



GLOSSARY OF TERMS

Acre-foot: the volume of water that will cover a 1-acre area to a depth of 1 foot.

Alluvial Deposits: sediments deposited by flowing water. Along the Wasatch Front, thick deposits of sediment, often referred to as alluvial fans, are commonly found at canyon mouths where channels enter the broad Salt Lake Valley.

Alluvial River: a river with a channel formed entirely within sediments deposited by flowing water; a self-formed channel not constrained by bedrock, hillslope deposits, or other external controls unrelated to the current streamflow regime and sediment load.

Annual High Water Level (AHWL): the water level, or stage, in Red Butte Creek during typical high flow conditions. The AHWL also demarcates the point from which Salt Lake City's Riparian Corridor Overlay Zone ordinance 100-foot riparian corridor is measured. Annual high flow typically occurs during the spring snowmelt runoff season. Based on analysis of available streamflow gage data, the average annual high flow value on Red Butte Creek is 22 cubic feet per second. Wetted channel width at annual high water varies throughout the study area based on local channel geometry and slope, and needs to be determined on a site-specific basis.

Culvert: a pipe, arch, or box structure that conveys Red Butte Creek underneath a road, utility, or trail crossing. Typically made of metal or concrete.

Embedded: refers to a condition wherein coarser-grained streambed material (gravel, cobble, or boulders) is surrounded by fine sediment (sand, silt, or clay) that fills the voids between the coarser particles and makes them difficult to pick up. Highly embedded sediments have reduced void space available as habitat for aquatic insects, and are not suitable as spawning gravels for fish. High degrees of embeddedness may indicate degraded watershed conditions and excessive delivery of fine sediment to the channel.

Entrenched: refers to a channel shape that is inset between tall slopes that vertically confine the channel and limit width of inundation during flooding. Entrenched channels occur naturally where streams have carved through steep canyons or glacial lake deposits, and can also occur as a result of fill placement or human-induced streambed lowering (incision) associated with land use changes, channel straightening, altered flood flows, reduced sediment supplies, and removal of in-channel woody debris.

Impervious: incapable of being penetrated by water.

Low bank/root zone erosion: a term that refers to erosion within the lower, toe area of the streambank. Streambanks affected by this type of erosion are characterized by exposed, bare roots. Low bank/root zone erosion may be caused by flashy urban hydrology that produces frequent, erosive runoff events, and can also result from toe failure caused by streambed lowering/incision.

Polygon (also referred to as “**vegetation polygon**”): an area delineated during field mapping as having vegetation community characteristics (i.e., plant species, density, structure) distinct from adjacent areas.



Riffle: a portion of stream channel—typically 15 to 30 feet long—characterized by choppy water, steep grade, and relatively coarse bed material. In natural streams, riffles often occur in an alternating sequence with flatter-gradient features such as pools or runs.

Riparian: an ecological term referring to the area located between aquatic (in-stream) and upland habitats.

Riparian Corridor (also referred to as “**corridor**” or “**stream corridor**”): a term used in a general sense in this document to describe the active stream channel plus the areas on both sides of the channel within 100 feet of the annual high water level. The term riparian corridor is also a specific legal term describing those areas subject to regulation under Salt Lake City’s Riparian Corridor Overlay Zone ordinance.

Storm Drain Outfall: the outlet point where a storm drain enters Red Butte Creek. Storm drains are typically pipes (metal, concrete, or plastic) or concrete box structures that capture and convey storm water runoff from streets, gutters, and rooftops.

Streambank: a term used in a general sense to describe the vertically sloping sides of a stream channel.

Streambed: a term used in a general sense to describe the relatively flat, unvegetated bottom of a stream channel. Streambed material typically consists of unconsolidated sediments (i.e., clay, silt, sand, gravel, cobble, boulders), but can also be composed of bedrock or artificial materials such as concrete.

Study Reach (also referred to as “**stream reach**” or “**reach**”): a specific portion of the Red Butte Creek stream channel, typically 300 to 1,400 feet long, commonly bounded by a road crossing, property boundary, or geologic break. For this study, stream channel conditions were evaluated and described for each individual study reach.

Terrace: a flat, bench-like landform originally created by floodplain or lake bed deposits, but subsequently abandoned when the lake receded and/or the stream cut itself a deeper channel. Terraces are essentially relict depositional features that are no longer inundated by the modern flow regime. In this document, the term **terrace erosion** refers to erosion that occurs where a stream has migrated laterally into a terrace deposit. Banks affected by terrace erosion are typically tall, nearly vertical, and bare.

Toe: the lowest portion of the streambank between the low-flow water surface and the start of perennial vegetation. In urban stream channels, the toe area is subject to frequent, flashy, erosive flows associated with storm water runoff. Erosion of the toe area can undermine higher bank areas and cause slumping. **Toe protection** refers to the placement of resistant materials in the toe area to prevent erosion.

Watershed: the land area drained by a river system, bounded by a drainage divide, and converging at a specific outlet point. For the riparian corridor study, the Red Butte Creek watershed includes the land area that drains to the downstream end of the study area near 1100 East.