

**CITY OF BOULDER
INFORMATION ITEM FOR:**

TRANSPORTATION ADVISORY BOARD – May 12, 2014
ENVIRONMENTAL ADVISORY BOARD – May 14, 2014
OPEN SPACE BOARD OF TRUSTEES – May 14, 2014
PLANNING BOARD – May 15, 2014
PARKS AND RECREATION ADVISORY BOARD – May 19, 2014
WATER RESOURCES ADVISORY BOARD – May 19, 2014

GREENWAYS ADVISORY COMMITTEE AGENDA ITEM
MEETING DATE: May 22, 2014

<p>SUBJECT: 2015-2020 Greenways Capital Improvement Program</p>
<p>REQUESTING DEPARTMENT: Kurt Bauer – Flood and Greenways Engineering Project Manager</p>
<p>PURPOSE: The 2015-2020 Greenways Capital Improvement Program is being provided to board members as an information item. If you have any comments or concerns regarding the 2015-2020 Greenways Capital Improvement Program, please pass them along to your Greenways Advisory Committee representative. If you have questions on this material, please contact Kurt Bauer at 303-441-4232 or bauerk@bouldercolorado.gov.</p>
<p>GREENWAYS ADVISORY COMMITTEE ACTION REQUESTED: A recommendation from the Greenways Advisory Committee to the City’s Planning Board and City Council concerning the proposed Greenways Capital Improvement Program is requested.</p>

Attached is information concerning the proposed 2015-2020 Greenways Capital Improvement Program (CIP) for review and consideration. A recommendation by the Greenways Advisory Committee to the city’s Planning Board and Council will be requested at the May 22, 2014 GAC meeting.

- Attachment A: Greenways 2015-2020 Capital Improvement Program Overview
- Attachment B: Greenways 2015-2020 Capital Improvement Program Summary Spreadsheet
- Attachment C: Greenways Program CIP Map
- Attachment D: Timeline for Floodplain Mapping, Mitigation Planning and Capital Improvements

Attachment A: Greenways 2015 - 2020 CIP Program Overview

GREENWAYS 2015 - 2020 CAPITAL IMPROVEMENTS PROGRAM

The city of Boulder Greenways System is comprised of a series of corridors along riparian areas including Boulder Creek and its 14 tributaries, which provide an opportunity to integrate multiple objectives, including habitat protection, water quality enhancement, storm drainage and floodplain management, alternative transportation routes for pedestrians and bicyclists, recreation and cultural resources.

The Greenways CIP follows an opportunistic approach, contributing funding toward projects that are being completed by other departments or private development in order to meet the various objectives of the Greenways Program. The Greenways CIP also looks to leverage funds with outside agencies in order to move projects forward that meet more than one objective of the Greenways Program, but may not be the highest priority when evaluating any one particular objective. Projects included in the Greenways CIP are typically called out in the Greenways Master Plan and are projects that Greenways staff can take the lead in coordinating.

Funding Overview

The total 2015 Greenways capital budget is \$320,441, with \$105,000 in the operating budget. Greenways projects are funded from the Transportation Fund, Stormwater and Flood Management Utility Fund, and the Lottery Fund. Annual funding distribution for the Greenways Capital Program for 2015 is as follows:

Transportation	-	\$97,500
Flood Utility	-	\$97,500
Lottery Fund	-	\$125,441

Starting in 2015, the Lottery contribution is expected to be reduced to \$125,441, based on Greenways receiving 15% of the city's funding allocation, with a projection of total Lottery proceeds being \$836,275.

Accomplishments and Highlights

The following presents a summary of the projects that were completed prior to the flood in 2013:

- The Boulder Creek Flood Mapping Update was submitted to FEMA in early 2013.
- Significant progress was made on the design of the Wonderland Creek Greenways and Flood improvement projects (Foothills to 30th and 30th to Winding Trail) including hiring an artist and working through design details with the Burlington Northern Railroad.
- The Wonderland Creek Diagonal to Winding Trail CEAP was completed in early 2013.
- Upper Goose Creek and Twomile Canyon Creek Flood Mapping Study was presented to WRAB in a public hearing in May.
- High resolution LiDAR (light and radar) data was collected in the spring of 2013 to update the city's topographic and GIS data.

- Staff completed a periodic update to the city's asset management database for all drainage infrastructure along all major drainageways in the spring of 2013.

In September 2013, a major storm event brought unprecedented rainfall to our region causing significant flooding, loss of life and widespread damage. The following provides a summary of the efforts completed following this event:

- Staff performed damage assessments along Boulder Creek and the 14 major drainageways and determined the limits of the flood boundary associated with the September flood for each drainageway.
- Seven Open Houses were conducted in coordination with the Community Planning and Sustainability Department to share flood extent and flood recovery information with the public.
- Emergency channel repair work and sediment removal was completed along Twomile Canyon Creek, Wonderland Creek and Boulder Creek in conjunction with the Urban Drainage and Flood Control District.
- A post-flood evaluation of the Fourmile Canyon Creek and Wonderland Creek flood mapping was initiated in December.

Projects Completed in 2014

- Goose Creek Restoration Project includes restoration improvements along Goose Creek between Foothills Highway and 55th Street. This project is expected to be completed in 2014. This project is primarily being funded through a Section 206 Restoration grant through the U.S. Army Corps of Engineers. The city's 35% funding match is being met mostly through credits from city owned real estate.
- A flood mitigation major drainageway plan for South Boulder Creek is anticipated to be completed by the end of 2014.
- The Urban Drainage and Flood Control District also completes maintenance projects along the major drainageways. In 2014 this includes a request for sediment removal along Wonderland Creek from Foothills Parkway to the confluence with Goose Creek. This maintenance project will help provide the necessary conveyance capacity required when the Wonderland Creek Greenways Improvement Project is completed.

Projects Expected for Completion in 2015

- Fourmile Canyon Creek at 19th Street is in preliminary design but was put on hold following the September 2013 flood event. It is anticipated that development of this project will continue in late 2014 with a CEAP completed in 2015.
- Flood mapping studies for Upper Goose and Twomile Canyon Creeks; Skunk, Kings Gulch and BlueBell Canyon Creeks; Boulder Slough and Bear Canyon Creek are anticipated to be completed in 2015.

Projects Starting in 2015, but Not Completed

- Construction of the Wonderland Creek Foothills to 30th Greenways Improvement Project is anticipated to begin in 2015.
- Construction of the Wonderland Creek (28th Street) Diagonal to Winding Trail Greenways Improvement Project is anticipated to begin in 2015.
- A flood mitigation plan was initiated in 2014 for Boulder Creek, Bear Canyon Creek and

Gregory Canyon Creek and is anticipated to be completed 2015.

Highlights of 2015 – 2020 Projects

The focus of the 2015-2020 Greenways CIP is on flood mitigation, bicycle and pedestrian multi-use paths and underpasses, and habitat and water quality improvements along the Fourmile and Wonderland Creek corridors. In addition to the projects along Fourmile Canyon Creek and Wonderland Creek, possible habitat restoration projects during the next few years include:

- Stream bank restoration along Boulder Creek at Eben Fine Park
- Confluence of Bear Creek and Boulder Creek at Foothills Community Hospital
- Dry Creek habitat improvements through Flatirons Golf Course
- Goose Creek, railroad to 47th Street tree plantings
- Fish Passage enhancement projects in association with Fishing is Fun grants
- South Boulder Creek minimum stream flow
- Removal of Russian Olive trees east of 75th Street along Boulder Creek

Relationship to Guiding Principles and Master Plan and Prioritization

Greenways projects address many of the CIP guiding principles. Greenways projects are identified in multiple master plans and meet the community sustainability goals. Most of the Greenways projects leverage outside or interdepartmental funding. Greenways habitat improvements seek to be sustainable and are intended to reduce the future maintenance required.

The Greenways CIP has been developed within the context of and is consistent with the Boulder Valley Comprehensive Plan (BVCP), the Transportation Master Plan (TMP), the major drainageway plans, the Comprehensive Flood and Stormwater Master Plan and the Greenways Master Plan. The Greenways Master Plan was updated in 2011 to reflect improvements that had been completed, and adopted changes that have been made in other master plans, city policies and ordinances that affect the Greenways Program since the last Master Plan update in 2001. Information from other existing master plans for seven additional tributaries was also incorporated into the Greenways Master Plan update. Future opportunities will also be coordinated with the Open Space and Mountain Park's Grassland Plan and Visitor Master Plan and Trail Study Area plans where appropriate.

Many of the Greenways projects shown in the CIP are being designed and constructed in coordination with major flood or transportation improvements. The Greenways funding associated with these projects focuses on habitat restoration, water quality improvements and trail connections. In addition to leveraging funding with the Transportation and Flood Utilities budgets, funding for Greenways projects is also available through the Urban Drainage and Flood Control District and Federal Transportation funds.

It should be noted that the city is still recovering from the September 2013 flood event that resulted in extensive flooding along most of the city's major drainageways. Following the flood, additional funds have been allocated in the Flood Utility CIP to reflect an increased interest in pursuing flood mitigation efforts along the city's major drainageways. Continued evaluation of the impacts from this event may result in additional changes to the Flood Utility and Greenways CIP in upcoming years.

New Projects

The 2015 - 2020 CIP continues to focus on Fourmile Canyon and Wonderland Creeks. The Flood Utility is currently updating the flood mapping for the following creeks and tributaries: Boulder Creek, Boulder Slough, Upper Goose Creek, Twomile Creek, Skunk Creek, Bluebell Creek and King's Gulch. Once the new mapping has been approved by FEMA, a flood mitigation analysis will be completed for each of these tributaries to determine if it is economically feasible to reduce the flood risk through construction of capital improvements. A flood mitigation plan is being initiated in 2014 for Boulder Creek, Gregory Canyon Creek and Bear Canyon Creek. This plan will identify potential economically feasible CIP projects which may provide opportunities for future Greenways Improvements. **Attachment B** presents a spreadsheet of proposed funding for these upcoming projects. **Attachment D** graphically presents the anticipated timeline for these projects.

Operation and Maintenance Impacts

\$105,000 is budgeted each year for Greenways operations and maintenance. \$80,000 of the operating budget is dedicated to habitat maintenance. The Greenways habitat crew works closely with Parks and Open Space maintenance staff to provide on-going maintenance, as well as on collaborative projects as part of the operations budget. Major drainageway improvements are maintained by the flood maintenance staff and multi-use paths and underpasses are maintained by either Transportation or Parks maintenance, depending upon jurisdiction.

Deferred Projects, Changes and Unfunded Needs

Since the Greenways Program is opportunistic, taking advantage of projects that are funded through other departments, there are no unfunded needs.

The Wonderland Creek from Foothills to 30th Street was granted Federal Transportation Improvement Program (TIP) funds in the amount of \$2 million (2012-2014). Additional TIP funding was granted for the Wonderland Creek at 28th Street project in the amount of \$900,000 (2013-2014).

Emerging Needs

None

BOARD ACTION

The Greenways Advisory Committee will review the Greenways CIP on May 22, 2014 and will be asked to make a recommendation for approval to the Planning Board and City Council.

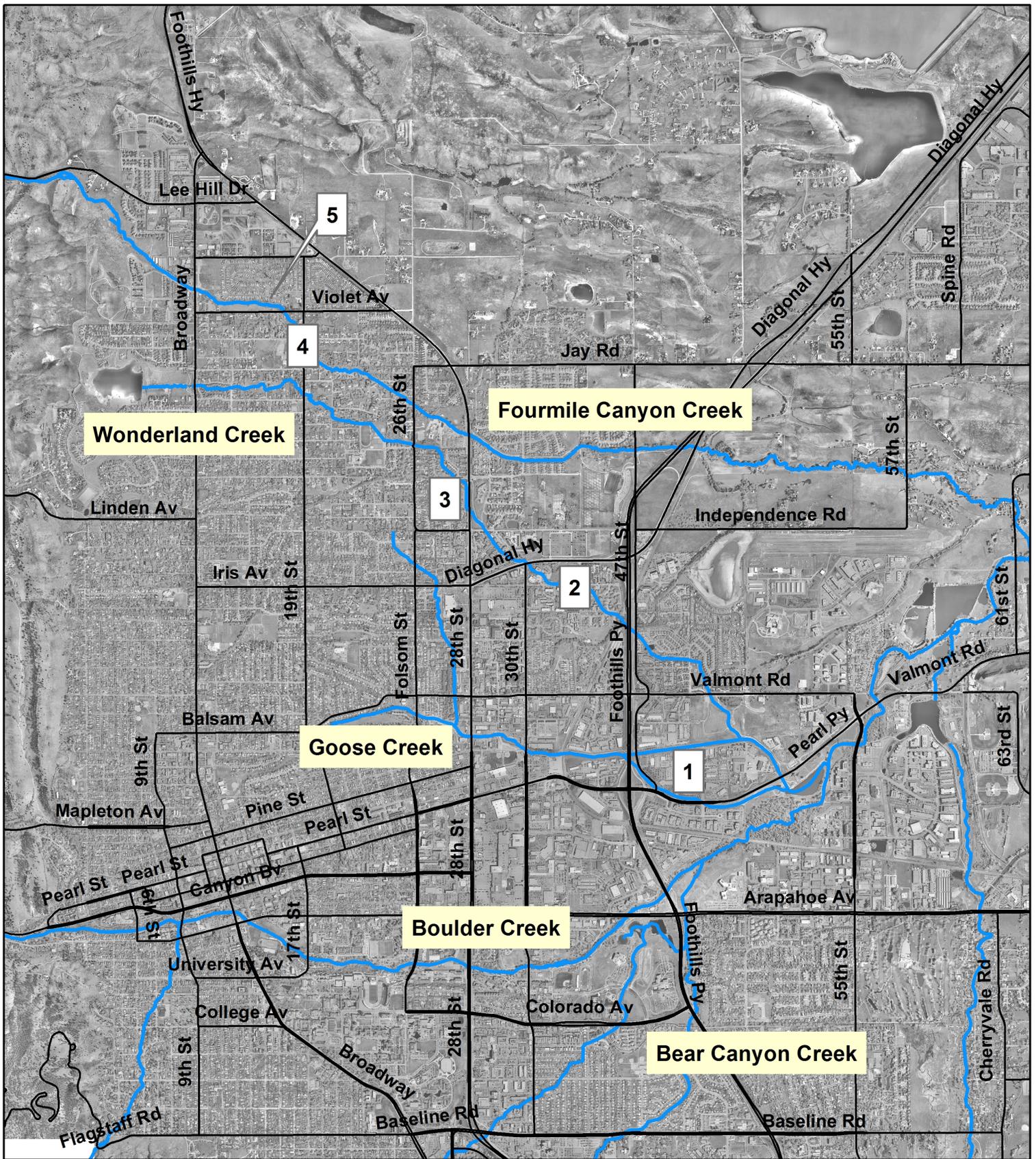
**CITY OF BOULDER
CAPITAL IMPROVEMENTS PROGRAM**

GREENWAYS PROGRAM 2015-2020 SUMMARY SHEET with Carry Overs from 2013 to 2014											
CAPITAL IMPROVEMENTS PROGRAM	Total Greenways	Expended in Prior Years	2013 Carry Over	2014 Budget	2014 Budget + Carry Over	2015 Projected	2016 Projected	2017 Projected	2018 Projected	2019 Projected	2020 Projected
1 Goose Creek Restoration	\$120,000	\$80,382	\$39,618	\$0	\$39,618						
2 Wonderland Foothills to 30th Street	\$391,716	\$42,689	\$349,027		\$349,027						
3 Wonderland 28th Street Underpass	\$565,441	\$0	\$0	\$295,000	\$295,000	\$270,441					
4 Fourmile 19th to 22nd	\$747,900	\$29,072	\$718,828	\$0	\$718,828						
5 Fourmile Upland to Violet	\$1,352,205	\$0	\$0	\$0	\$0		\$270,441	\$270,441	\$270,441	\$270,441	\$270,441
6 Restoration, Water Quality and Trail Improvements		\$0	\$104,288	\$50,000	\$154,288	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
7 CU Bike/Ped Bridge Replacement	\$200,000	\$0	\$200,000	\$0	\$200,000						
TOTAL GREENWAYS BUDGET			\$1,411,761	\$345,000	\$1,756,761	\$320,441	\$320,441	\$320,441	\$320,441	\$320,441	\$320,441

FLOOD FUNDING BY YEAR										
CAPITAL IMPROVEMENTS PROGRAM	Expended in Prior Years	2014 Budget + Unencumbered Carry Over	2015 Projected	2016 Projected	2017 Projected	2018 Projected	2019 Projected	2020 Projected	Total	
1 Goose Creek Restoration	\$0	\$0							\$0	
2 Wonderland Foothills to 30th	\$1,033,092	\$0	\$10,000,000						\$11,033,092	
3 Wonderland 28th Street Underpass	\$265,216	\$0	\$6,075,000						\$6,340,216	
4 Fourmile 19th to 22nd	\$296,793	\$1,282,655							\$1,579,448	
5 Fourmile Upland to Violet	\$0			\$500,000	\$500,000	\$500,000	\$750,000	\$2,500,000	\$4,750,000	
6 Bear Canyon Creek	\$0		\$100,000	\$500,000					\$600,000	
7 Gregory Canyon Creek	\$0		\$100,000	\$500,000					\$600,000	
8 Boulder Creek	\$0	\$100,000	\$500,000	\$2,500,000	\$2,500,000				\$5,600,000	
9 Boulder Slough	\$0	\$788,164							\$788,164	
10 Twomile Canyon Creek	\$0				\$100,000	\$500,000			\$600,000	
11 Bluebell Canyon / Kings Gulch Creek	\$0				\$100,000	\$500,000			\$600,000	
12 Skunk Creek	\$0				\$100,000	\$500,000			\$600,000	

TOTAL PROJECT FUNDING					
CAPITAL IMPROVEMENTS PROGRAM	All Years Greenways	Pre-flood Funds	Flood Funds	TIP	Project Total
1 Goose Creek Restoration	\$120,000		\$0		\$120,000
2 Wonderland Foothills to 30th Street	\$391,716		\$11,033,092	\$2,000,000	\$13,424,808
3 Wonderland 28th Street Underpass	\$565,441		\$6,340,216	\$900,000	\$7,805,657
4 Fourmile 19th to 22nd	\$747,900		\$1,579,448		\$2,327,348
5 Fourmile Upland to Violet	\$1,352,205		\$4,750,000		\$6,102,205

POTENTIAL 2014 TIP SUBMITTALS
1 Skunk Creek at 30th Street
2 Sunk Creek at Moorehead
3 Fourmile Canyon Creek 19th to Violet



Wonderland Creek

Fourmile Canyon Creek

Goose Creek

Boulder Creek

Bear Canyon Creek

- Projects
- 1 Goose Creek Restoration
 - 2 Wonderland Foothills to 30th Street/
 - 3 Wonderland 28th Street Underpass
 - 4 Fourmile - 19th to 22nd
 - 5 Fourmile - Upland to Violet

2015 - 2020 Greenways Program CIP Attachment C



