pasture with little vegetation.
			Sand	Sand is composed of rocks and minerals that range in diameter from 0.0625 to 2 mm.
			Sand and Gravel	Sediment that contains a mixture of rocks in varying sizes ranging from 0.0625 to 64 mm. This description is given to sediment that contains greater than 15% by volume gravel.
			Sand minor Gravel	Sediment that contains a mixture of rocks in varying sizes ranging from 0.0625 to 64 mm. This description is given to sediment that contains approximately less than 7% by volume gravel.
			Sand with Gravel	Sediment that contains a mixture of rocks in varying sizes ranging from

				0.0625 to 64 mm. This description is given to sediment that contains less than 15% by volume gravel.
			Silt	A fine grained sediment that has a diameter between 0.004 to 0.0625 mm.
			Silty Sand	Sand that contains some silt.
			Till	A term used to describe the unsorted sediment deposited by glaciers-contains a mixture of clay, silt, sand, gravel and boulders.
	MATERIAL_2	Text, 25	See Below	Describes the secondary (not primary) type of material at each observation site.
			Alluvium	Fine sediment ranging from fine sand to clay deposited by river or stream.
			Boulders	Presence of bedrock boulders.
			Clay	Clay is a very fine-grained sediment that is less than 0.004 mm in size.
			Cobbles	Clasts that range in size from 3 inches to 10 inches.
			Organics	Developed P soil horizon, indicating organic material and a high water table.
			Sand	Sand is composed of rocks and minerals that range in diameter from 0.0625 to 2 mm.
			Sand and Gravel	Sediment that contains a mixture of rocks in varying sizes ranging from 0.0625 to 64 mm. This description is given to sediment that contains greater than 15% by volume gravel.
			Sand with Gravel	Sediment that contains a mixture of rocks in varying sizes ranging from 0.0625 to 64 mm. This description is given to sediment that contains less than 15% by volume gravel.
			Silt	A fine grained sediment that has a diameter between 0.004 to 0.0625 mm.
			Silty Sand	Sand that contains some silt.
			Till	A term used to describe the unsorted sediment deposited by glaciers-contains a mixture of clay, silt, sand, gravel and boulders. Within the boundaries of Project of MPES Report 384 almost all visible till was created by the Superior lobe. There is some influence of the Des Moines lobe in the extreme south east corner

				of the county. Generally the till has a silty matrix and is tan in color.
			Topsoil	Presence of developed A soil horizon.
	FIELDDESC	Text, 200	Ex: Drill Hole (0-9 ft) 0-6 Till, 6-9 Gravel.	A short field description of the observation site.
	Thickness	Text, 15	Ex: +10, ~20, +25, 10, 25, Not Available	The thickness of the deposit expressed in combination with a modifier. Not Available indicates that the measurement does not apply or was not observed.
	Thick_mod	Text, 1	Ex: +,-	Modifiers to express numeric approximations observed for deposit thickness: + greater than - to, as in 10-20
	Thick_min	Number, 4	Ex: 5, 10, 15...-999	Gives the minimum value for thickness. (-999 is a null value)
	Thick_max	Number, 4	Ex: 5, 10, 15...-999	Gives the maximum value for thickness. (-999 is a null value)
	Overburden	Text, 15	Ex: +10, ~20, +25, 10, 25, Not Available	Expresses overburden thickness by possibly using one or both the modifier and value. Not Available indicates that the measurement does not apply or was not observed.
	Ob_mod	Text, 1	Ex: ~, -, +	Modifiers to express numeric approximations for the overburden thickness at a gravel pit. ~ approximate - to, as in 10-20 + greater than
	Ob_min	Number, 4	Ex: 5, 10, 15...-999	Gives the minimum value for overburden thickness. (-999 is a null value).
	Ob_max	Number, 4	Ex: 5, 10, 15...-999	Gives the maximum value for overburden thickness. (-999 is a null value).
	Sampled	Text, 3	Yes or No	For Kanabec County only select test holes were sampled. See kana_testholes for that information.
	Gravel_pct	Double	Ex: -999, 50	For Kanabec County only select test holes were sampled. See kana_testholes for that information.