



## 5.0 RIPARIAN CORRIDOR VISION

### Summary of Stakeholder Input

This section provides a summary of the input received during public outreach activities throughout the planning process. Because the RCS public outreach activities centered around a series of two 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 RCS planning process, including advertising public workshops and the composition of the RCS subcommittee. A number of residents expressed dissatisfaction with measures proposed in the recently-released Parleys Historic Nature Park draft Comprehensive Use and Management Plan and the lack of coordination between that document and the RCS. Dog owners were very concerned about the possible loss of access to stream bank areas and the threat of losing the park as an off-leash area. Participants are aware of erosion problems associated with dog, BMX, and heavy recreational uses of the

parks, and they are concerned about water quality issues.

Attendees also provided a number of suggestions for consideration in the RCS management plan. These included suggestions for specific stream bank access projects, posting of public workshop materials on the City's website, and charging fees to fund management and maintenance activities within City parks. Including FIDOS on the stakeholder committee was a popular suggestion, and a number of participants recommended that the BMX course remain in the Parleys Historic Nature Park. Another suggestion was to consider activities that are contributing to the sediment problem in the creek from upstream of the study area in the RCS document.

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?

- Recreation and safety
- All of the above

- Recreation, particularly Parleys Historic Nature Park which should be left naturally and available for people and dogs
- Cooler temperatures, channel stability, wildlife habitat, shading, floodplain connectivity, biodiversity and aesthetics

What Concerns Do You Have For The Riparian Corridor?

- Open space. Building the bike path has ruined large areas of Parleys Historic Nature Park
- All of the above
- The off-leash dog park is of primary importance. This area should be maintained with City/County funds to keep it safe
- In Sugar House Park and Parleys Park: Lack of native herbaceous vegetation cover, soil erosion, unstable/hardened stream banks, inappropriate or problematic in-stream structures, perceived "harassment" of wildlife (not sure if this is a real issue), loved too much



- For the golf course area: Lack of native herbaceous vegetation cover, no filter between golf course and water for herbicides, etc., inappropriate or problematic in-stream structures, no wildlife habitat for birds or amphibians.

What Suggestions Do You Have For Restoration?

- Other western cities have worked out sharing park areas with all users including dogs. The more you limit dog-friendly areas the worse the remaining areas become. What can I as a dog owner do to work on this problem?
- FIDOs continues to make positive efforts to improve the park. City/ County funds would be helpful. No birders, fishermen, or historians help to maintain anything.
- Parleys Park: I support the existing Parleys Management Plan which calls for moving people/ dogs away from the immediate corridor using designated trails, fencing and signs. Before anyone invests in streambank restoration

however, I think the area should be monitored for a year to determine whether the management plan can be successfully implemented.

- I'd like to see managers remove and/or replace existing man-made structures such as poorly built bridges, rip rap, failing culverts, and hardened stream access points. I'd like to see managers revegetate the herbaceous and shrub layer, and remove invasive weeds (if possible). I'd like to see someone study the flows in Parleys below the mouth of the Canyon to understand if there may be ways to better manage outflow from upstream reservoirs to facilitate better channel function.
- At the golf course, if water quality and channel instability is an issue, I'd like to see the creation of a buffer between Kentucky bluegrass and the stream channel. A shrubby, native herbaceous layer would also likely facilitate more streambank stability.

- I suggest that in a time of limited budgets all users pay a small fee for this area as they do at Mill Creek. If a dog owner pays a fee for each dog (which goes toward creek care), full use of the area is allowed. Fence off several of the most overused areas of the creek to ALL users. ( I assume this will be done at Sugar House Park also). These areas could be rotated from year to year. Have dog owners commit to weekly dog feces clean-ups through FIDOS or some other plan. (Perhaps a regularly scheduled community clean-up could allow participants a free pass to the park).

The Parleys Creek riparian corridor is . . .

- an area that serves groups not served by other parks
- an essential resource for Salt Lake City
- badly damaged freeway by two dams, a power station, County dredging, and a bike trail



- (was) once a remnant migratory corridor for people and wildlife to move between the mountains and the Salt Lake Valley. It not only provided a pathway from one ecosystem to another, but it was likely a destination for cooler summer temperatures, abundant food sources, and water to drink. Today, it functions primarily as a destination for people to recreate (Parleys Park, Sugar House Park, and the Golf Course) and the presence of water and cooler temperatures is the attraction. The corridor remains viable for some limited wildlife. Interestingly, it also still remains a migratory corridor for people to move between the mountains and the Valley (i.e., I-80 moves people between the ski resorts and Salt Lake City).

We envision a riparian corridor that . . .

- is open to groups not served by other parks
- is healthy, inviting, sustainable



- is maintained as an open space in Parleys Park so that dogs may be off-leash and open to all
- can sustain cool summer temperatures and clean water. I also envision a corridor that is restored and maintained for a diversity of wildlife including coldwater fish, birds, amphibians, and macro-invertebrates. I envision designated areas for people and pets (e.g., Sugar House Park), and designated areas where wildlife can persist without harassment from people, traffic, pets, etc (e.g., Parleys Park).

Together, we value the following riparian corridor functions:

- the sound of moving water and the shade it provides through the trees it nurtures
- lots of open space for all, including dogs, to run, socialize, and for their owners a good healthy walk

### **Public Workshop 2**

During public workshop 2, maps of individual stream reaches were posted for review and comments. 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 function, values, or improvement projects do you 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.

A variety of other more general concerns and questions were also expressed during the second public workshop. Participants asked whether Bonneville cutthroat trout are stocked in the creek, who owns and manages the Suicide Rock area, whether E. Coli levels are higher below Parleys Historic Nature Park (PHNP), how environmentally friendly golf course fertilizers are, and what might be causing an observed murky green water color in the creek. There was also discussion about how the RCS Management Plan and the PHNP Comprehensive Use and Management Plan are being coordinated, and whether/how

the RCO applies to PHNP since it is outside of the City’s municipal boundary. Participants were also interested in how the proposed riparian projects will be funded, whether the City Council will adopt the RCS reports, and how/who will decide which implementation projects to complete.

### Other Stakeholder Input

Various additional written comments were received from subcommittee members and other interested stakeholders. Many of these comments suggested specific edits or additions to the RCS report that have been incorporated in this final RCS document. Other comments included suggestions regarding volunteer efforts by dog owners towards stream repair within PHNP, protecting the creek while allowing dog access, and implementing a fee for users to help pay for restoration projects. Participants also encouraged fencing off degraded areas to all users along the creek during implementation

of restoration projects. Several stakeholders expressed concern regarding the continued degradation of PHNP since it became a dog park, specifically by trampling of vegetation and the creation of user trails. A number of comments expressed disappointment in losing important bird nesting habitat in the park and in the City’s lack of efforts to protect this important area. Another written comment addressed implementing projects on lands that are protected by conservation easement (e.g., Hidden Hollow Park) and how RCS projects would need to go through a review process for approval to ensure compliance with conservation easement requirements.

To obtain additional stakeholder input regarding the Sugar House Park portions of the Parleys Creek corridor, DPU and BIO-WEST staff met with Sugar House Park Authority board members on July 8, 2010. Board members expressed interest in many of the projects recommended in the riparian corridor plan, but indicated that funding sources for the park are limited. Partnering and grant opportunities to obtain supplemental funding were discussed. Following the July 8 meeting, additional written comments regarding Park Authority priorities were provided; these reach-specific priorities are included in the recommendations section of Appendix C.





### **Parleys Creek vision statement:**

*The Parleys Creek riparian corridor is a healthy and accessible natural resource in Salt Lake City that provides an appealing refuge from the urban environment for people, plants, and wildlife. Our community appreciates the corridor for its inclusive and unstructured natural atmosphere, as well as for the recreational and environmental benefits of the riparian area and free-flowing stream. Through collaborative participation and partnerships, the riparian ecosystem is restored to the extent possible and provides many of the functions of a vibrant ecosystem including fish and wildlife habitat, aesthetics, water quality, and educational benefits.*

*To achieve 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 fish and wildlife habitat, erosion control, and filtration of sediment and pollutants.*
- An uninterrupted flow of clean, clear water supports a healthy, native cold water fishery and riparian ecosystem.*
- Stream banks are stable but allow for natural stream dynamics within acceptable limits for property managers.*
- The stream is recognized as a valuable asset by the community, with trash or debris and noxious weeds kept out of the stream bed and riparian corridor.*
- Open space compliments the riparian corridor while allowing for safe and accessible public enjoyment of the stream environment.*
- Storm water conveyances are designed and upgraded to improve stream stability and water quality.*
- Culverts and infrastructure along the stream are remodeled, replaced, or repaired to reduce stream channel constrictions, provide energy dissipation, and improve stream bed and bank stability.*

*These goals will be achieved with collaboration between the City and the community using consistent management along the entire length of the Parleys Creek riparian corridor and with current users being given significant opportunities for input on rehabilitation projects. Accomplishment of rehabilitation projects will depend on their prioritization and available funding, with consideration given to charging fees where appropriate to fund projects. Grant funding opportunities for implementation of rehabilitation projects will be pursued through collaborations between the City, community members, recreational users, and agency stakeholders. Rehabilitation measures will use progressive approaches and the best available science for implementation.*

## **Parleys Creek Riparian Corridor Vision Statement**

Public and stakeholder input were used to develop a vision statement for the Parleys 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. The Parleys Creek riparian corridor vision statement is intended to be a “living” and adaptive planning tool that may grow or adjust as public awareness and active stewardship of the corridor becomes more established.

## **Riparian Corridor Priorities**

As evident from the input received during the RCS stakeholder outreach efforts, there is broad interest in the Parleys Creek corridor and the various different riparian functions it provides. Top concerns voiced by stakeholders include recreation, access, water quality, vegetative cover, and wildlife habitat. Projects or combinations of projects that address and balance these concerns are likely to receive community support.



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 areas with the highest densities of invasive plants occur in reaches LPC\_04C, LPC\_04E, LPC\_05A, and LPC\_05D. Therefore, these reaches are identified as the highest-need reaches for invasive plant removal/control efforts. As another example, reaches UPC\_R16A, UPC\_R16B, LPC\_R04A, and LPC\_04B 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 improvement projects at stream crossings 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 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 reach-specific 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.

For improvement projects where ecological restoration is the primary objective, recently proposed restoration standards

**Criteria proposed by Palmer et al. (2005) for ecologically successful river restoration:**

- The restoration design is based on a guiding image of a more dynamic, ecologically healthy stream
- The stream's ecological condition is measurably improved
- Resilience is increased and the ecosystem is more self-sustaining after the restoration effort
- Implementation of the restoration effort does not inflict lasting harm to the ecosystem
- Pre- and post-restoration monitoring is conducted and results are made publicly available

(Palmer et al. 2005) can provide some scientific guidance regarding project design and prioritization (see above sidebar).

**Riparian Enhancement Potential**

An important consideration when selecting projects for implementation is the potential for a given study reach to fully



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

REACH NUMBER	REACH DESCRIPTION	IMPROVEMENT MEASURE													
		Stream Cleanup - Hand	Mechanized Trash Removal	Invasive Plant Removal/Control	Revegetation -Canopy	Revegetation -Shrub	Revegetation - Understorey	Restoration of Native Understorey Plants	Storm Drain Improvement / Runoff Management	Grade Control	Access Control / Trail Stabilization	Biotechnical Slope Stabilization	Bank Stabilization	Replace/Retrofit Existing Bank or Bed Hardening Structures	Fill Removal / Floodplain Re-establishment
UPC_R16A	Upper Suicide Rock	low	high	medium			low				medium	high		medium	
UPC_R16B	Lower Suicide Rock	high	high	medium					medium		low	low			
LPC_RO1A01B	Upper Parleys Park	medium	medium	low			high		medium		high	medium	low	medium	
LPC_RO2	Middle Parleys Park		low	medium			high				high		medium	medium	
LPC_RO3	Lower Parleys Park			medium		high	medium				medium			high	
LPC_RO4A	Country Club - Above 2300 East	high	high	medium	low	low		medium	low			medium		medium	
LPC_RO4B	Country Club - Below 2300 East	high	high	medium	medium	high		low	medium		low	medium	medium		
LPC_RO4C	Country Club - Above 2000 East		medium	high	medium	medium			high	low			medium	low	
LPC_RO4D	Country Club - Below 2000 East	low	low	medium	high	medium		low	high				low	medium	
LPC_RO4E	Country Club - Above 1700 East	low	medium	high				low	medium	high		medium	high	high	
LPC_RO5A	Upper Sugar House Park	low		high				medium	high	high	high		high	low	
LPC_RO5B	Sugar House Park - Near Highland High Track	medium		medium				medium	medium	high	high		medium		
LPC_RO5C	Middle Sugar House Park	low	low	medium		low		high	low	medium	high		medium	medium	
LPC_RO5D	Sugar House Park - Below Pond			high				medium			medium			medium	
LPC_RO6	Hidden Hollow	medium	low	medium			low	low	high	low	medium	high		medium	

<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.



**Table 5.2. Recommendations and relative need for improvements at stream crossings within the Parleys Creek riparian corridor.**

CROSSING LOCATION/ DESCRIPTION	REACH NUMBER(S)	CROSSING LENGTH (feet)	TYPE OF IMPROVEMENT RECOMMENDED	RELATIVE NEED FOR IMPROVEMENT	ALTERNATIVE RECOMMENDATION
Flume and pedestrian bridge	bottom of UPC_R16A	70 (flume)	remove; replace with full-span bridge; re-naturalize channel	low	
Interstate 215	between UPC_R16B and LPC_RO1A	625	revegetate slopes above outlet	high	replace with open-bottom box culvert
Parleys Park - main bridge	between LPC_RO2 and LPC_RO3	-	vegetate rip rap bank protection at inlet and outlet	medium	replace with open-bottom box culvert that spans entire floodplain
Interstate 80	between LPC_RO3 and LPC_RO4A	1,359	safety/aesthetic improvements at pipe inlet	medium	replace with open-bottom box culvert
Country Club- access road and tee area	between LPC_RO4A and LPC_RO4B	264	vegetate rip rap bank protection at inlet; revegetate slope above outlet	medium	daylight stream and install open-bottom box culvert crossing
Country Club - trail crossing	LPC_RO4B	-	replace with open-bottom box culvert that spans entire floodplain	low	
Country Club - utility pipe/golf cart crossing	LPC_RO4B	-	replace with open-bottom box culvert that spans entire floodplain	low	
Country Club - access road	LPC_RO4C	-	vegetate rip rap bank protection at inlet and outlet	medium	replace with open-bottom box culvert that spans entire floodplain
Country Club - obsolete bridge	LPC_RO4C	-	remove structure	medium	
2000 East	between LPC_RO4C and LPC_RO4D	103	revegetate banks	medium	replace with open-bottom box culvert that spans entire floodplain
Country Club - piped section near Interstate 80	between LPC_RO4D and LPC_RO4E	134	retrofit/vegetate gabions at inlet	medium	daylight/restore stream
Country Club-recently piped section near Interstate 80	in LPC_RO4E	262	retrofit/vegetate gabions at inlet and outlet	high	daylight/restore stream
1700 East	between LPC_RO4E and LPC_RO5A	322	replace concrete headwalls at inlet/outlet with vegetated rock	medium	replace with open-bottom box culvert that spans entire floodplain
Sugar House Park - eastern road crossing	between LPC_RO5B and LPC_RO5C	75	replace with open-bottom box culvert that spans entire floodplain	high	replace concrete headwalls and bank protection with vegetated rock
Sugar House Park - footbridge	LPC_RO5C	-	replace with full-span prefabricated bridge	low	create stabilized stream access points adjacent to stone block wingwalls
Sugar House Park - western road crossing	between pond and LPC_RO5D	80	replace concrete outlet protection with vegetated rock	medium	
Hidden Hollow (western footbridge)	LPC_RO6	-	install stabilized access steps adjacent to bridge	medium	
Downstream end of Hidden Hollow	LPC_RO6	-	address erosion associated with flood control access point	high	



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 benefit-to-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 Parleys Creek RCS study area, the relative amount of impervious cover increases with distance downstream as the creek exits

the less-developed canyon 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 and/or highway fill have 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 Parleys 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 wider-span 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



**Table 5.3. Factors affecting relative riparian enhancement potential by reach. Table key: + = high relative to other study reaches, o = average relative to other study reaches, - = low relative to other study reaches.**

REACH NUMBER	REACH DESCRIPTION	FACTORS AFFECTING RIPARIAN ENHANCEMENT POTENTIAL		
		Relative Hydrologic Integrity	Relative Extent of Undeveloped Corridor Width	Relative Longitudinal Integrity/Connectivity
UPC_R16A	Upper Suicide Rock	+	o	o
UPC_R16B	Lower Suicide Rock	+	-	o
LPC_RO1A01B	Upper Parleys Park	+	+	+
LPC_RO2	Middle Parleys Park	+	+	+
LPC_RO3	Lower Parleys Park	+	o	+
LPC_RO4A	Country Club - Above 2300 East	o	o	o
LPC_RO4B	Country Club - Below 2300 East	o	-	+
LPC_RO4C	Country Club - Above 2000 East	o	o	+
LPC_RO4D	Country Club - Below 2000 East	o	o	-
LPC_RO4E	Country Club - Above 1700 East	o	-	-
LPC_RO5A	Upper Sugar House Park	-	o	o
LPC_RO5B	Sugar House Park - Near Highland High Track	-	+	o
LPC_RO5C	Middle Sugar House Park	-	o	o
LPC_RO5D	Sugar House Park - Below Pond	-	+	-
LPC_RO6	Hidden Hollow	-	-	-

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 Parleys Creek riparian corridor working group or watershed committee is recommended. Ideally, 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 groups. The working group could be a forum for continued involvement by interested members of the existing RCS Subcommittee and RCS workshop attendees.

One local example of a successful “working group” approach to achieving watershed enhancement goals is the East Canyon Watershed Committee ([www.eastcanyoncreek.org](http://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/html/jwrc/jrwc.html](http://www.waterresources.slco.org/html/jwrc/jrwc.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 a Parleys Creek-specific subgroup as a component of this council. The results of the ongoing Jordan River TMDL project 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 Parleys Creek riparian corridor.

During RCS subcommittee meetings and public workshops, attendees provided suggestions for several other types of implementation approaches. One suggestion was for park users to pay a fee that would go to a fund dedicated for riparian corridor improvements. Users

who participate in volunteer projects could receive a fee waiver or discount. Such a program could be modeled after the user fee program currently in place in Mill Creek canyon. Participants also suggested exploring the option of alternate use days within PHNP to help accommodate the recreational interests of dog owners and non-dog owners. Several people indicated that they have participated in past volunteer efforts within the park, including volunteer water quality monitoring, and expressed that they would be willing to volunteer for future stream repair efforts assuming off-leash use is maintained. The large numbers of interested, willing park users are a resource that should be utilized as implementation approaches for the Parleys Creek riparian corridor are considered.

## **Other Management Guidelines and Efforts**

Implementation of the RCS recommendations will need to be integrated with other ongoing management efforts and previously established guidelines within the Parleys Creek corridor. Specific relevant guidelines and projects are described below.

### **Hidden Hollow Natural Area Master Plan**

The Hidden Hollow area of the Parleys Creek riparian corridor (reach LPC\_R06) is protected by



a conservation easement and managed by the City's Parks Division. The 1998 Hidden Hollow Master Plan (MGB&A 1998) establishes recommendations for various improvements to the area. Many of the recommendations address needs for paths, lighting, and other facilities to improve safety and recreational amenities; most of these facilities have been constructed since publication of the 1998 plan. The plan also includes several recommendations relevant to management of the stream and riparian area. These recommendations are compatible with and similar to many of the RCS recommendations, and include:

- preservation and reintroduction of native plant species
- long-term management and removal of invasive trees including Siberian elm, green ash, Russian olive, tree of heaven, weeping willow, and hybrid poplars
- revegetation with native trees including box elder, peach leaf willow, Gambel oak, and narrowleaf cottonwood
- management of shrubs, grasses, and herbs

- enhancements to the ponded area at the western debris grate including planting of aquatic vegetation and improved stream access for maintenance and educational opportunities

### **Salt Lake City Watershed Management Plan**

This document (Bear West 1999) updates an original 1988 plan developed to protect the seven major Wasatch Mountain canyons east of Salt Lake Valley, including Parleys Creek, that serve as major municipal water sources. The 1999 plan includes a desired future condition statement that emphasizes maintenance of excellent water quality and prioritizes water quality first and other canyon uses second. Other elements of the desired condition include healthy streams and riparian areas, ecological balance, and minimal pollution. The 1999 plan emphasizes the use of a watershed education program to help limit potential degradation associated with recreational use of the canyons. Specific recommendations for Parleys Creek focus on the upper watershed areas above the Parleys Water Treatment Plant.

### **Sugar House Park Master Plan**

Sugar House Park, which includes study reaches

LPC\_R05A through LPC\_R05D, is managed by the Sugar House Park Authority (SHPA). The SHPA is an independent nonprofit entity funded primarily by Salt Lake County and Salt Lake City. The 2008 Master Plan (PSOMAS 2008) document establishes long-term guidelines for management of the park. The document includes a variety of recommendations relevant to Parleys Creek and its riparian area. These recommendations are generally compatible with and often similar to many of the RCS recommendations, and include:

- expand the use of native plants
- allow tree regeneration along the stream corridor
- create zones of deposition using structures such as rock weirs
- remove debris and concrete from stream channel
- dredge the pond to remove accumulated sediment and install pond aerators
- implement stream bank protection measures such as installation of anchored boulders or logs, slope grading, and willow plantings



- add a formal pathway along the eastern portion of the stream corridor (reach LPC\_R05A) to improve safety

### **Parleys Historic Nature Park Draft Comprehensive Use and Management Plan**

Beginning in fall 2008, Salt Lake City's Parks Division initiated a master planning process for Parleys Historic Nature Park (PHNP), which includes RCS reaches LPC\_R01A through LPC\_R03. The PHNP master planning process involved over 15 facilitated meetings for public and stakeholder input which were held separately from the RCS public involvement process. To accommodate the PHNP schedule, the schedule for the RCS baseline assessment efforts in these reaches was accelerated relative to the other Parleys Creek reaches, with stream assessments within PHNP completed during fall 2008 and vegetation assessments completed in spring 2009. The results of these RCS data collection efforts as well as some preliminary recommendations were provided to the consultants completing the PHNP master planning effort in December 2008.

At this time, the PHNP draft Comprehensive Use and Management Plan (Plan) remains in draft form and the Mayor has provided a recommended

alternative to City Council. It is not yet known which alternative the City Council will ultimately adopt. The Plan (MGB&A et al. 2010a) establishes several park goals that are common to all alternatives. Goals relevant to the riparian corridor include:

- protect riparian corridor and water quality
- protect and restore cultural and natural resources
- restore damaged areas
- formalize monitoring and adaptive management

The Plan also outlines a number of specific management strategies that are common to all action alternatives. Strategies most relevant to the riparian corridor include:

- bring all park improvements into compliance with RCO ordinance
- eliminate user-created trails
- set back BMX bike area from creek
- add flood control debris basin, establish designated flood control cleanout points, and implement safety improvements at western culvert inlet

- restore eroding culvert (storm drain) outlets and drainages and address water quality of discharged water
- control invasive plant and animal species
- launch a trail etiquette campaign to encourage users to stay on trail and reduce user-created trails; increase stewardship and education

### **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 Parleys 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
- encourage community members to participate in citizen water quality monitoring in coordination with the Utah Department of Environmental Quality’s statewide Monitoring Council



**Goal: Increase Public Awareness**

- design and install signs at road and trail crossings (e.g., “Crossing Parleys 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 Parleys 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 re-zoning efforts
- coordinate with Salt Lake County’s open space program to promote protection of existing undeveloped upper Parleys Creek watershed areas beyond City municipal boundaries and the existing protected watershed



- 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
- coordinate with UDOT to promote retrofits to the freeway runoff system to incorporate water quality and quantity controls

**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 high-priority 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 continued internal compliance with BMPs to reduce transfer of weed seeds such as washing

tires/treads when vehicles and equipment are moved between areas; encourage use of similar practices by Salt Lake County and the Utah Department of Transportation

- ensure funding and labor will be available for multi-year follow-up treatments and long-term maintenance/monitoring of revegetated areas

**Goal: Improve Riparian Functions through Improvements to Storm Drain and Stream Crossing Infrastructure**

- budget for and implement identified improvements at stream crossings
- budget for and implement identified storm drain outfall improvement projects

The Parleys 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.



