

NOTE: The following is an inclusive list of terms defined in the National Soil Survey Handbook, Part 629. The terms recommended for use in MO Region 11 are highlighted in bold text.

Exhibit 629-1 Lists of Landscape, Landform, Microfeature, and Anthropogenic Feature Terms defined in the Glossary (comprehensive alphabetical and subset lists grouped by Geomorphic Process or other Groupings). These lists are the core of the *Geomorphic Description System* (Schoeneberger, et al., 1998; revised 2001).

[Note: Various codes follow some of the entries: NR - indicates terms that are NOT RECOMMENDED (should not be used); NP - indicates terms that are NOT PREFERRED (have been used, but better alternatives are available). Also following terms are italicized letters for the corresponding shorthand code (e.g., *BA*); a dash (--) indicates that as yet, no shorthand code has been assigned.]

I) ALPHABETICAL LISTS (Landscapes, Landforms, Microfeatures, Anthropogenic Features).

A) LANDSCAPES (broad or unique groups or clusters of natural, spatially associated features).

alluvial plain	--	lava plateau (also Landform)	<i>LL</i>
alluvial plain remnant	--	lowland	--
badlands	<i>BA</i>	marine terrace (also Landform)	--
bajada (also Landform)	<i>BJ</i>	meander belt	<i>MB</i>
basin	<i>BS</i>	mountain range	--
batholith	--	mountains (singular = Landform)	<i>MO</i>
bolson	<i>BO</i>	mountain system	--
breaks	<i>BK</i>	outwash plain (also Landform)	--
canyonlands	--	peninsula	--
coastal plain (also Landform)	<i>CP</i>	piedmont	<i>PI</i>
cockpit karst	--	piedmont slope	--
continental glacier	--	plains (also Landform)	<i>PL</i>
delta plain (also Landform)	--	plateau (also Landform)	<i>PT</i>
drumlin field	--	rift valley	--
dune field	--	river valley (also Landform)	<i>RV</i>
fan piedmont (also Landform)	<i>FP</i>	sandhills	<i>SH</i>
fluviokarst	--	sand plain	--
foothills	<i>FH</i>	scabland	<i>SC</i>
hills (singular = Landform)	<i>HI</i>	semi-bolson	<i>SB</i>
ice-margin complex	--	shore complex	--
intermontane basin (also Landform)	<i>IB</i>	sinkhole karst	--
island (also Landform)	--	tableland	<i>TB</i>
karstland	<i>KP</i>	thermokarst	<i>TK</i>
kegel karst	--	till plain (also Landform)	<i>TP</i>
lake plain (also Landform)	--	upland	<i>UP</i>
lava field	--	valley (also Landform)	<i>VA</i>
lava plain (also Landform)	--	volcanic field	--

B) LANDFORMS (discrete, natural, individual, earth-surface features mappable at common survey scales)

a' a lava flow	--	chenier	CG
alas	AA	chenier plain	CH
alluvial cone	--	cinder cone	CI
alluvial fan	AF	cirque	CQ
alluvial flat	AP	cirque floor	--
alpine glacier	--	cirque headwall	--
anticline	AN	cirque platform	--
arete	AR	cliff	CJ
arroyo	AY	climbing dune	--
ash flow (also material)	AS	closed depression (also Microfeature)	--
atoll	AT	coastal plain (also Landscape)	CP
avalanche chute	AL	cockpit	--
axial stream	--	col	CL
backshore	AZ	collapsed ice-floored lakebed	CK
backswamp	BS	collapsed ice-walled lakebed	CN
bajada (also Landscape)	BJ	collapsed lake plain	CS
ballena	BL	collapsed outwash plain	CT
ballon	BV	collapse sinkhole	--
bar	BR	complex landslide	--
barchan dune	BQ	coulee	CE
barrier beach	BB	cove [coast] (water body)	--
barrier flat	BP	cove [geom]	CO
barrier island	BI	crag and tail	--
basin floor	BC	crater [volcanic]	CR
basin-floor remnant	BD	crevasse filling	CF
bay [coast] (water body)	WB	cuesta	CU
bay [geom.]	--	cuesta valley	--
bayou (water body)	WC	cutoff	CV
beach	BE	debris avalanche (also material)	DA
beach plain	BP	debris fall	--
beach ridge	BG	debris flow (also material)	DF
beach terrace	BT	debris slide (also material)	--
berm	BM	debris spread	--
beveled base	--	debris topple	--
blind valley	VB	deflation basin	DB
block field (also material)	BW	delta	DE
block glide (also material)	--	delta plain (also Landscape)	DC
block lava flow	--	depression	DP
block stream (also material)	BX	diapir	DD
blowout	BY	dike	DK
bluff	BN	dipslope	DL
bog	BO	disintegration moraine	DM
box canyon	--	divide	DN
braided stream	BZ	dome	DO
broad interstream divide	--	drainageway	DQ
butte	BU	draw	DW
caldera	CD	drumlin	DR
canyon	CA	drumlinoid ridge	--
canyon bench	--	dune	DU
Carolina Bay	CB	dune lake (water body)	--
channel (also Microfeature)	CC	dune slack (also Microfeature)	--

earth flow (also material) *EF*
 earth spread --
 earth topple --
end moraine *EM*
 ephemeral stream (also Microfeature) --
 eroded fan remnant --
 eroded fan-remnant sideslope --
 erosion remnant *ER*
escarpment *ES*
esker *EK*
 estuary (water body) *WD*
 faceted spur *FS*
 fall (also material) *FB*
 falling dune --
 fan *FC*
 fan apron *FA*
 fan collar --
 fanhead trench *FF*
 fan piedmont (also Landscape) *FG*
 fan remnant *FH*
 fan skirt *FI*
 fault-line scarp *FK*
 fault zone --
fen *FN*
 fissure vent --
 fjord (water body) *FJ*
flat *FL*
flood plain *FP*
 flood-plain playa *FY*
flood-plain splay *FM*
flood-plain step *FO*
 flow --
 flute (also Microfeature) *FU*
 fold *FQ*
foredune *FD*
 fosse *FV*
free face (also Geom. Comp. – Hills, Mountains) *FW*
 gap *GA*
 geyser --
 geyser basin --
 geyser cone --
 giant ripple *GC*
glacial drainage channel *GD*
glacial lake (water body) *WE*
glacial lake [relict] *GL*
 glacial-valley floor --
 glacial-valley wall --
 glacier --
 gorge *GO*
 graben *GR*
ground moraine *GM*
 gulch *GT*
 gulf [coast] (water body) --
 gut [stream]; (water body) *WH*

gut (valley) *GV*
 hanging valley *HV*
 headland *HE*
head-of-outwash --
 headwall *HW*
 high hill --
 highmoor bog *HB*
hill *HI*
hillslope --
 hogback *HO*
 horn *HR*
 horst *HT*
 hot spring --
ice-contact slope --
ice-marginal steam --
 ice-pushed ridge --
 inselberg *IN*
 inset fan *IF*
interdrumlin --
interdune (also Microfeature) *ID*
interfluvium (also Geom. Component - Hills) *IV*
 interior valley --
 intermittent stream (also Microfeature) --
 intermontane basin (also Landscape) *IB*
island (also Landscape) --
kame *KA*
kame moraine *KM*
kame terrace *KT*
 karst cone --
 karst tower --
 karst valley --
kettle *KE*
 kipuka --
knob *KN*
knoll *KL*
 lagoon (water body) *WI*
 lahar (also material) *LA*
lake (water body) *WJ*
lakebed [relict] *LB*
lake plain (also Landscape) *LP*
 lakeshore *LF*
lake terrace *LT*
landslide (also material) *LK*
lateral moraine *LM*
 lateral spread (also material) --
 lava field (also Landscape) --
 lava flow *LC*
 lava flow unit (also Microfeature) --
 lava plain *LN*
 lava plateau (also Landscape) *LL*
 lava trench --
 lava tube --
 ledge *LE*
 levee [stream] *LV*

loess bluff	LO	pediment	<i>PE</i>
loess hill	LQ	perennial stream (water body)	--
longitudinal dune	--	pillow lava flow	--
longshore bar [relict]	LR	pingo	<i>PI</i>
louderback	<i>LU</i>	pinnacle	--
low hill	--	pitted outwash plain	PM
lowmoor bog	<i>LX</i>	pitted outwash terrace	--
marine terrace (also Landscape)	<i>MT</i>	plain (also Landscape)	PN
maar	--	plateau (also Landscape)	<i>PT</i>
main scarp (also Microfeature)	--	playa	<i>PL</i>
marsh	MA	playa dune (also Microfeature)	--
mawae	--	playa floor (also Microfeature)	--
meander	<i>MB</i>	playa lake (water body)	<i>WL</i>
meandering channel	<i>MC</i>	playa rim (also Microfeature)	--
meander scar	MS	playa slope (also Microfeature)	--
meander scroll	<i>MG</i>	playa step (also Microfeature)	--
medial moraine	MH	plug [volcanic]	--
mesa	<i>ME</i>	plug dome	<i>PP</i>
meteorite crater	--	pluvial lake (water body)	<i>WM</i>
mogote	--	pluvial lake (relict)	<i>PQ</i>
monadnock	MD	pocosin	<i>PO</i>
monocline	<i>MJ</i>	point bar	PR
moraine	MU	pothole (also Microfeature)	PH
mountain (also Landscape)	<i>MM</i>	pothole lake (water body)	WN
mountain slope	<i>MN</i>	pressure ridge [ice]	--
mountain valley	<i>MV</i>	pressure ridge [volcanic]; also Micro.)	<i>PU</i>
mud flat	MF	proglacial lake (water body)	<i>WO</i>
mudflow (also material)	<i>MW</i>	proglacial lake [relict]	--
mud pot	--	pyroclastic flow	--
muskeg	<i>MX</i>	pyroclastic surge	--
natural levee	NL	raised beach	<i>RA</i>
neck [volcanic]	--	raised bog	<i>RB</i>
notch	<i>NO</i>	ravine	RV
nunatak	<i>NU</i>	recessional moraine	RM
ocean (water body)	--	reef	<i>RF</i>
open depression (also Microfeature)	--	reworked lake plain	--
outwash delta	--	ribbed fen	<i>RG</i>
outwash fan	<i>OF</i>	ridge	RI
outwash plain (also Landscape)	OP	rim	<i>RJ</i>
outwash terrace	OT	river (water body)	--
overflow stream channel	--	river valley (also Landscape)	--
oxbow	<i>OX</i>	roche moutonnée (also Microfeature)	RN
oxbow lake (water body)	WK	rock fall (also Microfeature)	--
oxbow lake (ephemeral)	OL	rock avalanche (also material)	--
paha	PA	rock glacier	<i>RO</i>
pahoehoe lava flow	--	rock pediment	--
paleoterrace	--	rock spread	--
parabolic dune	PB	rock topple	--
parna dune	<i>PD</i>	rotational debris slide	--
partial ballena	<i>PF</i>	rotational earth slide	--
patterned ground	PG	rotational rock slide	--
pavement karst	--	rotational slide (also material)	<i>RP</i>
peak	<i>PK</i>	saddle	<i>SA</i>
peat plateau	<i>PJ</i>	sag (also Microfeature)	--
		sag pond (water body, also "Microfeature")	--

salt marsh	<i>SM</i>
salt pond (water body also “Microfeature”)	<i>WQ</i>
sand flow (also material)	<i>RW</i>
sand ramp	--
sand sheet	<i>RX</i>
scarp	<i>RY</i>
scarp slope	<i>RS</i>
scree slope	--
sea (water body)	--
sea cliff	<i>RZ</i>
seif dune	<i>SD</i>
shield volcano	--
shoal (water body)	<i>WR</i>
shoal (relict)	<i>SE</i>
shore	--
shrub-coppice dune (Microfeature only)	<i>SG</i>
sill	<i>RT</i>
sinkhole	<i>SH</i>
slackwater (water body)	<i>WS</i>
slide (also material)	<i>SJ</i>
slot canyon	--
slough (ephemeral water)	<i>SL</i>
slough (permanent water)	<i>WU</i>
slump	<i>SK</i>
slump block	<i>SN</i>
snowfield	--
soil fall	--
solution sinkhole	--
sound (water body)	--
spit	<i>SP</i>
spur	<i>SQ</i>
stack [coast]	--
stack [geom]	<i>SR</i>
star dune	--
steptoe	<i>ST</i>
stock	--
stoss and lee	--
strait (water body)	--
strand plain	<i>SS</i>
strath terrace	<i>SU</i>
stratovolcano	<i>SV</i>
stream (water body)	--
stream terrace	<i>SX</i>
strike valley	--
string bog	<i>SY</i>
structural bench	<i>SB</i>

swale (also Microfeature)	<i>SC</i>
swallow hole	<i>TB</i>
swamp	<i>SW</i>
syncline	<i>SZ</i>
talus cone	--
talus slope	--
tarn (water body; also “Microfeature”)	--
terminal moraine	<i>TA</i>
terrace	<i>TE</i>
thermokarst depression	<i>TK</i>
thermokarst lake (water body)	<i>WV</i>
tidal flat	<i>TF</i>
tidal marsh	--
till-floored lake plain	--
till plain (also Landscape)	<i>TP</i>
toe (also Microfeature)	--
tombolo	<i>TO</i>
topple	--
tor	<i>TQ</i>
translational debris slide	--
translational earth slide	--
translational rock slide	--
translational slide	<i>TS</i>
transverse dune	<i>TD</i>
trough	<i>TR</i>
tunnel valley	<i>TV</i>
tunnel-valley lake (water body)	--
U-shaped valley	<i>UV</i>
valley	<i>VA</i>
valley flat	<i>VF</i>
valley floor	<i>VL</i>
valley side	<i>VS</i>
valley train	<i>VT</i>
volcanic cone	<i>VC</i>
volcanic dome	<i>VD</i>
volcanic field (also Landscape)	--
volcano	<i>VO</i>
V-shaped valley	<i>VV</i>
wash	<i>WA</i>
washover fan	<i>WF</i>
wave-built terrace	<i>WT</i>
wave-cut platform	<i>WP</i>
wind gap	<i>WG</i>
yardang (also Microfeature)	--
yardang trough (also Microfeature)	--

C) MICROFEATURES (discrete, natural, earth-surface features typically too small to delineate at common survey scales).

bar	--	hillock	--
channel (also Microfeature)	--	hoodoo	--
closed depression (also Landform)	--	interdune (also Landform)	--
corda	--	intermittent stream (water body; also "Landform")	--
cutter	--	karren	--
dune slack (also Landform)	--	lava flow unit (also Landform)	--
earth pillar	--	lava trench	--
ephemeral stream (also Landform)	--	main scarp (also Landform)	--
finger ridge	--	minor scarp	--
flute (also Landform)	--	mound	<i>M</i>
frost boil	--	nivation hollow	--
groove	--	open depression (also Landform)	--
gully	--	patterned ground (see below) PG	--

Patterned ground microfeatures (used in association with the landform "patterned ground" or *PG*):

a) *Periglacial* patterned ground microfeatures:

circle	--	palsa, palsen	--
earth hummocks	--	(= peat hummocks)	--
high-center polygons	--	polygons	--
ice wedge polygons	--	sorted circles	--
low-center polygons	--	stripes	--
non-sorted circles	--	turf hummocks	--

b) *Other* patterned ground microfeatures:

bar and channel	--	hummocks	--
circular gilgai	--	intermediate position [gilgai]	--
elliptical gilgai	--	mima mounds	--
linear gilgai	--	pimple mounds	--
gilgai	<i>G</i>		

perennial stream (water body; also Landform)	--	slip face	--
pinnacle	--	solifluction lobe	--
playa dune (also Landform)	--	solifluction sheet	--
playa floor (also Landform)	--	solifluction terrace	--
playa rim (also Landform)	--	solution corridor	--
playa slope (also Landform)	--	solution fissure	--
playa step (also Landform)	--	spatter cone	--
pond (water body)	--	spiracle	--
pool (water body)	--	strandline	--
pothole (also Landform)	--	swale (also Landform)	--
pressure ridge [volcanic]	--	swash zone	--
rib	--	tank (water body)	--
rill	--	tarn (water body; also "Landform")	--
ripple mark	--	terraces	<i>T</i>
roche moutonnée (also Landform)	--	toe [mass move.] (also Landform)	--
sag (also Landform)	--	tree-tip mound	--
sag pond (water body; also "Landform")	--	tree-tip pit	--
sand boil	--	tumulus (tumuli = plural)	--
scour (mark)	--	vernal pool (seasonal water body)	--
shoreline	--	yardang (also Landform)	--
shrub-coppice dune	--	yardang trough (also Landform)	--

D) ANTHROPOGENIC FEATURES [discrete, artificial (human-made), earth-surface features].

artificial collapsed depression *G*

artificial levee *A*

beveled cut --

borrow pit --

burial mound *B*

cut (road, railroad) --

cutbank --

ditch --

dump --

fill --

floodway --

gravel pit --

impact crater --

landfill (see sanitary landfill)

leveled land --

log landing --

midden *H*

openpit mine --

pond (human-made) --

quarry --

railroad bed *D*

reclaimed land --

rice paddy *E*

road bed *I*

sand pit --

sanitary landfill --

scalped area

sewage lagoon --

skid trail --

spoil bank --

spoil pile --

surface mine --

tillage features (below) *F*

Tillage / Management features (common types):

conservation terrace (modern) --

double-bedding mound (i.e., bedding mound used for timber production) --

drainage ditch --

truncated soil --

urban land --

furrow --

hillslope terrace (e.g., archeological features; China, Peru) --

inter-furrow --

II) GEOMORPHIC ENVIRONMENTS AND OTHER GROUPINGS (Landscape, Landform, and Microfeature terms grouped by geomorphic process (e.g. Fluvial) or common settings (e.g. Water Bodies). These lists are not mutually exclusive and some features occur in more than one environment or setting.)

1. COASTAL MARINE AND ESTUARINE (wave or tidal control or near-shore / shallow marine).

Landscapes:

coastal plain (also Landform) <i>CP</i>	peninsula	--
island (also Landform) --	shore complex	--
lowland --		
marine terrace (also Landform) --		

Landforms:

atoll <i>AT</i>	island (also Landscape) --
backshore <i>AZ</i>	lagoon <i>WI</i>
bar <i>BR</i>	longshore bar [relict] <i>LR</i>
barrier beach <i>BB</i>	marine terrace (also Landscape) <i>MT</i>
barrier flat <i>BF</i>	mud flat <i>MF</i>
barrier island <i>BI</i>	raised beach <i>RA</i>
beach <i>BE</i>	reef <i>RF</i>
beach plain <i>BP</i>	salt marsh <i>SM</i>
beach ridge <i>BG</i>	sea cliff <i>RZ</i>
beach terrace <i>BT</i>	shoal (relict) <i>SE</i>
berm <i>BM</i>	shore --
bluff <i>BN</i>	spit <i>SP</i>
chenier <i>CG</i>	stack [coast] --
chenier plain <i>CH</i>	strand plain <i>SS</i>
coastal plain <i>CP</i>	tidal flat <i>TF</i>
delta <i>DE</i>	tidal marsh --
delta plain (also Landscape) <i>DC</i>	tombolo <i>TO</i>
flat <i>FL</i>	washover fan <i>WF</i>
foredune <i>FD</i>	wave-built terrace <i>WT</i>
headland <i>HE</i>	wave-cut platform <i>WP</i>

Microfeatures:

ripple mark	--
shoreline	--
swash zone	--

2. LACUSTRINE (related to inland water bodies).

Landscapes:

island (also Landform) --	shore complex	--
lake plain (also Landform) --		
peninsula --		

Landforms:

backshore	<i>AZ</i>	lake terrace	<i>LT</i>
bar	<i>BR</i>	longshore bar [relict]	<i>LR</i>
barrier beach	<i>BB</i>	mud flat	<i>MF</i>
barrier flat	<i>BF</i>	oxbow lake (ephemeral)	<i>OL</i>
barrier island	<i>BI</i>	playa	<i>PL</i>
beach	<i>BE</i>	playa floor (also Microfeature)	--
beach plain	<i>BP</i>	playa rim (also Microfeature)	--
beach ridge	<i>BG</i>	playa slope (also Microfeature)	--
beach terrace	<i>BT</i>	playa step (also Microfeature)	--
berm	<i>BM</i>	pluvial lake (relict)	<i>PQ</i>
bluff	<i>BN</i>	raised beach	<i>RA</i>
delta	<i>DE</i>	reworked lake plain	--
delta plain (also Landscape)	<i>DC</i>	salt marsh	<i>SM</i>
flat	<i>FL</i>	shoal (relict)	<i>SE</i>
flood-plain playa	<i>FY</i>	shore	--
foredune	<i>FD</i>	spit	<i>SP</i>
headland	<i>HE</i>	stack [coast]	--
island (also Landscape)	--	strand plain	<i>SS</i>
lagoon [relict]	<i>WI</i>	till-floored lake plain	--
lakebed [relict]	<i>LB</i>	tombolo	<i>TO</i>
lakebed (water body)	<i>LB</i>	wave-built terrace	<i>WT</i>
lake plain (also Landscape)	<i>LP</i>	wave-cut platform	<i>WP</i>

Microfeatures:

bar	--	shoreline	--
playa floor (also Landform)	--	strandline	--
playa rim (also Landform)	--	swash zone	--
playa slope (also Landform)	--	vernal pool	--
playa step (also Landform)	--		
ripple mark	--		

3. FLUVIAL (dominantly related to concentrated water flow (channel flow); includes erosional and depositional features, but excluding glaciofluvial landforms (see Glacial), and permanent water features (see Water Bodies).

Landscapes:

alluvial plain	--	delta plain	--
alluvial plain remnant	--	fan piedmont	<i>FP</i>
badlands	<i>BA</i>	meander belt	<i>MB</i>
bajada	<i>BJ</i>	river valley	--
breaks	<i>BK</i>	scabland	<i>SC</i>
canyonlands	--		

Landforms:

alluvial cone	--	flood-plain splay	<i>FM</i>
alluvial fan	<i>AF</i>	flood-plain step	<i>FO</i>
alluvial flat	<i>AP</i>	giant ripple	<i>GC</i>
arroyo	<i>AY</i>	gorge	<i>GO</i>
backswamp	<i>BS</i>	gulch	<i>GT</i>
bajada	<i>BJ</i>	gut (valley)	<i>GV</i>
bar	<i>BR</i>	inset fan	<i>IF</i>
basin-floor remnant	<i>BD</i>	intermittent stream (also Microfeature)	--
block stream	<i>BX</i>	levee [streams]	<i>LV</i>
braided stream	<i>BZ</i>	meander scar	<i>MS</i>
canyon	<i>CA</i>	meander scroll	<i>MG</i>
channel	<i>CC</i>	natural levee	<i>NL</i>
coulee	<i>CE</i>	overflow stream channel	--
cutoff	<i>CV</i>	oxbow	<i>OX</i>
delta	<i>DE</i>	oxbow lake (ephemeral)	<i>OL</i>
delta plain (also Landscape)	<i>DC</i>	paleoterrace	--
drainageway	<i>DQ</i>	pediment	<i>PE</i>
draw	<i>DW</i>	point bar	<i>PR</i>
ephemeral stream (also Microfeature)	--	ravine	<i>RV</i>
fan apron	--	river valley (also Landscape)	--
fan collar	--	slot canyon	--
fanhead trench	<i>FF</i>	strath terrace	<i>SU</i>
fan remnant	--	stream terrace	<i>SX</i>
fan skirt	<i>FI</i>	valley flat	--
flood plain	<i>FP</i>	wash	<i>WA</i>
flood-plain playa	<i>FY</i>	wind gap	<i>WG</i>

Microfeatures:

bar	--	gully	--
bar & channel	--	intermittent stream (also Landform)	--
channel	--	ripple mark	--
ephemeral stream (also Landform)	--	swash zone	--
groove	--		

4. SOLUTION (dominated by dissolution, and commonly, subsurface drainage).

Landscapes:

cockpit karst	--	sinkhole karst	--
fluviokarst	--	thermokarst	<i>TK</i>
karst	<i>KP</i>		
kegel karst	--		

Landforms:

blind valley	<i>VB</i>	pinnacle	--
cockpit	--	sinkhole	<i>SH</i>
collapse sinkhole	--	solution sinkhole	--
interior valley	--	swallow hole	<i>TB</i>
karst cone	--	thermokarst depression (also	
karst tower	--	Microfeature)	<i>TK</i>
karst valley	--	yardang	--
mogote	--	yardang trough	<i>TK</i>
pavement karst	-		

Microfeatures:

cutter	--	thermokarst depression (also Landform)	--
karren	--	yardang trough	--
solution corridor	--		
solution fissure	--		

5. EOLIAN (dominantly wind related, erosional or depositional).

Landscapes:

dune field	--	sand plain	--
sandhills	<i>SH</i>		

Landforms:

barchan dune	<i>BQ</i>	longitudinal dune	--
blowout	<i>BY</i>	paha	<i>PA</i>
climbing dune	--	parabolic dune	<i>PB</i>
deflation basin	<i>DB</i>	parna dune	<i>PD</i>
dune	<i>DU</i>	playa dune	--
dune lake (water body)	--	sand ramp	--
dune slack (also Microfeature)	--	sand sheet	<i>RX</i>
falling dune	--	seif dune	<i>SD</i>
foredune	<i>FD</i>	star dune	--
interdune	<i>ID</i>	transverse dune	<i>TD</i>
loess bluff	<i>LO</i>	yardang (also Microfeature)	--
loess hill	<i>LQ</i>	yardang trough (also Microfeature)	--

Microfeatures:

dune slack	--	slip face	--
interdune (also Landform)	--	yardang	--
playa dune (also Landform)	--	yardang trough	--
shrub-coppice dune	--		

6. GLACIAL – (directly related to glaciers; includes glaciofluvial, glaciolacustrine, and glaciomarine features).

Landscapes:

continental glacier --
drumlin field --
hills *HI*
ice-margin complex --

outwash plain (also landform) --
till plain (also landform) *TP*

Landforms:

alpine glacier --
arete *AR*
cirque *CQ*
cirque floor --
cirque headwall --
cirque platform --
col *CL*
collapsed ice-floored lakebed *CK*
collapsed ice-walled lakebed *CN*
collapsed lake plain *CS*
collapsed outwash plain *CT*
crag and tail --
crevasse filling *CF*
disintegration moraine *DM*
drumlin *DR*
drumlinoid ridge --
end moraine *EM*
esker *EK*
fjord (water body) *FJ*
flute (also Microfeature) *FU*
fosse *FV*
giant ripple *GC*
glacial drainage channel *GD*
glacial lake [relict] *GL*
glacial lake (water body) --
glacial-valley floor --
glacial-valley wall --
glacier --
ground moraine *GM*
hanging valley *HV*
head-of-outwash --
ice-contact slope --
ice-marginal stream --
ice-pushed ridge --
interdrumlin --

kame *KA*
kame moraine *KM*
kame terrace *KT*
kettle *KE*
lateral moraine *LM*
medial moraine *MH*
moraine *MU*
nunatak *NU*
outwash delta --
outwash fan *OF*
outwash plain (also Landscape) *OP*
outwash terrace *OT*
paha *PA*
pitted outwash plain *PM*
pitted outwash terrace --
pothole (also Microfeature) *PH*
pressure ridge [ice] --
proglacial lake [relict] --
proglacial lake (water body) --
recessional moraine *RM*
reworked lake plain --
roche moutonnée (also Microfeature) *RN*
rock glacier *RO*
snowfield --
stoss and lee --
tarn (water body; also “Microfeature”) --
terminal moraine *TA*
till-floored lake plain --
till plain (also Landscape) *TP*
tunnel valley *TV*
tunnel-valley lake (water body)--
underfit stream --
valley train *VT*
U - shaped valley *UV*

Microfeatures:

flute --
nivation hollow --
pothole [glacial] --

roche moutonnée (also Landform) --
swale (also Landform) --
tarn (water body; also “Landform”) --

7. PERIGLACIAL - [related to non-glacial, cold climate (modern or relict); also includes patterned ground. Note: consider "patterned ground" as a Landform, but treat specific types of patterned ground, singular or plural, as Microfeatures.]

Landscapes:

coastal plain (e.g. North Slope, AK)	<i>CP</i>	thermokarst	<i>TK</i>
hills	<i>HI</i>		
plains	<i>PL</i>		

Landforms:

alas	<i>AA</i>	pingo	<i>PI</i>
block field	<i>BW</i>	rock glacier	<i>RO</i>
muskeg	<i>MX</i>	string bog	<i>SY</i>
patterned ground (see Microfeatures for types)		thermokarst depression	<i>TK</i>
<i>PG</i>		thermokarst lake (water body)	--
peat plateau	<i>PJ</i>		

Microfeatures:

circle	--	polygon	--
earth hummocks	--	solifluction lobe	--
frost boil	--	solifluction sheet	--
high-center polygons	--	solifluction terrace	--
ice wedge polygons	--	sorted circles	--
low-center polygons	--	stripes	--
nivation hollow	--	turf hummocks	--
non-sorted circles	--		
palsa (palsen = <i>plural</i> ; = peat hummocks)	--		

8. MASS MOVEMENT (MASS WASTING) – (dominated by gravity, including creep forms).

Landscapes:

foothills	<i>FH</i>	mountains	<i>MO</i>
hills	<i>HI</i>		
mountain range	--		

Landforms:

ash flow	<i>AS</i>	rock spread	--
avalanche chute	<i>AL</i>	rock topple	--
block glide	--	rotational debris slide	--
complex slide	--	rotational earth slide	--
debris avalanche	--	rotational rock slide	--
debris fall	--	rotational slide (also material)	<i>RP</i>
debris flow	<i>DF</i>	sag (also Microfeature)	--
debris slide	--	sag pond (water body; also Micro.)	--
debris spread	--	sand flow	<i>RW</i>
debris topple	--	scree slope	--
earth flow	<i>EF</i>	slide	<i>SJ</i>
earth spread	--	slump	<i>SK</i>
earth topple	--	slump block	<i>SN</i>
fall	<i>FB</i>	soil fall	--
flow	--	talus cone	--
lahar	<i>LA</i>	talus slope	--
landslide	<i>LK</i>	toe [mass move.] (also Microfeature)	--
lateral spread	--	topple	--
main scarp (also Microfeature)	--	translational debris slide	--
mudflow	<i>MW</i>	translational earth slide	--
rock fall (also Microfeature)	--	translational rock slide	--
rockfall avalanche	--	translational slide	<i>TS</i>

Microfeatures:

main scarp (also Landform)	--	terraces	<i>T</i>
minor scarp	--	toe [mass move.] (also Landform)	--
sand boil	--		
solifluction lobe	--		
solifluction sheet	--		
solifluction terrace	--		

9. VOLCANIC and HYDROTHERMAL

Landscapes:

foothills	<i>FH</i>	lava plateau	--
hills	<i>HI</i>	mountains	<i>MO</i>
lava field	--	volcanic field	--
lava plain	--		

Landforms:

a'a lava flow	--	louderback	<i>LU</i>
block lava flow	--	maar	--
caldera	<i>CD</i>	mawae	--
cinder cone	<i>CI</i>	mud pot	--
crater [volcanic]	<i>CR</i>	neck [volcanic]	--
fissure vent	--	pahoehoe lava flow	--
geyser	--	pillow lava flow	--
geyser basin	--	plug [volcanic]	--
geyser cone	--	plug dome	<i>PP</i>
hot spring	--	pressure ridge [volcanic]	<i>PU</i>
kipuka	--	pyroclastic flow	--
lahar	<i>LA</i>	pyroclastic surge	--
lava field (also Landscape)	--	shield volcano	--
lava flow-unit (also Microfeature)	--	steptoe	<i>ST</i>
lava flow	<i>LC</i>	stratovolcano	<i>SV</i>
lava plain	<i>LN</i>	volcanic cone	<i>VC</i>
lava plateau (also Landscape)	<i>LL</i>	volcanic dome	<i>VD</i>
lava trench (also Microfeature)	--	volcanic field (also Landscape)	--
lava tube	--		

Microfeatures:

corda	--	spiracle	--
lava flow unit (also Landform)	--	tumulus (tumuli = plural)	--
lava trench	--		
pressure ridge [volc.]	--		
spatter cone	--		

10. TECTONIC AND STRUCTURAL (related to regional or local bedrock structures, or crustal movement. In Soil Survey, tectonic and structural features are only recognized if they have some expression at or near the land surface).

Landscapes:

batholith	--	mountain system	--
bolson	<i>BO</i>	plateau	<i>PT</i>
foothills	<i>FH</i>	rift valley	--
hills	<i>HI</i>	semi-bolson	<i>SB</i>
intermontane basin	<i>IB</i>	tableland	<i>TB</i>
mountain range	--	valley	<i>VA</i>
mountains	<i>MO</i>		

Landforms:

anticline	<i>AN</i>	hogback	<i>HO</i>
canyon bench	--	horst	<i>HT</i>
cuesta	<i>CU</i>	louderback	<i>LU</i>
cuesta valley	--	meteorite crater	--
diapir	<i>DD</i>	monocline	<i>MJ</i>
dike	<i>DK</i>	sag (also Microfeature)	--
dipslope	<i>DL</i>	scarp slope	<i>RS</i>
dome	<i>DO</i>	sill	<i>RT</i>
fault-line scarp	<i>FK</i>	stock	--
fault zone	--	strike valley	--
fold	<i>FQ</i>	structural bench	<i>SB</i>
graben	<i>GR</i>	syncline	<i>SZ</i>

Microfeatures:

sag (also Landform)	--
sand boil	--

11. SLOPE - generic terms or those that describe slope form, geometry, or arrangement of land features, rather than any particular genesis or process.

Landscapes:

badlands	<i>BA</i>	mountain system	--
breaks	<i>BK</i>	piedmont	<i>PI</i>
canyonlands	--	piedmont slope	--
foothills	<i>FH</i>	plateau	<i>PT</i>
hills	<i>HI</i>	tableland	<i>TB</i>
mountain range	--	upland	<i>UP</i>
mountains	<i>MO</i>		

Landforms:

beveled base	--	mesa	<i>ME</i>
bluff	<i>BN</i>	mountain (plural = Landscape)	<i>MM</i>
broad interstream divide	--	mountain slope	<i>MN</i>
butte	<i>BU</i>	mountain valley	<i>MV</i>
canyon bench	--	notch	<i>NO</i>
cliff	<i>CJ</i>	paha	<i>PA</i>
cuesta	<i>CU</i>	peak	<i>PK</i>
dome	<i>DO</i>	pediment	<i>PE</i>
escarpment	<i>ES</i>	plain (also Landscape)	<i>PN</i>
faceted spur	<i>FS</i>	plateau (also Landscape)	<i>PT</i>
fault-line scarp	<i>FK</i>	ridge	<i>RI</i>
free face (also Geom Component – Hills, Mountains.)	<i>FW</i>	rim	<i>RJ</i>
gap	<i>GA</i>	rock pediment	--
headwall	<i>HW</i>	scarp	<i>RY</i>
high hill	--	scarp slope	--
hill (plural = Landscape)	<i>HI</i>	scree slope	--
hillslope	--	spur	<i>SQ</i>
hogback	<i>HO</i>	stack [geom]	<i>SR</i>
interfluve (also Geom. Component - Hills)	<i>IV</i>	talus cone	--
knob	<i>KN</i>	talus slope	--
knoll	<i>KL</i>	tor	<i>TQ</i>
ledge	<i>LE</i>	valley	<i>VA</i>
low hill	--	wind gap	<i>WG</i>

Microfeatures:

finger ridge	--	rill	--
mound	<i>M</i>		
rib	--		

12. EROSIONAL – related dominantly to water erosion but excluding perennial, channel flow (i.e. fluvial, glaciofluvial), or eolian erosion.

Landscapes:

badlands	<i>BA</i>	mountains	<i>MO</i>
breaks	<i>BK</i>	piedmont	<i>PI</i>
canyonlands	--	piedmont slope	--
foothills	<i>FH</i>	plateau	<i>PT</i>
hills	<i>HI</i>	tableland	<i>TB</i>
mountain range	--		

Landforms:

ballena	<i>BL</i>	monadnock	<i>MD</i>
ballon	<i>BV</i>	notch	<i>NO</i>
basin floor remnant	<i>BD</i>	paha	<i>PA</i>
beveled base	--	partial ballena	<i>PF</i>
canyon bench	--	peak	<i>PK</i>
col	<i>CL</i>	pediment	<i>PE</i>
cuesta	<i>CU</i>	rock pediment	--
cuesta valley	--	saddle	<i>SA</i>
eroded fan remnant	--	scarp slope	<i>RS</i>
eroded fan-remnant sideslope	--	stack [geom]	<i>SR</i>
erosion remnant	<i>ER</i>	strike valley	--
free face (also Geom. Comp. – Hills, Mountains)	<i>FW</i>	structural bench	<i>SB</i>
gap	<i>GA</i>	tor	<i>TQ</i>
hogback	<i>HO</i>	wind gap	<i>WG</i>
inselberg	<i>IN</i>		

Microfeatures:

earth pillar	--	rib	--
finger ridge	--	rill	--
groove	--	swale	--
gully	--		
hoodoo	--		
pinnacle	--		

13. DEPRESSIONAL (low area or declivity features, excluding permanent water bodies).

Landscapes:

basin	<i>BS</i>	valley	<i>VA</i>
bolson	<i>BO</i>		
semi-bolson	<i>SB</i>		

Landforms:

alluvial flat	<i>AP</i>	open depression (also Microfeature)	--
basin floor	<i>BC</i>	playa	<i>PL</i>
basin floor remnant	<i>BD</i>	playa floor (also Microfeature)	--
box canyon	--	playa rim (also Microfeature)	--
canyon	<i>CA</i>	playa slope (also Microfeature)	--
closed depression (also Microfeature)	--	playa step (also Microfeature)	--
col	<i>CL</i>	pothole (also Microfeature)	<i>PH</i>
coulee	<i>CE</i>	ravine	<i>RV</i>
cove [geom.]	<i>CO</i>	saddle	--
cuesta valley	--	sag (also Microfeature)	--
depression	<i>DP</i>	slot canyon	--
drainageway	<i>DQ</i>	strike valley	--
gap	<i>GA</i>	swale (also Microfeature)	<i>SC</i>
gorge	<i>GO</i>	trough	<i>TR</i>
gulch	<i>GT</i>	U-shaped valley	<i>UV</i>
gut (valley)	<i>GV</i>	valley	<i>VA</i>
intermontane basin	<i>IB</i>	valley floor	<i>VL</i>
kettle	<i>KE</i>	V-shaped valley	<i>VV</i>
mountain valley	<i>MV</i>		

Microfeatures:

closed depression (also Landform)	--	playa step (also Landform)	--
open depression (also Landform)	--	swale	--
playa floor (also Landform)	--	tree-tip pit	--
playa rim (also Landform)	--		
playa slope (also Landform)	--		

14.WETLANDS (PALUSTRINE) - [Related to vegetated and / or shallow wet areas, and wet soils.
Provisional list: conventional, geologic definitions; not legalistic or regulatory usage].

Landscapes:

Landforms:

alas	<i>AA</i>	muskeg	<i>MX</i>
backswamp	<i>BS</i>	oxbow lake (ephemeral water)	<i>OL</i>
bog	<i>BO</i>	peat plateau	<i>PJ</i>
Carolina Bay	<i>CB</i>	playa (intermittent water)	<i>PL</i>
dune slack (also Microfeature) --		pocosin	<i>PO</i>
ephemeral stream (also "Microfeature") --		pothole (intermittent water)	<i>PH</i>
estuary	<i>WD</i>	raised bog	<i>RB</i>
fen	<i>FN</i>	ribbed fen	<i>RG</i>
flood-plain playa	<i>FY</i>	salt marsh	<i>SM</i>
highmoor bog	<i>HB</i>	slough (intermittent water)	<i>SL</i>
intermittent stream (also "Microfeature") --		string bog	<i>SY</i>
lowmoor bog	<i>LX</i>	swamp	<i>SW</i>
marsh	<i>MA</i>	tidal flat	<i>TF</i>
mud flat	<i>MF</i>	tidal marsh	--

Microfeatures:

dune slack (also Landform) --		pothole	--
ephemeral stream (also "Landform") --		vernal pool (seasonal water)	--
intermittent stream (also "Landform") --			

15. WATER BODIES - Discrete “surface water” features, primarily permanent open water, which in Soil Survey Reports are commonly treated as the generic map unit “water” (e.g. lake), or as a spot / line symbol (e.g., perennial stream).

Landforms:

axial stream	--	pluvial lake	<i>WM</i>
bay [coast]	<i>WB</i>	pothole (lake) (also “Micro.”)	<i>WN</i>
bayou	<i>WC</i>	proglacial lake	<i>WO</i>
cove [coast]	--	river	--
dune lake	--	sag pond (also “Microfeature”)	--
estuary	<i>WD</i>	salt pond (also “Microfeature”)	<i>WQ</i>
fjord	<i>FJ</i>	sea	--
glacial lake (water body)	<i>WE</i>	shoal	<i>WR</i>
gulf [coast]	--	slackwater	<i>WS</i>
gut [stream]	<i>WH</i>	slough (permanent water)	<i>WU</i>
ice-marginal stream	--	sound	--
lagoon	<i>WI</i>	strait	--
lake	<i>WJ</i>	stream (permanent water)	--
ocean	--	thermokarst lake	<i>WV</i>
oxbow lake	<i>WK</i>	tarn (also “Microfeature”)	--
perennial stream (also “Microfeature”)	--	tunnel-valley lake	--
playa lake	<i>WL</i>		

Microfeatures:

channel (permanent water)	--	sag pond	--
perennial stream (also “Landform”)	--	salt pond (also “Landform”)	--
pond	--	tank	--
pool	--	tarn	--
pothole (permanent water)	--		

**Exhibit 629-2 List of Materials or Material-Related, Structure, or Morphological-Feature Terms
Contained in the Glossary.**

(NR - indicates terms that are NOT RECOMMENDED; NP - indicates terms that are NOT PREFERRED)

a'a lava	debris flow deposit
ablation till	debris slide deposit
alluvium	deposit
anticline	desert pavement
aquiclude	desert varnish - NP
aquifer	detritus (geology)
aquitard	diamictite
ash	diamicton
ash flow	diatomaceous earth
backswamp deposit	dike
basal till	dip
bed	discontinuity
bedded	discontinuous permafrost
bedding plane	dropstone
bedrock	dolomite (mineral)
block	dolomite (rock)
block lava	dolostone - NR
block field	dome
block glide deposit	drift (glacial geology)
block stream	earthflow deposit
blue rock [volcanic]	eolian deposit
bombs [volcanic]	epiclastic
boulder field - NR	erosional pavement
bowl	erratic
breccia	estuarine deposit
buried soil	facies (stratigraphy)
caliche	fanglomerate
caprock	felsenmeer - NP
chert	felsic rock
chimney	fill
cinders	fly ash
clast	flowtill
clastic	fold
colluvium	formation (stratigraphy)
complex landslide deposit	glacial drift - NR
conglomerate	glacial outwash - NR
continuous permafrost	glacial till - NR
coprogenous earth	glaciofluvial deposits
coprogenous material	glaciolacustrine deposits
country rock	glaciomarine deposits
craton	glauconite pellets
creep deposit	graben
cross-bedding	greensands
cross-lamination	ground soil
cross-stratification	grus
cryptogamic crust	herbaceous peat
cryoturbate	horst
cyclothem	ice-pushed ridge
dead-ice - NR	ice wedge
debris	ice wedge cast
debris avalanche deposit	igneous rock

interbedded
intrusive
lacustrine deposit
lahar
lamella
lamina
lamination - NR
lapilli
lateral spread deposit
lava flow
limestone
lithologic
lodgement till
loess
louderback
mafic rock
marine deposit
marl
melt-out till
metamorphic rock
metasediment
microbiotic crust
moraine
moss peat
muck
mucky peat
mudstone
mudflow deposit
nueé ardente
outcrop
outwash
overbank deposit
overburden
overthrust
paleosol
pahoe-hoe lava
parna
peat
pedisediment
permafrost
pillow lava
pitted outwash
pluton
plutonic
porcellanite
puff [gilgai]
pumice
pyroclastic
regolith
relict soil
residuum
rhythmite
rockfall deposit
rockfall avalanche deposit
rockfall landslide deposit

rock varnish
rotational landslide deposit
rubble
sand sheet
sandstone
saprolite
scoria
scree
sediment
sedimentary peat
sedimentary rock
shale
siltstone
sill
slide
slip face
slip surface
slope alluvium
sloughed till - NR
slump - NR
slump block
slump till
soil fall deposit
solifluction sheet
spoil bank
spoil pile
sporadic permafrost
stagnant ice
stone line
strandline
subglacial till
subglacial melt-out till
supraglacial till
supraglacial debris-flow sediment - NP
supraglacial melt-out till - NP
supraglacial till - NP
syncline
talus
tephra
thaw-sensitive permafrost
thaw-stable permafrost
till (glacial)
tombolo
topple deposit
tor
tuff
valley fill
valley side alluvium
varve
ventifact
vitric
volcaniclastic
welded soil
welded tuff
woody peat

Exhibit 629-3 Genesis-Process Terms and Geologic Time Terms Contained in the Glossary.

(NR - indicates terms that are NOT RECOMMENDED; NP - indicates terms that are NOT PREFERRED).

aeolian - NR

accretion

active layer

active slope - NR

aggradation

alluvial

angle of repose

avalanche

avulsion

backwearing

block glide

buried

bypassed

cat clay - NR

colluvial

competence

complex landslide

conformity

congelifraction - NP

congeliturbation - NR

constructional (geomorphology)

corrosion

creep

cryoplanation

cryoturbation

cut and fill

debris avalanche

debris flow (mudflow)

debris slide

deflation

degradation

deposition

destructional (geomorphology)

discontinuity

distal

earthflow

Eocene

eolian

erosion

erosional (geomorphology)

exfoliation

exhumed

extramorainic - NP

extramorainal

extrusive

fall

flow

fluvial

frost bursting - NR

frost churning - NR

frost riving - NR

frost shattering

frost splitting - NR

frost stirring - NR

frost weathering - NR

frost wedging - NR

geomorphology

gelifraction - NR

gelivation - NR

glacial

glacial epoch

glacial marine sedimentation

glacial outburst flood

glaciation

Holocene

ice age - NR

ice-rafting

ice segregation

intramorainal

joint

knickpoint

landslide

lateral spread

lithification

mass movement

mass wasting – NP

metastable slope - NR

Miocene

mudflow

nivation

Oligocene

Paleocene

pedoturbation

periglacial

Pleistocene

Pliocene

postglacial - NP

proximal

Quaternary

recent

relict

rockfall

rockfall avalanche

rotational landslide

sand flow

scour

scour and fill

slide

slope wash

slump - NP

soil creep - NP

soil fall

solifluction

subaerial

subaqueous

storm surge

stratified
stratigraphy
stream order
subaerial
subglacial
superglacial - NP

Tertiary
topple
translation slide
volcanic
weathering
welding