

# 5.0 RIPARIAN CORRIDOR VISION

## Summary of Stakeholder Input

This section provides a summary of the input received during public outreach activities throughout the 15-month planning process. Because the RCS public outreach activities centered around a series of four public workshops, the input received is summarized below according to public workshop.

#### Public Workshop 1

During the first public workshop, much of the input received focused on questions and concerns regarding the Riparian Corridor Overlay Ordinance that was enacted by the City. A number of residents complained about the regulations being too onerous and not allowing for enough individual site variance. Property owners were very concerned about the continuing loss of stream bank area to erosion and the threat to individual property improvements from stream bank instability. Residents are keenly aware of erosion problems associated with storm drain outfalls and stream culverts, and they are concerned about water quality issues associated with septic systems located in Emigration Canyon. Concerns about reasonable use of private property and the privacy of

residents were also expressed by those who attended.

Residents also provided a number of suggestions for consideration in the RCS management plan. These included suggestions for specific restoration projects, as well as requests for information on how to implement them on individual properties. Installing no trespass signs at stream crossings was a popular suggestion, and a number of participants recommended that water rights be obtained to help maintain stream flow throughout the year. Residents were encouraged to provide permission for project team members to access private property along the creek.

The following is a summary of the questions asked and the responses received on the workshop response forms that were distributed at the first public workshop.

What Riparian Corridor Functions Are Important To You?

- Stream bank stability
- Wildlife habitat
- Aesthetics
- Water quality
- Control of my own
  property

What Concerns Do You Have For The Riparian Corridor?

- Stream bank erosion
- Storm water affecting water quality
- Reasonable use of my property
- Trespassing
- Debris blockages

What Suggestions Do You Have For Restoration?

- Redesign of storm drains
- Revegetation of stream banks
- Maintain water in stream channel
- Stop septic tanks in Emigration Canyon
- Install signage to reduce trespass
- Educate property owners on solutions

## Public Workshop 2

During the second public workshop there were a number of questions regarding what data were collected and how (e.g., wildlife use, water quality, and vegetation). Participants



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suggested that information on firewise landscaping, vegetation management, where to find native plants, and ecosystem services be included in the management plan. Participants also asked questions specific to their individual property and whether project team members could help make recommendations for fixing specific problems.

The following is a summary of the questions asked and the responses received on the workshop response forms that were distributed at the second public workshop.

The Emigration Creek riparian corridor is . . .

- a place for migratory birds and other creatures
- a vital component of our community providing us with ecosystem services and allowing nature to exist within our City
- very important and is worth devoting time, effort, resources and money to help preserve and improve
- a valuable natural ecosystem that sustains birds, fish, wildlife, and vegetation with opportunities for recreation and open space places within our City

great to have aboveground water in the City

We envision a riparian corridor that . . .

- is thick with native plants, has clean water, provides nesting areas
- is clean, pastoral, and reflects a native vegetation oasis in the City
- is something that attracts and supports wildlife
- has clean water, trees, wildlife, flood control

Together, we value the following riparian corridor functions:

- habitat
- a green zone, peaceful, quiet, native
- clean water, trees, wildlife, flood control

## Public Workshop 3

During the third public workshop, participants requested that information be included in the management plan that identifies native plants to use, where to buy them, and how much they may cost. Some concerns were expressed for how to deal with those segments of Emigration Creek where there is limited floodplain because of the deep, incised stream channel and vertical stream banks. Participants also asked questions in regard to the permitting process for implementing rehabilitation projects, as well as questions about specific construction techniques that were being presented.

Suggestions from participants included working with volunteer organizations on clean up projects, engaging forestry and wildlife agencies in specific rehabilitation projects, and making specific changes to the draft vision statement. Participants also expressed concern about flooding problems from clogged culvert inlets at several specific road crossings and frustration with weed and litter problems in some specific riparian properties managed by the City. In a follow-up comment after the third public workshop, a resident indicated a desire to see the creek become more "visible" to the public and community at-large, perhaps through the replacement of some of the culvert crossings that currently enclose and "hide" the stream.

## Public Workshop 4

During the final public workshop, participants requested that more information concerning a time-frame for implementation of RCS projects be added to the final report. They specifically asked questions regarding how identified projects would be implemented by the City and how the City would rank projects in terms of priority. Concerns

were expressed that the final report will sit on the shelf and not be implemented. Workshop attendees also asked that the comment period on the draft document be extended.

During public workshop 4, maps of individual stream reaches were posted around the room. Participants with interest in specific reaches were asked to review the relevant maps and provide reach-specific input on comment forms attached to the maps. The comment forms asked the question "What riparian functions, values, or improvement projects do vou think are high priority within this stream reach specifically?" Input gathered during this exercise is included in Appendix C, which also provides maps, data, and recommendations for individual stream reaches.

Workshop participants expressed support for large-scale culvert removal and bank stabilization projects, but were concerned about how those expensive projects would be funded. They also recommended that RCS projects be identified in terms of who would take the lead on individual projects (e.g., City verses property owners or other government agencies). Some participants were supportive of the idea of scheduling a half- to full-day workshop to facilitate more input on improvement projects; other participants thought such an event would be ineffective. One participant suggested adding information to

#### **Emigration Creek vision statement:**

The Emigration Creek riparian corridor is a highly valued and unique natural resource in Salt Lake City that provides a refuge from the urban environment for people, plants, and wildlife. Our community appreciates the corridor for its relaxing and peaceful atmosphere, as well as for the visual and auditory benefits of the riparian area and free-flowing stream. Through ongoing cooperative efforts, the riparian ecosystem is restored to the extent possible and provides many of the functions of a healthy natural ecosystem including wildlife habitat, aesthetic, water quality, and educational benefits.

To reach this vision, the following riparian corridor functions must be realized:

- A well-connected vegetative corridor provides a diverse habitat for native wildlife and migrating bird species.
- Healthy, mature vegetation provides a canopy to cool air and water temperatures; mid-level vegetation and ground cover allow for diverse wildlife habitat, erosion control, and filtration of sediment and pollutants.
- An uninterrupted flow of clean, clear water supports a healthy cold water fishery in the naturally perennial segments of the creek.
- Streambanks are stable but allow for natural stream dynamics within acceptable limits for property owners.
- The stream is recognized as a valuable asset by the community, with trash or debris and noxious weeds kept out of the streambed and riparian corridor.
- Public open space compliments the riparian corridor while allowing for accessible enjoyment of the stream environment by city residents.
- Storm water conveyances are upgraded to improve stream stability and water quality.
- Culverts along the stream are replaced to reduce stream channel constrictions, provide energy dissipation, and improve streambed and streambank stability.

These goals will be achieved with cooperation between the City and the community, with property owners being given significant opportunities for input on rehabilitation projects. Accomplishment of projects will depend on their prioritization and available funding. Grant funding opportunities for implementation of rehabilitation projects will be pursued through collaborations between the City, community members, property owners, and agency stakeholders. Improvement measures will use progressive approaches and the best available science.





the report regarding irrigation or canal companies, and a suggestion to raise taxes to help fund riparian improvements was also made. Another participant recommended scheduling the City's annual curbside waste pickup event to occur in the fall for stream-side residents, rather than during the spring when high flows limit access to the creek for trash removal.

## Emigration Creek Riparian Corridor Vision Statement

Stakeholder input was used to develop a vision statement for the Emigration Creek riparian corridor. The vision statement uses introductory text that describes the desired future condition of the corridor, followed by supporting text that identifies more specific targets and objectives. The closing text of the vision statement provides general guidance on how to achieve the desired future condition for the corridor.

## Riparian Corridor Priorities

As evident from the input received during the RCS stakeholder outreach efforts, there is broad interest in the Emigration Creek corridor and the various different riparian functions it provides. Three specific functions that stakeholders frequently identified as being important were habitat for wildlife and birds, water quality (including instream flows), and streambank stability. Projects that enhance these riparian functions and resources are likely to be broadly supported by the community and should be considered high priority for implementation. Additional studies to learn more about wildlife use of the corridor and water-quality conditions would also be of considerable interest to stakeholders.

Other items that were commonly mentioned included concerns about ensuring protection of private property rights and the effects of stream-crossing culverts on stream stability. These priorities relate to specific locations and stream reaches and are noted where relevant in Appendix C.

Priorities for funding and implementing improvement projects will vary depending on perspective, scale, and anticipated implementation approach. For example, in a stream reach that currently is in good condition except for the presence of a small amount of trash, stream cleanup may be the highest-priority project for the reach. However, when considered from the perspective of the entire riparian corridor, other reaches that have more substantial trash problems may be higher-priority areas for stream cleanup efforts.

In Table 5.1 relevant improvement projects are

summarized by reach, and relative needs are identified by project type from the perspective of the entire riparian corridor. For example, baseline assessment results suggest that some of the worst stability problems associated with streambed lowering occur in reaches LEM R07, LEM R08A, and LEM R08B. Therefore, these reaches are identified as the highest-need reaches for implementation of grade-control measures (Table 5.1). As another example, reaches LEM R02B, LEM R10, and LEM R11B were identified as having the most significant amounts of over-sized, heavy litter items; hence, these reaches are noted as the highest-need reaches for mechanized trash removal efforts within the corridor. Similar guidance regarding corridor-scale needs for culvert-replacement projects is provided in Table 5.2. If funding were to become available for a specific type of improvement measure (e.g., storm drain outlet improvements), the information in Tables 5.1 and 5.2 could be used to help decide where within the corridor to focus efforts.

In some cases support and funding for improvement efforts may develop for a specific stream reach or property within the riparian corridor. In these cases information about reach-specific priorities and needs will be necessary to help guide project choices. Toward this end, the information gathered during the baseline assessment and



		IMPROVEMENT MEASURE										
REACH NUMBER	REACH DESCRIPTION	Stream Cleanup - Hand	Mechanized Trash Removal	Invasive Plant Removal	Revegetation - Canopy	Revegetation - Shrub	Revegetation - Understory	Storm Drain Improvement	No-trespassing Signage	Grade Control	Bank Stabilization	Access Control/ Trail Stabilization
UEM_R16	Below Emigration Tunnel Spring	-	-	low	-	low	low	-	low	low	low	-
UEM_R17	Above Debris Basin	low	-	low	-	low	medium- high	I	-	low	low	medium
LEM_RO1	Rotary Glen Park	medium	medium	medium	-	low	low	I	I	low	low	low
LEM_RO2A	Upper Hogle Zoo	1	-	medium	1	low	I	low	1	medium	medium	-
LEM_RO2B	Lower Hogle Zoo	medium	high	low	1	low	medium	medium	I	medium	high	-
LEM_RO2D	Above Bonneville Golf Course	1	low	medium	1	medium	high	high	low	low	low	-
LEM_RO3A	Bonneville Golf Course - Upper	1	-	high	high	high	high	1	1	low	low	-
LEM_RO3B	Bonneville Golf Course – Suspension Bridge	ŀ	low	high	ŀ	medium	low	high (gully)	I	high (gully)	low	-
LEM_RO4	Bonneville Golf Course - Below Storm Outfall Gully	-	-	high	-	medium	high	high (gully)	-	high (gully)	low	-
LEM_R05A	Bonneville Golf Course - Oak Forest	-	-	high	-	low	high	-	-	low	low	-
LEM_R05B	Bonneville Golf Course - Above Foothill Drive	low	-	medium	-	-	high	low	-	low	low	-
LEM_ROG	Foothill Drive to 2100 East	low	-	ı	-	medium	high	high	-	low	medium	medium
LEM_R07	2100 East to 1300 South	-	-	high	low	medium	-	medium	-	high	high	low- medium
LEM_RO8A	1300 South to 1900 East - Upper	medium	medium	high	-	-	low	high	-	high	high	low- medium
LEM_R08B	1300 South to 1900 East - Lower	medium	-	high	ŀ	-	I.	medium	-	high	high	low- medium
LEM_R09A	Below 1900 East	low- medium	low- medium	medium	ł	low	high	medium	ŀ	low	low	-
LEM_RO9B <sup>b</sup>	Near Clayton Middle School <sup>b</sup>	medium	medium	medium	-	medium	high	high	high	low	low	high
LEM_R09C	Above Wasatch Hollow Park	high	medium	high	-	low	medium- high	-	high	low	low- medium	medium
LEM_R10	Wasatch Hollow Park	high	high	high	-	medium	high	-	high	low	medium	high
LEM_R11B	Above 1500 East	high	high	medium	ı	high	medium	high	low	medium	medium	medium
LEM_R13A	Westminster College	-	-	medium	-	medium	low- medium	high	medium	low	medium	medium

#### Table 5.1Relative need for various improvement measures by study reach. <sup>a</sup>

\* Relative needs are identified from the perspective of the entire riparian corridor; e.g., the highest-need reaches for stream cleanup are those assessed as having the worst trash problems in the corridor.

<sup>b</sup> Field assessment of this reach was only partial.

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Table 5.2.Relative needs for stream crossing culvert replacement and improvement projects within the<br/>Emigration Creek riparian corridor.

CROSSING LOCATION/DESCRIPTION	REACH NUMBER(S)	RELATIVE NEED FOR REPLACEMENT/ IMPROVEMENT		
Emigration Canyon	between UEM_R16 and UEM_R17	low <sup>a</sup>		
Debris basin outlet	LEM_RO1	low		
Crestview Drive	between LEM_R01 and LEM_R02A	medium		
Hogle Zoo	between LEM_RO2A and LEM_RO2B	medium-high		
Path in middle of LEM_RO2D	LEM_RO2D	no improvements needed		
Bonneville Golf Course - eastern golf path crossing	between LEM_RO2D and LEM_RO3A	medium-high		
Bonneville Golf Course - central golf path crossing	between LEM_R03A and LEM_R03B	high		
Bonneville Golf Course - western golf path crossing	between LEM_R05A and LEM_R05B	high		
Foothill Drive	between LEM_R05B and LEM_R06	low-medium		
2100 East	between LEM_R06 and LEM_R07	high		
1300 South	between LEM_R07 and LEM_R08A	low-medium		
1900 East	between LEM_R08B and LEM_R09A	low		
1700 South	between LEM_R10 and LEM_R11A	high <sup>♭</sup>		
1500 East	between LEM_R11B and LEM_R12	low-medium <sup>b</sup>		
1300 East	between LEM_R12 and LEM_R13A	medium-high <sup>a</sup>		

<sup>a</sup> Inlet condition not assessed.

<sup>b</sup> Outlet condition not assessed.

stakeholder outreach activities was used to identify recommendation lists for improvement efforts for individual stream reaches. Constraints and opportunities unique to individual reaches were also defined. Where stakeholders provided reachspecific input, their priorities for those stream reaches were also summarized. This reach-specific information is provided in Appendix C. Approximate cost estimates for improvement measures are provided in Appendix D.

## Riparian Enhancement Potential

An important consideration when selecting projects for implementation is the potential for a given study reach to fully meet certain riparian enhancement functions or objectives. This "riparian enhancement potential" varies depending on the position of the reach in the watershed, the extent of infrastructure development adjacent to the reach, and the frequency/ proximity of road crossings or other features that interrupt longitudinal connectivity. Projects intended to enhance the riparian functions of wildlife habitat, floodplain storage, travel corridors/ connectivity, water quality, or streambank stability will typically be the most effective and provide the greatest benefitto-cost ratio when they are implemented in reaches with high riparian enhancement potential.

One important factor affecting riparian enhancement potential is impervious cover percentage. As discussed in Chapter 3, the

conversion of watershed area to impervious surfaces results in reduced groundwater infiltration and increased, more rapid surface runoff. These changes tend to cause increased erosion, degraded water quality, and reduced baseflow. Impervious cover is commonly used as an index of the extent of urban development and as a predictor of stream health (Schueler and Brown 2004). Within the Emigration Creek RCS study area, the relative amount of impervious cover increases with distance downstream as the creek exits the less-developed canvon area and flows through the urbanized city. Therefore, the relative hydrologic integrity of the stream is greatest within upstream reaches and lowest at the downstream end of the study area (Table 5.3). Another advantage of project implementation within upstream reaches is that many project benefits (e.g., water quality. floodplain storage, streambank stability, invasive species removal) translate into downstream improvements well beyond the localized implementation area.

Another factor affecting riparian enhancement potential is the lateral extent of undeveloped corridor width. In some study reaches, infrastructure has been built very close to the streambanks, limiting the width of the naturally-vegetated riparian corridor. Reaches tightly confined by infrastructure will have relatively limited potential for floodplain re-establishment, floodplain storage, or natural channel migration. The overall area of high quality habitat for riparian-dependent wildlife and bird species will also be limited relative to study reaches with wider undeveloped corridor widths. Improvement projects focused on enhancing these types of riparian functions will tend to be most effective in reaches with minimal infrastructure constraints.

Longitudinal integrity also influences riparian enhancement potential within the Emigration Creek corridor. Existing stream crossing culverts create barriers that interrupt the free migration of wildlife and fish through the riparian corridor. Therefore, reaches with short channel lengths between culverts will have lower habitat potential than reaches that are connected to long sections of uninterrupted channel. Well-connected reaches also have greater potential in terms of the riparian functions associated with transport and storage of woody debris, nutrients, and organic matter. The longitudinal connectivity of some reaches can be improved by replacing culverts with widerspan structures that allow unrestricted passage of wildlife. fish, woody debris, sediment, and organic matter.

The factors affecting riparian enhancement potential for the different study reaches are summarized in Table 5.3. This information can be used to help

guide decisions regarding improvement efforts in hopes of achieving the greatest relative benefit for a given implementation investment. However, significant and important benefits can be achieved even in study reaches rated as having relatively low enhancement potential. The rankings in Table 5.3 should be used as just one piece of information along with other factors such as community interest and support, funding availability, and relative project need (Table 5.1) when selecting efforts for implementation.

## Implementation Approaches

Implementation of the recommended riparian corridor improvement projects will be a long-term effort that will require continued awareness, interest, and support from stakeholders and the community. It will also require significant financial investment. As described in the vision statement, the intent is to pursue funding through collaborations between the City, community members, property owners, and agency stakeholders.

To help guide, coordinate, and support the long-term implementation of enhancement efforts, the establishment of an Emigration Creek riparian corridor working group or watershed committee is recommended. Ideally,



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Table 5.3.Factors affecting relative riparian enhancement potential by reach. (Table key: + = high relative<br/>to other study reaches, o = average relative to other study reaches, - = low relative to other<br/>study reaches).

		FACTORS AFFECTING RIPARIAN ENHANCEMENT POTENTIAL					
REACH NUMBER	REACH DESCRIPTION	Relative Hydrologic Integrity <sup>a</sup>	Relative Extent of Undeveloped Corridor Width <sup>b</sup>	Relative Longitudinal Integrity/Connectivity °			
UEM_R16	Below Emigration Tunnel Spring	+	+	+			
UEM_R17	Above Debris Basin	+	+	0			
LEM_RO1	Rotary Glen Park	+	+	0			
LEM_RO2A	Upper Hogle Zoo	+	0	-			
LEM_RO2B	Lower Hogle Zoo	+	0	+			
LEM_RO2D	Above Bonneville Golf Course	+	0	+			
LEM_RO3A	Bonneville Golf Course - Upper	+	+	-			
LEM_RO3B	Bonneville Golf Course – Suspension Bridge	0	0	+			
LEM_R04	Bonneville Golf Course - Below Storm Outfall Gully	0	+	+			
LEM_RO5A	Bonneville Golf Course - Oak Forest	0	0	+			
LEM_R05B	Bonneville Golf Course - Above Foothill Drive	0	+	-			
LEM_ROG	Foothill Drive to 2100 East	0	0	-			
LEM_R07	2100 East to 1300 South	0	-	-			
LEM_ROBA	1300 South to 1900 East - Upper	0	_	0			
LEM_RO8B	1300 South to 1900 East - Lower	-	0	0			
LEM_RO9A	Below 1900 East	-	0	+			
LEM_RO9B	Near Clayton Middle School	-	+	+			
LEM_R09C	Above Wasatch Hollow Park	-	0	+			
LEM_R10	Wasatch Hollow Park	-	0	+			
LEM_R11B	Above 1500 East	-	0	0			
LEM_R13A	Westminster College	-	0	0			

<sup>a</sup> Qualitatively assessed based on relative percentage of impervious cover within contributing drainage area for each study reach.

<sup>b</sup> Qualitatively assessed based on relative amount of existing infrastructure within 50 and 100 feet of the annual high water level; see infrastructure tables in

Appendix C.

 $^\circ$  Qualitatively assessed based on relative length of uninterrupted channel connected to the reach.

membership in this working group would include representatives from the City, as well as State, County, and federal government entities, local property owners and community residents, and nonprofit environmental groups. The working group could be a forum for continued involvement by interested members of the existing RCS Subcommittee and RCS workshop attendees.

Because of the mix of property ownership within the Emigration Creek corridor, it will not be possible to achieve the riparian corridor vision statement objectives through a purely topdown, government-driven approach. Many of the projects will evolve from residents joining together around shared interests. The Emigration Creek Property Owner's Association, established by residents interested in streambank stabilization in specific stream reaches, is one example of this type of approach. An established riparian corridor working group or watershed committee would be helpful in facilitating such communitydriven efforts by serving as a clearinghouse for the sharing of technical information and providing technical resources to help obtain and administer grant funds.

One local example of a successful "working group" approach to achieving watershed enhancement goals is the East Canvon Watershed Committee (www.eastcanyoncreek.org). This committee consists of a group of stakeholders interested in the health of East Canyon Creek and its watershed. The group has been in existence for more than 10 years and includes representatives from State, County, municipal, and regional government entities, local property owners and community residents, nonprofit environmental groups, and the Snyderville Basin Water Reclamation District. The committee essentially functions as an "umbrella" organization to help coordinate, facilitate, support, and guide improvement efforts, and also provides an information-sharing forum. The East Canyon Watershed Committee has successfully guided and coordinated a wide variety of watershed and stream improvement efforts, including several recent streambank stabilization projects. Grant

funds from a number of sources (Nonpoint Source Implementation [Clean Water Act Section 319] Grant Program. Natural Resources Conservation Service (NRCS) Wildlife Habitat Incentive Program, and Environmental Protection Agency Water Quality Cooperative Agreement program [Clean Water Act Section 104 (b)(3)]) have supported their efforts. The East Canyon Watershed Committee currently includes education, monitoring, and stream restoration working groups that focus on projects addressing those specific issues.

Another example of an established working group is the Jordan River Watershed Council (www.waterresources.slco.org/ht ml/iwrc/irwc.html). This group also consists of a broad mix of stakeholders, and the Jordan **River Watershed Council has** helped coordinate riparian enhancement efforts along the Jordan River. It may be possible to establish an Emigration Creekspecific subgroup as a component of this council. The results of the ongoing Jordan River and Emigration Creek TMDL projects may also spur interest in improvement projects that would provide water quality benefits.

Certain riparian corridor improvement efforts could be modeled on existing partnering approaches that have proven successful. For example, each spring Salt Lake City partners



with the Bonneville Cooperative Weed Management Area (CWMA) and environmental groups to encourage volunteers to participate in weed pulling efforts in the City Creek watershed. A similar approach could be used to implement invasive plant removal projects within the Emigration Creek riparian corridor.

Native plant exchanges are another partnering approach that could be applied to the Emigration Creek corridor. For the past several years, the Salt Lake County weed control program has worked with the Utah Native Plant Society, local businesses, the Salt Lake Conservation District, and Bonneville CWMA to sponsor plant-exchange events where homeowners who bring in the noxious weeds they remove from their yards receive free native plants in exchange. At RCS workshops, attendees indicated an interest in these types of approaches that would help defray some of the costs of revegetation efforts. One possibility in the Emigration Creek corridor would be to target a single invasive plant species each year.

During RCS subcommittee meetings and public workshops, attendees provided suggestions for several other types of implementation approaches. One suggestion was to use the establishment of "special improvement districts" to



generate funds for riparian improvements in specific privately owned portions of the corridor. Another suggestion was to pursue a personalized, oneon-one outreach effort where City or agency staff would visit individual homeowners to discuss improvement options for their properties. Soil Conservation Districts and the NRCS have employed this type of personalized approach for many years to facilitate stream corridor and riparian enhancements on privately owned agricultural lands. In New York State, the NRCS has established an "Urban Resources Partnership" program (www.ny.nrcs.usda.gov/programs /#urp) to help community organizations implement resource-enhancement projects in certain designated cities. This program has facilitated successful riverbank stabilization, wetland restoration, and habitat improvement projects on the Bronx River in New York City. Establishment of a similar type of program by the Utah NRCS could be encouraged.

## **Action Items**

A variety of specific action items are recommended for implementation. These items are grouped by overall goal and listed below. Following the adoption of a working group or other organizational framework, more detailed project priorities will be determined, allowing for development of funding approaches and grant

applications. The DPU will include riparian corridor projects in annual budgets based on available funding and system needs, and by referring to the prioritized lists in this document. Priorities established in this Emigration Creek study will be included, along with priorities on other streams, to provide direction for City project implementation. To the extent possible, DPU's implementation efforts will be balanced among all four of the City's creeks (City, Red Butte, Emigration, and Parleys) and the Jordan River.

Goal: Continue public outreach and establish implementation working group

- establish organizational structure to guide implementation of riparian corridor improvement efforts
- promote involvement of multiple agencies/ organizations in working group to facilitate communication regarding project ideas and potential funding sources (e.g., schools with needs for volunteer projects, U.S. Army Corps of Engineers in-lieu mitigation funds, etc.)
- encourage community/ school groups, residents, and local businesses to participate in the Utah "Adopt a Waterbody" program

prepare and install standardized notrespassing signage in collaboration with interested property owners

Goal: Increase public awareness

- design and install signs at road and trail crossings (e.g., "Crossing Emigration Creek") to increase public awareness and knowledge of where the City's creeks are located
- stencil storm drain inlets using lettering that includes stream names (e.g. "Do not dump: drains to Emigration Creek"); coordinate this effort with the established Salt Lake County Stormwater Coalition
- prepare informational insert to distribute in utility bills; insert should include a map of stream corridors and public access points and information on riparian corridor functions and the RCS process
- conduct a riparian corridor-focused activity during the City's established annual "Water Week" event



Goal: Manage and reduce impervious surfaces

- protect existing undeveloped watershed areas within City municipal boundaries through pursuit of open space and conservation easement acquisitions and/or appropriate rezoning efforts
  - coordinate with Salt Lake County's open space program to promote protection of existing undeveloped upper Emigration Creek watershed areas beyond City municipal boundaries
    - promote/require use of progressive long-term stormwater BMPs that reduce the hydrologic impacts of new developments; coordinate this effort with the Salt Lake City Division of Sustainability and Environment
    - coordinate and partner with existing organizations involved with storm water management

Goal: Explore instream flow opportunities

- develop a more complete understanding of current water rights, uses, and conservation potential
- explore potential for purchase or lease of instream flow water rights under State water law through coordination with groups such as the Utah Division of Water Rights, Trout Unlimited, Utah Rivers Council, Utah Division of Wildlife Resources, and Utah Division of State Parks and Recreation
- pursue measures to increase infiltration and groundwater recharge

Goal: Improve riparian corridor aesthetics

- promote volunteer
  stream cleanups
- remove over-sized trash items from publicly owned riparian corridor areas

Goal: Improve riparian habitat through control of invasive plant species and restoration of native plant communities

> promote invasive plant removal by targeting and publicizing one highpriority species per year



- initiate invasive plant removal/control efforts in City-owned riparian corridor areas, beginning upstream and working downstream, utilizing an integrated weed control strategy
- ensure funding and labor will be available for multiyear follow-up treatments and long-term maintenance/monitoring of revegetated areas

Goal: Improve streambank and streambed stability through correction of localized infrastructure-related erosion problems

- budget for and implement identified high-priority stream crossing culvert replacement/ improvement projects
- budget for and implement identified storm drain outfall improvement projects

The Emigration Creek riparian corridor currently provides a wealth of riparian functions and community benefits. Many opportunities exist to enhance these functions and benefits. With dedication on the part of all stakeholders, the vision for the corridor can be achieved.