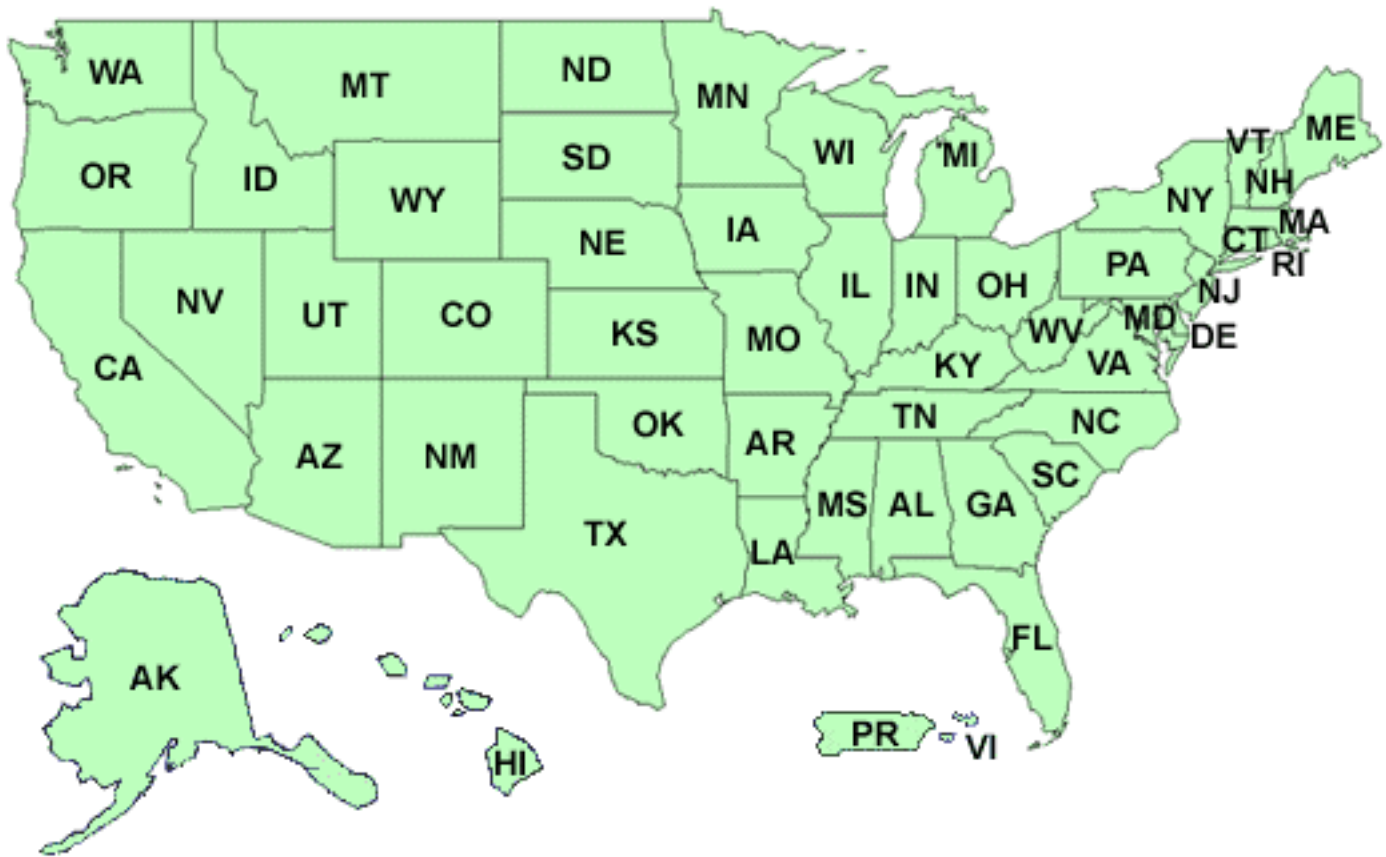




Rocky Mountain Mapping Center



USGS Topographic Maps Illustrating Physiographic Features

USGS topographic maps are effective tools to illustrate a wide variety of physiographic features. Use this index to select the names and locations of topographic maps that illustrate the particular physical feature of interest, such as those resulting from glaciation, karst, tectonics, or volcanism. The index is also organized by state. By clicking on a particular state on the map above, the list of topographic maps illustrating particular features in that state are listed. This set of maps generally follows the USGS Physical Divisions Map of the United States, and illustrates most of its 86 sections.

The USGS publishes approximately 57,000 different topographic maps covering the USA. Topographic maps include contour lines indicating landforms and elevations, hydrography (rivers, lakes, marshes, transportation (roads, trails, railroads, airports), vegetation, boundaries, survey markers, urban areas, buildings, and a variety of other features. These

maps are drawn according to the [National Map Accuracy Standard](#) and are most commonly published at 1:24,000, 1:100,000, 1:250,000, and 1:500,000-scale, although many other scales exist as well. This selection of maps illustrating physiographic features highlights 1:24,000-scale maps unless otherwise indicated.

Topographic maps represent a fantastic resource for educators. They can be used in a variety of ways in the science, math, geography, and history curriculum, from elementary to college level.

Sample images from USGS Topographic Maps: Visit: <http://mapping.usgs.gov/mac/isb/pubs/booklets/usgsmaps/usgsmaps.html>

How To Obtain Topographic Maps: Visit <http://mapping.usgs.gov/mac/findmaps.html>

Topographic Map Symbols: Visit <http://mapping.usgs.gov/mac/isb/pubs/booklets/symbols/index.html>

COASTAL FEATURES AND SHORELINES

Abandoned shoreline	Ancient beach ridges	Ancient cusped bar, split and tombolo	Barrier beach	Battered sea cliff
Bay	Bay, Carolina	Bayhead bar	Baymouth bar	Bayou
Beach	Bonneville and Provo shoreline	Cape	Coastal bars	Coastal terrace
Cove	Crowsfoot delta	Deltaic channels	Distributary channels, abandoned	Distributary channels
Distributary stream on delta	Diverted outlet	Drowned coast line	Drowned river	Drowned valley
Estuary	Fiord	Headland, truncated	Lagoon	Marine terrace
Neck	Okefenokee terrace	Pamlico shoreline	Pamlico terrace	Pass

Point	Prograded shore	Raised beach ridges	Raised spit and hook	Sand spit
Sea stacks	Silver Bluff beach, lagoon, and shoreline	Silver Bluff terrace	Spit, compound recurved	Tidal marsh or swamp
Tombolo	Wave-cut cliff	Wicomico terrace		

ESCARPMENT FEATURES

Allegheny Front	Ancient river bluff	Blue Ridge Front	Cliff	Cuesta
Cumberland Front	Eastern escarpment Sierra Nevada	Erosional escarpment	Escarpment	Faceted
Facets	Fault line scarp	Falt scarp	Piedmont re-entrants	Rim
River bluff	West face of Green Mountains			

GLACIATION FEATURES FORMED BY ALPINE GLACIATION

Amphitheater	Arete	Biscuit-board topography	Cirque	Cirque lake
Cirque headwall	Col	Compound cirque	Cyclopean stairs	Finger lakes
Glacial trough	Glacial valley	Glacier	Hanging valley	Lateral moraine
Matterhorn	Medial moraine	Nunatak	Pater Noster lakes	Sub-summit erosion surface scoured by ice cap
Tarn	U-shaped valley			

GLACIATION FEATURES RESULTING FROM CONTINENTAL GLACIATION

Abandoned glacial channels	Abraded bedrock hills	Bedrock knobs	Continental glaciation (southern margin)	Coteau du Missouri
Deranged drainage	Dissected glacial plateau	Drainage diversion, glacial	Drainage reversal, glacial	Drumlins
Drumloldal hills	End moraine	Esker	Finger lake	Glacial drift
Glacial gorges or spillways	Glacial Lake Agassiz	Glacial lake bottom deposits	Glacial Lake Maumee Glacial Lake Vermont	Glacial linear ridges
Glacially deepened trough	Glacially modified hills	Glacially rounded hills	Glaciated plain (mantled with loess)	Ground moraine
Hills, glacially scoured and plucked	Ice-carved strike ridges	Ice-contact slope	Ice-marginal drainage channel	Ice-terminal drainage channel
Intermorainal lowland	Kalamazoo Moraine	Kame-kettle complex	Kames	Kame plains
Kame terrace	Kames and kettles	Kettle holes	Kettle (with lake or pond)	Knobs and kettles
Lake Border Moraine	Lakes and ponds in glacially scoured bedrock basins	Lobate lineation	Lobate washboard moraine	Meltwater channel
Morainal lakes	Morainic topography	Mountains and islands modified by glaciation	Obstructed drainage	Outwash channels
Outwash filled channels	Outwash terrace	Pitted outwash plain	Ponds in kettles	Poorly integrated drainage
Spillway from Glacial Lake Hartford	Strand lines, Glacial Lake Agassiz	Swell and swale topography	Terminal moraine	Valparaiso Moraine

MISCELLANEOUS FEATURES

Badlands	Carolina Bay	Continental Divide	Contrasting topography	Dam and reservoir
Fall line	Flood control and navigation development	Great Raft	Highest point in eastern United States	Highest point in Texas
High relief topography	International Boundary (channel of Rio Grande)	Intracoastal Waterway	Laurentian Divide	Low relief
Lowest elevation in United States	Natural bridge	River development	Rock sculpture controlled by fractures	Sea level and below sea level contours
Underwater contours (depth curves)				

MOUNTAIN FEATURES

Accordant summits	Anticline	Anticlinal ridge	Canoe-shaped mountain	Concave slope
Convex slope	Dissected asymmetric dome	Dissected block mountains	Dissected dome mountains	Dissected upland
Fault block mountains	Fault line scarp	Fault line valley	Flatirons	Folded mountains
Fold ridges	Folds en echelon	Hogback	Island mountains (inselbergs)	Isolated ranges
Linear ridge controlled by bedrock structure	Low divide	Matterhorn	Migrating divide	Monadnock
Mountain peak, isolated Pass	Ridges of accordant height	Ridges formed of folded hard strata	San Andreas Rift	Sinuuous divide
S-shaped ridge	Strike ridge	Strongly dissected mountainous highland	Structurally controlled ridges	Synclinal mountain
Water gap	Wind gap	Esplanade	Klippe	

PLAINS FEATURES

Aggraded desert plain	Alluvial plain	Desert plain	Dissected lacustrine plain	Dissected plain
Dissected till plain	Flood plain	Glaciated plain	Lacustrine plain	Mississippi alluvial plain
Plain trenched by creek and river				

PLATEAU FEATURES

Apex of Ozark Plateau	Badlands (dissected plateau)	Beaches controlled by bedrock	Butte	Cuesta
Dip slope	Dissected plateau	Dissected plateau of strong relief	Erosional remnant	Erosion surface
Mesa	Okanogan Highlands	Outlier	Piedmont remnants	Plateau
Point	Summit erosion surface remnants	Table	Table-top mountains	

SOLUTION FEATURES

Blind valleys (valley sinks)	Disappearing stream	Karst topography	Lakes in sinks	Sinks
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VALLEY FEATURES

Abandoned channels	Abandoned entrenched meanders	Abandoned meanders	Alluvial fan	Alluvial fan, coalescing
Alluvial fan, dissected	Alluvial fill	Alluvial plain	Alluviated lowland	Amphitheater

Anticlinal valley	Arroyo	Bajada	Barranca	Basin
Bed of drained shallow lake	Bolson	Broad valleys eroded in soft rock	Canyon	Centrifugal drainage
Channeled scabland	Columbia River Valley	Cove	Dendritic drainage	Dendritic drainage developed on flat lying strata
Dendritic drainage, rectangular	Disappearing intermittent streams	Dissected pediment	Dissected terraces	Entrenched creeks and river
Entrenched meander	Fault controlled valley	Fault line valley	Fault valley	Flats
Flood plain	Gorge	Gorge, postglacial	Gully deeply eroded	Hanging valley
Imminent cut-off	Imminent stream piracy	Immature drainage	Meander channel, re-occupied	Meander core
Meander patterns	Meanders	Meander scars	Meandering stream in flood plain	Narrows
Natural levee	Nonintegrated drainage	Old channel with placer deposits	Parallel drainage	Pediment
Playa	Reverse drainage	River terraces	River with sand channel	Rock terrace
Salt basin	Sand bars and scrolls (along river)	Slipoff slope	Stream piracy (capture)	Strike valley
Structurally controlled dissected terraces	Structurally controlled drainage	Structurally controlled valleys	Subsequent stream	Synclinal valley
Terrace, alluvial	Tonto Platform	Trellis drainage	Undercut slope	Underground drainage flowing from caves
V-shaped valley	Wash or channel, sandy	Wide meander belts		

VOLCANIC FEATURES

Ancient Mount Mazama	Caldera	Cinder cones	Collapse depression	Collapsed volcanic cone
Crater	Dikes, radial	Dissected volcano	Eroded volcanic mountains	Faulted volcanic cone
Lava area (malpais)	Lava, recent	Nuees ardents deposits	Parasitic cone	Pumice sheet
Radial drainage on volcanic cone	Recent vulcanism	Rim of caldera	Shield volcano	Stripped lava flow surface
Volcanic cone	Volcanic cone, breached	Volcanic cone with caldera	Volcanic cone, breached	Volcanic tableland
Water gap in lava				

WATER FEATURES

Abandoned channels	Abandoned river mouths	Antecedent stream	Artificial drainage	Bayou
Braided stream	Consequent streams	Cutoff meanders	Deep lakes in solution basins	Disappearing stream
Finger lake	High water table	Kettle with lake	Lake dammed by landslide	Lake drowned in tributary valley
Lakes in sinks	Marshy divide	Mineral springs	Morainal lakes	Oxbows
Oxbow lake	Oxbow swamp	Ponds, glacial	Ponds heading drainage	Poorly integrated drainage
Post-glacial lake in drowned valley	Rapids	River with sand channel	Shallow lakes on coastal terrace	Slough
Springs	Stream piracy	Subsequent stream	Superposed stream	Waterfall
Water gap	Waterholes			

WIND FEATURES

Blowout dune	Buried town (shifting sands)	Clay dune	Deflation basins	Dune ridges, some transverse
Dunes and deflation hollows	Dune topography	Lakeshore dunes	Sand hills	

ALABAMA

MOBILE, BRIDGEHEAD, DAPHNE, HOLLINGERS ISLAND

- Abandoned Pleistocene shoreline (Pamlico shoreline, foot of bluffs, about 30-foot level, thorough center of map)**
- Deltaic channels A-3**
- Distributary channels (successively occupied) A-3**
- Dissected plain**
- Drowned valleys (on marine terrace)**
- Marine terrace (Pamlico terrace, swampy, adjacent to Mobile Bay and below the 30-foot level)**
- Partially obstructed outlet (Dog River)**
- Tidal marsh or swamp**

ARIZONA

HALEY HILLS, ANTELOPE PEAK NE, INDIAN BUTTE, ANTELOPE PEAK

- Sonoran Desert**
- Alluvial fan C-1, C-3**
- Alluvial plain**
- Arroyo A-1**
- Bajada A-3**
- Barranca C-2**
- Cinder cone (in southeast corner of map) C-3**
- Cuesta C-2, C-3 (hill 2758)**
- Desert plain**
- Erosional remnant (Antelope Peak)**
- Island mountains (inselbergs) B-2, B-3**
- Parallel drainage on pediment B-2**

Pediment B-2
Short mountain range
Was A-1, C-1

HAVASUPAI POINT, SHIVA TEMPLE, GRAND CANYON, PIUTE POINT

Grand Canyon Section
Amphitheater A-1
Butte (Dana Butte B-2, Lyell Butte C-3, etc.)
Cliffs (banded contouring)
Dissected plateau of strong relief
Encroachment of younger upon older drainage (south portion of map)
Fault line valley (Bright Angel Canyon)
Gorge (Granite Gorge B-1)
Grand Canyon of the Colorado River
Hanging valley A-2 (Outlet Canyon)
Mesa C-1
Migrating divide (south portion of map)
Plateaus (Coconino and Kaibab)
Points (Grandeur, Hopi, etc.)
Rapids (Granite Rapids, etc.)
Rock terrace
Tonto Platform (lower rim of the canyon, at Plateau Point, etc.)
V-shaped valley

PROMONTORY BUTTE, WOODS CANYON, OXBOW MOUNTAIN, DIAMOND BUTTE

Mexican Highland (and Grand Canyon Section)
Basin C-2, C-3
Canyon or gorge (Tonto Creek)
Cuesta C-1, C-2
Dissected highland (south of Mogollon Rim)
Entrenched meanders C-2, C-3
Escarpment (Mogollon Rim)
Mesa (Mogollon Mesa, north portion of map)
Parallel consequent drainage (on Mogollon Mesa)
Wind gap C-1 (Gilliand Gap)

ARKANSAS

ST. PAUL, JAPTON, WITTER, PETTIGREW

Ozark Plateaus

Boston Mountains

Dendritic drainage

Dissected plateau

Flood plain

Outlier

Remnants of plateau surface

River bluff and terrace

Undercut slope

BRENTWOOD, DELANEY, BIDVILLE, FERN

Ouachita Mountains

Folded mountains (2nd cycle, strong and weak rocks)

Folds en echelon

Hogbacks

Knob (Pilot Knob, Hickory Knob, etc.)

Ridges (formed of folded hard strata)

Slip-off slope C-2 (Sec. 7)

Strike ridges and valleys

Structurally controlled drainage (trellis type north portion of map)

Trellis drainage

Undercut slope C-2 (Sec. 7)

Water gap (Poteau River B-3, etc.)

CALIFORNIA

GARNER MOUNTAIN, LITTLE GLASS MOUNTAIN, SNAG HILL, HORSE PEAK

Southern Cascade Mountains

Butte C-1

Cinder cones

Collapse depressions (in Red Rock Valley) A-2, A-3

Disappearing intermittent streams

Eroded volcanic mountains

Flat B-3

Ice cave B-1 (Sec. 16)

Lava area (malpais) C-1

parasitic cone B-3

Sink A-2 (Sec. 6)

Volcanic crater (breached) A-3, C-2

DEVILS GOLF COURSE, RYAN, DANTES VIEW, BADWATER

Basin and Range Province

Great Basin Section

Alluvial fans, coalescing (of bajada)

Alluvial fan, dissected A-1

Bolson (Death Valley)

Borax works ruins A-2

Dissected block mountains

Dissected foothills (fan shaped) B-3, C-3

Facets C-3

Fault-line scarp (west face of Black Mountains)

Island mountains (inselbergs) A-1

Isolated mountain ranges

Lowest elevation in the United States C-3

Mineral springs (Travertine Springs) A-3

Mining areas (Gower Gulch and Twenty Mule Team Canyon) Natural bridge C-3

Playa

Salt spring A-2

Sea level and below sea level contours to minus 20

Wash A-1, B-1

MOUNT TOM, TUNGSTEN HILLS, MT. DARWIN, MT. THOMPSON

Sierra Nevada (also portion of Great Basin)

Alluvial fan, dissected (at Round Valley) A-2, B-2

Alpine topography C-1

Arete C-1

Basin C-1

Cirque C-1

Cirque headwall C-1 (Sec. 19)

Cirque lake C-1 (Sec. 33)

Col C-1

Cyclopean stairs C-1

Eastern escarpment of Sierra Nevada (through west central portion of map)

Glacial trough B-1

Glaciers C-1

Hanging valley C-1

Lateral moraine B-2, C-3

Pass C-1

Pater Noster lakes C-1

Tarns A-1, B-1, C-1

U-shaped valleys (Rock Creek and Pine Creek)

Volcanic tableland A-3

INVERNESS, DOUBLE POINT, BOLINAS, DRAKES BAY

Pacific Border Province

California Coast Range

Barrier beach (offset) C-1 (at Drakes Bay)

Battered sea cliff (Point Reyes and Drakes Head)

Baymouth bar A-1, C-2

Block mountain (Inverness Ridge)

Cape (Point Reyes)

Closed depressions D-3

Delta C-3

Distributary stream on delta

Drainage (blocked by barrier beach) C-1, C-2

Drowned valley (Tomales Bay)

Entrenched meanders (Walker Creek) A-2

Estuary (Drakes Estero, Tomales Bay, etc.)

Hanging valley D-3

Headland, truncated (Point Reyes and C-1, C-2)

Lagoons or coastal lakes (see estuary)

Marine terrace C-2, C-3, D-3

Parallel ranges and valleys

San Andreas rift (Tomales Bay and valley of Olema Creek)

Sand dunes B-1, C-1

Sand spit C-1

Sea stacks A-1, D-1, D-3

Tidal flat (at Point Reyes Station) C-3

Wave-cut cliff A-1, C-1, C-2, D-1, D-3

SAN LUIS REY

Lower California Province

Arroyo in flood plain with sand channel A-1

Barrier beaches

Dissected upland on crystalline rocks (east portion of map)

Dry falls (El Salto) B-2

Lagoon B-1, C-2

Lakes (artificial and connected) A-2

Marine terraces

Terraced lowland (west portion of map adjacent to Gulf of Santa Catalina)

VENTURA

Pacific Border Province

Los Angeles Ranges

Alluvial fan C-3

Alluviated lowland C-3

Beach

Coastal plain C-3

Delta (Ventura River)

Dissected upland

Hanging valley A-1 (Sec. 13)

Landslide area B-1

Marine terraces B-1

Obstructed drainage C-2 (mouth of Ventura River)

Oil field

River in flood plain with sand channel

Sea cliffs (at BM 24)

Underwater contours (depth curves)

COLORADO

COMMERCE CITY

Great Plains

Colorado Piedmont Section

Canals (irrigation system)

Dissected pediment (northwest portion of map)

Flood plain (South Platte River)

River bluffs

Sand dunes, inactive, east and southeast of Derby B-3

Terrace. East side of the South Platte River, known as Broadway Terrace and well defined in A-2, A-3, C-2

MOUNT OF THE HOLY CROSS, PAUDO, LEADVILLE NORTH, HOMESTAKE RESEVOIR

Southern Rocky Mountain

Alpine topography

Amphitheater B-2 (southeast of Homestake Peak)

Arete A-1

Cirque C-1 (Isolation Lake, Lonesome Lake, etc.)

Cirque Lake

Col A-1 (Fall Creek Pass, etc.)

Continental Divide

Contrasting topography between mountains of Pre-Cambrian rocks, west portion of map, and mountains of sedimentary rocks, east portion of map

Cyclopean stairs A-1 (East Cross Creek, etc.)

Dip slope A-2

Glacial valley C-1 (Mill Creek and Glacier Creek)

Intermont basin C-2, C-3

Lateral moraine A-1 (between Fall Creek and Notch Mountain Creek)

Mineralized area C-2, C-3, gold, lead, silver, zinc

Pass B-3 (Tennessee Pass)

Pater Noster lakes A-1, B-1

Reverse drainage suggestive of stream piracy A-3

Tarn B-2 (Deckers Lake, etc.)

Terminal moraines C-2 (at Sylvan Lake and Turquoise Lake)

U-shaped valley C-3, etc.

JUANITA ARCH

Colorado Plateaus

Canyon Lands

Basin eroded on crest of dome (Sinbad Valley) C-1

Canyon, v-shaped (Salt Creek Canyon)

Canyon or gorge (Dolores River)

Cliffs

Cone Mountain (not volcanic)

Dry Falls A-2, B-2

Escarpments C-1 and at rims of Salt Creek and Dolores River

Esplanade A-3, B-3

High relief topography (nearly 2,000 feet at C-1)

Mesa A-3, etc.

Natural bridge (Juanita Arch) B-3

CONNECTICUT

NEW BRITAIN

New England Uplands

Alluvial plain (northwest portion of map)

Drainage diversion, glacial (Farmington River at Farmington)

Drainage reversal, glacial (Pequabuck River flowing north where Farmington River formerly flowed south)

Drumlins (east half of the map)

Esker (at Patten Brook) C-1

Fault block mountains C-2, etc.

Kettles (northwest portion)

Lava with irregular surface (Bradley Mountain)

Outwash terraces (west portion of map)

Ponds in clay pits (southeast corner of map)

Spillway from glacial Lake Hartford B-3, C-3 (at East End Park)

Stream Piracy, pre-glacial (at Plainville)

Wind gap-ancient water gap of ancestral Connecticut River (Cooks Gap)

Swamps (Dead Wood Swamp, etc.)

DELAWARE

LITTLE CREEK

Coastal Plain

Embayed Section

Artificial drainage ditches (parallel)

Coastal terrace (Pamlico terrace), weakly dissected and above the 6 to 8 foot level

Cut-off bends A-1, A-2

Distributary channels

Nearly abandoned distributary B-2, B-3

Silver bluff terrace (swampy), below 6 to 8 foot Silver Bluff shoreline

Tidal drainage (dendritic) A-3

Tidal meanders

Tidal swamp (bordering Delaware Bay)

DISTRICT OF COLUMBIA

WASHINGTON WEST

Coastal Plain and Piedmont Upland

Abandoned canal (historic)

Artificial reservoir
Channel (small ships)
Dissected depositional surface (Coastal Plain)
Dissected erosional surface (Piedmont)
Drowned river (Potomac River below Key Bridge)
Entrenched meanders (Rock Creek below Walter Reed Hospital)
Entrenched stream (Potomac River above Key Bridge)
Estuary (below gorge)
Faceted river bluffs B-1, C-1 (palisades of Potomac River, right bank)
Fall line (dividing line between Piedmont and Coastal Plain, along Florida Avenue, etc.)
Flood plain (Rock Creek above Walter Reed Hospital)
Rocks awash C-2 (Three Sisters)
Urban area (tinted)
Waterfall or rapids (Little Falls)

FLORIDA

JACKSONVILLE BEACH

Coastal Plain
Floridian Section
Ancient beach ridges
Barrier beaches, 3 series (present, Silver Bluff raised, and Pamlico raised)
Beaches, along Atlantic Ocean
Coastal bars of Pamlico shoreline, Pleistocene, (west side of map, above 30-foot level)
Dunes and beach ridges A-3
Depressions A-1, A-2
Drowned valley A-1
Indian Mound A-2
Pamlico terrace, Pleistocene (west side of map)
Prograded shore
Silver Bluff beach, post-Pleistocene (between lagoon and present beach)
Silver Bluff lagoon (nearly filled in) A-2, B-2, C-2
Silver Bluff shoreline, post-Pleistocene (center of map, at elevation of 6 to 8 feet)
Swamp A-1, B-1, C-1
Tidal swamp (Silver Bluff lagoon, along Intracoastal Waterway)

LAKE WALES

Coastal Plain
Floridian Section

Artificial drainage canal C-1

Deep lakes and deep dry depression (sinks formed by solution of subsurface limestone) on Lake Wales Ridge

Iron Mountain

Irregular shallow depressions and lakes on terraced surfaces (east portion of map)

Marsh

Okefenokee terrace, east portion of map between 100 and 150-foot level

Poorly defined surface drainage

Sandy north-south ridge near west portion of map (Lake Wales Ridge)

Wicomico terrace, east side of map, below 100-foot level

GEORGIA

DURAND, WARM SPRINGS, SHILOH, PINE MOUNTAIN

Piedmont Upland

Basin (eroded in soft rocks in a structural dome - The Cove)

Gorge A-3

Dissected peneplain surface

Resistant rock ridges (steeply dipping and folded - Pine Mountain and Oak Mountain)

Superposed stream (Flint River)

Undercut slope B-3

Warm Springs (Mineral Springs)

Water gap C-1, C-2, C-3

Wind gap (on Pine Mountain, Dunn Gap, Stevenson Gap, and on Oak Mountain, Carlisle Gap)

IDAHO

MENAN BUTTES

Snake River Plain

Artificial levees

Check dams C-2, C-3

Cinder cones (Menan Buttes)

Craters (Menan Buttes)

Depression contours (northwest portion of map and in craters of Menan Buttes)

Flood plain

Irrigation system with canals

Lava flow, recent (northwest portion of map)

Meander scars (along Henrys Fork)
Meandering streams in flood plain
Oxbow lakes
Slough C-3

THOUSAND SPRINGS

Snake River Plain
Abandoned channel B-1 (also at Clear Lake B-2, B-3)
Canyon A-1, B-2
Erosional remnant B-1
Escarpments (at rim of canyon B-2, B-3, etc.)
Gravel bars with high, steep slopes (mouth of Mud Creek and Falls Creek, etc.)
Hot springs
Hot water wells
Plain (former valley filled with lava flows, northeast portion of map)
Rapids (due to hard and soft layers)
Springs captured for hydraulic power A-1, B-3
Springs at various levels, right bank Snake River, fed from underground streams following buried river channels and intercepted by north flowing tangent of Snake River

ILLINOIS

EFFINGHAM NORTH, EFFINGHAM SOUTH, ALTAMONT EAST, SHUMWAY

Central Lowland
Till Plains
End moraine (position controlled by bedrock bridge) running northeast-southwest through Shumway A-1, A-2, B-1
Dendritic drainage
Dissected till plain, with loess mantel (Illinoian Age)
Gullied stream channels in flood plains
Integrated drainage on end moraine

INDIANA

OOLITIC, BARTLETTS, BEDFORD EAST, BEDFORD WEST

Interior Low plateaus

Possible Western Section (not delimited)

Abandoned meander (at Crooked Creek C-2)

Disappearing streams C-2, C-3

Dissected plateau (west half of map)

Entrenched meanders (White River)

Karst topography (east portion of map)

Limestone quarries B-3

Meander core at Crooked Creek C-2

Meander spurs C-1, C-2 (Henshaw Bend and Horseshoe Bend)

Sinks (limestone)

Slip-off slope C-2 (along White River)

Undercut slopes C-2 (along White River, Crooked Creek, Indian Creek, and a Salt Creek)

IOWA

ADEL, MAUKEE, ST. CHARLES NW, EARLHAM EAST

Central Lowland

Dissected Till Plains and Western Lake Section

Cutoff meander C-1

Dendritic drainage with entire drainage basin on map (Panther Creek)

Dissected till plains (south and east portions of map)

Double channel (Mill Slough and North Raccoon Creek) B-3

Flood plain, narrow

Former river channel B-2, B-3 (along C.M. St. P. & P. RR.)

Glaciated plain, mantled with loess (north portion of map)

Oxbow lakes B-3

River bluffs A-3

Slough

Stream capture (lower Panther creek) B-2 (Sec. 5)

KENTUCKY-VIRGINIA

EWING

Appalachian Plateaus

Cumberland Mountain Section (also Valley and Ridge Province)

Cumberland Front (south face of Cumberland Mountain)

Escarpment (Cumberland Mountain)

Hogback (Poor Valley Ridge)
Non-structurally controlled drainage (north portion of map)
Ridge (Poor Ridge)
Sink holes C-3
Strike valley (Poor Valley)
Strongly dissected plateau (north of Cumberland Front)
Structurally controlled drainage (south portion of map)
Water gaps B-3, C-2, C-3

KENTUCKY

HILLSBORO

Interior Low Plateaus
Lexington Plain (Also portion of Appalachian Plateaus)
Abandoned meander channel (mouth of Turkey Run) C-1
Dendritic drainage, rectangular, joint-controlled (Turkey Run, etc.) C-1, C-2
dissected plain (Blue Grass Section)
Entrenched stream (Licking River)
Former meander channel now occupied by Indian Creek C-1
Imminent stream piracy at bend in Buttermilk Branch B-1
Meander core (mouth of Turkey Run) C-1
Outliers of Appalachian Plateau A-3, B-3, C-1, C-3
Plain (trenched by creeks and river)
Ridges of accordant height (east edge of map)
River bluff
River terraces (Licking River)
Slip-off slopes (on Locust Creek and Licking River)
Stock watering ponds
Stream capture (Turkey Run) C-1
Terraced floodplain C-1
Undercut slopes (on Licking River)

MAMMOTH CAVE, RHODA, NOLIN LAKE, CUB RUN

Interior Low Plateaus
Highland Rim Section
Blind Valleys (valley sinks) B-2, C-2
Caves (Mammoth Cave, Colossal Cave, etc.)
Cuesta B-1, B-2 (Dripping Springs Cuesta)
Disappearing streams C-2, C-3

Dissected plateau

Entrenched meander (Turnhole Bend)

Karst topography (on dissected plateau, north portion of map; and on lowland, near base level of subterranean streams, south portion of map)

Sink (Hunts Sink A-3, Cedar Sink B-2, Monroe Sink B-3, etc.)

Slip-off slopes (Green River)

Springs (Dripping Springs) B-1, etc.

Undercut slopes (Green River)

LOUISIANA

CAMPTI, FAIRVIEW-ALPHA, MARTIN, CHESTNUT

West Gulf Coastal Plain

Abandoned channel C-3 (Cane River Lake)

Artificial levee C-3

Bed of drained shallow lake C-1 (Old Spanish Lowlands)

Cut-bank C-2

Dissected upland, east end Sabine Uplift C-1, C-2

Flood plain (Red River)

Flood plain swamps

Lake in drowned tributary valley, Black Lake, (attributed to The Great Raft, lower end of which was reported below Natchitoches by early Spanish and French explorers)

Marsh or swamp (Robeaux Brake, etc.)

Meandering stream (Red River)

Natural levee B-1, B-2

Oxbow lake, B-1

River shore bars B-2, C-22, C-3

Sloughs (Bayou Pierre, etc.)

SOUTH PASS

Coastal Plain

Mississippi Alluvial Plain

Abandoned distributary (accentuated by grant lines or tract lines that follow early French subdivision pattern) B-1, C-1 (Ts. 23S and 24S)

Active distributary (South Pass)

Crowsfoot delta of Mississippi River at Gulf of Mexico (this map is just below the "Head of Passes")

Deltaic channels

Inactive distributaries

MAINE

MT. KATAHDIN, KATAHDIN LAKE TROUT MTN, ABOL POND

New England Province
White Mountain Section
Arete (Knife Edge) B-2
Biscuit-board topography A-1, B-1
Cirque A-1
Col
Cyclopean stairs
Glacial drift C-3
Hanging valley (North Basin, etc.)
Kames B-2
Meanders (Sandy Stream) C-3
Monadnock (Mount Katahdin, said to be the first point on which morning sun shines on continental United States)
Marsh or swamp
Ponds in kettles B-2, C-2
Radial drainage (Mount Katahdin)
Strongly dissected mountainous highland
Tarn A-1
Waterfall or rapids C-1

NEWBURY NECK, SALSBURY COVE, SOUTHWEST HARBOR, BARTLETT ISLAND

New England Province
Seaboard Lowland Section
Bay
Cliff C-3
Cove
Drowned coast line
Fiord (Somes Sound)
Finger lakes
Lakes and ponds in glacially scoured bedrock basins
Mountains and islands modified by continental glaciation
Narrows
Rock sculpture controlled by fractures, (Seal Cove Pond, etc.) C-2
Tidal marsh

MARYLAND-PENNSYLVANIA-WEST VIRGINIA

CUMBERLAND

Valley and Ridge Province

Middle Section (also portion of Appalachian Plateau)

Abandoned canal (historic) C-3

Allegheny Front (center of map)

Anticlinal ridge (Haystack Mountain and Wills Mountain)

Dip slope (west slope of Piney Mountain)

Dissected plateau (west of Allegheny Front)

Gorge (The Narrows)

Hogbacks (Shriver Ridge, Piney Mountain, etc.)

Homoclinal ridge (Piney Mountain, etc.)

Stream piracy (lower course Braddock Run diverted by tributary of Wills Creek)

Structurally controlled drainage (east portion of map, particularly well-illustrated by North Branch Potomac River)

Superposed stream, cutting water gap in anticlinal ridge at The Narrows

Trellis drainage (east portion of map)

Water gaps (The narrows and at Courthouse)

Wind gap (Haystack Mountain)

MASSACHUSETTS

AYER

New England Province

New England Upland and Seaboard Lowland Sections

Drumlins A-2, B-2, C-3

Esker C-3 etc.

Glacial lake bottom A-1

Glacial swamps

Kames A-1

Kame plains (Fort Devens Airport, etc.)

Kame terrace B-2

Linear ridge controlled by bedrock structure (Oak Hill) C-2, C-3

Marsh or swamp

Oxbow A-1

Ponds in kettles A-3, B-2, B-3, C-1

LYNN

New England Province
Seaboard Lowland Section
Artificial land B-1
Bayhead bar (Pond Beach)
Bedrock knobs glacially abraded (north portion of map)
Drumlins C-1
Ponds in glacially scoured bedrock basins
Tidal marsh or swamp
Tombolo (complex at Nahant, surrounded by Broad Sound, Massachusetts Bay, and Nahant Bay)

PROVINCETOWN

New England Province
Seaboard Lowland Section
Baymouth bar (Pilgrim Beach)
Beach
Beach ridges, along Atlantic Ocean side of Cape Cod
Compound recurved spit, prograding (Cape Cod)
Harbor
Lagoon B-1
Ponds in depressions
Sand dunes
Spits (Long Point and Race Point)
Tidal swamp

MICHIGAN

DELAWARE

Superior Upland
Cuesta (center of map)
Dig slope along north portions of B-1, B-2, B-3
Esker B-3, C-3
Fault line scarp C-3 (Keweenaw Fault)
Glacial drift (faint)
Hanging Valley C-3
Hogback (north portion of map)
Immature drainage (throughout map)

Point (Agate Point, on lava)
Ridge and valley topography (north and central portions of map)
Swamp or bog
Water Gap B-2 (Silver River)
Wind Gap B-1, and at elevation 1065, B-3

FENNVILLE, GLENN, PULLMAN, LACOTA

Central Lowland
Eastern Lake Section
Abandoned river mouths A-1
Blowout dune A-1 (Sec. 33)
Buried town A-1 (Sec. 4) north side of Kalamazoo River, former lumber town of Singapore, flourished from 1834 to 1890, until buried by shifting sands
Cutoff meanders (in Kalamazoo River)
Drainage canals C-2
Entrenched tributaries (Roelofs Gulley, etc.)
Intermorainal lowland B-3, C-2, C-3
Knobs and kettles
Lake in kettle (Round Lake)
Lakeshore dunes A-1 (east shore Lake Michigan)
Morainic topography (Lake Border, west portion, and Valparaiso, east portion)
Pitted outwash plain B-3, C-2, C-3
Raised beach ridges
Raised spit and book (at Douglas) B-1
River terrace A-3
Sand dunes, modern active dunes at lake shore, and inland dunes fixed by vegetation south of Kelly Lake A-1 and near Tracy School C-3 (Sec. 6 and 7)
Swamps
Wave-cut cliffs B-1, C-1

JACKSON (north and south), MICHIGAN CENTER, SOMERSET CENTER, CEMENT CITY

Central Lowland
Eastern Lake Section
Abandoned glacial channels A-1, C-1
Artificial drainage A-2 (Grand River)
Esker B-2 (Blue Ridge)
Kames
Knobs and kettles
Lake in kettle B-1 (Mud Lake, etc.)
Morainic topography, terminal (Kalamazoo Moraine - south portion of map)

Pitted outwash plain C-3
Ponds in kettles
Poorly integrated drainage with many lakes
Swamp or marsh
Till plain (north portion of map)

MINNESOTA

VIRGINIA

Superior Upland
Esker A-2, A-3
Glacial drift C-1
Glacially rounded hills B-1, B-2, B-3
Kettles in outwash plain C-1
Linear ridge on crystalline rocks (Laurentian Divide)
Mine dumps, tailings and a tailings ponds
Monadnock B-3
Morainic topography A-1, A-2, A-3
Open pit mine, iron, C-3 (Missabe Mountain Mine)
Swamp or bog
Wind gap B-2

MISSISSIPPI

PHILIPP, CASCILLA, AVALON, MONEY

Coastal Plain
Mississippi Alluvial Plain
Ancient river bluff (partially dissected)
Abandoned channels A-1, B-1, C-1
Alluvial fans B-3 (at base of bluff)
Cutoff meander (Tippo Bayou) C-2
Dissected loess upland A-3, B-3, C-3
Flood plain swamp B-2, B-3, C-2, C-3
Marsh or swamp (Hubbard Brake, etc.)
Meander patterns (large and small)
Meander scars
Meandering stream on alluvial plain (Tippo Bayou)
Mississippi alluvial plain (known as "The Delta")

Oxbow lakes B-1, B-2
Oxbow swamp B-1

MISSOURI

CAMDEN

Central Lowland
Dissected Till Plains
Abandoned channels
Artificial levee
Coal mines
Dissected plains
Faceted spurs C-1
Flood plain of Missouri River
Meander scars
Oxbow lake remnants (Big Lake, Ralph Lake)
River bluff
Sand bars and scrolls
Stock watering scrolls
Swamp areas

IRONTON, LAKE KILLARNEY, DES ARC NE, GLOVER

Ozark Plateaus
Springfield-Salem Plateaus
Saint Francis Mountains Region
Apex of Ozark Plateau
Centripetal drainage (all drains originate within boundaries of this quadrangle)
Dissected upland (known as the Iron Mountain Country)
Knob, not glaciated
Wind gap C-2 (Ketcherside Gap)

MONTANA

CHIEF MOUNTAIN

Northern Rocky Mountains
Alpine topography

Arete
Cirque
Cirque lake
Col
Continental Divide
Cyclopean stairs
Erosion surfaces, mature type (Flattop Mountain and Granite Park)
Finger Lakes (Lake McDonald, etc.)
Glacial trough
Glacier B-2, C-2
Glacier wall B-2 (cliff surface)
Hanging valley
Klippe (Chief Mountain)
Matterhorn (Mount Logan, etc.)
Mountain ranges (Lewis Range, etc.)
Pass (Logan Pass) B-2
Stream Piracy (Kipp Creek beheaded branch of Waterton River) A-1
Tarn
U-shaped valley
Wind gap (Kootenai Pass A-1)

ENNIS, EIGHTMILE CREEK, CAMERON, VARNEY

Northern Rocky Mountains
Alluvial fan
Alpine topography A-3, B-3, C-3
Braided stream (Madison River)
Canyon A-2
Cirque B-3
Coalescing alluvial fans A-2, B-2
Dam and reservoir
Flood plain of Madison River
Glaciated valleys
Matterhorn (Fan Mountain)
Parallel drainage A-1, B-1
Radial drainage C-2
Superposed stream A-2 (gorge of Madison River)
Tarn
Terrace, alluvial B-1

NEBRASKA

ASHBY, BINGHAM, LOWE VALLEY, CAMP VALLEY

Great Plains Province

Sand Hills of Nebraska (in High Plains Section)

Artificial drainage canals

Concave slope, exemplary of leese side C-1 (See 16, etc.)

Depression with lake B-2

Dune topography

High water table with lakes, marshes, and flowing wells

Large scale dune ridges (some transverse) modified by secondary wind erosion, following stabilization (numerous minor blowouts)

Nonintegrated drainage

NEVADA

SONOMA RANGE

Basin and Range Province

Great Basin Section

Alluvial fan A-1

Bajadas (throughout map)

Bolson

Dissected block mountains

Fault scarp C-2

Flat

Gap or pass (numerous)

Isolated ranges (separated by aggraded desert plains called valleys)

Playa C-2, C-3 and C-1, D-1

Volcanic cones (one occupied by Airway Beacon east of Buffalo Valley C-3, other at elevation 5085 west of Krum A-1)

Water gap A-3

NEW HAMPSHIRE

CRAWFORD NOTCH, MOUNT CARRIGAIN, MT. OSCEOLA, SOUTH TWIN MTN

New England Province

White Mountain Section

Bedrock knobs

Cascades B-2

Cirque A-2

Cliff B-2

Col B-3

Dissected mountains of crystalline rocks overridden by glaciers

Falls A-1, B-2

Hanging valley

Marshy divide A-1 (Above Zealand Pond)

Notch (Carrigan Notch, B-1, Hancock Notch C-1, etc.)

Presidential Range of White Mountains

Ponds heading drainage (Shoal Pond B-1, head of Shoal Pond Brook, Norcross Pond B-2, head of Norcross Brook, etc.)

Ridge (Mount Alan Ridge, Signal Ridge, etc.)

Tarn

U-shaped valley (Saco River)

Wind Gap (Hancock Notch C-1, Bear Notch C-3)

MT GRACE, ROYALSTON

New England Upland

Bedrock hills in crystalline rocks, abraded by glaciation (except C-3)

Concave slopes (Monadnock Mountain)

Drainage deranged by continental glaciation

Drumlins C-3

Glacial drift B-3, C-3

Hanging valleys A-1, A-2, B-1

Kame terraces B-3, C-2

Kettle holes

Lakes in kettle holes

Monadnock Mountain (feature from which Davis derived physiographic term)

Morainal lakes

Mountain peak (isolated)

NEW JERSEY

PATERSON

New England Upland and Northern Piedmont Lowland (Triassic Lowland)

Continental glaciation (southern margin)

Escarpment (east slope at First Mountain)

Glacially modified hills

Ice-contact slope (northeast of Preakness School, across pond 281)

Kame terraces A-1, B-1

Kettles

Lakes in kettles (Franklin Lake, etc.)

Marsh or swamp

Meltwater channel (along Preakness Brook) A-1, B-1, B-2

Structurally controlled drainage

Swales (between ridges)

Urban area, east portion of map (tinted)

Watchung Mountains (Formed on titled diabase sheets)

NEW MEXICO

BOTTOMLESS LAKES

Great Plains Province

Pecos Valley Section

Braided stream pattern (Pecos River)

Dendritic drainage (around Dimmit Lake)

Erosional remnant A-1

Escarpment A-1, B-1

Intermittent ponds in deflation basins or "buffalo wallows" B-3, C-3

Lakes in sinks, caused by solution and removal of gypsum (Bottomless Lakes)

Marsh or swamp in river bottom

Meandering stream (Pecos River)

Oxbow lake

Sink holes on dissected plain

SHIP ROCK, SAND SPRING MITTEN ROCK, YELLOW HILL

Colorado Plateaus

Navajo Section

Dikes (radial)

Dip slopes C-2

Flatirons (along Rock Ridge) C-3

Gully, deeply eroded (Little Ship Rock Wash)

Hogback C-2

Sandy dry wash (Red Wash)

Volcanic necks (Ship Rock, also Mitten Rock and the Thumb)

NEW YORK

AMSTERDAM, TRIBES HILL, GLOVERSVILLE, BROADALBIN

Appalachian Plateaus

Mohawk Section

Deranged drainage, glacial (north third of map)

Dissected glaciated plateau (southern two thirds of map)

Erie Canal, in river channel (with locks) A-1, A-2

Glacial gorges or spillways (Wolf Hollow, Cranes Hollow, etc.)

Kames (northeast of Marraville Lake)

Linear drumloidal topography C-3

Marshy divides (Skyhaven Airport and B-1)

Old Erie Canal (abandoned)

River bluffs (Mohawk River)

Rock bench (Glenville Hill) B-3

Sinuuous divide C-1 (BM 1079 to airport)

Terraced sand plain C-3 (south of radio station)

Topographic grain, glacially modified (southeast portion of map)

U-shaped valley with terraced shores (Mohawk River Valley)

HUDSON NORTH, STOTTVILLE, CLAVERACK, HUDSON SOUTH

Valley and Ridge Province

Hudson Valley Section

Bedrock knobs A-3 (Blue Hill and Mount Merino)

Cliffs (west side of map)

Delta (Saugerties)

Dendritic drainage pattern A-3 (complete on this map)

Dissected glaciated plateau bounded on east by escarpment (west portion of map)

Disappearing stream (Van Luven Lake area) A-1

Drowned river (Hudson River)

Drumlins (Cross Hill, Round Top B-2 and Whale back, etc., C-2)

Elongate folds and ice-carved strike ridges (west portion of map)

Eskeroid topography (east of Nativity Chapel from Pine Hill to Fraleighs) B-3

Glacial lake bed (Kiskatan Flats) A-1

Kame belt A-3, B-3, C-3

Knobs and kettles B-3

Lakes and ponds in kettle holds (Twin Lakes, etc.) B-3, C-3

Land-tied island (Cruger Island) C-1

Limestone quarries B-1

Meandering stream (Roeliff Jansen Kill)

Narrow ridges, plunging folds B-1
Post glacial gorge (Austin Glen) A-2
Reverse drainage (Esopus Creek, Roeliff Jansen Kill, etc.)
Sand plain, glacial, C-2
Stream in narrow rock gorge (Esopus Creek)
Strike valley (Beaver Kill and Kaaterskill Creek)
Topographic grain accentuated by glacial scour (throughout map)
Water gap (High Falls) B-1

ITHACA

Appalachian Plateaus
Southern New York Section
Finger Lakes Region
Convex slopes A-3, B-3, C-3
Delta A-3, B-3
Drainage at right angles to glacial trough A-3, B-3, C-3
Finger lake, in glacial trough (Cayuga Lake)
Hanging valleys (Glenwood Creek, Buttermilk Stream, in contrast to plunging lower Buttermilk creek) C-3
Moraine/Trough (West Danby)
Parallel drainage A-2, A-3, etc.
Southern New York section Appalachian Plateau with 1100 feet relief on this map
Stream in glacial trough (Cayuga Inlet)
Waterfalls (Lucifer Falls in Enfield Glenn) C-1

NEW YORK - VERMONT

TICONDEROGA

Adirondack Province (also Champlain Section of Saint Lawrence Province)
Adirondack Mountains (east boundary)
Bluff (Rogers Slide)
Cuesta C-3
Dip slope C-3
Fault block mountains (second cycle)
Fault line scarps B-1, B-3, C-2, C-3
Fault line scarps, intercepting pattern B-2, B-3, C-3
Glacially deepened trough (Lake George)
Glacial drift A-2
Glacial lake plain, dissected, former glacial Lake Vermont, no shoreline features A-2, A-

3

Hills of crystalline rocks glacially scoured and plucked (Anthonys Nose, Bear Mountain, and Cook Mountain)

Marsh C-2

Structurally controlled valleys and mountains

NORTH CAROLINA - TENNESSEE

MOUNT MITCHELL

Blue Ridge Province

Southern Section (also portion of Piedmont Upland)

Blue Ridge Front (southeast portion of map)

Complexly dissected mountainous highland

Dendritic drainage (weak structural control)

Erosional escarpment (Blue Ridge Front)

Highest point in Eastern United States (Mount Mitchell) B-2

Knobs not glaciated

Piedmont re-entrant valley (Catawba River)

Subcontinental Divide (Blue Ridge) between Gulf and Atlantic drainages

Wind Gap (Swannanoa Gap) C-2

NORTH DAKOTA

EMERADO, EMERADO SE & SW, ARVILLA

Central Lowland

Western Lake Section

Glacial lake bottom A-3 (lacustrine plain)

Strand lines (Glacial Lake Agassiz) A-1, B-1, B-2, B-3

Swamp or bog (Kelly Slough)

LANSFORD, NW, NE, SW, SE

Central Lowland

Western Lake Section

Glacial outwash channels, over entire map, counter to regional slope, ice marginal, and at successive levels (Spring Coulee, etc.)

Ground moraine

Poorly integrated drainage
Swell and swale topography A-1, A-2, A-3
Undrained depression

PELICAN LAKE, PELICAN LAKE SE, ALKALI LAKE, SIEBOLD LAKE

Great Plains Province
Missouri Plateau, glaciated Coteau du Missouri Region
End Moraine topography (typical of Coteau du Missouri - covers major portion of map)
Glacial outwash channel B-1, C-1
Kames C-3
Lakes in kettle holes B-1, C-1
Lobate washboard moraine, recessional C-2 (Secs. 20, 21, 28, 29, 32, and 33)
Marsh or swamp
Poorly integrated drainage
Swell and swale topography A-1, A-2, A-3

VOLTAIRE

Central Lowland
Western Lake Section
Cuesta C-1
End moraine A-1
Esker B-2
Glacial linear ridges A-2, B-3
Glacial outwash channels A-2, B-2, B-3, C-1, C-2, C-3
Glacial outwash terraces, both sides of Souris River
Ground moraine (center of map)
Kames B-2
Lakes in kettles
Lobate lination (faint) B-1, B-2
Oxbows A-2
Poorly integrated drainage (southern two-thirds of map)
River bluff A-2, A-3
Swell and swale topography (center of map)

OHIO

MAUMEE

Central Lowland
Eastern Lake Section
Abandoned channel C-1, C-2
Dissected lacustrine plain (Glacial Lake Maumee)
End moraine A-1
Meander scars or chutes B-2
Plains remnant C-1
Rapids (Maumee River)
River bluffs (along Maumee River)

OKLAHOMA

JENKS

Central Lowland
Osage Plains
Artificial levee B-1, C-1
Dissected plains
Meanders (Polecat Creek) C-1
Outliers (Twin Hills, etc.)
River Bluff C-1, C-1
Sand bars in river channel
Wide flood plain (Arkansas River)

OREGON

BANDON, BULLARDS, RIVERTON, BILL PEAK

Pacific Border Province
Oregon Coast Range
Beach ridges (uplifted and modified by sand dunes) A-2, C-1
Coal mines (north of Randolph) A-2
Dissected marine terrace A-3 (between Seven Mile Creek and Hatchet Slough)
Dissected erosion surface B-3, C-3
Diverted outlet (Coquille river)
Flood plain A-3, B-1, B-3
Longitudinal valleys
Marine terrace A-2, B-2, C-2
Monadnock (Bill Peak) C-3

Point (Coquille Point, etc.)
Prograded shore B-2, C-1
Sea stacks B-1
Stacks on uplifted marine terrace B-1, C-1
Tidal marsh
Wave-cut cliff A-2

CHEMULT

Columbia Plateaus
Harney Section
Bolson (Klamath Marsh)
Disappearing streams C-1, C-2
Fault scarps (Walker Rim and east side of Crescent Butte)
Faulted volcanic cone (Crescent Butte) A-3
Glaciated valley (Clover Creek) B-1
Pumice sheet, forming plain, C-1, C-2
Recent vulcanism (Black Rock Butte)
Volcanic cone (Black Rock Butte, Deer Butte, Welch Butte, and Sugarpine Mountain)
Volcanic crater (Little Odell Butte) A-1

CRATER LAKE NATIONAL PARK AND VICINITY

Middle Cascade Mountains
Ancient Mount Mazama (collapsed volcanic cone now occupied by Crater Lake)
Benches formed by nuees ardentes deposits (in Annie Creek, Castle Creek, Sand Creek, Sun Creek)
Bluffs (Anderson Bluffs, Whitehorse Bluffs, etc.)
Caldera of ancient Mount Mazama (Crater Lake)
Cirque (east side of Mount Thielsen, at north edge of map)
Cliffs (at rim of caldera)
Crater of ancient Mount Mazama (Crater Lake)
Dissected volcano (Mount Thielsen, also known as "The Matterhorn")
Glacial notches on rim of caldera (Kerr Notch, etc.)
High-level plain formed by pumice (Pumice Desert, north central portion of map)
Lake with underground outlet (Crater lake)
Lateral moraines (pre nuees ardentes deposits along north side of Annie Creek)
Parasitic cones (Red Cone, Crater Peak, etc.)
Radial drainage (from ancient Mount Mazama)
Shield volcano, capped by pyroclastic cones (Timber Crater)
Springs (at Beaver Meadows)
Volcanic cone-breached (Goose Nest, in southern portion of map)

Volcanic cone within caldera (Wizard Island)

GALICE, MT PEAVINE, BUNKER CREEK, MT. REUBEN

Pacific Border Province
Klamath Mountains
Canyon (Rogue River)
Dissected upland
Entrenched meanders
Old channel C-2 (high level river channel placer deposits)
River terrace C-2, C-3
V-shaped valley (Rogue River)

PENNSYLVANIA

ALTOONA, ASHVILLE, CRESSON, HOLLIDAY

Appalachian Plateaus
Allegheny Mountain Section (also portion of Valley and Ridge)
Allegheny Front (escarpment through center of map)
Anticlinal valley (Sinking Valley)
Anticline (at Sinking Run)
Disappearing streams C-3
Dissected plateau (Allegheny Mountains)
Hogback (Brush Mountain)
Sink holes (solution pits) C-3
Stream piracy (Bells Gap Run beheads Laurel Run) B-1
Structurally controlled dissected terraces (Sinking Valley)
Watergap (Bells Gap, etc.) C-3
Wind gap C-3 (Kettle Creek beheaded Sinking Run)

RENOVO W & E, SNOWSHOE NE, HOWARD NW

Appalachian Plateaus
Allegheny Mountain Section
Abandoned entrenched meanders C-1, C-2
Canyon or gorge (West Branch of the Susquehanna River)
Dendritic drainage (Drury Run, etc.)
Dissected plateau
Entrenched creeks and river

Entrenched meander (Oxbow Bend) A-2

Imminent cutoff (Oxbow Bend) A-2

Meander cores (Round Top Mountain and Little Round Top Mountain) C-1, C-2

Slip-off slope (between BM 704 and BM 722) C-2

Undercut slope C-2

TYRONE, TIPTON, HOUTZDAL, SANDY RIDGE

Valley and Ridge Province

Middle Section

Allegheny Front (northwest corner of map)

Canoe-shaped plateau (Allegheny Mountains in northwest portion of map)

Entrenched stream (Juniata River)

Hogback (Tussey Mountain, etc.)

Sink holes B-1, B-2

Structurally controlled ridges and valleys

Synclinal valley (Canoe Creek)

Synclinal mountain (Brush Mountain and Canoe Mountain)

Water gaps at Tyrone A-1 and at Water Street C-2

RHODE ISLAND

KINGSTON

New England Province

Seaboard Lowlands

Baymouth bar C-1, C-2

Beach (on Block Island Sound)

Drumloidal hills A-1, B-1

Drumloidal hills (projecting through outwash plain C-1, C-2)

End moraine C-1, C-2, C-3

Kames and kettles

Kame terrace A-2, C-2

Kettles in moraine

Lagoon (Trustom Pond)

Necks (Great Neck and Tobey Neck)

Outwash filled channels A-1, A-2

Pitted outwash plain C-1, C-2

Ponds in kettles

Swamp

SOUTH CAROLINA

MULLINS

Coastal Plain

Sea Island Section

Carolina Bay Region

Carolina bay (origin variously attributed to solution of thin bedded limestone, tidal swirls on falling coastline, or falling meteorites, and called Carolina bay; origin of name is botanical, not hydrographic)

Coastal plain (terraced surface)

Flood plain (Black Swamp of Little Pee Dee River)

River bluff (bordering Back Swamp) C-3

Sand rims (around Carolina bays)

SOUTH DAKOTA

HOT SPRINGS

Black Hills

Abandoned roadway B-3

Cuestas (east of Dudley Canyon, etc.)

Dip slopes eastward

Dissected dome mountains (map shows part of southern area)

Entrenched meander C-3 (Cheyenne River)

Fault controlled valley B-2, C-2

Fault scarp (Sec. 8)

Gorge B-2 (Dudley Canyon)

Hot springs (covered) B-1

Parallel drainage B-3, C-3

Strike valley A-1

SHEEP MOUNTAIN TABLE

Great Plains Province

Missouri Plateau, unglaciated

Badlands (over entire map)

Dissected plateau

Dunes and deflation hollows C-2

Fine textured topography

Intermittent drainage

Mesa A-3

Outlier (Cedar Butte)

Structural terrace C-3

Table (Sheep Mountain Table)

TENNESSEE

NORRIS

Valley and Ridge Province

Tennessee Section

Disappearing stream A-3

Meander-like stream pattern (Hinds Creek) structurally controlled

River development (Norris Dam and Reservoir)

Sinks A-3

Strike ridge (Lone Mountain, etc.)

Strike valley (Brushy Valley, etc.)

Structurally controlled drainage and ridges A-3, B-3, C-1, C-2, C-3

Trellis drainage

Undercut slope (below Observation Point) A-2, B-2

Water gap (Hinds Creek, etc.)

Wind gap C-2

ROVER

Nashville Basin Depression contours

Disappearing streams

Dissected lowland

Divide (Tennessee Valley Divide)

Karst topography A-1, A-3, B-1

Outliers of Highland Rim (Pinnacle Hill, Brady Knob, etc.)

Pond in sink (at Rover)

Sinks (Lamb Bottoms and Byler Bottoms)

WHITWELL

Appalachian Plateaus

Cumberland Plateau Section

Anticlinal valley (Sequatchie valley, known as Sequatchie Anticline)

Benches controlled by bedrock - marked by coal minds A-2, B-2
Contrasting topography between structurally controlled valley (Sequatchie River) and valley not structurally controlled (Little Sequatchie River)
Cove
Dissected plateau (Cumberland Plateau)
Hanging valley upheld by resistant beds (Bee Branch) A-1, A-2, etc.
Low divide, near Pryor Cemetery B-3
Meander C-3
Structurally controlled drainage (Hall Branch) C-2, C-3
Underground drainage flowing from caves (Dancing Fern Cave C-1, Ship Cave B-1, etc.)

TEXAS

EAST BROWNSVILLE

West Gulf Coastal Plain
Lower Rio Grande Valley
Abandoned channels of deltaic river with natural levees (Resaca de la Palma and Resaca de la Rancho Viejo)
Abandoned distributary (no resaca channel preserved) A-3
Artificial floodway A-3
Artificial levee C-1
Clay dune (Loma Alta) A-2
Delta of Rio Grande (entire map)
Depression contours (numerous)
Drainage ditch
International Boundary (channel of Rio Grande)
Irrigation canals and system
Low relief
Meanders of Rio Grande and of abandoned river channels
Oxbow lakes (bancos)

GUADALUPE PEAK, EL PASO GAP, GUNSIGHT CANYON, INDEPENDANCE SPRING

Basin and Range Province
Sacramento Section
Alluvial fans (coalescing) A-1, etc.
Block mountains
Bolson (west portion of map)
Cliff A-2, B-2
Dip slope (vicinity Getaway Gap) B-3

Dissected upland (Guadalupe Mountains)
Escarpment (Delaware Mountains) C-3
Fault scarps (southeast from Williams Ranch B-2 and west face Brushy Mesa C-3)
Fault valley (east of Patterson Hills) B-2
Flats A-1 (Crow Flats)
Highest point in Texas (Guadalupe Peak)
Mesa C-3
Parallel drainage B-3
Pass B-3
Pediment B-3
Playa A-1, C-1
Salt Basin A-1, B-1, C-1 (for centuries the source of salt for Indians and Mexicans)
Salt Lake A-1, C-1
Trellis drainage - small pattern B-3, C-3

SANTIAGO PEAK, GRAYTOP, BUTTERBOWL, Y E MESA

Basin and Range Province
Mexican Highland
Alluvial fan A-2, etc.
Agraded desert plain
Desert topography
Dry falls C-2
Escarpment C-2, etc.
Fault scarps (on Y E Mesa)
Intermittent drainage (Chalk Draw, etc.)
Mountain range (Santiago Mountains)
Structurally controlled topography A-3
Table-top mountains (Y E Mesa and Black Mountain)
Volcanic plug (Santiago Peak)

TURKEY MOUNTAIN, MUSTANG WATERHOLE, CLINE, ODLAW

Great Plains Province
Edwards Plateau
Abandoned meanders C-3
Bluff A-3
Disappearing intermittent streams A-3, C-3
Dissected plain, south portion of map
Dissected plateau, north portion of map
Entrenched meanders, north portion of map (West Nueces River)
Outlier (Turkey Mountain and Round Mountain)

River with sand channel (West Nueces River)

Slip-off slope A-1

Tanks (stock water)

Undercut slope A-1

Waterholes A-1, A-2, A-3, C-3

Wells with windmills (over entire map)

UTAH-WYOMING

FLAMING GORGE

Middle Rocky Mountains

Alluvial fan (Hideout Flat) B-1

Broad valleys eroded in soft rock (Antelope Flat, Luverene Valley)

Canyon B-1, C-1, C-2, C-3

Contrasting topography (wide valley, A-2 changing to canyon, Flaming Gorge)

Deflation basins filled with lakes (Green Lakes) C-3

Entrenched meanders (Horseshoe Canyon, Red Canyon)

Fault-line scarp (Secs. 5, 6, 7, 12)

Flat A-2, A-3

Flood plain (Antelope Flat, Lucerne Valley)

Hogbacks (Boars Tusk, The Glades)

Meander

Meanders (Henry Fork)

Meander scar A-2

Piedmont remnants B-2, C-1, C-2

River terrace A-1

Sheer cliffs (in Horse Canyon, Flaming Gorge, and Red Canyon)

Structurally controlled drainage A-1, B-1, B-2

UTAH

JORDAN NARROWS

Basin and Range Province

Great Basin Section

Abandoned meanders (along Jordan River)

Ancient cusped bar with depression (at Point of the Mountain)

Ancient spit C-1 at Bonneville shoreline

Bonneville shoreline A-3, etc. (At Point of the Mountain, along base of Steep Mountain)

and generally on this map between elevation 5,100 and 5,200 feet)

Cutoff meanders C-3

Lacustrine plain (above and below the Jordan Narrows)

Provo shoreline A-3 and generally on this map between 4,700 and 4,800 feet

Water gap (Jordan Narrows)

MARYSVALE, MT. BRIGHAM, MARYSVALE CANYONE, ANTELOPE RANGE

High Plateaus of Utah

Alluvial fan B-2, etc.

Dam and reservoir

Dissected plateau (portion of Sevier Plateau)

Fault valley (of Sevier River, occupying fault depression)

Flood plain (Sevier River)

Lake dammed by landslide (Barney Lake) A-2

Meanders (Sevier River)

Oxbow A-1, B-1

Superposed stream Sevier Canyon A-1

Table (Big Table) B-2, B-3

VERMONT

BRANDON

New England Province

Green Mountain Section

Abraded bedrock hills

Glacial drift A-2

Gorge A-3

Kettle Holes A-2

Lake in kettle hole (Fern Lake) A-2

Obstructed drainage B-2

Quarries, marble, underlying glacial drift (through center of map)

Ridge and valley area

Strike ridges, structurally controlled (Hawk Hill northward C-2, B-2, also Birch Hill B-3, C-3)

Swamp

Taconic Range, north end C-1

West front of Green Mountain

VIRGINIA

PEAKS OF OTTER, MONTVALE, BUCHANAN, ARNOLD VALLEY

Blue Ridge Province

Northern Section (also Piedmont Upland)

Blue Ridge Front (north portion of map)

Blue Ridge (northwest portion of map)

Dissected lowlands (Piedmont)

Monadnock cluster C-2, C-3

Piedmont reentrants A-1, C-1

Wind gaps (behind Peaks of Otter)

STRASBURG

Valley and Ridge Province

Middle Section (also portion of Blue Ridge Province)

Accordant summits with sharp crests (center of map)

Alluvial apron C-3 (Thompson Hollow)

Blue Ridge C-3

Canoe-shaped Mountain A-2 (around Little Fort Valley)

Dip slopes

Entrenched meanders

Escarpments, center of map

Meanders

Mon-linear ridges with rounded crests, on crystalline rocks (Blue Ridge)

Rapids

S-shaped ridge, formed by plunging anticline and syncline B-2

Strike valleys and ridges (center of map)

Synclinal valleys (Fort Valley and Little Fort Valley)

Water gap B-1, B-2

Wide meander belts

Wind gap (Boyer Gap) B-1

WASHINGTON

GRAND COULEE DAM, ELECTRIC CITY

Columbia Plateaus

Walla Walla Plateau

Channeled scabland B-1 (from Long Lake southwestward)
Dam and reservoir (in narrow Columbia River Valley)
Dissected plateau, Columbia Plateau (south of Columbia River)
Dissected upland, Okanogan Highlands (north of Columbia River)
Lake (artificial)
Plateau rim A-1, A-2, A-3
Terraces A-1, A-2, A-3

HOLDEN, SUIATTLE PASS, AGNES MOUNTAIN

Northern Cascade Mountains
Alpine summits of accordant height
Alpine topography
Arete A-2
Cirque
Col A-2
Faceted spurs C-2
Glacial valley (Entiat River, etc.)
Glaciers
Hanging valley A-3 (Holden Creek, Copper Creek)
Pass (Cloudy Pass) A-1, etc.
Ridges B-2, C-3, etc.
Tarn

TANWAX LAKE, LAKE KAPOWSIN, EATONVILLE, ELBE

Pacific Border Province
Puget Trough
Abandoned meanders A-1 (northeast of Alderton)
Bluffs (along Carbon River, etc.)
Braided stream (White River)
Drumlins (in and around Lake Tapps)
Ice-marginal drainage channel (north and northwest of Spar Pole Hill) C-2
Ice-terminal drainage channel (south of Spar Pole Hill) C-2
Kame-kettle complex (east and south of Crocker) B-2
Kame terrace C-1 (Sec. 20, 29, 33, east side of Puyallup River)
Kettle B-3 (Sec. 29, west of Wilkeson)
Lake in kettle (Orting Lake) B-1
Perennial lake raised by dams (Lake Tapps)
U-shaped valley, glaciated (upper Voight Creek) C-3
V-shaped valley, stream cut (Carbon River gorge) C-3

MOUNT RAINIER

Middle Cascade Mountains
Alpine Topography
Cirque
Cirque lake
Col A-1
Falls B-2
Flood plain (Cowlitz River)
Glacial trough (White River) A-3
Glaciers (more than on any peak in continental United States)
Hanging valley (Butter Creek) B-2
High relief topography (more than 13,500 feet)
Matterhorn (Pinnacle Peak)
Moraines (lateral and medial at Cowlitz and Emmins Glaciers)
Mountain peak, isolated (Mount Rainier)
Natural bridge A-2
Nunatak (Saint Andrews Rock and Glacial Island)
Pater Noster lakes A-3
Radial drainage on volcanic cone (Mount Rainier)
Volcanic cone (Mount Rainier)
Wind gap or pass (Chinook Pass) A-3

YAKIMA EAST, ELEPHANT MOUNTAIN, SELAH SPRINGS, POMONA

Columbia Plateaus
Walla Walla Plateau (West Portion)
Antecedent stream (Yakima River)
Anticlinal ridge (Umtanum Ridge, Yakima Ridge, Rattlesnake Hills)
Anticlinal ridge (plunging nose) A-1
Consequent streams on ridges B-3, C-3
Dissected pediment (north and south slopes of Yakima Ridge)
Entrenched meanders A-1
Erosional remnants (Squaw Tit A-1, etc.)
Fault-line valley (Selah Creek A-3, Sec. 21)
Flood plain (Yakima River)
Fold ridges, first cycle (see anticlinal ridge)
Hogback A-3, C-3
Parallel drainage on ridges A-3, C-3
Pediment (at Pease Ranch A-3 and east of Country Club B-1)
Stripped lava flow surface (tilted, slope of Umtanum Ridge)
Subsequent stream (upper Selah Creek)

Synclinal valleys (Moxee Valley, Burbank Valley, etc.)
Water gaps in lava A-1, C-1
Wind gaps A-1 (Sec. 3), B-1 (Sec. 3), B-2 (Sec. 4), C-2 (Sec. 19), etc.

WEST VIRGINIA

FAYETTEVILLE, ANSTED, SUMMERSVILLE DAM, WINONA

Appalachian Plateaus
Kanahwa Section
Coal mining area (on most of map)
Cliff (rim of gorge)
Contrasting topography between east and west portions of map
Dissected plateau
Entrenched meanders
Erosional remnants B-3, C-2
Gorge C-3, etc.
Hanging valleys B-2, C-3
Slipoff slope A-3 (Coontz Bend)
Undercut slope A-3

WISCONSIN-MINNESOTA

ALMA, WABASHA N & S, URNE

Central Lowland
Wisconsin Driftless Section
Abandoned channel (old channel of Zumbro River) C-1
Dendritic drainage developed on flat-lying strata
Dissected uplands
Flood control and navigation development (Mississippi River)
Flood plain (Mississippi River)
Meanders (Buffalo River)
Natural levees (Mississippi River)
Oxbows (Buffalo River)
Ridges of accordant height
River bars (Mississippi River)
River bluffs B-1, C-1
River terraces (Buffalo River)
Sand dunes C-1

WYOMING

MAVERICK SPRING

Wyoming Basin

Alluvial fill C-3

Cuesta A-2, etc.

Deflation depression B-1

Dissected asymmetric dome

Fine textured topography

Hogback A-1, etc.

Hot water well

Mineral spring, poisonous (Maverick Spring)

Oil field

Strike ridges and valleys

Stripped crest of dome A-1

Structurally controlled drainage

Synclinal valley B-3

Trellis drainage A-2, B-2

V-shaped drainage pattern, opening up-dip A-2 (between Secs. 24 and 25)

MOUNT BONNEVILLE, ROVERTS MOUNTAIN, WASHAKIE PARK, LIZARD HEAD PEAK

Middle Rocky Mountains

Alpine Glaciation

Alpine topography

Arete B-3

Cirque

Col b-3 (Hailey Pass, etc.)

Compound cirque leading to U-shaped valley A-3 (North Fork Little Wind River)

Continental Divide

Contrasting topography, between east and west portions of map

Glacier A-2, B-3

Hanging valley B-1, B-2, etc.

Matterhorn (Mount Washakie, etc.)

Pater Noster lakes A-3, B-2

Mountain range (Wind River Range)

Sub-summit erosion surface scoured by ice-cap (west portion of map)

Structurally controlled linear drainage (west portion of map)

Tarn

PAT O'HARA MOUNTAIN, LOGAN MOUNTAIN, JIM MOUNTAIN, DEAD INDIAN MEADOWS

Middle Rocky Mountains

Basin B-3

Cliff (vertical) C-3

Deeply eroded narrow valley or canyon (Rattlesnake canyon)

Escarpment (The Palisades) B-2

Fine textured topography C-1

Flatirons (The Palisades) C-3

Hanging valley (not glaciated) A-2

Pass (Dead Indian Pass - historic point of retreat by Nez Perce Indian Chief Joseph in 1877)

Radial drainage (Pat O'Hara Mountain)

Strongly dissected mountainous highland

U-shaped valley A-1

COSTAL FEATURES AND SHORELINES

Abandoned shoreline (Pleistocene)	
Mobile	Alabama
Ancient beach ridges	
Jacksonville Beach	Florida
Barrier beach	
Jacksonville Beach	Florida
Point Reyes	California
Battered sea cliff	
Point Reyes	California
Bay	
Little Creek	Delaware
Lynn	Massachusetts

Mobile	Alabama
Bay	Carolina
(See Miscellaneous Features)	
Bayhead bar	
Lynn	Massachusetts
Baymouth bar	
Kingston	Rhode Island
Lynn	Massachusetts
Provincetown	Massachusetts
Bayou	
Campti	Louisiana
Philipp	Mississippi
Beach	
Kingston	Rhode Island
Jacksonville Beach	Florida
Bonneville and Provo shorelines	
Jordan Narrows	Utah
Cape	
Point Reyes	California
Provincetown	Massachusetts
Coastal bars	
Jacksonville Beach	Florida
Coastal terrace	
(See Okefenokee, Pamlico, and Wicomico)	

Cove	
Mount Desert	Maine
Crowsfoot delta	
South Pass	Louisiana
Delta	
East Brownsville	Texas
Deltaic channels	
Mobile	Alabama
South Pass	Louisiana
Distributary channel, abandoned	
South Pass	Louisiana
Distributary channels	
Mobile	Alabama
South Pass	Louisiana
Distributary stream on delta	
Point Reyes	California
Diverted outlet	
Bandon	Oregon
Drowned coast line	
Mount Desert	Maine
Drowned River	
Catskill	New York
Washington West	D.C.-MD-VA
Drowned Valley	

Mobile	Alabama
Point Reyes	California
Estuary	
Point Reyes	California
Washington West	D.C.-MD-VA
Fiord	
Mount Desert	Maine
Headland, truncated	
Point Reyes	California
Lagoon	
Point Reyes	California
Provincetown	Massachusetts
Marine terrace	
Bandon	Oregon
Mobile	Alabama
Neck	
Kingston	Rhode Island
Okefenokee terrace	
Lake Wales	Florida
Pamlico shoreline	
Jacksonville Beach	Florida
Mobile	Alabama
Pamlico terrace	
Little Creek	Delaware

Mobile	Alabama
Pass	
South Pass	Louisiana
(See also Mountain Features)	
Point	
Delaware	Michigan
Point Reyes	California
(See also Plateau Features)	
Prograded shore	
Bandon	Oregon
Jacksonville Beach	Florida
Raised beach ridges	
Fennville	Michigan
Jacksonville Beach	Florida
Raised spit and hook	
Fennville	Michigan
Sand spit	
Point Reyes	California
Sea stacks	
Point Reyes	California
Silver Bluff beach, lagoon, and shoreline	
Jacksonville Beach	Florida
Bluff terrace	
Little Creek	Delaware

Spit, compound recurved	
Provincetown	Massachusetts
Tidal marsh or swamp	
Little Creek	Delaware
Lynn	Massachusetts
Tombolo	
Lynn	Massachusetts
Wave-cut cliff	
Point Reyes	California
Wicomico terrace	
Lake Wales	Florida

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ESCARPMENT FEATURES (cliffs, cuestas, hogbacks, etc.)

Allegheny Front	
Altoona	Pennsylvania
Cumberland	MD-PA- W.VA
Ancient river bluffs	
Philipp	Mississippi
Blue Ridge Front	
Mount Mitchell	NC-TN
Peaks of Otter	Virginia
Cliff	
Bright Angel	Arizona
Fayetteville	West Virginia

Guadalupe Peak	Texas
Cuesta	
Delaware	Michigan
Mammoth Cave	Kentucky
Cumberland Front	
Ewing	KY-VA
Eastern escarpment	
Mount Tom	California
Erosional escarpment	
Mount Mitchell	NC-TN
Escarpment	
Anvil Points	Colorado
Juanita Arch	Colorado
Promontory Butte	Arizona
Faceted river bluffs	
Washington West	D.C.-MD-VA
Facets	
Furnace Creek	California
Fault line scarp	
Furnace Creek	California
Flaming Gorge	UT-WY
Fault Scarp	
Chemult	Oregon
Piedmont re-entrants	

Peaks of Otter	Virginia
Rim	
Chemult	Oregon
Promontory, Butte	Arizona
River bluff	
Maumee	Ohio
Alma	Wisconsin-MN
West front of Green Mountains	
Brandon	Vermont

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GLACIATION FEATURES FORMED BY ALPINE GLACIATION

Amphitheater	
Holy Cross	Colorado
(See also Valley Features)	
Arete	
Chief Mountain	Montana
Holy Cross	Colorado
Mount Tom	California
Biscuit-board topography	
Katahdin	Maine
Cirque	
Chief Mountain	Montana
Holy Cross	Colorado
Mount Bonneville	Wyoming

Cirque lake	
Chief Mountain	Montana
Mount Tom	California
Cirque headwall	
Mount Tom	California
Col	
Chief Mountain	Montana
Holy Cross	Colorado
Mount Tom	California
Compound cirque	
Mount Bonneville	Wyoming
Cyclopean stairs	
Chief Mountain	Montana
Holy Cross	Colorado
Mount Tom	California
Finger Lakes	
Chief Mountain	Montana
(See also Glaciation Features, continental)	
Glacial trough	
Chief Mountain	Montana
Mount Tom	California
Glacial valley	
Holden	Washington
Holy Cross	Colorado

Glacier	
Chief Mountain	Montana
Holy Cross	Colorado
Mount Rainier	Washington
Hanging valley	
Chief Mountain	Montana
Holy Cross	Colorado
Mount Rainier	Washington
(See also Valley Features)	
Lateral moraine	
Mount Tom	California
Matterhorn	
Chief Mountain	Montana
Mont Bonneville	Wyoming
Medial moraine	
Mount Rainier	Washington
Nunatak	
Mount Rainier	Washington
Pater Noster lakes	
Mount Bonneville	Wyoming
Mount Tom	California
Sub-summit erosion surface scoured by ice cap	
Mount Bonneville	Wyoming
Tarn	

Mount Bonneville	Wyoming
Mount Tom	California
U-shaped valley	
Chief Mountain	Montana
Mount Tom	California

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GLACIATION FEATURES RESULTING FROM CONTINENTAL GLACIATION

Abandoned glacial channels	
Jackson	Michigan
Abraded bedrock hills	
Brandon	Vermont
Monadnock	New Hampshire
Bedrock knobs	
Catskill	New York
Lynn	Massachusetts
Continental glaciation (southern margin)	
Paterson	New Jersey
Coteau du Missouri	
Pelican Lake	North Dakota
Deranged drainage	
Amsterdam	New York
Monadnock	New Hampshire
Dissected glaciated plateau	
Amsterdam	New York

Catskill	New York
Drainage diversion glacial	
New Britain	Connecticut
Drumlins	
Ayer	Massachusetts
Lake Tapps	Washington
Drumloldal hills	
Kingston	Rhode Island
End moraine	
Kingston	Rhode Island
Pelican Lake	North Dakota
Voltaire	North Dakota
Esker	
Delaware	Michigan
Jackson	Michigan
Finger lake	
Ithaca West	New York
Glacial drift	
Brandon	Vermont
Ticonderoga	N.Y.-VT
Glacial gorges or spillways	
Amsterdam	New York
Glacial Lake Agassiz	
Emerado	North Dakota

Glacial lake bottom deposits	
Ayer	Massachusetts
Glacial Lake Maumee	
Maumee	Ohio
Glacial Lake Vermont	
Ticonderoga	N.Y.-VT
Glacial linear ridges	
Voltaire	North Dakota
Glacially deepened trough	
Ithaca West	New York
Ticonderoga	N.Y.-VT
Glacially modified hills	
Paterson	New Jersey
Glacially rounded hills	
Virginia	Minnesota
Glaciated plain (mantled with loess)	
Adel	Iowa
Ground moraine	
Lansford	North Dakota
Hills, glacially scoured and plucked	
Ticonderoga	N.Y.-VT
Ice-carved strike ridges	
Catskill	New York
Ice-contact slope	

Paterson	New Jersey
Ice-marginal drainage channel	
Lake Tapps	Washington
Ice-terminal drainage channel	
Lake Tapps	Washington
Intermorainal lowland	
Fennville	Michigan
Kalamazoo Moraine	
Jackson	Michigan
Kame-kettle complex	
Lake Tapps	Washington
Kames	
Ayer	Massachusetts
Jackson	Michigan
Kame plains	
Ayer	Massachusetts
Kame terrace	
Ayer	Massachusetts
Paterson	New Jersey
Kames and kettles	
Kingston	Rhode Island
Kettle holes	
Monadnock	New Hampshire
Kettle (with lake or pond)	

Jackson	Michigan
Pelican Lake	North Dakota
Knobs and kettles	
Jackson	Michigan
Lake Border Moraine	
Fennville	Michigan
Lakes and ponds in glacially scoured bedrock basins	
Lynn	Massachusetts
Mount Desert	Maine
Lobate lineation	
Voltaire	North Dakota
Lobate washboard moraine	
Pelican Lake	North Dakota
Meltwater channel	
Paterson	New Jersey
Morainal lakes	
Monadnock	New Hampshire
Morainic topography	
Jackson	Michigan
Mountains and islands modified by glaciation	
Mount Desert	Maine
Obstructed drainage	
Brandon	Vermont
Ticonderoga	N.Y.-VT

Outwash channels	
Landford	North Dakota
Voltaire	North Dakota
Outwash filled channels	
Kingston	Rhode Island
Outwash terrace	
New Britain	Connecticut
Voltaire	North Dakota
Pitted outwash plain	
Jackson	Michigan
Kingston	Rhode Island
Ponds in kettles	
Ayer	Massachusetts
Jackson	Michigan
Poorly integrated drainage	
Jackson	Michigan
Pelican Lake	North Dakota
Spillway from Glacial Lake Hartford	
New Britain	Connecticut
Strand lines, Glacial Lake Agassiz	
Emerado	North Dakota
Swell and swale topography	
Pelican Lake	North Dakota
Terminal moraine	

Jackson	Michigan
Valparaiso Moraine	
Fennville	Michigan

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MISCELLANEOUS FEATURES

Badlands	
(See Plateau Features)	
Carolina bay	
Mullins	South Carolina
Continental Divide	
Chief Mountain	Montana
Holy Cross	Colorado
Mount Bonneville	Wyoming
Contrasting topography	
Fayetteville	West Virginia
Flaming Gorge	Utah-WY
Whitwell	Tennessee
Dam and reservoir	
Ennis	Montana
Grand Coulee Dam	Washington
Norris	Tennessee
Fall Line	
Washington West	D.C.-MD-VA
Fine textured topography	

Maverick Spring	Wyoming
Sheep Mountain Table	South Dakota
Flood control and navigation development	
Alma	Wisconsin-Minnesota
Great Raft	
Campti	Louisiana
Highest point in eastern United States	
Mount Mitchell	N.C.-TN
Highest point in Texas	
Guadalupe Peak	Texas
High relief topography	
Mount Rainier	Washington
International Boundary (channel of Rio Grande)	
East Brownsville	Texas
Intracoastal Waterway	
Jacksonville Beach	Florida
Laurentian Divide	
Virginia	Minnesota
Low relief	
East Brownsville	Texas
Lowest elevation in United States	
Furnace Creek	California
Natural bridge	
Furnace Creek	California

Juanita Arch	Colorado
Mount Rainier	Washington
River development	
Norris	Tennessee
Rock sculpture controlled by fractures	
Mount Desert	Maine
Sea level and below sea level contours	
Furnace Creek	California
Underwater contours (depth curves)	
Ventura	California

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MOUNTAIN FEATURES (ridges, hills, faults, folds, etc.)

Accordant summits	
Strasburg	Virginia
Anticline	
Altoona	Pennsylvania
Anticlinal ridge	
Cumberland	MD-PA-W.VA
Yakima East	Washington
Canoe-shaped mountain	
Strasburg	Virginia
Tyrone	Pennsylvania
Concave slope	
Monadnock	New Hampshire

Convex slope	
Ithaca West	New York
Dissected asymmetric dome	
Maverick Spring	Wyoming
Dissected block mountains	
Furnace Creek	California
Somona Range	Nevada
Dissected dome mountains	
Hot Springs	South Dakota
Dissected upland	
Ironton	Missouri
Fault block mountains	
New Britain	Connecticut
Ticonderoga	N.Y.-VT
Fault line scarp	
Delaware	Michigan
Fault line valley	
(See Valley Features)	
Flatirons	
Pat O'Hara Mountain	Wyoming
Folded mountains	
Waldron	Arkansas
Fold ridges	
Yakima East	Washington

Folds en echelon	
Waldron	Arkansas
Hogback	
Cumberland	MD-PA-W.VA
Tyrone	Pennsylvania
Waldron	Arkansas
Island mountains (inselbergs)	
Antelope Peak	Arizona
Isolated ranges	
Sonoma Range	Nevada
Linear ridge controlled by bedrock structure	
Ayer	Massachusetts
Low divide	
Whitwell	Tennessee
Matterhorn	
(See Glaciation Features)	
Migrating divide	
Bright Angel	Arizona
Monadnock	
Monadnock	New Hampshire
Mountain peak, isolated	
Monadnock	New Hampshire
Mount Rainier	Washington
Pass	

Chief Mountain	Montana
Holy Cross	Colorado
Ridges of accordant height	
Alma	Wisconsin-Minnesota
Ridges formed of folded hard strain	
Waldron	Arkansas
San Andreas Rift	
Point Reyes	California
Sinuuous divide	
Amsterdam	N.Y.
S-shaped ridge	
Strasburg	Virginia
Strike ridge	
Brandon	Vermont
Norris	Tennessee
Strongly dissected mountainous highland	
Katahdin	Maine
Pat O'Hara Mountain	Wyoming
Structurally controlled ridges	
Tyrone	Pennsylvania
Synclinal mountain	
Tyrone	Pennsylvania
Wind gap	
Delaware	Michigan

New Britain	Connecticut
Yakima East	Washington
Esplanade	
Juanita Arch	Colorado
Klippe	
Chief Mountain	Montana

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PLAINS FEATURES

Aggraded desert plain	
Sonoma Range	Nevada
Alluvial plain	
(See Valley Features)	
Desert plain	
Antelope Peak	Arizona
Dissected lacustrine plain	
Maumee	Ohio
Dissected plain	
Hillsboro	Kentucky
Dissected till plain	
Effingham	Illinois
Flood plain	
(See Valley Feature)	
Glaciated plain	

(See Glaciation Feature)	
Lacustrine plain	
Emerado	North Dakota
Mississippi alluvial plain	
Philipp	Mississippi
Plain trenched by creek and river	
Hillsboro	Kentucky

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PLATEAU FEATURES (buttes, mesas, outliers, etc.)

Apex of Ozark Plateau	
Ironton	Missouri
Badlands (dissected plateau)	
Sheep Mountain Table	South Dakota
Benches controlled by bedrock	
Whitwell	Tennessee
Butte	
Bright Angel	Arizona
Chemult	Oregon
Cuesta	
Delaware	Michigan
Mammoth Cave	Kentucky
Promontory Butte	Arizona
Dip slope	
Cumberland	MD-PA-W.VA

Delaware	Michigan
Dissected plateau	
Fayettvill	West Virginia
Renovo West	Pennsylvania
Sheep Mountain Table	South Dakota
Dissected plateau of strong relief	
Anvil Points	Colorado
Bright Angel	Arizona
Erosional remnant	
Fayetteville	West Virginia
Thousand Springs	Idaho
Erosion surface	
Chief Mountain	Montana
Mesa	
Juanita Arch	Colorado
Promontory Butte	Arizona
Okanogan Highlands	
Grand Coulee Dam	Washington
Outlier	
Hillsboro	Kentucky
Sheep Mountain Table	South Dakota
Rover	Tennessee
Piedmont remnants	
Flaming Gorge	Utah-Wyoming

Plateau	
Bright Angel	Arizona
Point	
Bright Angel	Arizona
Summit erosion surface remnants	
Mount Bonneville	Wyoming
Table	
Marysvale	Utah
Sheep Mountain Table	South Dakota
Table-top Mountains	
Santiago Peak	Texas

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SOLUTION FEATURES

Blind valleys (valley sinks)	
Mammoth Cave	Kentucky
Disappearing stream	
(See Water Feature)	
Karst topography	
Mammoth Cave	Kentucky
Oolitic	Indiana
Lakes in sinks	
Bottomless Lakes	New Mexico
Sinks	
Mammoth Cave	Kentucky

Rover

Tennessee

[return to top of page](#)**VALLEY FEATURES (Basins, channels, drainage patterns, fans, meanders, terraces, etc.)**

Abandoned channels

East Brownsville

Texas

Hillsboro

Kentucky

Thousand Springs

Idaho

Abandoned entrenched meanders

Renovo West

Pennsylvania

Abandoned meander

Oolitic

Indiana

Alluvial fan

Ennis

Montana

Alluvial fan, coalescing

Furnace Creek

California

Alluvial fan, dissected

Furnace Creek

California

Mount Tom

California

Alluvial fan

Maverick Spring

Wyoming

Alluvial plain

Antelope Peak

Arizona

Philipp

Mississippi

Alluviated lowland

Ventura	California
Amphitheater	
Bright Angel	Arizona
Anticlinal valley	
Altoona	Pennsylvania
Whitwell	Tennessee
Arroyo	
Antelope Peak	Arizona
San Luis Rey	California
Bajada	
Antelope Peak	Arizona
Sonoma Range	Nevada
Barranca	
Antelope Peak	Arizona
Basin	
Guadalupe Peak	Texas
Juanita Arch	Colorado
Warm Springs	Georgia
Bed of drained shallow lake	
Campti	Louisiana
Bolson	
Furnace Creek	California
Guadalupe Peak	Texas
Sonoma Range	Nevada

Broad valleys eroded in soft rock

Flaming Gorge

Utah-Wyoming

Canyon

Bright Angel

Arizona

Flaming Gorge

Utah-Wyoming

Juanita Arch

Colorado

Centrifugal drainage (originates on map)

Ironton

Missouri

Channeled scabland

Grand Coulee Dam

Washington

Columbia River Valley

Grand Coulee Dam

Washington

Cove

Whitwell

Tennessee

Dendritic drainage

Effingham

Illinois

Dendritic drainage developed on flat lying strata

Alma

Wisconsin-Minnesota

Dendritic drainage, rectangular

Hillsboro

Kentucky

Disappearing intermittent streams

Bray

California

Turkey Mountain

Texas

Dissected pediment

Derby	Colorado
Yakima East	Washington
Dissected terraces	
Altoona	Pennsylvania
Tyrone	Pennsylvania
Entrenched creeks and river	
Renovo West	Pennsylvania
Entrenched meander	
Fayetteville	West Virginia
Oolitic	Indiana
Fault controlled valley	
Hot Springs	South Dakota
Fault line valley	
Bright Angel	Arizona
Fault valley	
Marysvale	Utah
Flats	
Flaming Gorge	Utah-Wyoming
Guadalupe Peak	Texas
Flood plain	
Camden	Missouri
Menan Buttes	Idaho
Gorge	
Bright Angel	Arizona

Cumberland	MD-PA-W.VA
Gorge, postglacial	
Catskill	New York
Gully deeply eroded	
Ship Rock	New Mexico
Hanging valley	
Fayetteville	West Virginia
(See also Glaciation Feature)	
Imminent cut-off	
Renovo West	Pennsylvania
Imminent stream piracy	
Hillsboro	Kentucky
Immature drainage	
Delaware	Michigan
Meander channel, re-occupied	
Hillsboro	Kentucky
Meander core	
Oolitic	Indiana
Renovo West	Pennsylvania
Meander patterns	
Philipp	Mississippi
Meanders	
East Brownsville	Texas
Strasburg	Virginia

Voltaire	North Dakota
Meander scars	
Camden	Missouri
Philipp	Mississippi
Meandering steam in flood plain	
Menan Buttes	Idaho
Narrows	
Cumberland	MD-PA-W.VA
Jordan Narrows	Utah
Natural levee	
Campti	Louisiana
East Brownsville	Texas
Nonintegrated drainage	
Ashby	Nebraska
Old channel with placer deposits	
Galice	Oregon
Parallel drainage	
Antelope Peak	Arizona
Ithaca West	New York
Pediment	
Antelope Peak	Arizona
Yakima East	Washington
Playa	
Furnace Creek	California

Guadalupe Peak	Texas
Sonoma Range	Nevada
Reverse drainage	
Catskill	New York
River terraces	
Alma	Wisconsin-Minnesota
Hillsboro	Kentucky
River with sand channel	
Turkey Mountain	Texas
Rock terrace	
Bright Angel	Arizona
Salt basin	
Guadalupe Peak	Texas
Sand bars and scrolls (along river)	
Camden	Missouri
Slipoff slope	
Mammoth Cave	Kentucky
Oolitic	Indiana
Stream piracy (capture)	
Adel	Iowa
Cumberland	MD-PA-W.VA
New Britain	Connecticut
Strike valley	
Brandon	Vermont

Catskill	New York
Ewing	KY-VA
Structurally controlled dissected terraces	
Altoona	Pennsylvania
Tyrone	Pennsylvania
Structurally controlled drainage	
Cumberland	MD-PA-W.VA
Structurally controlled valleys	
Tyrone	Pennsylvania
Subsequent stream	
Yakima East	Washington
Synclinal valley	
Strasburg	Virginia
Tyrone	Pennsylvania
Yakima East	Washington
Terrace, alluvial	
Ennis	Montana
Tonto Platform	
Bright Angel	Arizona
Trellis drainage	
Cumberland	MD-PA-W.VA
Waldron	Arkansas
Undercut slope	
Mammoth Cave	Kentucky

Oolitic	Indiana
Underground drainage flowing from caves	
Whitwell	Tennessee
V-shaped valley	
Bright Angel	Arizona
Wash or channel, sandy	
Ship Rock	New Mexico
Turkey Mountain	Texas
Wide meander belts	
Strasburg	Virginia

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VOLCANIC FEATURES

Ancient Mount Mazama	
Crater Lake National Park and Vicinity	Oregon
Caldera	
Crater Lake National Park and Vicinity	Oregon
Cinder cones	
Bray	California
Menan Buttes	Idaho
Collapse depressions	
Bray	California
Collapsed volcanic cone	
Crater Lake National Park and Vicinity	Oregon

Crater	
Crater Lake National Park and Vicinity	Oregon
Menan Buttes	Idaho
Dikes, radial	
Ship Rock	New Mexico
Dissected volcano	
Crater Lake National Park and Vicinity	Oregon
Eroded volcanic mountains	
Bray	California
Faulted volcanic cone	
Chemult	Oregon
Lava area (malpais)	
Bray	California
Lava, recent	
Menan Buttes	Idaho
Nuees ardentes deposits	
Crater Lake National Park and Vicinity	Oregon
Parasitic cone	
Bray	California
Crater Lake National Park and Vicinity	Oregon
Pumice sheet	
Chemult	Oregon
Radial drainage on volcanic cone	
Mount Rainier	Washington

Recent vulcanism	
Chemult	Oregon
Rim of caldera	
Crater Lake National Park and Vicinity	Oregon
Shield volcano	
Crater Lake National Park and Vicinity	Oregon
Stripped lava flow surface	
Yakima East	Washington
Volcanic cone	
Chemult	Oregon
Mount Rainier	Washington
Volcanic cone, breached	
Crater Lake National Park and Vicinity	Oregon
Volcanic cone within caldera	
(Wizard Island)	
Crater Lake National Park and Vicinity	Oregon
Volcanic necks and plugs	
Santiago Peak	Texas
Ship Rock	New Mexico
Water gap in lava	
Yakima East	Washington

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WATER FEATURES (lakes, streams, etc.)

Abandoned channels	
(See Valley Features)	
Abandoned river mouths	
Fennville	Michigan
Antecedent stream	
Yakima East	Washington
Artificial drainage	
Jackson	Michigan
Bayou	
(See Coastal Features)	
Braided stream	
Bottomless Lakes	New Mexico
Ennis	Montana
Consequent streams	
Yakima East	Washington
Cutoff meanders	
Fennville	Michigan
Philipp	Mississippi
Deep lakes in solution basins	
Bottomless Lakes	New Mexico
Lakes Wales	Florida
Disappearing stream	
Mammoth Cave	Kentucky
Oolitic	Indiana

Rover	Tennessee
Finger Lake	
(See Glaciation Features)	
High water table	
Ashby	Nebraska
Kettle with lake	
(See Glaciation Features)	
Lake dammed by landslide	
Marysvale	Utah
Lake in drowned tributary valley	
Campti	Louisiana
Marshy divide	
Crawford Notch	New Hampshire
Ithaca West	New York
Mineral springs	
Furnace Creek	California
Maverick Spring	Wyoming
Morainal lakes	
(See Glaciation Features)	
Oxbows	
Voltaire	North Dakota
Oxbow lake	
Campti	Louisiana
East Brownsville	Texas

Oxbow swamp	
Philipp	Mississippi
Ponds	glacial
(See Glaciation Features)	
Ponds heading drainage	
Crawford Notch	New Hampshire
Poorly integrated drainage	
(See Glaciation Feature)	
Post-glacial lake in drowned valley	
Ticonderoga	N.Y.-VT
Rapids	
Maumee	Ohio
Thousand Springs	Idaho
River with sand channel	
(See Valley Features)	
Shallow lakes on costal terrace	
Lake Wales	Florida
Slough	
Campti	Louisiana
Menan Buttes	Idaho
Springs	
Crater Lake National Park and Vicinity	Oregon
Thousand Springs	Idaho
Stream piracy	

(See Valley Features)	
Subsequent stream	
Yakima East	Washington
Superposed stream	
Cumberland	MD-PA-W.VA
Ennis	Montana
Warm Springs	GA
Waterfall	
Ithaca West	New York
Water Gap	
(See Mountain Features)	
Waterholes	
Turkey Mountain	Texas

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WIND FEATURES

Blowout dune	
Fennville	Michigan
Buried town (shifting sands)	
Fennville	Michigan
Clay dune	
East Brownsville	Texas
Deflation basins	
Bottomless Lakes	New Mexico

Dune ridges, some transverse	
Ashby	Nebraska
Dunes and beach ridges	
Jacksonville Beach	Florida
Dunes and deflation hollows	
Sheep Mountain Tables	South Dakota
Dune topography	
Ashby	Nebraska
Lakeshore dunes	
Fennville	Michigan
Large scale dune ridges	
Ashby	Nebraska
Sand bars and scrolls	
(See Valley Features)	
Sand dunes	
Commerce City	Colorado
Fennville	Michigan
Provincetown	Massachusetts
Sand hills	
Ashby	Nebraska

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