

What are words used when discussing dams?

- Abutment:** Valleyside part against which dam is constructed (with left and right abutments defined by observer looking downstream from the dam).
- Acre-foot:** Unit of measure (for example, 1 foot depth of water covering an acre of land).
- Berm:** Nearly horizontal step (bench) in upstream or downstream sloping face of dam.
- Boil:** Disruption of soil surface due to water discharging from below the surface with possible eroded soil deposited in form of ring (miniature volcano) around disruption.
- Breach:** Opening through dam that allows reservoir draining; controlled is intentionally constructed opening and uncontrolled is unintended failure of the dam.
- Centerline:** Longitudinal view along centerline axis of dam
- Crest:** Uppermost elevation of embankment dam.
- Conduit:** Closed channel that conveys water through, around, or under the dam.
- Control section:** Usually level segment in profile of open channel spillway above which reservoir water discharges through spillway.
- Cross section:** Slice through dam showing elevation vertically and direction of natural water flow horizontally from left to right.
- Dam:** Artificial barrier generally constructed across a watercourse for purpose of impounding or diverting water.
- Dam operator:** Person(s) or entities with responsibility for operation and maintenance of dam.
- Drain, toe, or foundation:** Water collection system of sand and gravel and typically pipes along downstream portion of dam to collect seepage and convey it to a safe outlet.
- Drainage area (watershed):** Geographic area on which rainfall flows into the dam.
- Drawdown:** Lowering or releasing of reservoir water level over time.
- Emergency:** Condition that develops unexpectedly, endangers structural integrity of dam and/or downstream human life and property, and requires immediate action.
- Emergency Action Plan:** Formal document identifying potential emergency conditions that may occur at dam and specifying preplanned actions to minimize potential failure of the dam or minimize failure consequences including loss of life, property damage, and environmental impacts.
- Evacuation map:** Map showing geographic area downstream of a dam that should be evacuated if it is threatened to be flooded by a breach of dam or other large discharge.
- Failure mode:** Process resulting from an existing inadequacy or defect leading to dam failure and uncontrolled release of the reservoir.
- Filter:** Layers of sand and gravel in a drain that allow seepage through an embankment to discharge into drain without eroding embankment soil.
- Foundation:** Natural soil or rock on which the dam is placed.
- Freeboard:** Vertical distance between a stated water level in reservoir and dam top.
- Gate:** Operable, watertight valve to manage discharge of water.
- Groin:** Area along intersection of dam face and abutment.
- Hazard classification:** System that categorizes dams (high, significant, or low) according to the degree of their potential to create adverse incremental consequences such as loss of life, property damage, or environmental

impacts of a failure or misoperation of a dam.

Height, dam: Vertical distance between the lowest point along the top of the dam and lowest point at downstream toe, which usually occurs in bed of outlet channel.

Hydrograph, inflow or outflow: Graphical representation of either the flow rate or flow depth at a specific or breach point above or below the dam over time for a specific flood occurrence.

Hydrology: Science of the water — its properties, distribution, use, circulation — of the earth and their environmental relationships and also of the atmosphere.

Instrumentation: Devices installed into or near dams that provide measurements to evaluate the structural behavior and other performance parameters of the dam and appurtenant structures.

Inundation area or map: Geographic area downstream of dam that would be flooded by a breach of the dam or other large discharge.

Jurisdictional dam (in Kansas): State-regulated dams are 25' or more in height or 6' high with storage capacity of 50 or more acre-feet measured from auxiliary spillway top.

Levee: Long, low embankment alongside a river to protect land from flooding.

Outlet works: Appurtenant structure that provides for controlled passage of normal (principal spillway) water flows through the dam.

Piping: Progressive seepage destruction of an embankment or foundation by internal erosion.

Probable Maximum Precipitation (PMP) or Flood (PMF): The theoretically greatest precipitation or resulting flood meteorologically feasible for a given duration over a specific drainage area at a particular geographical location.

Reservoir: Body of water impounded or potentially impounded by dam.

Riprap: Layer of large rock, precast blocks, bags of cement, or other suitable material, generally placed on an embankment or along a watercourse as protection against wave action, erosion, or scour.

Risk: Measure of the likelihood and severity of an adverse consequence.

Seepage: Natural movement of water through the embankment, foundation, or abutments of the dam.

Slide: Movement of a mass of earth down a slope on dam embankment or abutment.

Slope: Side of an embankment and also used in measuring ratios.

Spillway (auxiliary or emergency): Appurtenant structure that provides controlled conveyance of excess water through, over, or around dam.

Spillway capacity: Discharge spillway safely conveys with reservoir at maximum design elevation.

Spillway crest: Lowest level at which reservoir water can flow into spillway.

Stilling basin: Area constructed to dissipate energy of fast-flowing water to prevent erosion.

Tailwater: Body of water immediately downstream of embankment at a specific point in time.

Toe of dam: Junction of the upstream or downstream face of an embankment with ground surface.

Trashrack: Device located at an intake to prevent floating or submerged debris from entering intake.

Tributary: Stream that flows into a larger stream or body of water.

Watershed: Area of land where all water under it or drains off it goes to the same place.

Weir: Low dam across a stream to raise upstream water level.

Sources for this publication include the Natural Resources Conservation Service; Association of State Dam Safety Officials; U.S. Department of the Interior (Dams and Public Safety); Environmental Protection Agency; State of Kansas regulations; and National Dam Safety Program, U.S. Department of Homeland Security, Federal Emergency Management Agency (Federal Guidelines for Dam Safety: Glossary of Terms)