

Glossary

A

Allostratigraphic Allostratigraphy defines map units based on recognition and delineation of their bounding discontinuities (for example, channel scours, valley scours, traceable soil horizons).

Allunit A mapping measurement unit derived from allostratigraphic techniques.

Alluvium Clay, silt, sand, gravel, or other particulate material deposited by a river or stream. Alluvial valley fill refers to these sediment deposits.

Aquatic habitat The native environment or specific surroundings where a plant or animal naturally grows or lives in, on, or near the water.

Anthropogenic Derived from human activities.

Avulsion A relatively sudden shift of the river channel to a new location leaving an abandoned channel.

B

Basal area The cross sectional area of a tree trunk or stem at breast height.

C

Cavitation Applied to tree physiology, the blockage of the sap column by a large negative water potential resulting in the infiltration of air into the xylem.

Channel Fill Alluvial sediments that have been deposited in a former river channel.

D

Deposition The accumulation of sediments because of slowing movement of transporting water.

Digital Elevation Model (DEM) A digital representation of elevation data in a raster form (see raster below). DEMs consist of a sampled array of elevations at regularly spaced intervals.

E

Erosion The wearing away and removal of earth materials by weathering, solution, corrosion, or transportation by running water, waves, moving ice, and wind currents.

Evapotranspiration The combined processes by which water is transferred from the earth's surface to the atmosphere through evaporation of water, the capillary fringe of the ground-water table, and the transpiration of ground water by plants whose roots tap the capillary fringe of the ground-water table.

Fluvial Refers to topics related to flowing water.

G

Geochronology The science of determining the age of rocks, fossils, and sediments using a variety of dating methods.

Geomorphology The study of landforms, including their origin and evolution, and the processes that shape them.

H

Holocene Epoch A geologic time extending from about 10,000 years ago to the present.

Hydroperiod The seasonal and cyclical pattern of water in a stream, river, or wetland.

L

Lithofacies A mappable subdivision of a designated stratigraphic unit based on physical sedimentary characteristics, including mineralogy and particle size distribution.

Lithology The study, description, and classification of the physical character of a rock, sediment, or geologic formation.

Landsat Thematic Mapper (TM) A satellite instrument that detects and records electromagnetic radiation from the earth; used for mapping land cover distributions.

M

Meander loop allunit An allostratigraphic unit comprising a point bar and bounding channel-fill allunits. Interpreted to record

lateral migration of a single point bar during development of a single river meander.

Mississippian period In geologic time, the period from 360-325 million years ago.

Multi-spectral digital satellite image Satellite-based images composed from multiple bands of the visible or infrared region of electromagnetic radiation.

Optically stimulated luminescence (OSL) dating A method of establishing the age of sediments based on time elapsed since their last exposure to light prior to burial.

O

Orthophotographic image An image that has been rectified to remove distortion.

P

Paleozoic Era The geologic eras extending from 544 to 248 million years ago.

Panchromatic image An image constructed from many discrete wavelength bands rather than individual bands; typically used to describe images produced from dedicated equipment aboard earth observation satellites.

Pedology The scientific study of soils, their origins, characteristics, and uses.

Pleistocene Epoch In geologic time, 1.8 million to approximately 10,000 years ago.

Point bar Landform on the inside of river bends where sediment accumulates as the bend migrates laterally across the valley.

Potentiometric surface Surface that represents the static head of water in an aquifer; it is defined by the altitude to which water will rise in tightly cased wells from a given point in an aquifer.

Pressure transducers Instrumentation used to measure water levels in ground-water level monitoring wells.

Q

Quaternary Period In geologic time, from 1.8 million years ago to the present, encompassing the Holocene and Pleistocene epochs.

Quasi-experiments Systematic experiments with controls and treatments, but lacking complete randomization.

R

Raster image data Spatial data acquired by a remote sensing device and expressed as a matrix of cells or pixels (an abbreviation for picture element).

Riparian Relating to the banks of a river or stream, and to associated plant and animal communities.

S

Sedimentology Study of the history and processes of sediment transport and deposition.

Seismic refraction survey A geophysical survey that utilizes the refraction of seismic waves on geologic layers and rock/soil units in order to characterize the subsurface geologic conditions and geologic structure.

Side-channel chute Secondary river channels that typically cut across a river bend.

Siliciclastic bedrock formations Rock units composed primarily of silicate mineral fragments.

Splay A typically sandy deposit formed when river water flows overbank and expands laterally, dropping its sediment.

Stochastic Characterized by random probability.

Stomata Pores in the epidermis of a leaf or stem through which gases and water vapor pass.

Strata A layer of sedimentary rock or sediment with relatively uniform composition.

Stratigraphy The branch of geology concerned with the formation, composition, ordering in time, and arrangement in space of sedimentary rocks and sediments.

Substrate Topmost layer of sediment at the bottom of a river or lake.

Surficial geology The study of sediment and soils at and near the land surface.

T

Transmissivity The rate of water transmission through a unit width of porous sediment or rock.

Transpiration The process by which water vapor escapes from plants through the leaves to enter the atmosphere.

Trophic level The position occupied by an organism in a food chain.

Xeric plant species A plant that requires little moisture or a habitat containing little moisture.

X

Xylem Supporting and water-conducting tissue of vascular plants.

Acronyms

BAI Basal area increments

DEM Digital elevation model

DBH Diameter at breast height

GPS Global Positioning System

MDC Missouri Department of Conservation

NAD 83 North America Datum of 1983

NAVD 88 North America Vertical Datum of 1988

NGVD 29 National Geodetic Vertical Datum of 1929

NWIS National Water Quality Information System

OSL Optically stimulated luminescence

SWH Shallow water habitat

TM Thematic mapper

USACE U.S. Army Corps of Engineers

USFWS U.S. Fish and Wildlife Service

USGS U.S. Geological Survey

