

5.0 RIPARIAN CORRIDOR VISION

Summary of Stakeholder Input

This section provides a summary of the input received during public outreach activities throughout the 12-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 streambank area to erosion and the threat to individual property improvements from streambank instability. Residents are keenly aware of erosion problems associated with storm drain outfalls and stream culverts, and they are concerned about water quality issues. Concerns about reasonable use of private property and the privacy of residents were also expressed by those who attended. Workshop attendees also asked questions

about the cost of the RCS study, the funding for the study, the composition of the RCS subcommittee, and whether the study will result in changes to the RCO ordinance.

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. 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?

- Streambank stability
- Wildlife habitat
- Aesthetics
- Water quality

- Control of my own property

What Concerns Do You Have For The Riparian Corridor?

- Streambank 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 streambanks
- Maintain water in stream channel
- 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



suggested that information on firewise landscaping, vegetation management, where to find native plants, control of nuisance wildlife species (raccoons, rats, etc.), 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. Other questions related to revisions to the Riparian Corridor Overlay Ordinance, the effects of Red Butte Dam, participation by the University of Utah in the study, instream flows, and public access to the riparian corridor.

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 Red Butte 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 above-ground 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
- serves the community and environment with an appropriate balance
- 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, natural
- 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 Red Butte Creek where there is limited floodplain because of the deep, incised stream channel and vertical streambanks.

Participants also asked questions about the potential effects of climate change on the riparian corridor, invasive species control measures, off-leash dog concerns, and where funding would come from and how projects would be prioritized.

Suggestions that were provided by participants at the third public workshop included working with volunteer organizations on clean up projects, engaging forestry and wildlife agencies in specific rehabilitation projects, improving access opportunities within the publicly owned portions of the corridor upstream of Sunnyside Avenue, and making specific changes to the draft vision statement. Participants also expressed frustration with the University of Utah and the VA Medical Center for problems along Red Butte Creek under their management control. One workshop participant suggested that the City may be able to improve their public relations by



going door to door to meet one-on-one with residents and discuss riparian corridor issues and solutions. This technique has been successfully used by agencies such as the Natural Resources Conservation Service to establish cooperative relationships with private landowners in rural areas and improve stream conditions.

Public Workshop 4

During the final public workshop, participants asked questions regarding the costs for recommended projects and how they would be funded. Concerns were expressed about the degradation of downstream riparian corridor functions caused by development projects that are being implemented on larger properties in the upper portion of the study area (e.g., Veteran's Administration and the University of Utah). Several workshop participants expressed interest in seeing greater involvement by these entities in the RCS planning process, recognizing that what happens on their lands affects those who live downstream. One suggested that Red Butte Garden should play a more active role in the implementation of recommended projects throughout the riparian corridor because they have expertise in the areas of weed control and native plant restoration.

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 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.

Meetings with University of Utah and VA Medical Center

Because both the University of Utah and VA Medical Center manage large portions of Red Butte Creek within the RCS study area, specific meetings were held to facilitate their input into the management planning process. DPU and BIO-WEST met with University of Utah facilities management staff as well as Red Butte Garden staff on June 22, 2009. As a state government entity, the University is not legally required to follow the requirements of the City's RCO ordinance. However, staff expressed an interest in the RCS study and in potential opportunities to collaborate with the City on improvement projects. Red Butte Garden indicated particular interest in opportunities to coordinate on grant applications for projects with educational or interpretive

components. At this time, the University of Utah does not have an administrative structure that would allow them to actively pursue riparian corridor improvement projects. Currently, no specific plan is in place to guide or manage uses and practices within the riparian corridor portions of the University campus. University staff did indicate that they recently made improvements to a maintenance and storage facility adjacent to the creek.

BIO-WEST and DPU met with VA Medical Center staff on September 29, 2009. As a federal entity, the VA Medical Center is not legally required to follow the requirements of the City's RCO ordinance. However, staff expressed interest in the RCS project and recognize the creek as a potential amenity for VA patients and employees. In addition to the federal VA, the Utah State Veteran's Nursing Home and the Boyer Company also manage portions of the riparian corridor between Foothill Drive and Sunnyside Park. There is currently no specific plan in place to guide or manage the riparian corridor in this area. Years ago some preliminary work was done on a potential trails plan to facilitate commuting through the corridor by bicycle or by foot, but because of the challenges associated with steep slopes, tight infrastructure, and security concerns no trails have been developed. Recently, the VA has upgraded their storm drain system such that much of



Red Butte Creek vision statement:

The Red Butte 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 on-going 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.

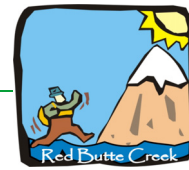
the runoff from the complex is now primarily routed to an off-stream detention basin rather than discharging directly into Red Butte Creek. The VA staff also explained that they frequently receive inquiries from boy scouts about possible Eagle Scout projects, and indicated a willingness to direct scouts to some of the projects recommended in the RCS management plan.

Red Butte Creek Riparian Corridor Vision Statement

Stakeholder input was used to develop a vision statement for the Red Butte 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 Red Butte 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 interest to stakeholders.

Residential property owners within the portions of Red Butte Creek downstream of Sunnyside Avenue would also be likely to support corridor improvement projects within the stream reaches above Sunnyside Avenue. Measures to improve water quality and reduce erosive flow velocities would be of particular interest, as downstream residents expressed concern that they “inherit” water quality and flow problems from the areas upstream. At the RCS workshops, some attendees emphasized that issues and opportunities are different in the reaches upstream of Sunnyside Avenue than in downstream reaches, and implementation approaches and priorities should vary accordingly.

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 invasive species problems in the corridor occur in reaches LRB_R04C, LRB_R05A, and LRB_R07. Therefore, these reaches are identified as the highest-need reaches for implementation of invasive plant removal measures (Table 5.1). As another example, reaches LRB_R04A and LRB_R05A 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 priorities 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 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. Cost estimates for reach-specific recommendations 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

**Table 5.1. Relative need for various improvement measures by reach. ^a**

REACH NUMBER	REACH DESCRIPTION	IMPROVEMENT MEASURE										
		Stream Cleanup - hand	Mechanized Trash Removal	Invasive Plant Removal	Revegetation - Canopy	Revegetation - Shrub	Revegetation - Understory	Restoration of Native Understory Plants	Storm Drain Improvement	Grade Control	Bank Stabilization	Access Control/ Trail Stabilization
URB_R09	Upper Red Butte Garden	-	low-medium	low-medium	-	-	-	-	-	low	low	low
LRB_R01	Lower Red Butte Garden	low	-	-	-	-	-	-	-	-	-	-
LRB_R02	University - Below Red Butte Garden	low	low	low	-	high	high	-	-	-	high	high
LRB_R03	University - Above Chipeta Way	-	-	low	medium	-	low	-	-	medium	medium	-
LRB_R04A	University - Below Chipeta Way	high	high	medium	medium	-	-	-	medium	low	medium	-
LRB_R04B	University - Near Tennis Courts	-	-	-	-	-	medium	-	high	medium	medium	-
LRB_R04C	University - Above Foothill Drive	medium	medium	high	high	low	low	medium	medium	medium	medium	-
LRB_R05A	VA Medical Center - Below Foothill Drive	low	high	high	-	high	low	-	-	medium	high	-
LRB_R05B	VA Medical Center - Above Sunnyside Park	-	-	low-medium	-	medium	medium	-	medium	medium	medium	-
LRB_R05C	Sunnyside Park	-	-	medium-high	-	low	high	medium	-	medium-high	medium	medium
LRB_R07	Miller Park/Bonneville Glen	low	low-medium	high	-	medium	low	high	-	high	high	high

^a 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.

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

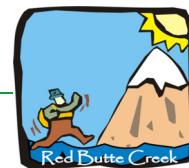


Table 5.2. Relative needs for stream crossing culvert replacement and improvement projects within the Red Butte Creek riparian corridor.

CROSSING LOCATION/ DESCRIPTION	REACH NUMBER(S)	APPROXIMATE CULVERT LENGTH (feet)	RELATIVE NEED FOR IMPROVEMENT	PREFERRED TYPE OF IMPROVEMENT	ALTERNATIVE TYPE OF IMPROVEMENT
Trail at south end of Red Butte Garden	between LRB_R01 and LRB_R02	50	low	replace with full-span prefabricated bridge	-
Chipeta Way	between LRB_R03 and LRB_R04A	108	low	replace with bridge or open-bottom box culvert	-
Crossing near tennis courts	between LRB_R04A and LRB_R04B	90	medium	remove	replace with open-bottom box culvert
Crossing near Marriot	between LRB_R04B and LRB_R04C	72	medium	remove	replace with open-bottom box culvert
Foothill Drive	between LRB_R04C and LRB_R05A	192	high	replace with open-bottom box culvert	install outlet protection and stabilize fill slopes
Hall Street	between LRB_R05A and LRB_R05B	128	medium	replace with bridge or open-bottom box culvert	install outlet protection and stabilize fill slopes
Crossing within VA Medical Center complex	near downstream end of LRB_R05B	20	high	remove	replace with open-bottom box culvert
Sunnyside Avenue	between LRB_R05C and LRB_R06	180	low ^a	replace with open-bottom box culvert	-
900 South	between LRB_R06 and LRB_R07	210	medium-high ^b	replace with open-bottom box culvert	install outlet protection
Trail in Miller Park	middle of LRB_R07	16	no improvements needed	-	-
1500 East	between LRB_R07 and LRB_R08	400	low ^a	replace with open-bottom box culvert	explore potential to daylight portion under parking lot
1300 East	between LRB_R09 and LRB_R10	260	unknown ^{a b}	replace with open-bottom box culvert	-
1100 East	between LRB_R10 and LRB_R11	90	no improvements recommended	-	-

^a Outlet condition not assessed.

^b Inlet condition not assessed

development and as a predictor of stream health (Schueler and Brown 2004). Within the Red Butte 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.



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 ^a	Relative Extent of Undeveloped Corridor Width ^b	Relative Longitudinal Integrity/Connectivity ^c
URB_R09	Upper Red Butte Garden	+	+	+
URB_R10	Middle Red Butte Garden	+	-	- ^d
LRB_R01	Lower Red Butte Garden	+	o	-
LRB_R02	University - Below Red Butte Garden	+	-	+
LRB_R03	University - Above Chipeta Way	+	+	+
LRB_R04A	University - Below Chipeta Way	+	-	o
LRB_R04B	University - Near Tennis Courts	o	o	-
LRB_R04C	University - Above Foothill Drive	o	+	o
LRB_R05A	VA Medical Center - Below Foothill Drive	o	+	-
LRB_R05B	VA Medical Center - Above Sunnyside Park	o	-	o
LRB_R05C	Sunnyside Park	o	+	o
LRB_R06	Sunnyside Avenue to 900 South	-	-	- ^d
LRB_R07	Miller Park/ Bonneville Glen	-	o	+
LRB_R08	Below 1500 East	-	+	+ ^d
LRB_R09	Above 1300 East	-	+	+ ^d
LRB_R10	1300 East to 1100 East	-	-	o ^d
LRB_R11	Below 1100 East	-	o	- ^d

^a Qualitatively assessed based on relative percentage of impervious cover within contributing drainage area for each Red Butte Creek study reach.

^b Qualitatively assessed based on relative amount of existing infrastructure within 50 and 100 feet of the annual high water level on at least one streambank; see infrastructure tables in Appendix C.

^c Qualitatively assessed based on relative length of uninterrupted channel connected to the reach.

^d Reach not fully assessed.

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. Reaches assessed as having relatively wide undeveloped



corridor widths (Table 5.3) should be protected from future development to the extent possible.

Longitudinal integrity also influences riparian enhancement potential within the Red Butte 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 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 Red Butte 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 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 Red Butte Creek corridor, it will not be possible to achieve the riparian corridor vision statement objectives through a purely top-down, government-driven approach. Some projects will likely evolve from residents joining together around shared interests. An established riparian corridor working group or watershed committee would be helpful in facilitating such community-driven 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 Canyon 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/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 an Red Butte Creek-specific subgroup as a component of this council. The results of the on-going Jordan River Total Maximum Daily Load project may also spur interest in improvement projects on

tributary streams that would provide water quality benefits.

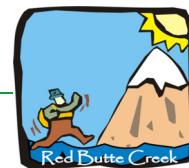
Certain riparian corridor improvement efforts could be modeled on existing partnering approaches that have proven successful. For example, each spring Salt Lake City partners with the Bonneville Cooperative Weed Management Area (CWMA) and environmental groups to encourage volunteers to participate in weed pulling efforts in the City Creek watershed. A similar approach could be used to implement invasive plant removal projects within the Red Butte Creek riparian corridor.

Native plant exchanges are another partnering approach that could be applied to the Red Butte 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 Red Butte 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, one-on-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 Red Butte 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, ACOE 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 no-trespassing signage in collaboration with interested property owners

Goal: Increase public awareness

- design and install signs at road and trail crossings (e.g., "Crossing Red Butte 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 Red Butte 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
- 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 DWRT, 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 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 funding and labor will be available for multi-year 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 Red Butte 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.