Bullough's Dam

Glossary of Terms

Structural Components

- **Crest** – The top surface of the dam, often used for access or maintenance.
- **Core Wall** – An impervious barrier (often clay or concrete) built within the embankment to reduce seepage through the dam; a core wall is not a structural, load bearing wall but rather prevents seepage.
- **Upstream Slope** – The water-facing side of the reservoir.
- **Downstream Slope** – The side facing away from the reservoir.
- **Toe** – The junction where the slope meets the foundation (upstream toe and downstream toe).
- **Abutments** – The side supports at both ends of a dam where the dam meets the existing topography.
- **Spillway** – A controlled waterway designed to safely discharge excess water.
- **Low level Outlet -** a conduit or pipe located near the base (lowest part) of the dam that allows for the controlled release of water from the reservoir behind the dam.

Distress Features & Surface Conditions

- **Scarping (Scarp Formation)** – The formation of a steep, step-like surface or near-vertical face on the slope, typically resulting from localized erosion, sliding, or sloughing.
- **Sloughing (Slumping)** – A shallow, localized failure of soil on a slope, leaving a concave depression.
- **Cracking** – Linear openings on the crest or slopes, often caused by differential settlement, drying, or structural stress.

- **Depressions** – Low spots or sagging areas on the crest, indicating possible internal voids or settlement.
- **Rutting** – Surface grooves or depressions caused by traffic or concentrated flow.
- **Seepage** – The movement of water through or beneath the dam, often along permeable paths such as the foundation, the embankment, or animal burrows. While some seepage is normal, uncontrolled or concentrated seepage can lead to internal erosion (piping) and potential structural failure.

Erosion & Environmental Factors

Surface Erosion – Soil loss from the crest or slopes caused by rainfall, runoff, or wind.

- **Gullying** – Formation of deep channels from concentrated runoff.
- **Animal Burrows** – Holes created by burrowing animals that can form seepage paths.
- **Vegetation Encroachment** – Growth of trees and shrubs on the dam, which can weaken the structure and conceal defects.

Hydraulic & Spillway Concerns

- **Overtopping** – Water flowing over the crest of the dam, often leading to rapid erosion and potential failure.
- **Spillway Erosion** – Structural damage at the spillway discharge area caused by high-velocity water.

Failure Terms

- **Breach** – The complete or partial opening of the dam caused by structural failure, overtopping, or internal erosion, resulting in uncontrolled release of the reservoir.

Dam Overview