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 Emigration 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 Emigration 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 Emigration 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 higher-priority improvement measures identified for each 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]
UEM_R16	Below Emigration Tunnel Spring	2,864	N/A	$5,070
UEM_R17	Above Debris Basin	681	N/A	$9,890
LEM_R01	Rotary Glen Park	1,284	N/A	$15,980
LEM_R02A	Upper Hogle Zoo	290	$1,440,290	$50,590
LEM_R02B	Lower Hogle Zoo	734	$463,530	$189,490
LEM_R02C	Below Hogle Zoo	1,120	reach not assessed	reach not assessed
LEM_R02D	Above Bonneville Golf Course	277	N/A	$8,360
LEM_R03A	Bonneville Golf Course - Upper	341	$104,820	$39,820
LEM_R03B	Bonneville Golf Course - Suspension Bridge	451	$131,180	$66,180
LEM_R04	Bonneville Golf Course - Below Storm Outfall Gully	768	N/A	$57,690
LEM_R05A	Bonneville Golf Course - Oak Forest	615	N/A	$7,760
LEM_R05B	Bonneville Golf Course - Above Foothill Drive	317	$97,880	$32,880
LEM_R06	Foothill Drive to 2100 East	155	$1,367,910	$32,160
LEM_R07	2100 East to 1300 South	674	$1,774,820	$172,680
LEM_R08A	1300 South to 1900 East - Upper	988	$1,359,140	$220,340
LEM_R08B	1300 South to 1900 East - Lower	677	N/A	$134,710
LEM_R09A	Below 1900 East	579	$2,157,620	$11,320
LEM_R09B	Near Clayton Middle School	264	N/A	$26,690
LEM_R09C	Above Wasatch Hollow Park	1,248	N/A	$54,570
LEM_R10	Wasatch Hollow Park	1,121	$3,394,180	$124,030
LEM_R11A	Below 1700 South	520	reach not assessed	reach not assessed
LEM_R11B	Above 1500 East	614	$3,008,540	$89,390
LEM_R12	1500 East to 1300 East	1,666	reach not assessed	reach not assessed
LEM_R13A	Westminster College	1,304	$2,242,970	$162,320
	TOTAL FOR EMIGRATION CREEK CORRIDOR		$17,542,340	$1,511,930

[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 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 maintenance costs) will not be gained.