



Glossary of Terms

Drumheller Resiliency & Flood Mitigation Office

Adaptive Fill

Adaptive fill is the material used to construct a temporary berm in locations where a permanent berm is not feasible. The adaptive fill material typically consists of compacted clay which provides a barrier between the river and adjacent community. After water levels have receded post flood, the adaptive fill is collected and stored for re-use during a future flood event.

Appraised Value

Appraised value is an evaluation of a property's value based on a given point in time. The evaluation is performed by a professional appraiser.

Aquatic Environment

Aquatic environments include oceans; groundwater; glaciers and ice caps; snow and ice; and lakes rivers and streams, all of which contain diverse biotic and microbial populations.

Assessed Value

Assessed value is the dollar value assigned to a home or other piece of real estate for property tax purposes. It takes into account the value of comparable properties in the area, among other factors.

Berm

A linear raised structure which can act as an extension of the riverbank and act to prevent overland flooding at times of high river levels.

Borehole

A borehole is a hole that is bored beneath the ground during a geotechnical investigation. It can be used to collect soil, water and rock samples and cores from underground to determine the geotechnical make-up of the sub surface materials.

Conveyance

Conveyance or hydraulic conveyance refers to the geometric characteristic of a river or watercourse at a given point that determines the flow-carrying capacity at that point.

Design Flood

A hypothetical flood, having a specific likelihood of occurrence (e.g., 1% annual exceedance probability), used for design of flood infrastructure.

Dike

An engineered embankment, wall, landform or any other thing that is constructed, assembled, or installed to prevent overland flooding.

Embedding

To fix an object firmly and deeply in a surrounding mass.

Flood Barrier

An earthen embankment (known as a berm or a dike), flood wall, or a temporary wall constructed of sandbags or other materials built to provide protection from floods.

Flood Fringe

The portion of the floodplain outside of the floodway that is typically covered by a 100-year flood (1% annual exceedance), as defined by Alberta Environment.

Flood Hazard Area

In Alberta, the flood hazard area is the area that would be flooded in a 1:100 year return period (or 1% chance) flood. It is typically divided into two zones: floodway and flood fringe. In some areas, there may also be a third zone, called the overland flow zone, which is considered a special part of the flood fringe.

Flood Hazard Mapping

Mapping that shows flood hazard areas along streams and rivers.

Flood Mitigation

Activities or infrastructure which reduce or eliminate the impacts of flood emergencies or anticipated emergencies (can include structural measures, public communication, emergency response planning, municipal development planning and flood monitoring and forecasting).

Floodplain

The area of land adjacent to a watercourse between the top of the bank to the next significant change in topography which can be expected to be inundated or covered with surface water.

Floodway

The channel of a watercourse and the adjacent land areas that must be reserved in order to discharge base floods; it typically represents the area of highest flood hazard where flows are deepest, fastest, and most destructive during the 1:100 design flood, as defined by Alberta Environment.

Flow Rate

Flow is a measure of the amount of water travelling past a point in a given amount of time. In rivers, the flow of water is typically reported in cubic metres per second (m³/s). A cubic meter is the volume of water contained in a cube of one metre high, one metre wide, and one metre deep. It is equivalent to 1000 litres of water and weighs a metric tonne.

Freeboard

Vertical allowance added to standard design flood level to allow for waves, water surface super-elevation, hydraulic model level of accuracy, local stormwater inflow on top of the design flow, channel deposition during flood event, debris and future climate change.

Groundwater seepage

Groundwater seepage refers to the flow of water through interstitial spaces in the soil or ground. Groundwater seepage can impact basements when there is an excessive amount of water in the ground adjacent to a foundation wall or the basement floor. The pressure of the groundwater can build to a point that it may begin to “seep” through small cracks in the foundation or floor.

Inundation

Overflow of riverine water onto land in areas that would normally be dry.

Non-Structural Mitigation Measures

Non-structural mitigations include land use policy and public education to reduce the consequence of a flood by reducing the exposure, reducing the vulnerability, and increasing the resiliency to flooding. These measures include establishing limitations, restrictions, and requirements on land use, such as limits on what type of development occurs on flood-prone lands, establishing no-build setbacks from a waterbody, and defining minimum elevations for new construction. It also includes public education, to increase awareness of the local flood risk and the role and value of individual preparations.

Overland Flooding

Floodwaters that flow from an outside source or body of water onto dry land, causing water damage.

Permeable

Having pores or openings that permit liquids to pass through.

Recovery

The process of returning a community, organization, business, institution back to normality after a disaster.

Resilience

Resiliency or flood resiliency refers to the means that damages are minimized during times of flooding resulting in less risk to people and infrastructure and ensuring that there is ample room for flooding and river adjustments to occur where the opportunity may exist. Resiliency also means that flood recovery may be less expensive and may get people back on their feet more quickly than in past flood events, and that the water resource is not negatively affected and is able to recover on its own.

River Straightening

River straightening involves changing the course of the river by cutting out meanders. This reduces the total length of the river and increases the river slope and water velocity in those sections.

River Widening

River widening involves increasing a river channel cross section by removal of material from the riverbank(s).

Sediment Deposition

Deposition is the laying down of sediment carried by water, or ice.

Spillway

A spillway is a structure used to provide the controlled release of water from a dam or levee downstream, typically into the riverbed of the dammed river.

Spurs

Spurs are the structures constructed on the riverbank normal to the dominant flow direction or at an angle pointing upstream or downstream. Spurs are constructed to protect infrastructure by slowing down the water directly adjacent the bank(s) of a river during a flood event to reduce the impact of erosion.

Structural Mitigation Measures

Structural mitigation measures, such as dikes, flood reservoirs and by-pass channels, influence the physical flood hydrology and/or hydraulics to reduce property damage and increase public safety.

Tendering

The tendering process is a process when an owner, general contractor or subcontractor obtains competitive bids for a project with a view to obtaining the best possible price to complete the desired works.

Watershed

The entire land area that drains to a river.