EXECUTIVE SUMMARY

Salt Lake City's urban creeks and their associated riparian corridors are unique and important natural resources. To recognize the importance of these resources, Salt Lake City passed a Riparian Corridor Overlay Zone ordinance in 2008. In conjunction with passage of the ordinance, the City Council authorized the Salt Lake City Department of Public Utilities (DPU) to conduct stream corridor studies to assess baseline conditions on the above-ground portions of City, Emigration, Parleys, and Red Butte Creeks within Salt Lake City's municipal boundaries.

This Red Butte Creek Riparian Corridor Study Management Plan document introduces the study and describes the importance of riparian functions (Chapter 1), presents the methods (Chapter 2 and Appendix A) and results (Chapter 3) of baseline assessment of stream and vegetation conditions, describes various recommended techniques to improve riparian conditions (Chapter 4 and Appendix B), presents the vision for the desired future condition of the corridor as determined from public and stakeholder input (Chapter 5), provides maps and recommendations for specific stream reaches within the Red Butte Creek riparian corridor (Appendix C), and includes approximate cost estimates for recommended projects (Appendix D).

Study findings indicate that tree cover and shading are generally good throughout the corridor, and that community members value and appreciate the corridor for its aesthetic and ecological values. Common issues affecting riparian function include litter, streambank erosion, streambed lowering, invasive plants, lack of shrub and understory cover, storm drain outfall erosion, failing bank revetment, and problems associated with small-diameter stream crossing culverts. Recommendations include invasive plant removal/control, storm drain outlet protection, culvert replacement, revegetation of streambanks, installation of grade control and toe protection features, reach-scale streambank stabilization, stream cleanup and adoption, and measures to reduce impervious cover and improve watershed condition.

This document is intended to be used as a tool to help guide and inform future efforts to enhance riparian conditions within the Red Butte Creek stream corridor and achieve the vision statement for the corridor. Chapter 4 provides information on permitting requirements (Table 4.5), costs and benefits (Tables 4.6 and 4.7), maintenance and monitoring considerations (Table 4.8), and grant resources (Table 4.9) for different types of improvement projects. This information can be used in combination with reach-specific recommendations and objectives (Table 5.1, Table 5.2, Table 5.3, Appendices C and D) to plan for funding and implementation of improvement projects. The tools in this document are intended to be flexible and useful for a variety of implementation approaches, including corridor-scale approaches that target a specific issue (e.g., planning for phased upgrades to storm drain outfalls throughout the riparian corridor) and reach-specific approaches that apply a variety of improvement measures to a specific section of stream (e.g., bank stabilization, invasive plant removal, and trash cleanup within a 1,000-foot-long stream reach between road crossings). Owners of individual stream-side properties can also use resource references in the document (sidebars in Chapter 4) to help select appropriate improvement techniques, obtain necessary materials, and contact appropriate agencies/organizations for guidance and support.

Various action items are recommended for implementation (Chapter 5), including a recommendation to establish a riparian corridor working group. This entity may help identify more detailed funding approaches, leadership, and schedules for individual projects. Dependent on available funding and to the extent possible, DPU's implementation efforts will be balanced among the City's four creeks (City, Red Butte, Emigration, and Parleys) and the Jordan River.

Cost estimates for the improvement measures identified for each fully-assessed study reach are summarized in Table ES1. These cost values are highly approximate. Site-level design work and engineering are required for many projects, and cost estimates may vary substantially once detailed designs are prepared for a given study reach. In addition, the proposed improvement measures are not intended to be exhaustive, and as site-specific designs are completed additional improvement measures may be included. Appendices C and D provide additional details about the recommended projects and cost estimates.

Table ES1. Summary of estimated approximate costs for improvement measures by reach.

REACH NUMBER	REACH DESCRIPTION	REACH LENGTH (feet)	APPROXIMATE COST ESTIMATE FOR INITIAL IMPLEMENTATION OF IMPROVEMENT MEASURES [a]	
			With Culvert Replacement and/or Daylighting	Without Culvert Replacement and/or Daylighting [b]
URB_R09	Upper Red Butte Garden	2,297	N/A	$14,720
URB_R10	Middle Red Butte Garden	827	reach not fully assessed	reach not fully assessed
LRB_R01	Lower Red Butte Garden	281	N/A	$160
LRB_R02	University - Below Red Butte Garden	451	$171,280	$80,280
LRB_R03	University - Above Chipeta Way	1,041	N/A	$92,650
LRB_R04A	University - Below Chipeta Way	961	$729,640	$97,840
LRB_R04B	University - Near Tennis Courts	595	$584,190	$57,690
LRB_R04C	University - Above Foothill Drive	1,294	$553,150	$131,950
LRB_R05A	VA Medical Center - Below Foothill Drive	433	$1,217,430	$125,430
LRB_R05B	VA Medical Center - Above Sunnyside Park	1,081	$857,010	$134,210
LRB_R05C	Sunnyside Park	887	$1,174,080	$121,080
LRB_R06	Sunnyside Avenue to 900 South	492	reach not fully assessed	reach not fully assessed
LRB_R07	Miller Park/ Bonneville Glen	2,084	$4,024,650	$487,350
LRB_R08	Below 1500 East	1,059	reach not assessed	reach not assessed
LRB_R09	Above 1300 E ast	633	reach not fully assessed	reach not fully assessed
LRB_R10	1300 East to 1100 East	1,449	reach not fully assessed	reach not fully assessed
LRB_R11	Below 1100 East	301	reach not fully assessed	reach not fully assessed
	TOTAL FOR RED BUTTE CREEK CORRIDOR		$9,311,440	$1,343,370

[a] Estimated cost values include materials and installation and 30% contingency for design, permitting, right of way, legal administrative etc. expenses. Values do not include annual monitoring or maintenance costs.

[b] If culvert outlets are protected but culverts are not removed or replaced with wider-span/open-bottom structures, stream stability is expected to improve but the additional benefits associated with replacement (improved connectivity, habitat, conveyance, reduced risk of clogging, etc.) will not be gained.