

RECOMMENDED

2022-2027

CAPITAL

IMPROVEMENT

PROGRAM



CITY OF BOULDER, COLORADO
SERVICE EXCELLENCE FOR AN INSPIRED FUTURE.

CAPITAL IMPROVEMENT PROGRAM

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CAPITAL IMPROVEMENT PROGRAM

The City of Boulder's 2022-2027 Capital Improvement Program (CIP) contains information on how the city plans to invest available resources into key infrastructure and facilities between 2022 and 2027. The 2022-2027 CIP provides the funding plan (amount needed by year) for each CIP project in the document's summary sections and in each project sheet. This section contains: planned project funding summaries organized by department, project type, and fund; links to maps and detail project sheets illustrating the location of projects throughout the city; and narratives describing the rationale behind project prioritization. The 2022-2027 CIP has four main parts:

INTRODUCTION

Provides an overview of the 2022-2027 CIP including process and highlights.

FUNDING SUMMARIES

Contains analysis of how the 2022-2027 CIP allocates dollars among city departments, project types, and funds.

DEPARTMENT OVERVIEWS

Contains highlights of each department's focus, operating and maintenance impacts, unfunded projects, CEAP projects, board action, 2022-2027 CIP, and a link to that department's project sheets.

CEAP (COMMUNITY & ENVIRONMENTAL ASSESSMENT PROCESS)

Contains a list of individual projects identified in the annual CIP process that will complete a CEAP.

CAPITAL IMPROVEMENT PROGRAM

The funding tables (includes tables in the Funding Summaries section, as well as tables in the Capital Project Overviews section) show the six-year Estimated Total Cost for each project, which includes total approved budget for 2022, and the estimated cost for each year between 2022 through 2027.

Innovation & Technology							
	Estimated Total Cost	2020 Approved	2021 Projected	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Capital Program Total	\$ 18,113,400	\$ 4,390,000	\$ 2,810,600	\$ 1,932,800	\$ 7,180,000	\$ 1,500,000	\$ 300,000
CIP-Capital Enhancement Total	\$ 550,000	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -
Enterprise CRM	\$ 300,000	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -
General Fund CIP. Replacement of current CRM system, Inquire Boulder. The current system has many deficiencies and has not been updated since its release in 2013. We will add requirements for the new CRM system to our Website Redesign RFP, which will be released in July 2019. We hope to find vendors who may have CRM functionality native to their proposed solution. This solution is an enterprise-level tool.							
Enterprise Data Warehouse	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -
General Fund CIP. The siloed nature of various departments throughout the city makes sharing of internal information and data relatively difficult, as often it is unknown what data exists, what form it exists in, and whether it is compatible with data collected in another department. Having a citywide centralized system will allow departments to integrate data from multiple sources and applications into one location. A data warehouse would improve data quality and consistency throughout the City. This initial phase of the project is funding for consulting and cloud hosting services. An increase in the CRF of \$30,000/year has already been built into the FY2020 rates for continued support of this solution.							
CIP-Capital Maintenance Total	\$ 10,063,400	\$ 2,340,000	\$ 1,310,600	\$ 432,800	\$ 5,680,000	\$ -	\$ 300,000
Data Backup and Disaster Recovery	\$ 140,000	\$ -	\$ -	\$ 140,000	\$ -	\$ -	\$ -
The project reflects the hardware, software and support needed to ensure reliable high speed backup of files, databases and applications stored on the city's enterprise servers and data storage sub-systems. Note that these systems are required not only for disaster preparedness and recovery purposes, but to meet legal records retention requirements.							

Example

Funding tables in the Capital Project Overviews section list projects by the following types:

- Capital Enhancement
- Capital Maintenance
- Capital Planning Studies
- Land Acquisition, or
- New Facility/Infrastructure

Innovation & Technology							
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Example

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INTRODUCTION

BACKGROUND ON THE CAPITAL IMPROVEMENT PROGRAM (CIP)

The City of Boulder's Capital Improvement Program (CIP) is a comprehensive, six-year plan for capital investment in maintaining and enhancing public infrastructure. The CIP provides a forecast of funds available for capital projects and identifies all planned capital improvement projects and their estimated costs over the six-year period. A community's CIP is a guide that lays out the framework for achieving the current and future goals related to the physical assets of the community.

Boulder invests in facilities and infrastructure and provides a high-level of municipal services. The city owns and maintains 385 buildings and structures (including three recreation centers, five library facilities, eight fire stations, and five parking structures), 1,800 acres of parkland, 71.2 acres of Open Space & Mountain Parks, 305 centerline miles of streets, 159 centerline miles of bike facilities, 80 underpasses, two water treatment facilities, one wastewater treatment facility, 11 dams, and over 800 miles of water and wastewater piping.

The city funds the construction and maintenance of these assets using a wide range of sources, including tax revenues, bond proceeds, and fees and continues to look for ways to leverage its funding, through federal, state, and local grants and reimbursements, to maximize funding for CIP projects.

The CIP development process prioritizes the city's numerous needs across multiple departments and services with attention to the limits of each funding source, progress on ongoing CIP projects, funding commitments made by prior CIPs, and ongoing work.

RECOMMENDED 2022-2027 CAPITAL IMPROVEMENT PROGRAM (CIP)

The 2022-2027 CIP is based upon an improved revenue picture as the Boulder economy has shown signs of recovery from the COVID-19 Pandemic. With that, the 2022-2027 CIP has \$158 million recommended for 2022, and approximately \$684 million is recommended for years 2022-2027. It is important to remember that, unlike an operating budget, the capital budget may significantly fluctuate between years due to timing of projects and availability of funding.

The city is spending the majority, about 82%, of its 2022-2027 capital funds on capital maintenance and enhancement of its existing assets. The CIP focuses on taking care of what the city already owns with an emphasis on making improvements to its core service areas. Capital enhancements involve upgrades to existing facilities that may include upgraded technologies, materials, and equipment that can be more efficient, effective and less costly to operate over time.

SEVERAL LARGE 2022 CAPITAL PROJECTS INCLUDE:

- Aquatic Facility Enhancements (\$1.6M)
- Alpine Balsam Flood Mitigation (\$3.0M)
- South Boulder Creek Flood Mitigation (\$2M)
- Gregory Creek Flood Mitigation (\$3.0M)
- Pavement Management Program (\$4.85M)
- 28th Street Multi-modal Enhancements Project (\$4.7M)
- Main Sewer Improvements (\$44.5M)

INTRODUCTION

PLANNING CONTEXT:

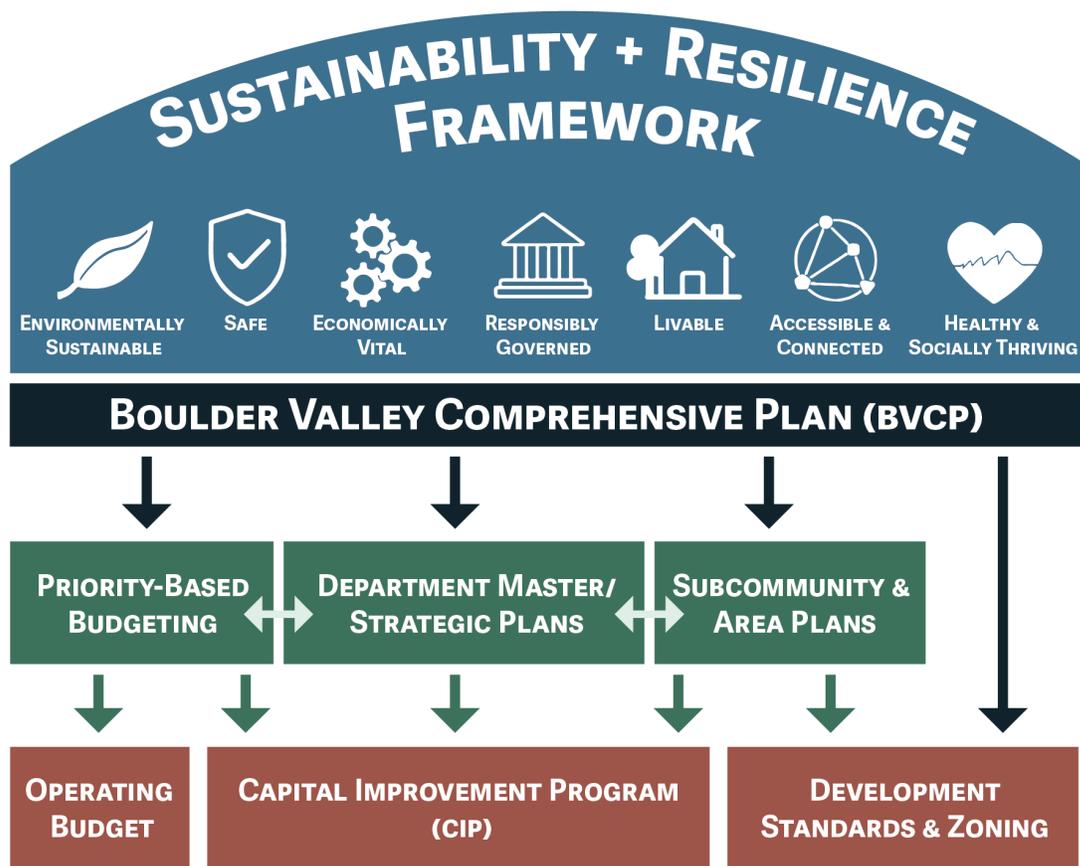
The Boulder community has long been a leader in collaborative strategic planning and proactive longterm financial planning. The city utilizes the Community Sustainability + Resilience Framework and Boulder Valley Comprehensive Plan (BVCP) to guide all decisions. The BVCP sets the stage for more detailed planning for parts of the Boulder Valley and for implementation. More detailed planning puts the vision of this plan into practice through the steps described below and as shown in the figure below.

COMMUNITY SUSTAINABILITY & RESILIENCE FRAMEWORK

The Community Sustainability + Resilience Framework helps provide common language for the Boulder Valley, community and City Council goals and priorities. It assists in the alignment of the BVCP, master plans, decision-making and budgeting process. The City of Boulder continuously works to provide service excellence for an inspired future. This framework guides budgeting and planning processes by providing consistent goals necessary to achieve Boulder’s vision of a great community and the actions required to achieve them.

BOULDER VALLEY COMPREHENSIVE PLAN (BVCP)

The BVCP is the overarching policy to guide development and preservation in the Boulder Valley, including for the city’s capital improvements. Sections within each policy chapter of the BVCP generally coincide with the seven broad categories and outcomes of the Community Sustainability + Resilience Framework. The CIP is one of the key implementation tools to ensure that the city’s capital investments meet the city’s long-term goals and is aligned with the vision set forth in the BVCP.



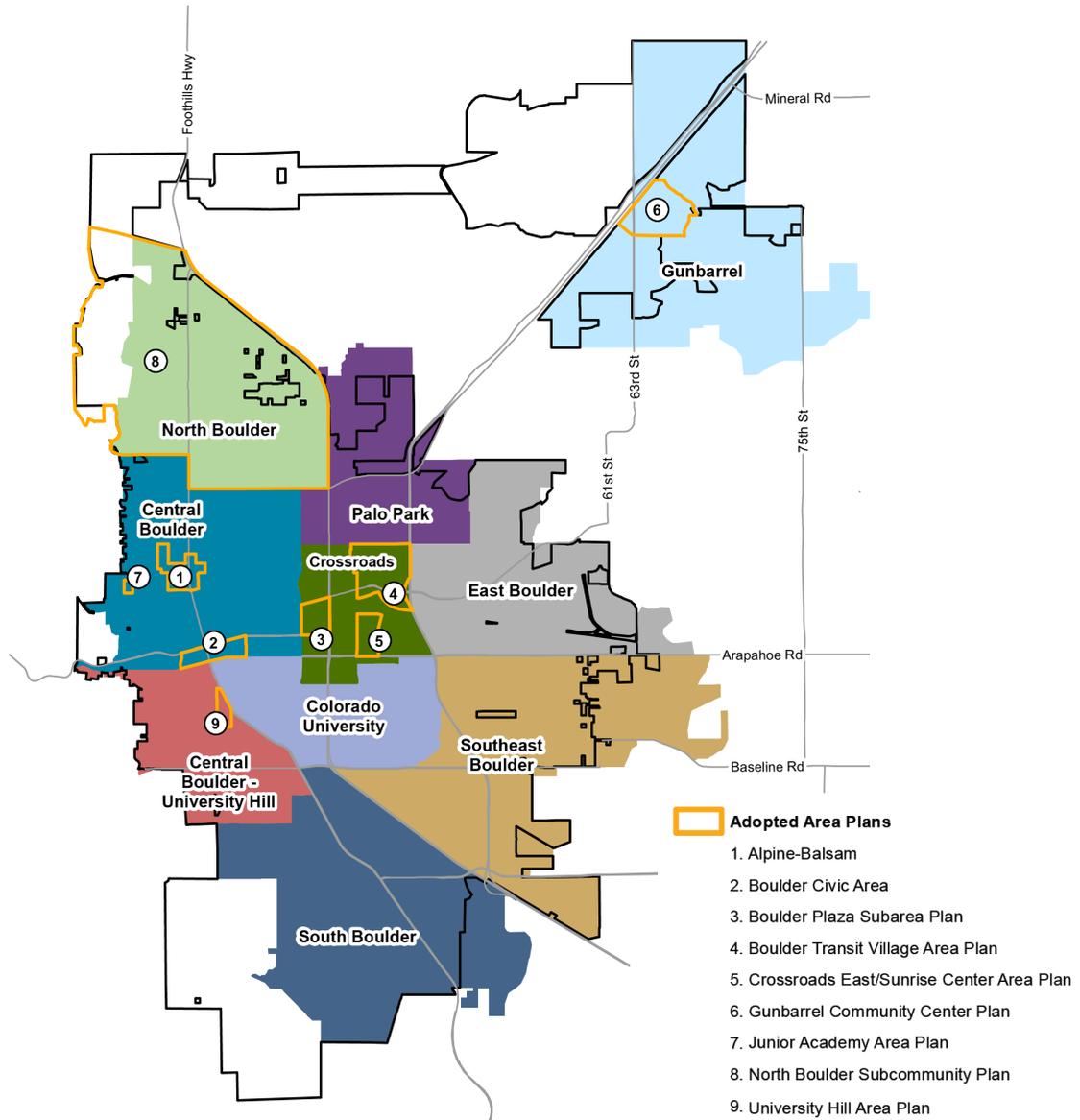
INTRODUCTION

DEPARTMENT MASTER PLANS

Most departments have master plans outlining the provision of services and facilities. Master plans include a robust community engagement process and are developed to be consistent with the policies and the growth projections in the BVCP. They include level of service standards needed to meet BVCP goals and policies, more specific policies, and system-wide priorities for scheduling and targeting capital improvements. Master plans play a fundamental role in the identification and eventual implementation of capital projects. In turn, the CIP plays a fundamental role in achieving the visions set forth in department master plans.

SUBCOMMUNITY AND AREA PLANS

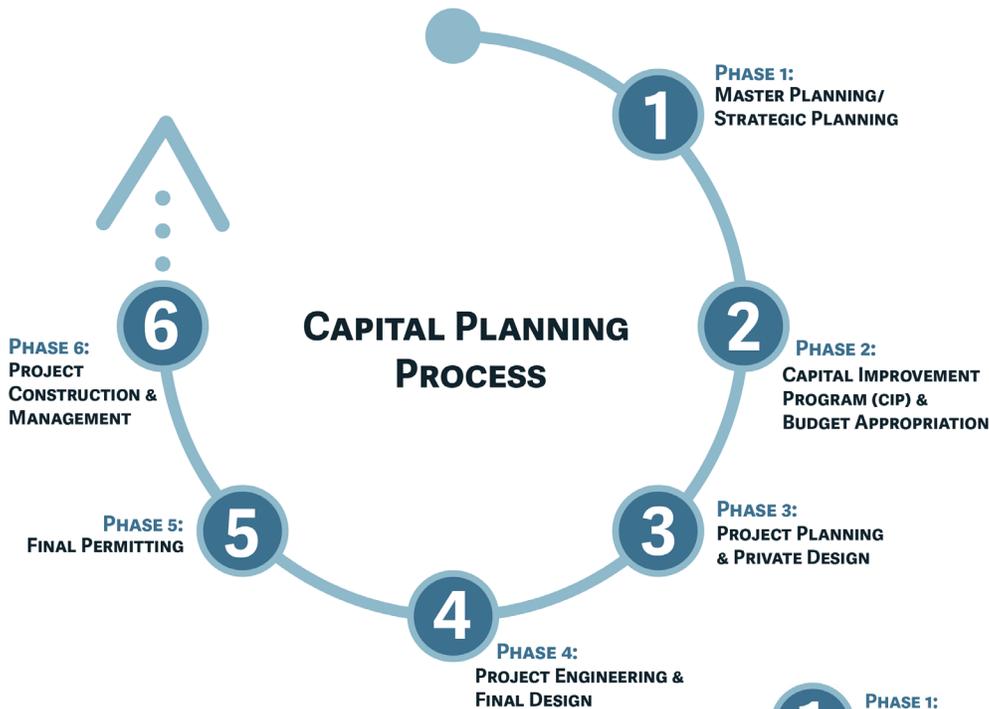
As defined in the BVCP, subcommunity and area plans (map provided below) provide direction for specific geographic areas. They provide a link between the broad policies of the BVCP and more detailed zoning, development review and capital improvement programming decisions. Like department master plans, subcommunity and area plans play a fundamental role in the identification and eventual implementation of capital projects. In turn, the CIP plays a fundamental role in achieving the visions set forth in subcommunity and area plans.



INTRODUCTION

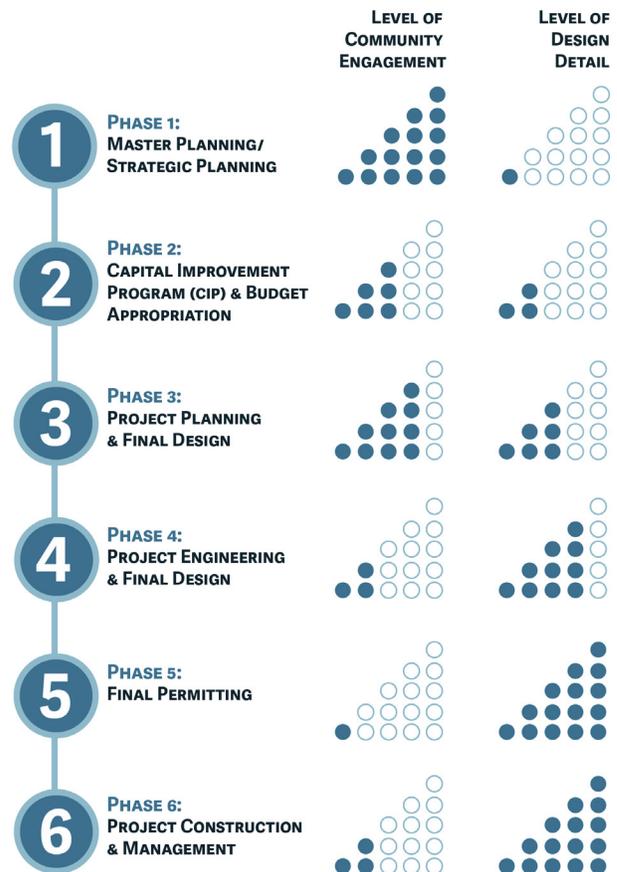
CAPITAL PLANNING (DEPARTMENT LEVEL)

The diagram below shows the general steps in the capital planning process. Each department prioritizes and schedules its CIP based on the needs and priorities identified in its master plan, any subcommunity or area plan, industry best practices, opportunities for external funding, estimated cost, projected revenue, urgency of the project, and maintenance schedules. Projects are then scheduled into the six-year CIP, with some design work and financing completed as they approach the budget funding cycle.



The diagram to the right also shows the general steps in Boulder’s planning process, but highlights the general expectations for community engagement and the overall level of detail. Master plans include a robust community engagement process that ultimately results in conceptual CIP projects. Additional engagement often happens in Phase 3, especially when there are numerous alternatives to consider. Community engagement during final permitting and construction is limited to informing community members about impacts to their daily lives.

City Council, advisory boards/commissions, community members, and others have the highest amount of influence during the master planning process and in the scheduling of years two through six of the CIP. More information on each phase is included on the following page.



INTRODUCTION

PHASE 1: DEPARTMENTAL MASTER OR STRATEGIC PLANNING

- Guided by the Boulder Valley Comprehensive Plan (BVCP) and the Sustainability + Resilience Framework, departmental master plans establish detailed policies, priorities, facility and system needs, and funding plans.
- Most master/strategic plans involve significant public participation and often result in CIP projects.
- Plans are reviewed by advisory boards/commissions and the Planning Board, and are accepted by City Council.

PHASE 2: CAPITAL IMPROVEMENT PROGRAM (CIP) AND BUDGET APPROPRIATION

- The CIP project prioritization is guided by departmental, subcommunity, and area plans.
- The CIP forecasts available funds for capital projects and identifies all planned projects and estimated costs over a six-year period.
- First year's CIP program is adopted by City Council as a counterpart to the operating budget.

PHASE 3: PROJECT PLANNING AND DESIGN

- Evaluates a full range of project alternatives and resulting impacts (not system-wide alternatives).
- Identifies an appropriate review process, including the Community and Environmental Assessment Process (CEAP), or a Concept Plan and Site Plan review. CEAPs are reviewed by department advisory boards/commissions, the Planning Board, and finally, City Council.
- Includes appropriate community engagement in design alternatives.
- Identifies if a project qualifies for public art.

PHASE 4: PROJECT ENGINEERING AND FINAL DESIGN

- Some projects require Technical Document Review and are reviewed internally through the Development Review Committee.

PHASE 5: FINAL PERMITTING

- Some projects require building, flood, stormwater discharge, or right-of-way permits.

PHASE 6: PROJECT CONSTRUCTION AND MANAGEMENT

- Projects requiring building, right-of-way, or wetlands permitting also require construction and post-construction follow-up.
- Once construction is complete, the project is closed out and becomes a city asset.

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OVERVIEW OF FUNDING SUMMARIES

The Funding Summaries section provides full detail of the city’s CIP budget needs from 2022 through 2027 by department, project type, and fund. For each of the three funding views, the following information is shown:

- Total project cost for 2022 through 2027
- Planned funding allocation in each year 2022-2027 and the six-year total
- Prior funded amount

The Funding Summaries focus on estimated budget needs for all projects. In practice, as projects are planned, designed, and constructed, during any given year, appropriated project sources almost always differ from project expenditures. In some circumstances, such as a large project that requires many years of accumulated funds before design or construction can commence, expenditures may significantly lag appropriations.

All tables and graphs in this section include transfers between departments. These transfers are included in the departments because they will appear in the individual department sections of the overall city budget.



FUNDING SUMMARIES

FUNDING BY DEPARTMENT

The Public Works Utilities and Transportation divisions have the greatest allocations of resources in the 2022-2027 CIP.

Many departments have dedicated revenue sources that keep their CIP funding relatively constant. For example, both Open Space & Mountain Parks and Parks & Recreation have dedicated revenue sources, and their CIP funding remains relatively constant.

During the renewal of the community, culture, and safety tax and the 2018 Budget process, discussions with Council highlighted that the General Fund CIP has been limited, generally to Facilities & Asset Management-related projects, and supplemented through voter-approved capital funding initiatives. With many unfunded capital projects residing in the General Fund, the 2018 Budget, for the first time, included \$3.65 million to begin phase one of a formal Capital Improvement Program for the General Fund.

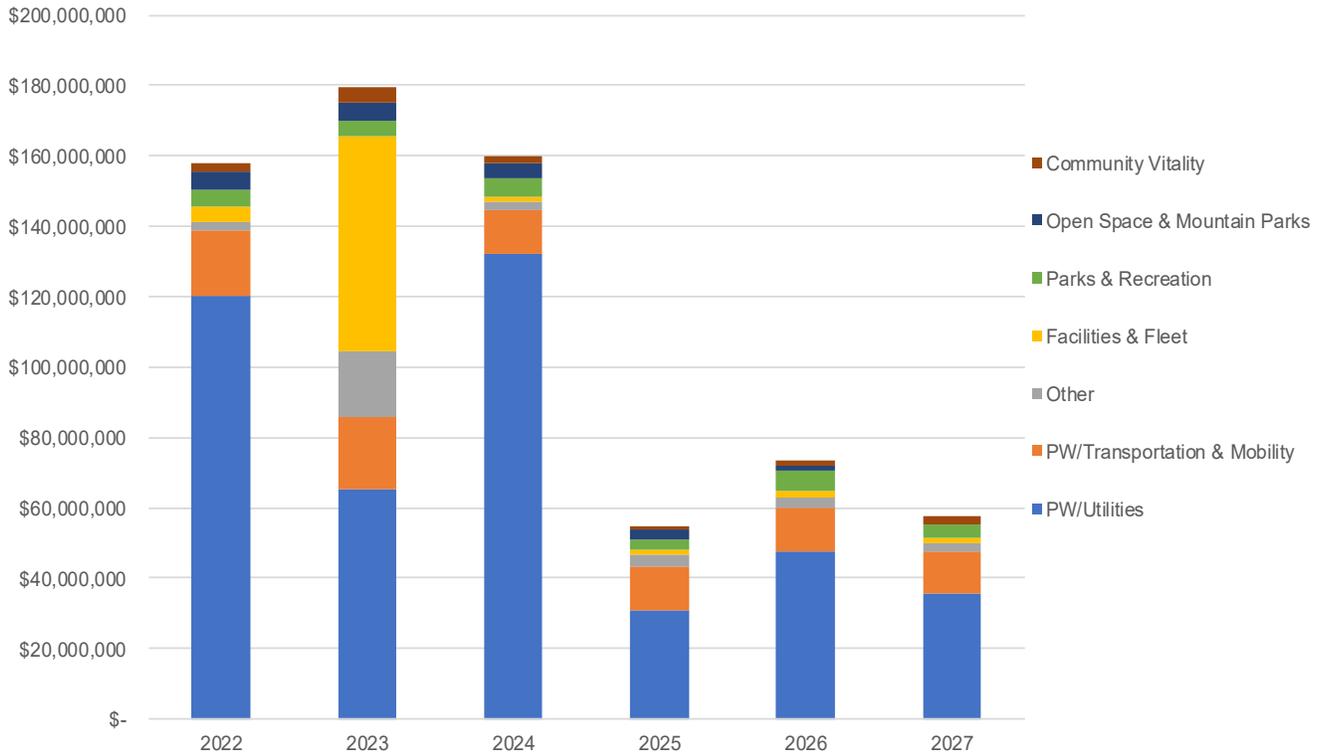
The chart on the following page displays the share of total 2022 2027 CIP spending by each department.

The following city departments are participating in the 2022-2027 CIP:

- Citywide
- Community Vitality
- Facilities & Fleet
- Fire-Rescue
- Innovation & Technology
- Library & Arts
- Open Space & Mountain Parks
- Parks & Recreation
- Police
- Transportation
- Utilities & Greenways

FUNDING SUMMARIES

2022-2027 Funding by Department



2022-2027 FUNDING SUMMARY BY DEPARTMENT

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Citywide	\$ 10,773,440	\$ 1,339,440	\$ 1,886,800	\$ 1,886,800	\$ 1,886,800	\$ 1,886,800	\$ 1,886,800
Community Vitality	13,902,000	2,047,000	4,410,000	2,095,000	1,100,000	1,750,000	2,500,000
Fire-Rescue	10,491,560	-	10,491,560	-	-	-	-
Innovation & Technology	10,700,800	867,800	5,930,000	575,000	1,455,000	1,360,000	513,000
Open Space & Mountain Parks	19,029,000	5,571,000	4,964,000	4,302,000	3,098,000	1,094,000	-
Parks & Recreation	26,058,500	4,528,000	4,180,000	5,177,000	2,436,500	6,092,000	3,645,000
Police	64,000	64,000	-	-	-	-	-
PW/Facilities & Fleet	72,473,046	4,578,841	61,578,841	1,578,841	1,578,841	1,578,841	1,578,841
PW/Stormwater & Flood Utility	136,454,602	8,788,567	16,938,567	96,341,767	4,268,567	4,448,567	5,668,567
PW/Transportation & Mobility	88,538,020	18,630,187	20,874,625	12,460,833	12,617,250	12,158,500	11,796,625
PW/Wastewater Utility	140,456,000	56,635,000	32,178,000	7,580,000	7,255,000	27,623,000	9,185,000
PW/Water Utility	154,700,000	54,805,000	16,000,000	28,055,000	19,260,000	15,600,000	20,980,000
TOTAL	\$ 683,640,968	\$ 157,854,835	\$ 179,432,393	\$ 160,052,241	\$ 54,955,958	\$ 73,591,708	\$ 57,753,833

FUNDING SUMMARIES

FUNDING BY PROJECT TYPE

Each CIP project has been classified as a city investment in one of five project types: Capital Enhancement, Capital Maintenance, Capital Planning Studies, Land Acquisition, and New Facility/Infrastructure.

The five project types are defined by the following criteria:

1. CAPITAL ENHANCEMENT

- Construction results in the expansion or significant improvement of an existing facility or asset.
- Projects have a discrete start and end date.
- Projects are location specific.
- Projects are typically over \$100,000 in total project cost, but do not have to be. Innovation & Technology projects are typically over \$50,000 in total project cost.
- Projects result in a durable, long lasting asset, with a useful life of at least 15 years. Innovation & Technology projects may be as short as five years.
- Projects may qualify for a percent for art allocation.

2. CAPITAL MAINTENANCE

- Project results in the repair, replacement, or renovation of an existing asset.
- Projects may or may not have a discrete start and end date.
- Projects are location specific or programs that cover a geographic area.
- Projects are typically over \$100,000 in total project cost. Innovation & Technology projects are typically over \$50,000 in total project cost.

3. CAPITAL PLANNING STUDIES

- Project results in the development of a study or plan which is intended to identify, plan, or prepare for the construction or acquisition of capital assets or a capital program.
- Projects have a discrete start and end date.
- Projects are typically for studies that are over \$100,000 in total cost.

4. LAND ACQUISITION

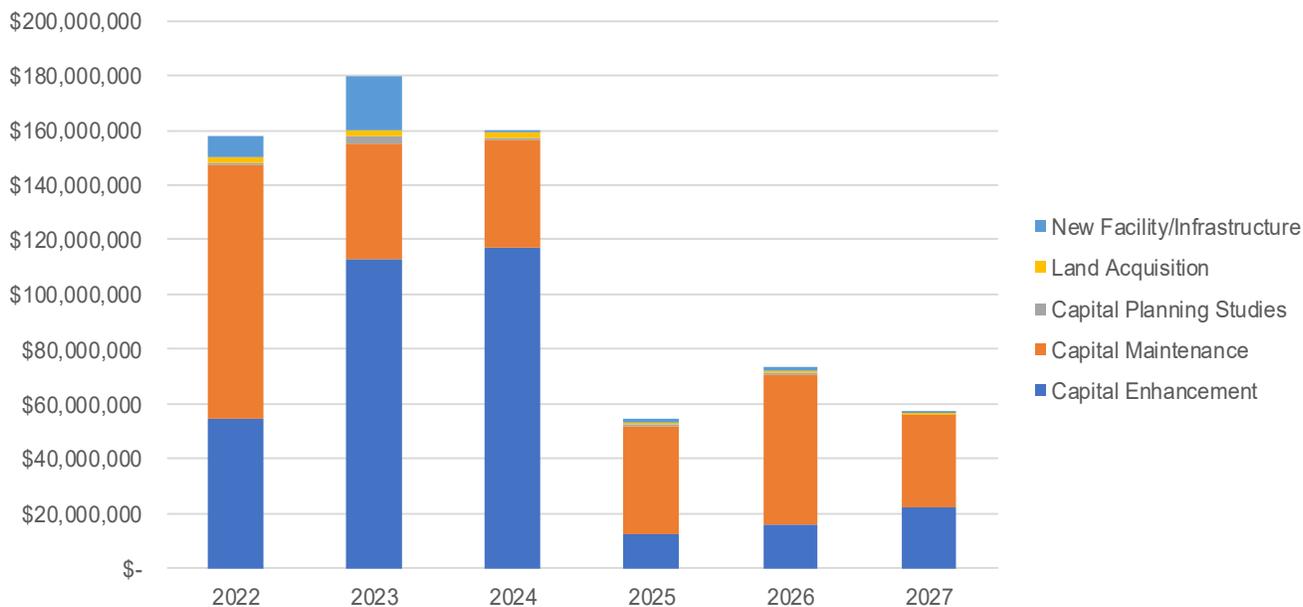
- Project or program results in the acquisition of real property, such as land, mineral or water rights, or permanent easements.
- Projects may have discrete start and end dates, or may be programmatic.
- Projects or programs may be location specific or citywide.
- Projects or programs typically include acquisitions totaling over \$100,000.

5. NEW FACILITY/INFRASTRUCTURE

- Project results in the construction or acquisition of a new asset.
- Construction results in additional square footage of an existing asset.
- Projects have a discrete start and end date.
- Projects are location specific.
- Projects are typically over \$100,000 in total project cost, but do not have to be.
- Projects result in a durable, long lasting asset, with a useful life of at least 15 years.
- Projects may qualify for a percent for art allocation.

FUNDING SUMMARIES

2022-2027 Funding by Project Type



2022-2027 FUNDING SUMMARY BY TYPE

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
CIP-CAPITAL ENHANCEMENT	\$ 335,193,921	\$ 54,431,011	\$ 112,935,568	\$ 117,198,267	\$ 12,298,817	\$ 16,066,067	\$ 22,264,192
CIP-CAPITAL MAINTENANCE	302,112,730	92,930,377	42,264,289	39,015,641	39,312,141	55,010,641	33,579,641
CIP-CAPITAL PLANNING STUDIES	5,983,333	910,000	2,500,000	1,043,333	1,120,000	410,000	-
CIP-LAND ACQUISITION	8,031,056	1,700,704	2,060,352	1,770,000	800,000	830,000	870,000
CIP-NEW FACILITY/INFRASTRUCTUR	32,319,928	7,882,743	19,672,185	1,025,000	1,425,000	1,275,000	1,040,000
Total	\$ 683,640,968	\$ 157,854,835	\$ 179,432,394	\$ 160,052,241	\$ 54,955,958	\$ 73,591,708	\$ 57,753,833

FUNDING SUMMARIES

FUNDING BY FUND

Detailed descriptions of all of the city's funds are available in the introduction section of the 2020 Approved Budget. Many of the funds exist to handle dedicated revenues that can only be used for specific types of capital projects. These restrictions provide consistency in planning for project types, but also require the city to allocate resources to a specific category of infrastructure and maintain existing priorities. The Greenways Program is not a fund as defined above, but is used within the CIP to illustrate the funding structure of the Public Works - Greenways workgroup, and to call out the CIP projects associated with the work of Greenways.

The following funds qualify for a percent for art allocation: 0.25 Cent Sales Tax Fund, Facility Renovation & Replacement Fund, Governmental Capital/General Fund, Permanent Park & Recreation Fund, Transportation Fund, and Transportation Development Fund.

Similar to the department distributions described earlier in this section, the Transportation and Utility Funds are the largest contributors to the city's 2022-2027 CIP.

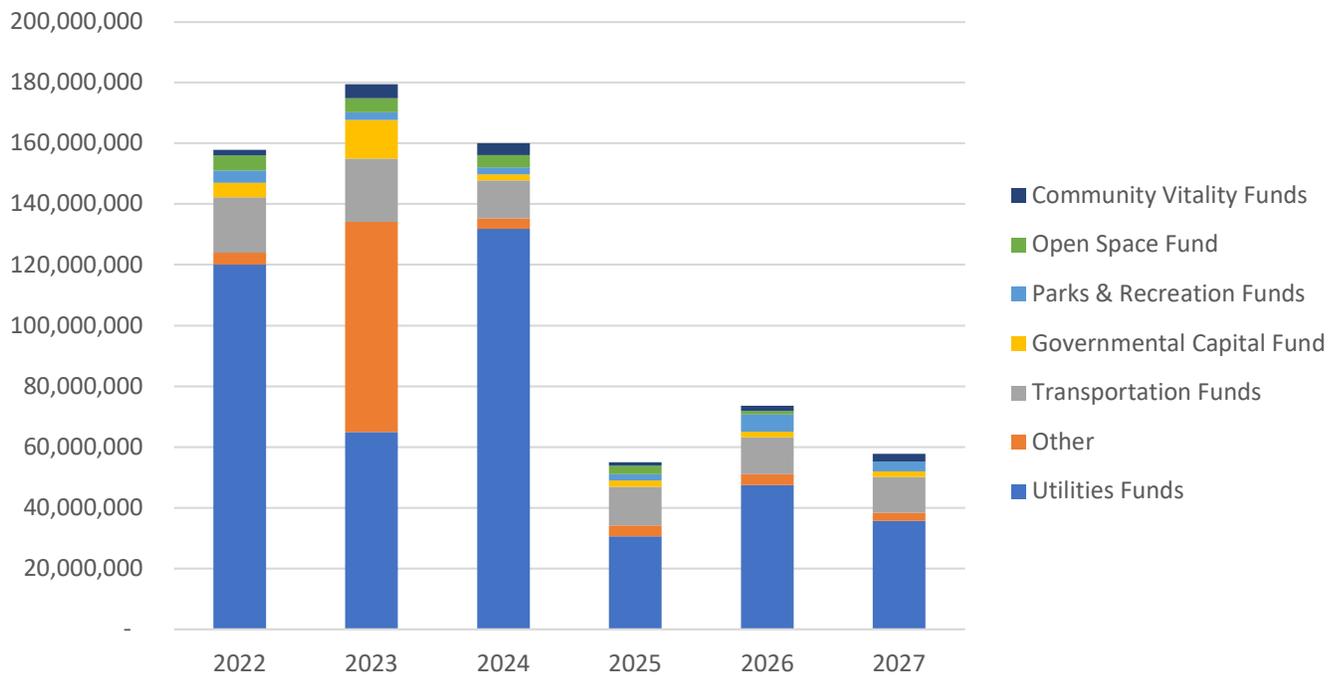
The chart shows the distribution of six-year funding by fund.

The CIP projects are funded through the following 21 sources.

- .25 Cent Sales Tax Fund (for Parks & Recreation)
- Airport Fund
- Boulder Junction GID - Parking
- Capital Development Fund
- Community, Culture, & Safety Tax Fund
- Computer Replacement Fund
- Downtown Commercial District Fund
- Equipment Replacement Fund
- Facility Renovation & Replacement Fund
- Fleet Fund
- Governmental Capital Fund (tied to General Fund)
- Lottery Fund
- Open Space Fund
- Permanent Park & Recreation Fund
- Planning & Development Services Fund
- Stormwater & Flood Management Utility Fund
- Transportation Fund
- Transportation Development Fund
- University Hill Commercial District Fund
- Wastewater Utility Fund
- Water Utility Fund

FUNDING SUMMARIES

2022-2027 Funding by Fund



2022-2027 FUNDING SUMMARY BY FUND

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
.25 Cent Sales Tax	\$ 8,438,000	\$ 2,888,000	\$ 500,000	\$ 500,000	\$ 600,000	\$ 2,000,000	\$ 1,950,000
Airport	\$ 333,333	\$ -	\$ -	\$ 333,333	\$ -	\$ -	\$ -
Bldr Junction Cap Imprvmt	\$ 2,100,000	\$ -	\$ 210,000	\$ 1,890,000	\$ -	\$ -	\$ -
Bldr Junction GID- Parking	\$ 505,125	\$ 105,125	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -
Bldr Junction GID-TDM	\$ 5,125	\$ 5,125	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Development	\$ 3,455,958	\$ 100,000	\$ 2,855,958	\$ 500,000	\$ -	\$ -	\$ -
Capital Improvement CCS	\$ 3,673,199	\$ 434,000	\$ 3,239,199	\$ -	\$ -	\$ -	\$ -
Computer Replacement	\$ 4,800,800	\$ 617,800	\$ 580,000	\$ 575,000	\$ 1,155,000	\$ 1,360,000	\$ 513,000
Downtown Commercial District	\$ 10,558,500	\$ 1,603,500	\$ 1,810,000	\$ 1,995,000	\$ 1,000,000	\$ 1,650,000	\$ 2,500,000
Facility Renovation & Replace	\$ 69,473,046	\$ 1,578,841	\$ 61,578,841	\$ 1,578,841	\$ 1,578,841	\$ 1,578,841	\$ 1,578,841
Governmental Capital Fund	\$ 25,256,843	\$ 4,776,440	\$ 12,633,203	\$ 1,886,800	\$ 2,186,800	\$ 1,886,800	\$ 1,886,800
Lottery	\$ 5,002,402	\$ 1,207,067	\$ 879,067	\$ 879,067	\$ 879,067	\$ 579,067	\$ 579,067
Open Space	\$ 17,501,000	\$ 4,943,000	\$ 4,664,000	\$ 4,002,000	\$ 2,798,000	\$ 1,094,000	\$ -
Permanent Parks & Recreation	\$ 11,352,500	\$ 1,112,000	\$ 2,042,000	\$ 1,859,000	\$ 1,408,500	\$ 3,664,000	\$ 1,267,000
Stormwater & Flood Mgt Utility	\$ 135,548,200	\$ 8,637,500	\$ 16,787,500	\$ 96,190,700	\$ 4,117,500	\$ 4,297,500	\$ 5,517,500
Transportation	\$ 79,496,687	\$ 12,822,187	\$ 20,424,625	\$ 11,277,500	\$ 11,817,250	\$ 11,358,500	\$ 11,796,625
Transportation Development	\$ 8,274,000	\$ 5,374,000	\$ 450,000	\$ 850,000	\$ 800,000	\$ 800,000	\$ -
University Hill Comm Dist	\$ 2,710,250	\$ 210,250	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -
Wastewater Utility	\$ 140,456,000	\$ 56,635,000	\$ 32,178,000	\$ 7,580,000	\$ 7,255,000	\$ 27,623,000	\$ 9,185,000
Water Utility	\$ 154,700,000	\$ 54,805,000	\$ 16,000,000	\$ 28,055,000	\$ 19,260,000	\$ 15,600,000	\$ 20,980,000
Total	\$ 683,640,968	\$ 157,854,835	\$ 179,432,393	\$ 160,052,241	\$ 54,955,958	\$ 73,591,708	\$ 57,753,833

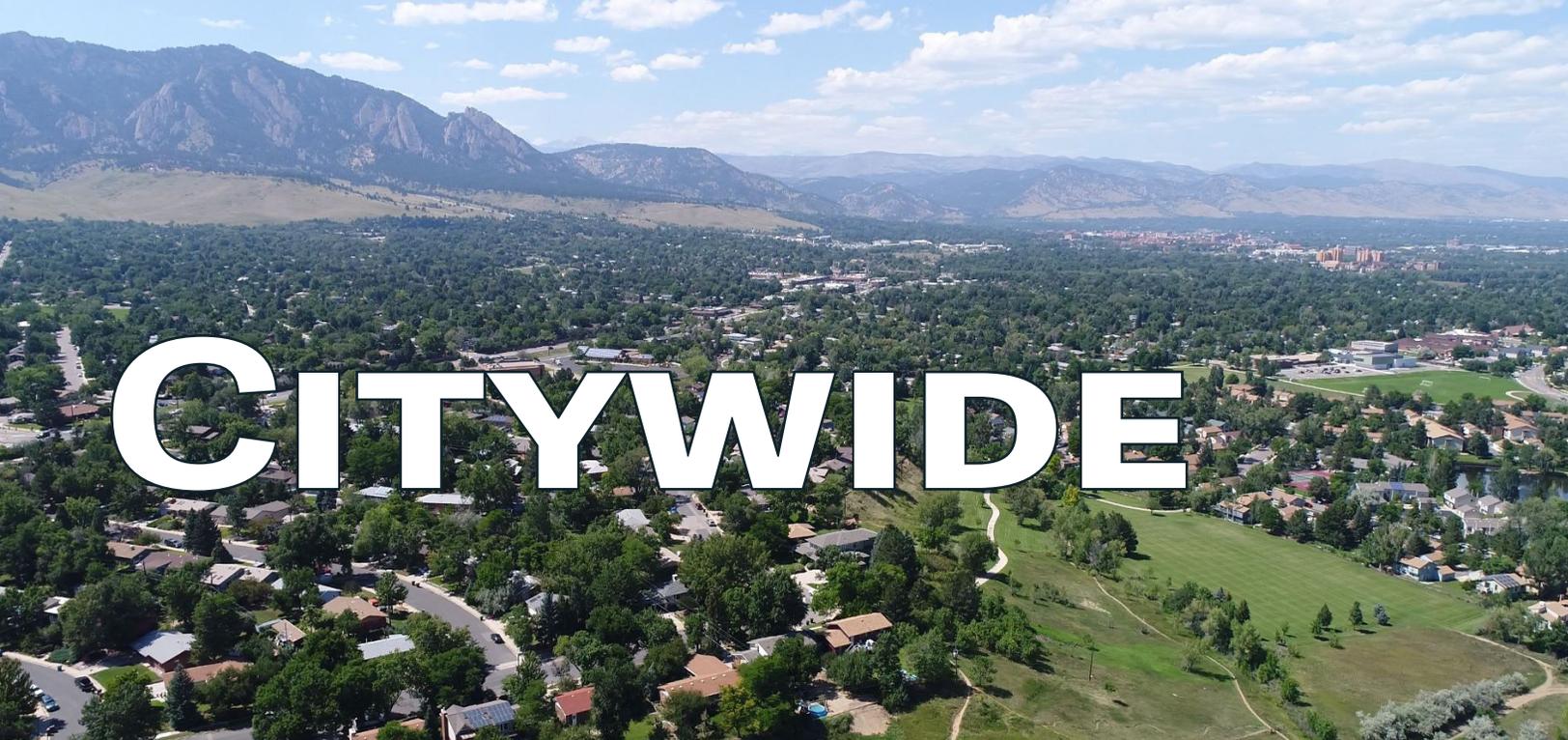
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CITYWIDE

CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

The goals of the General Fund CIP are to provide a sustainable funding source for essential capital needs; improve resiliency of essential services; and save the city money in the long run by not deferring necessary improvements. Many General Fund CIP projects are found within the corresponding departments. However, there are several projects in 2022 that are true citywide projects and do not have an associated department focus. Projects in 2022 include:

Continuing payment support for Hogan Pancost - The Hogan Pancost property is a 22.2-acre parcel in area II contiguous to South East Boulder (see image on next page). After several attempts by developers to annex and develop the property, council decided that it would be in the best interest of the community for the city to purchase the land. Having control of the property will allow for a pause to consider the most appropriate uses. It will remove the incentive to maximize the return on investment. It will also allow time to consider the effects of the South Boulder Creek flood mitigation study and guarantee that the neighboring community has a voice in what ultimately happens on the property.

OPERATING & MAINTENANCE IMPACTS

Operating costs will be included as appropriate.

UNFUNDED PROJECTS & EMERGING NEEDS

Many of the city's unfunded needs reside in the General Fund and include facility backlogs, emerging technology needs, and large, unfunded facility replacements. The goal of this funding source is to address the backlog, critical infrastructure, and technology needs while also recognizing that additional funding sources will be needed to accomplish larger, high-dollar projects such as new facilities.

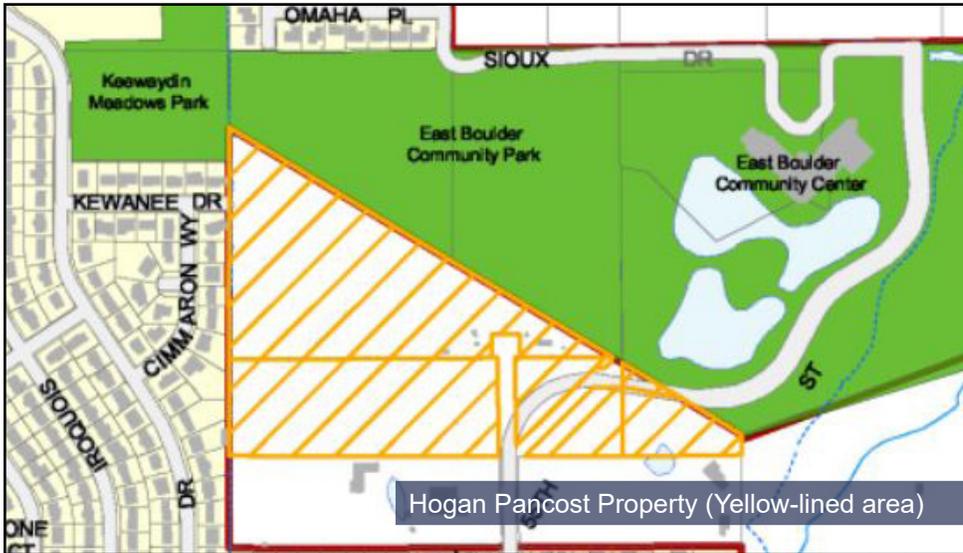
CEAP PROJECTS

None

BOARD ACTION

N/A

CITYWIDE CAPITAL



2022-2027 Capital Improvement Plan

Citywide							
	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Capital Program Total	\$ 10,773,440	\$ 1,339,440	\$ 1,886,800	\$ 1,886,800	\$ 1,886,800	\$ 1,886,800	\$ 1,886,800
CIP-Capital Maintenance Total	\$ 9,812,384	\$ 698,736	\$ 1,566,448	\$ 1,886,800	\$ 1,886,800	\$ 1,886,800	\$ 1,886,800
General Fund Capital	\$ 9,812,384	\$ 698,736	\$ 1,566,448	\$ 1,886,800	\$ 1,886,800	\$ 1,886,800	\$ 1,886,800
General Fund Capital dollars transferred to the Governmental Capital Fund to provide a sustainable funding source for essential capital needs; improve resiliency of essential services; and save the city money in the long run by not deferring necessary improvements. Specific projects will be identified during the annual CIP process.							
CIP-Land Acquisition Total	\$ 961,056	\$ 640,704	\$ 320,352	\$ -	\$ -	\$ -	\$ -
Hogan Pancost Land Purchase	\$ 961,056	\$ 640,704	\$ 320,352	\$ -	\$ -	\$ -	\$ -

The Hogan Pancost property is a 22.2-acre parcel in area II contiguous to South East Boulder. After several attempts by developers to annex and develop the property, council decided that it would be in the best interest of the community for the city to purchase the land. Having control of the property will allow for a pause to consider the most appropriate uses. It will remove the incentive to maximize the return on investment. It will also allow time to consider the effects of the South Boulder Creek flood mitigation study and guarantee that the neighboring community has a voice in what ultimately happens on the property.



COMMUNITY VITALITY

CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

In alignment with city-wide goals and plans, Community Vitality’s departmental strategic plan focuses on access for people, vision of place, and pursuit of vitality. In the COVID-related economically constrained environment, it was critically important to adhere to community-supported plans for the purposes of prioritization and efficiency. Specific objectives within the CV Strategic Plan guided decisions within the development of the 2022-2027 Capital Improvement Plan (CIP):

- Invest in existing infrastructure to enhance and extend life of district- owned assets and develop a strategic asset plan for future opportunities.
- Set and achieve customer service enhancements such as, reducing in- person wait times, setting standards for responsiveness to customer issues, and further development of partnerships.
- Utilize existing programs to contribute to the city-wide Vision Zero goals; safety enhancements for pedestrians, bikes, and vehicles.
- To facilitate a diverse and dynamic economy where residents and businesses grow and succeed together through strategic partnerships (internal and external), policies, and programs.

Community Vitality manages several general improvement districts and the district-owned assets. In the Central Area General Improvement District (CAGID), Community Vitality manages five parking structures, two of which have leasable commercial property. Major 2022 projects in the parking structures included work at the Randolph Center to repair persistent water infiltration, structural improvements in the St. Julien Hotel parking structure, and landscaping enhancements on the Hill. The other major 2022 capital project was the completion of the replacement of most of the aging on-street parking pay stations.

The 2022-2027 seeks to make strategic investments that enhance the overall customer experience, add to the vibrancy of our commercial areas, and improve the access and accessibility across the city.

IMPLEMENTATION OF AMPS STRATEGY

The implementation of the Access Management and Parking Strategy, or AMPS, involves improving signage and communications across districts to reflect changes to parking pricing and programs. Complementing the capital work will be the addition of a fixed-term position to guide implementation over the next few years.

COMMUNITY VITALITY CAPITAL

INSTALLATION OF GATELESS TECHNOLOGY

As a part of COVID-related departmental reductions, Community Vitality's customer service capacity was significantly impacted in 2020. To address this impact, the department is planning to enhance our overall customer experience through the installation of gateless technology in the downtown parking structures. This technology will simplify current processes and greatly improve upon aging infrastructure and outdated technology. Scoping is taking place in 2022 and the installation will be phased through 2022 and 2023.

CAPITAL PLANNING ON UNIVERSITY HILL

As a part of the Hill Hotel development project, the University Hill General Improvement District (UHGD) sold the Pleasant Street parking lot. The proceeds of the sale are to be directly reinvested into the district in a manner that is consistent with district goals of financial viability, safety, and vibrancy. The initial focus is on redevelopment of the remaining district asset, the 14th Street parking lot. Pre-development costs, such as planning, soil testing, and consultant fees, are anticipated to ensure a positive development in 2022.



2022 CAPITAL PROJECTS

- Planning for investment on 14th Street Lot on University Hill
- Implementation of Access, Management, and Parking Strategy (AMPS)
- Installation of Gateless Technology in downtown parking structures
- Wayfinding infrastructure in Boulder Junction

OPERATING AND MAINTENANCE IMPACTS

The department retained Orion, Inc., to assist the department with project management through early 2022. This has greatly improved the capacity of the department in executing construction projects. Additionally, the need to refresh 2017 data relative to the overall condition of the parking structures is important and included in the 2022-2027 CIP. The previous 2017 assessment was not updated through a regular maintenance program. The department intends to invest in asset management software and improve the annual maintenance program to make better use of outside data.

COMMUNITY VITALITY CAPITAL

UNFUNDED PROJECTS AND EMERGING NEEDS

UNFUNDED PROJECTS

Planning for a future refresh of the Pearl Street Mall and surrounding area is included in the CIP – this project was delayed due to COVID budget reductions. Once properly scoped, this project will require a community conversation and other funding sources than currently identified. The only funding included in the CIP is \$65,000 in 2022 as a shared portion of an initial internal planning effort (in conjunction with Parks and Recreation).

EMERGING NEEDS

The impact of COVID on the business community and the overall local economy will persist throughout 2022 and beyond. As a property owner and key partner with business organizations, Community Vitality will have to monitor the need for investment in district-owned spaces for affordable opportunities and other areas where city investment may be appropriate.

RACIAL EQUITY IMPACTS

There are several projects and programs within Community Vitality that seek to reduce racial disparities, such as the affordable commercial pilot program in district-owned spaces, specific parking products for second and third shift workers, and small business support programs.

The overall mission of improving access to commercial districts is complemented by the district provided EcoPasses to businesses within UHGID and CAGID, and businesses and residents within Boulder Junction. This ensures that for those without access to a vehicle, there is access to job centers through public transportation. And, parking access and affordability is attainable for those that do not have access to public transportation.

CAGID provides several leased spaces to local businesses and seeks to attract local, women, and minority-owned businesses through our commercial brokerage firm. The lease rates are generally below market and there are opportunities for tenant improvement assistance in certain circumstances. Also, specific small business support programs provide financial access to business owners who do not have access to traditional sources of capital.

While many of these are represented within the department's general operations, they complement the implementation of the capital improvement plan.

CEAP PROJECTS

None

BOARD ACTION

The University Hill Commercial Area Management Commission (UHCAMC) recommended approval of the 2022-2027 Community Vitality Capital Improvement Plan at their July 6, 2022, meeting.

The Downtown Management Commission (DMC) recommended approval of the 2022-2027 Community Vitality Capital Improvement Plan at their July 13, 2022, meeting.

The Boulder Junction Access District Commissions (Parking & TDM) recommended approval of the 2022-2027 Community Vitality Capital Improvement Plan at their July 21, 2022, meeting.

COMMUNITY VITALITY CAPITAL

Community Vitality

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Capital Program Total	\$ 13,902,000	\$ 2,047,000	\$ 4,410,000	\$ 2,095,000	\$ 1,100,000	\$ 1,750,000	\$ 2,500,000
CIP-Capital Enhancement Total	\$ 5,830,000	\$ 905,000	\$ 3,000,000	\$ 175,000	\$ 650,000	\$ 1,100,000	\$ -
14th St Parking Lot Redevelopment	\$ 2,700,000	\$ 200,000	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -

With the pending sale of the Pleasant St. parking lot of the Hill hotel, this projects aims to direct those dollars back into the district as an investment in the other district owned lot's redevelopment.

Affordable Commercial Capital Prog	\$ 500,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -
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This is a pilot program within CAGID-owned spaces to provide affordable commercial space to qualifying businesses. This assistance includes tenant enhancements that are capital in nature. The pilot was delayed in 2020 due to COVID and the program will resume in 2021.

AMPS and NPP Study and Implmentatio	\$ 205,000	\$ 205,000	\$ -	\$ -	\$ -	\$ -	\$ -
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Access management and parking study and the implementation of those findings which include changes to the the neighborhood parking program and parking pricing. CIP investment in signage, data collection, and software enhancements.

Parking Garage Exterior Brick Rehab	\$ 575,000	\$ -	\$ -	\$ 75,000	\$ 500,000	\$ -	\$ -
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This project is to address necessary rehabilitation of the brick structure at the Spruce and Pearl parking structure. This includes replacing necessary bricks and addressing any structural issues that arise during assessment. Some of this work is necessary to address issues that arose out of other construction projects in 2019-2020. Scope reduced in 2024.

Budgeting for Resiliency: Important

Gateless System Installation	\$ 800,000	\$ 400,000	\$ 400,000	\$ -	\$ -	\$ -	\$ -
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In alignment with the Access and Parking Management Strategy (AMPS), this project is to enhance the customer service through the application of innovative solutions within the parking garages. This technology, currently utilized at Trinity Garage and Boulder Junction, will allow improved customer experience and reduced operating costs.

The project was initially scheduled for 2020-2021 and was delayed to 2022 as a budget reduction measure. This will coincide with the timing of the next phase of AMPS implementation.

Budgeting for Resiliency: Helpful.

Parking Product Software Enhancemen	\$ 1,050,000	\$ -	\$ -	\$ -	\$ 50,000	\$ 1,000,000	\$ -
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In alignment with the City's Goals and Values and Community Vitality's areas of focus, this project seeks to improve customer service through the development and acquisition of software that enhances the current suite of parking products offered by Community Vitality. The scale and individual products will be developed through a department strategic planning process and the next phase of the AMPS implementation.

The overall scope of the project was reduced as a budget savings measure.

Budgeting for Resiliency: Helpful.

CIP-Capital Maintenance Total	\$ 7,972,000	\$ 1,042,000	\$ 1,410,000	\$ 1,920,000	\$ 450,000	\$ 650,000	\$ 2,500,000
Boulder Junction Public Improvemnts	\$ 500,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -

Boulder Junction Parking District is responsible for the maintenance and enhancement of capital assets within the district. Since the establishment of the district, no funds have been aside for public improvements and other related enhancements to the district. While there is not an individual project identified at this time, there is expected necessary investment within the district, utilizing Boulder Junction Access District (Parking) funds.

This was initially planned for 2021. Due to lost revenue, this will be delayed until 2022. A long-term planning effort with the Boulder Junction Commissions will take place in 2020 to help inform future investment.

Budgeting for Resiliency: Helpful.

Parking Building Doors and Windows	\$ 200,000	\$ -	\$ -	\$ 200,000	\$ -	\$ -	\$ -
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This is required capital maintenance on all CAGID assets based on the Farnsworth facility assessment report. Several doors and windows are in need of replacement and/or repair. This will help with the energy efficiency of these buildings. This project is projected to be completed in 2024.

Budgeting for Resiliency: Helpful.

Parking Garage Elevator Replacement	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ -
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This project is to address continued work in updating the elevators within the downtown parking garages. Work in replacing elevators at Spruce and Pearl Street garages is being completed in 2020. This project would plan, scope, and bid the next major repair and/or replacement (at the St. Julien) in 2021 and 2022. An assessment of the other garages allowed for an overall reduced scope and cost, \$310,000 in savings over three years.

Budgeting for Resiliency: Important

Parking Garage Fire Supp. Repairs	\$ 250,000	\$ -	\$ -	\$ 250,000	\$ -	\$ -	\$ -
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This project is to address critical repairs within parking structures to the fire suppression and sprinkler systems. An assessment is being conducted in 2020 and early information allows for the overall scope of the project to be reduced. Capital work is likely to be completed in 2021. Future work is expected in 2024.

Budgeting for Resiliency: Important.

COMMUNITY VITALITY CAPITAL

Community Vitality

	Estimated Total	2022		2023		2024		2025		2026		2027	
	Cost	Recommended	Projected										

ParkingGarage Staircase Replacement	\$ 660,000	\$ -	\$ 60,000	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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This project will continue the work to address deferred maintenance in all downtown parking garages. This will prioritize the replacement of staircases at the RTD garage. This work was delayed from 2021 to 2022-2023 to reduce budget.

Budgeting for Resilience: Important.

HVAC System Repair-Replacement	\$ 640,000	\$ 20,000	\$ 300,000	\$ 20,000	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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This project is the planning, scoping, and construction of HVAC systems at Spruce and Pearl garages. This impacts the parking areas, tenant spaces, and offices and represents a phased approach from 2022-2025.

Budgeting for Resiliency: Helpful.

Garage Deck & Structural Cap Maint	\$ 3,760,000	\$ 260,000	\$ 300,000	\$ 700,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000
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The 2017 Farnsworth Facilities Assessment identified deferred maintenance to be addressed in all of the CAGID parking structures. Specifically, one the largest in scale was the annual cost of repairing the concrete parking decks and underlying structure that wears down over time. This Capital Maintenance program seeks to address deferred maintenance by making an annual investment of \$400,000 into various projects, with a focus on the concrete parking decks and underlying structure.

The amount was reduced and reallocated in 2020 -2022 to focus on specific projects and reduce overall budget impact.

Budgeting for Resiliency: Important.

Randolph Garage Deck Repairs	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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CAGID is a 50% owner of the Randolph Center at 1100 Walnut. The facility has experienced persistent water penetration, leading to some infiltration into the tenant spaces below and adjacent to the parking structure. After an engineering report confirmed that the leaking is occurring due to poor sealing in the parking structure, immediate repairs are necessary.

The estimated total amount of immediate repair is \$465,000.

Through the Condo Association, additional assessment took place in 2020. This prioritized work to be completed in 2020. However, additional work will be necessary in 2021.

Budgeting for Resiliency: Important.

Ceiling and Roof Repair/Replace	\$ 375,000	\$ 25,000	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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Significant patching and replacement of areas of the roof and ceilings within the Pearl and Spruce structures is necessary. Exact scoping for the improvements will occur in 2022 with construction in 2023.

Budgeting for Resiliency: Important.

Storm water system repairs	\$ 537,000	\$ 537,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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After one of the deep freezes in 2021, two storm water systems failed at 1500 Pearl and 1100 Spruce. After immediate repairs, an assessment was conducted of the systems and determined that major repairs are necessary to prevent continued failure and backup into tenant spaces.

Interior Tenant Space Repairs	\$ 300,000	\$ 100,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -
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CAGID manages retail space for 13 tenants and approximately 16,000SF within the Pearl and Spruce structures. As the owner of the retail spaces, there is annual maintenance within the spaces and sometimes more extensive work required if/when a tenant space turns over. This represents the expected annual amount for more significant repairs.

Additional consideration may be given to CAGID businesses impacted by the pandemic and assistance will be determined based on future criteria.

Budgeting for Resiliency: Helpful.

CIP-Capital Planning Studies Total	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital & Maint Assessment of Asset	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Evaluation of CAGID owned parking structures for capital and maintenance needs that will contribute to capital improvement planning and annual maintenance program. Refresh of 2017 Farnsworth Report.

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CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

Facilities' 2022 CIP demonstrates a commitment to providing high-quality, functional, and welcoming spaces for our city staff and the public to enjoy. Through continued investment in our building infrastructure, Facilities is helping to ensure that Boulder's assets are utilized strategically over the long term. As the "front door" to city services, the Facilities department is here to support other departments manage the maintenance and replacement of city facilities and equipment

In 2022, the Facilities Department will focus on three primary areas: (1) planning, designing, and constructing new building infrastructure, (2) maintaining existing infrastructure, and (3) implementing Boulder's first-ever Facilities Master Plan.

NEW CONSTRUCTION OF BUILDING INFRASTRUCTURE

The newly established Facilities Department is leading design and construction efforts on two large projects, the new North Boulder (NoBo) Branch Library and the relocation of Fire Station #3. Facilities is also continuing the deconstruction and horizontal infrastructure development at the Alpine-Balsam site which was purchased by the city in December 2015. The first project on the Alpine-Balsam site occurred in 2018 with the renovation of the existing Brenton Building which consolidated the city's Finance Department into a single building. This was followed by interior deconstruction of the Boulder Community Health (BCH) hospital and Medical Office Pavilion to prepare for major renovation of the Pavilion building. The focus in 2022 will be continuing renovation of the existing building and planning for redevelopment of the site into a centralized Western City Hub that will enable several existing city buildings, which are not geographically constrained, to be consolidated into this one location to better serve the community. Consolidation will help the city achieve many efficiencies through more effective use of physical space, reductions in capital renewal efforts, and economy in operations and maintenance. Importantly, consolidation will also advance the city's climate goals through the construction of high energy performing buildings. City Council adopted a climate action plan that aims to reduce the city's greenhouse gas emissions by 80% by 2030, an aggressive yet attainable goal. Consolidation will greatly reduce energy usage within Boulder's facility portfolio and contribute towards the city's environmental sustainability

MAINTENANCE OF EXISTING INFRASTRUCTURE

The Facilities Department expanded the asset management program to 83 city facilities in 2022. The asset management software assists in prioritizing building system replacement needs and assigns a Facility

FACILITIES & FLEET CAPITAL

Condition Index (FCI) score to each building. The Deferred Facility Maintenance Projects funding will be used on urgent or high priority system repairs or replacements in buildings with the highest (worst) FCI score. Replacements funded with this project include HVAC systems, fire suppression/detection systems, major maintenance, or replacement of roofing systems, etc. The Facilities Master Plan (FMP) will offer a comprehensive model that will be used to prioritize how to maintain existing infrastructure.

Fire stations major maintenance will continue in 2022. The 24/7 occupancy of the city's eight fire stations and their status as essential facilities requires a higher level of maintenance. This annual CIP project is distributed among the eight Boulder fire stations to improve the quality of kitchen, dining, and living areas. The 2022 project plan is currently being developed in coordination with Boulder Fire-Rescue Department.

The Boulder Parks and Recreation (BPR) Aquatics Facility Study (AFS) identified capital renewal needs within BPR facilities. Addressing the needs identified will be a multi-year effort and East Boulder Community Center (EBCC) will continue to be the focus in 2022. Facilities will partner with BPR on a Natatorium Enhancement project that addresses the identified capital renewal needs and improves the user experience. In 2022, funding was used to supplement planning and design for the EBCC Natatorium Enhancement project and in 2022 funding will continue to go toward implementation with the Facilities portion being used to address necessary facility repairs and system replacements. The aquatic centers are an example of buildings with significant environmental impact due to the energy demands and current reliance on natural gas systems to heat the swimming pools; the recreation centers account for about half of the total natural gas usage in city facilities. Funding from the possible extension of the Community, Culture and Safety (CCS) tax could potentially be utilized to further decrease the carbon footprint of the aquatic facilities. Such a project would be instrumental in helping the city achieve its emission reduction goals.

FACILITIES MASTER PLAN IMPLEMENTATION

The new Facilities Master Plan (FMP) is a comprehensive assessment of all non-residential, occupied, conditioned spaces - encompassing 83 buildings and structures (it excludes OSMP barns and ranches and Park shelters). Key goals of the first-ever Facilities Master Plan are to identify a common vision and core values across all city facilities and to evaluate facility health and condition using common values as its main criteria. It will also be used to guide a strategic implementation plan and capital investment strategy for near term, within the timeframe of CIP planning and over a long-term horizon. Major milestones for investment strategies align with the city's Climate Commitment Goals in both 2030 for city buildings and 2050 with community wide goals.

A key strategic initiative of the FMP is to develop a consolidation plan for 22 facilities that do not serve a necessary geographic purpose, such as fire stations or recreation centers. There are numerous benefits that can be achieved through consolidation such as operational and maintenance efficiencies, energy efficiency, space economy, increased staff effectiveness and more. Many of these benefits also result in cost savings and most importantly better delivery of essential services to the community. The completion of the FMP will be the focus in 2022 and the implementation strategy as it applies to capital planning will be an ongoing focus of the Facilities Department.

2022 CAPITAL PROJECTS

- BCH Hospital Deconstruction
- Western City Hub Horizontal Infrastructure Development
- New Fire Station 3. More details can be found in BF&R CIP.
- New North Boulder Library. More details can be found in BPL CIP.
- Aquatic Facilities Major Maintenance
- Fire Stations Major Maintenance

FACILITIES & FLEET CAPITAL

- Capital Renewal of Major Building Systems

OPERATING AND MAINTENANCE IMPACTS

Despite delays caused by the COVID-19 pandemic, the groundbreaking for the new North Boulder (NoBo) Library is expected to commence in late 2022 and will continue to be under construction throughout 2022. Boulder Public Libraries are currently leasing a 500 square foot storefront location and the new NoBo Library will be a 10,500 square foot high-performance building owned and maintained by the city. The estimated General Fund budget impact for the new NoBo library is \$300,000 annually for operational expenses. This includes \$90,000 for custodial and utility expenses and \$210,000 in FR&R contributions to fund major maintenance and repair & replacement over the life of the building, consistent with the widely accepted best practice of 2% annual investment into capital renewal. It is being considered whether the library system will become its own independent district; if this action is taken, operating expenses would be funded by its own dedicated revenue source.

Although the NoBo Library and Fire Station 3 represent a net increase in total square footage and operating expenses when compared to the buildings that they are replacing, they are designed to be highly energy efficient and will have new building systems that will not require major replacements for at least 5 years after coming online.

The Pavilion remodel project will allow for the consolidation of existing decentralized office buildings into a single high-performance building resulting in an overall net reduction in square footage which will lower O&M and Utility expenses for the overall city portfolio. Facilities operating expenses will increase in the short term as NoBo, Fire Station 3, and the Pavilion come online, but will start to decrease as buildings that are part of the consolidation are deconstructed, sold, or repurposed by the city. Operating expense reductions are not expected to be realized until 2027 and beyond.

O&M expenses for the remainder of the city's building portfolio are expected to decrease slightly as Boulder implements its plan for the consolidation of decentralized facilities. Canceling the Center Green building lease in October 2020 has saved the city more than \$900,000 annually in operational costs; this budget was repurposed to fund ongoing Workplace Transformation efforts in 2022. These operational savings will ultimately go towards paying the debt service for the Western City Hub project after the completion of the project.

Critical and high priority building system replacements will reduce the O&M for that specific building system, yet the balance of existing infrastructure will continue to age. The Facilities Master Plan will address the capital funding target for the city building portfolio and the impact to on-going operating and capital budgets will be clearer after the FMP is formally adopted in late 2022.

UNFUNDED PROJECTS AND EMERGING NEEDS

UNFUNDED CAPITAL RENEWAL AND MAJOR MAINTENANCE

Fire Station #8, opened in 2015, and the Brenton Building, opened in 2018, have not been collecting Facility Renovation & Replacement (FR&R) funding. Best management practice recommends 2% of a facility's current replacement value (CRV) be collected annually to fund future renovations and replacements to maintain the value of the asset over its life cycle. Fire Station #8 has a \$6 million replacement value and the Brenton building is \$8 million. In total, \$280,000 of annual funding for future replacement needs are not being collected for these buildings. It will be a primary objective of the FMP to develop a funding model that allows not only FS #8 and the Brenton Building to collect 2% of CRV in annual capital renewal funding, but for all other recently constructed or renovated buildings as well.

FACILITIES & FLEET CAPITAL

The Facilities Department recently identified capital renewal needs, previously referred to as deferred maintenance backlog, of \$55 million across the city's portfolio (not including the three Utilities treatment plants) over the next five years. This number aims to project the costs of like-for-like replacements of mechanical equipment such as boilers and rooftop condensing units as well as upgrades to fire suppression systems, roof replacements and other necessary major maintenance to ensure the continued safe operation of city facilities. The necessary replacement of building components represents an opportunity for the city to advance its climate goals by replacing building equipment with highly energy efficient systems that significantly reduce greenhouse gas (GHG) emissions and reduce the city's carbon footprint. Specifically, mechanical, electrical, and plumbing (MEP) systems account for about 50 percent of these renewal needs over the five-year time horizon. The MEP systems must be switched from their current natural gas-based systems for heating of air and domestic water to electricity-based systems so their energy consumption can be offset by renewables. The 2022 Facilities Master Plan (FMP) will provide a detailed picture of building portfolio condition as a whole, and address needs within buildings in context of their value and meeting city-wide goals. The FMP will provide a strategic investment and implementation plan to address capital renewal needs in city building assets.

HORIZONTAL INFRASTRUCTURE/FLOOD MITIGATION AT BCH SITE

The 2015 purchase of the Alpine-Balsam property, formerly the Boulder Community Health (BCH) Broadway campus, was a strategic investment for the community. The adoption of the Alpine-Balsam Area Plan in 2019 confirmed the vision for the property to be redeveloped, in alignment with community goals, as a mixed-use community hub for affordable housing and the city's western hub. However, the Alpine-Balsam site is partially located in the 100-year floodplain. As a result, it is necessary to build infrastructure that removes the site from the floodplain to allow for the residential construction and Pavilion renovation to be designed without floodproofing constraints. The city hired engineering firm Anderson Consulting Engineers in 2020 to perform an alternatives analysis to identify the most feasible design options to meet the criteria of the area plan and technical requirements.

The analysis concluded that an open-channel greenway that is approximately 60-feet in width and traverses the southern edge of Balsam Avenue would be the preferred design that fully removes the site from the floodplain. The design's inlet (how it directs water into the channel on the western edge of 9th Street) may require some construction under 9th Street and on the edge of North Boulder Park, though the consultant is still evaluating the engineering feasibility of this option. The inlet will not interfere with the operation or use of North Boulder Park and will be coordinated with Parks & Recreation staff to ensure alignment and community engagement. The design is aligned with the Goose Creek Master Plan (in progress) and the Alpine-Balsam Area Plan.

The next step in 2022 is to finalize the design details and complete the conditional letter of map revision (CLOMR) process through FEMA, which is the federal permitting process that allows for construction to occur.

The intention is to align the exterior hospital deconstruction with the construction of the flood mitigation channel, which would take advantage of construction efficiencies and potentially utilize soils removed from the channel to assist in filling the hole and grading the site where the hospital was located. Should these efficiencies occur, flood mitigation construction could begin in 2022.

In addition to flood mitigation, there is additional horizontal infrastructure work that needs to be performed, including energy infrastructure, construction of some or all roads, pedestrian connections, and utilities construction. Preliminary estimates have suggested this work will cost \$3.6 million, bringing the total site development (horizontal infrastructure plus flood mitigation) to \$6.6M.

FACILITIES & FLEET CAPITAL

EASTERN CITY HUB DEVELOPMENT

As part of the FMP and consolidation of city buildings that do not serve a geographic purpose, the potential benefits of an Eastern City Hub are being evaluated in terms of cost and space efficiency. The Eastern City Hub would be located where the Municipal Service Center (MSC) currently resides and would include Transportation, Utilities, and Fleet maintenance (which are current users of the site) and could potentially include Parks & Rec, OSMP, and Public Safety operations. While the process has not yet entered the design phase, preliminary financial analyses have suggested that the city could see operational savings from such a consolidation in the intermediate future. It is being studied how these operational savings could be harnessed as a financing mechanism.

COVID-19 IMPACTS

The COVID-19 pandemic forced the closure of city administrative buildings and city staff who could work remotely were asked to do so for an extended period through 2020 and 2022. As a result, the organization learned that the city can effectively telework and many staff now prefer to maintain some amount of telework permanently in their weekly schedule. Another lesson learned is that in-person engagement and collaboration is also necessary for true success and service excellence. The pandemic also brought to light the requirements for a healthy building, one that lessens the spread of infectious disease and promotes the health of individuals who occupy the spaces. These lessons are being incorporated into all new building projects moving forward and overall should result in reduction of costs per employee – both from physical space reduction as well as reduced health care expense.

As a result of the COVID-19 pandemic, construction costs have increased significantly. Prior to the pandemic, cost escalation associated with construction had far outpaced projected inflation, by most measures historically ranging between 0.4% and 0.8% monthly. However, the past year has highlighted an even more drastic situation; the price of construction materials has increased almost 18% over the past 12 months according to the Federal Reserve Bank. With the city's building portfolio current replacement value of more than \$200 million, even "gentle" cost escalation can create substantial budget gaps that cannot be closed using conventional methods.

RACIAL EQUITY IMPACTS

One of the Facilities Department's core values as highlighted in the Master Plan is accessibility and equitability within the city's entire building portfolio. Buildings are in the process of being evaluated by their effectiveness in advancing equity and accessibility. This includes the evaluation of each building's ADA compliance, its ability to be accessed by multi-modal means (specifically those without access to cars), and whether buildings have multi-lingual signage, among many other criteria. These assessments will be incorporated into a larger more comprehensive approach for creating informed decisions on future facility investment.

Through the Capital Improvement Plan, Facilities demonstrates a commitment towards ensuring city services remain accessible to under served community members that may have limited mobility options. The construction of the Nobo Library will expand Library services to an area of Boulder that previously only had access to a 500 square foot corner library. Further investments and renovations to Boulder's parks and recreation facilities ensures that community members can continue to rely on the city providing high-quality spaces and programs to stay healthy and active. Under served and marginalized communities may not have access to clean and safe spaces other than what the city provides through public facilities. Continued investment in all city buildings, by keeping systems functional and reducing downtime caused by breakdowns, will ensure that these spaces continue to be available for those who wish to use them. Thus, no Facilities' led projects are likely to result in a disparate racial impact, and instead, will likely enhance and improve the experiences of these groups that interface with Boulder's services.

FACILITIES & FLEET CAPITAL

CEAP PROJECTS

None

BOARD ACTION

None

Facilities & Fleet

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Capital Program Total	\$ 72,473,046	\$ 4,578,841	\$ 1,578,841	\$ 1,578,841	\$ 1,578,841	\$ 1,578,841	\$ 1,578,841
CIP-Capital Enhancement Total	\$ 63,300,000	\$ 3,000,000	\$ -	\$ 300,000	\$ -	\$ -	\$ -
BPR Ops Facility Enhancements	\$ 300,000	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -

BPR staff have developed a General Maintenance and Management Plan (GMMP) to identify levels of service related to operations and maintenance in the field including the necessary staffing, equipment and facilities to perform these services. In 2023, staff will be updating this plan as well as performing a more in-depth analysis of the department's facilities and assets related to operations and maintenance teams. This will inform the priorities for any renovation, expansion or retirement of any BPR maintenance facilities.

Facilities will take the lead in a renovation of several BPR Operations Facilities, such as maintenance shops and Parks support buildings. Facility enhancements may include the 3,000 square foot Tantra Park Shop building, constructed in 1984, which needs repairs and renovations to major building systems. At this time, no specific scope has been identified for this project planned in 2023.

This project is considered 'Important' using the Budgeting for Resilience classification in that it could not be cut without a significant impact, or risk of impact, to the city's basic operation and functioning. Tantra Park is the south zone Parks Operations and Maintenance team's maintenance shop. Tantra Park is assessed as 'Important' rather than 'Helpful' because of the building's role in supporting the daily operations of the team providing the maintenance of all neighborhood and community parks in the south zone.

Western City Hub Redevelopment	\$ 60,000,000	\$ -	\$ 60,000,000	\$ -	\$ -	\$ -	\$ -
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The Alpine-Balsam Area Plan was adopted by Council in the fall of 2019. The plan included the intent to renovate the Medical Office Pavilion for city services and redevelop the eastern portion of the site as a new consolidated Western City Hub. In 2020, a budget of \$1.7M was appropriated to begin design work to advance development of the site for this purpose and to prepare the remainder of the site for future housing development. Early design work included development of a city-wide master consolidation program to inform an approach for delivery of city services now and into the future as well as flood mitigation design and other horizontal infrastructure analysis necessary to complete the project. An additional \$392,258 in 2021 will bring the total appropriations to \$2,100,000 covering most design work required for the project.

Construction on the site is anticipated to begin in 2023 and early estimated costs for the city portion of redevelopment work are approximately \$60,000,000. This number includes renovation costs of the Pavilion building and site improvements. While this estimate also includes modest cost escalation assuming construction begins in 2023, rapidly increasing construction costs in 2021 may result in this estimate being lower than actuals. Design work at this stage is conceptual, and therefore cost estimates on all aspects of the project will be further developed as the project progresses and is refined. A separate and discrete CIP project sheet provides more detail on the flood mitigation needed for the Western City Hub Redevelopment.

Funding for the Western Hub Redevelopment project will be through bond proceeds in the General Fund. A portion of debt service for the bond will be offset from lease savings from vacating Center Green city offices.

Alpine Balsam Flood Mitigation	\$ 3,000,000	\$ 3,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
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The 2015 purchase of the Alpine-Balsam property, formerly the Boulder Community Health (BCH) Broadway campus, was a strategic investment for the community. The adoption of the Alpine-Balsam Area Plan in 2019 confirmed the vision for the property to be redeveloped, in alignment with community goals, as a mixed-use community hub for affordable housing and the city's Western Campus. However, the Alpine-Balsam site is partially located in the 100-year floodplain. As a result, it is necessary to build a flood channel on the north side of the site to remove the Pavilion and future residential construction from the floodplain.

In 2020, the city completed an alternatives analysis and through collaboration between Facilities, Housing and Utilities, selected a preferred design that achieves the goals and requirements for both redevelopment of the Alpine-Balsam site and the Goose Creek Master Plan (in-progress). Flood mitigation on the site is essential for redevelopment to occur and as such the funding request is predominantly from the Government Capital Fund. Additional enhancements that align the work with the Good Creek Master Plan will be funded by Utilities.

Design work has already been funded and staff have submitted a conditional letter of map revision (CLOMR) to FEMA, for approval of the open flood channel design allowing for construction to proceed.

The intention is to align the exterior hospital deconstruction with the construction of the flood mitigation channel, to take advantage of construction efficiencies. Both exterior deconstruction of the hospital and flood channel work are currently planned to proceed in 2022 pending funding of the flood channel work. These construction activities are essential toward the redevelopment of Alpine-Balsam and will be top priority in 2021.

CIP-Capital Maintenance Total	\$ 8,823,046	\$ 1,578,841	\$ 1,578,841	\$ 1,278,841	\$ 1,428,841	\$ 1,378,841	\$ 1,578,841
Martin Park Shelter Major Maint	\$ 170,000	\$ -	\$ 170,000	\$ -	\$ -	\$ -	\$ -

The P&R Round 1, Capital Investment Strategy project improved the shelter's exterior to include ADA access to the shelters, lighting upgrades, amenities (benches/tables), bear proof trash/recycling receptacles and concrete flatwork. FR&R funding was not available with 2013/2014 CIS project. This project upgrades the plumbing and fixtures and renews interior and exterior surface finishes of this facility constructed in 1962. Minor cosmetic work totaling \$16,000 was last done in 2007. Code upgrades for the electrical systems will also be accomplished as required with any major renovation project. The funding for this project will be combined with Parks & Rec funding for Neighborhood and Community Park Capital Maintenance to complete the repairs at Martin Park in 2023.

This project is considered 'Helpful' using the Budgeting for Resilience classification in that it could be cut without significant or immediate impacts to the city's basic operations and functioning.

FACILITIES & FLEET CAPITAL

CIP-Capital Maintenance Total	\$ 8,823,046	\$ 1,578,841	\$ 1,578,841	\$ 1,278,841	\$ 1,428,841	\$ 1,378,841	\$ 1,578,841
Martin Park Shelter Major Maint	\$ 170,000	\$ -	\$ 170,000	\$ -	\$ -	\$ -	\$ -

The P&R Round 1, Capital Investment Strategy project improved the shelter's exterior to include ADA access to the shelters, lighting upgrades, amenities (benches/tables), bear proof trash/recycling receptacles and concrete flatwork. FR&R funding was not available with 2013/2014 CIS project. This project upgrades the plumbing and fixtures and renews interior and exterior surface finishes of this facility constructed in 1962. Minor cosmetic work totaling \$16,000 was last done in 2007. Code upgrades for the electrical systems will also be accomplished as required with any major renovation project. The funding for this project will be combined with Parks & Rec funding for Neighborhood and Community Park Capital Maintenance to complete the repairs at Martin Park in 2023.

This project is considered 'Helpful' using the Budgeting for Resilience classification in that it could be cut without significant or immediate impacts to the city's basic operations and functioning.

Fleet - System Repairs/Replacements	\$ 300,000	\$ -	\$ 220,000	\$ -	\$ 80,000	\$ -	\$ -
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The Fleet Services Building, originally constructed in 1989, has numerous system repairs and upgrades needed including upgrades to the fire alarm panels, mechanical ventilation system replacement and asphalt repair and replacement. Utilizing the Facilities Department new capital asset planning software system, projects will be prioritized and bundled to efficiently implement.

This project is considered 'Important' using the Budgeting for Resilience classification in that it could not be cut without a significant impact, or risk of impact, to the city's basic operation and functioning. This project will fund building infrastructure maintenance required for the life, health, and safety of city staff and visitors.

Facilities & Fleet

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
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Fire Stations Major Maintenance	\$ 900,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
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The 24/7 occupancy of the city's eight fire stations and the status as essential facilities requires a higher level of maintenance. This annual CIP project will be distributed among the eight Boulder fire stations to maintain finishes to industry standards, and upgrade kitchen, dining and living areas. Work on Fire Station 3 will be limited due to future replacement scheduled to be complete in 2023.

This project is considered 'Important' using the Budgeting for Resilience classification in that it could not be cut without a significant impact, or risk of impact, to the city's basic operation and functioning. Fire Stations are essential, but the types of projects funded out of Fire Stations Major Maintenance are classified as 'Important'. The types of projects funded include non- infrastructure upgrades to fire stations that support first responder's ability to perform their job functions. Building infrastructure system repair and replacement projects for Fire Stations (i.e. roof, HVAC, water heater, etc. replacements) are funded through Deferred Facility Maintenance Projects which is classified as 'Essential'.

Aquatics Facility Repairs	\$ 1,376,000	\$ 1,123,000	\$ 253,000	\$ -	\$ -	\$ -	\$ -
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The Parks and Recreation (P&R) Aquatics Facility Study (AFS) identified deferred maintenance needs within P&R existing facilities. P&R operates 11 pools within the city including indoor and outdoor leisure pools, lap pools and hot tubs. As part of the Aquatics Facility Study ongoing maintenance and repairs to recreation facilities have been prioritized starting with the three indoor facilities. 2021 funding will be used to supplement planning and design funding for East Boulder Recreation Center (EBRC). 2022 funding will be used to supplement EBRC Natatorium enhancements, with the Facilities portion going to address necessary facility repairs. 2023 funding will go toward funding the remaining Aquatic Facility repairs identified in the Aquatics Feasibility Study.

This project is considered 'Helpful' using the Budgeting for Resilience classification in that it could be cut without significant or immediate impacts to the city's basic operations and functioning.

Deferred Facility Maint Projects	\$ 6,077,046	\$ 305,841	\$ 785,841	\$ 1,128,841	\$ 1,198,841	\$ 1,228,841	\$ 1,428,841
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The Facilities Department has performed asset reviews for 80 city facilities and loaded that data into an asset management software. Facilities used that software to create building and system priorities. For example, a recreation center is maintained to a higher standard than a maintenance shop, and roofing systems are given a higher priority than interior finishes. The software program allows Facilities to prioritize system replacements based on a buildings Facility Condition Index (FCI). Replacements funded with this project include HVAC systems, boilers, parking lot repairs, and various other building systems. The goal with this funding is to address system replacements in buildings with the lowest FCI to drive to an acceptable FCI for the portfolio over time.

This project is considered 'Essential' using the Budgeting for Resilience classification in that it could not be cut without a significant and immediate impact, or risk of impact, to the city's or community's basic operation and functioning. The Deferred Facility Maintenance Projects CIP is used to fund Urgent and High Priority building system major maintenance or replacement projects for General Fund facilities. The types of projects being funded are essential for providing safe, functioning buildings for city staff and the community.

CIP-Capital Planning Studies Total	\$ 350,000	\$ -	\$ -	\$ -	\$ 150,000	\$ 200,000	\$ -
Facilities Master Plan Updates	\$ 350,000	\$ -	\$ -	\$ -	\$ 150,000	\$ 200,000	\$ -

This project funds the first city-wide Facilities Master Plan (FMP) which is a comprehensive assessment of all city facilities encompassing more than 80 buildings and structures (it excludes OSMP barns and ranches and P&R shelters). Key goals of the first Facilities Master Plan are to identify a common vision and core values across all city facilities and to measure facility health and condition against these common values to guide a strategic implementation plan and capital investment strategy for near term, within the time frame of CIP planning and over the long term, decades. Major milestones for investment strategies align with the city's Climate Commitment Goals in both 2030 for city buildings and 2050 to align with community wide goals.

A key strategic initiative of the FMP is to consolidate 22 facilities that are not otherwise tied to a specific geographic location such as a fire station or recreation center. There are numerous benefits that can be achieved through consolidation such as operational and maintenance efficiencies, energy efficiency, space economy, increased staff effectiveness and more. Many of these benefits also result in cost savings and most importantly better delivery of essential services to the community.

This project is considered 'Helpful' using the Budgeting for Resilience classification in that it could be cut without significant or immediate impacts to the city's basic operations and functioning. Funding is already appropriated for the first city-wide Facilities Master Plan (FMP), anticipated to be adopted in 2021. The update to the FMP in 2025 & 2026 will provide an update on progress towards goals identified in the original plan and define the next near term strategic investment plan based on what has been achieved, new opportunities that have arisen and other influences experienced since the first FMP was adopted.

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FIRE-RESCUE



CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

Fire-Rescue updated its departmental Master Plan in early 2020 and included a number capital replacement and enhancement elements that would enable the department to achieve its Council-accepted strategic goals over the next 7-10 years under three funding scenarios: Fiscally-Constrained, Action, and Vision. There are several key projects to support the accomplishment of this plan that represent priorities in the upcoming year:

RELOCATION AND REPLACEMENT OF FIRE STATION 3:

At the Fiscally-Constrained level, the Master Plan called for the city to move forward with the relocation and replacement of Fire Station #3 to accomplish three objectives. First, Fire Station #3 is being moved to a new location further north on 30th street to take it out of a 100-year floodplain. Second, the new station is being re-located to an area that is better situated to respond to higher call volumes. Finally, the replacement of Station #3 will expand Fire-Rescue's system-wide facility capacity to expand into fire-based advanced life support (paramedicine) and transport as well as accommodate administrative staffing space needs which is necessary as the department is currently using temporary for administrative functions. This co-location is critical as it is an efficient utilization of acquired land, avoid long term rental fees for administrative space, and build a near net-zero facility to help meet city-wide climate goals.

The relocation and replacement of Fire Station #3 is being funded from a number of sources including dedicated dollars generated by the Community, Culture, and Safety Tax that was passed in 2017 in addition to supplemental General Fund capital funding and use of Fire-Rescue's balance of impact fees and development excise taxes in the Capital Development Fund. The project has been submitted for site review and construction is anticipated to begin in 2022. The department needs an additional \$11.4 million to complete the project due to an increase in construction costs. Currently, inclusion in the CCS tax renewal is being discussed as a potential revenue source.

FIRE-RESCUE CAPITAL



Fire Station 3 Artist Rendering

ROLLING CAPITAL STOCK REPLACEMENT (ONGOING)

In addition to facility capital projects, Fire-Rescue maintains a capital investment program to achieve the timely replacement of its rolling capital stock of eleven front-line and four reserve fire apparatus. In 2022, Fire-Rescue will be replacing two of its fire engines that will operate out of Fire Station #2 and Fire Station #3. One exciting initiative currently being explored by the department is the potential to refurbish as opposed to replace one of these engines to reduce strain on the apparatus replacement fund and extend the life-span of existing apparatus.

2022 CAPITAL PROJECTS

- Fire Station #3 Design and Construction
- Replacement of Fire Engines with existing funding

OPERATING AND MAINTENANCE IMPACTS

Constructing a new Fire Station #3 will reduce facility maintenance and energy costs relative to the current Station #3 facility that was built in the 1960s. The new station is expected to include administrative office space along with community and shared meeting space that could be used by other city departments as well as community members. Replacement of Stations 2 and 4 are anticipated to have similar impacts to significantly reduce the current operating costs of the department's capital inventory. The current stations are approximately an average age of 60 years old and have become difficult to maintain and operate.

Additionally, the station renovations that were completed in 2020 resulted in system-wide installation of health-compliant laundry facilities which negated the need for separate third-party laundry service generating thousands of dollars in annual operational savings.

FIRE-RESCUE CAPITAL

UNFUNDED PROJECTS AND EMERGING NEEDS

Fire-Rescue’s Master Plan called for a number of capital investments for which sufficient funding has not been identified. As identified here, the Fiscally-Constrained level, the relocation and replacement of Fire Station #3 is falling short of approved funding levels. Depending upon the final design of the station, it is anticipated that an \$11.4 million in additional funding will be needed. At the Action-Level, Fire-Rescue’s capital strategy focuses on relocating Fire Station #4 and Fire Station #2, with priority on the latter. In both cases, relocation will remedy the size and functionality deficiencies that currently exist at the outdated stations and likely involve land acquisition. No funding has been identified for either station relocation, though council has discussed options for inclusion in the CCS tax renewal.

Fire-Rescue has also identified the potential need to better address maintenance in the near-term and repairs in the long-term at the Boulder County Regional Fire Training Center (FTC). The FTC assets for which current maintenance funding is insufficient and replacement funding does not exist include the teaching and administrative space, the fire ground’s driving pad, and the burn and smoke buildings. Fire-Rescue manages the FTC under an agreement with the FTC’s Board and Boulder County. The City of Boulder is set to take ownership of the facility in 2034 at which point deferred maintenance and replacement will be shouldered solely by the city. In addition to maintenance and replacement, Fire-Rescue intends to eventually pursue phase II of the FTC facility master plan which calls for expansion of the on-site classroom space and adding dormitories to accommodate increased demand. This is identified at the Vision-level within Fire-Rescue’s Master Plan.

RACIAL EQUITY IMPACTS

The above requests do not reduce any disparities for marginalized or under served groups and Fire-Rescue does not foresee any unintended consequence. In addition, inclusion of community space in the new Fire Station 3 will enhance the department’s ability to conduct outreach to under served populations living in north and central Boulder.

CEAP PROJECTS

None

BOARD ACTION

N/A

Fire-Rescue							
	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Capital Program Total	\$ 10,491,560	\$ -	\$ 10,491,560	\$ -	\$ -	\$ -	\$ -
CIP-New Facility/Infrastructure Total	\$ 10,491,560	\$ -	\$ 10,491,560	\$ -	\$ -	\$ -	\$ -
Fire Station 3 Desn & Construction	\$ 10,491,560	\$ -	\$ 10,491,560	\$ -	\$ -	\$ -	\$ -

Fire Station #3 is being moved north on 30th Street to a location that removes it from a 100-year floodplain, better situates it to serve growing call volumes, and allow Fire-Rescue to build a modern station that can address system-wide capital deficiencies and supports possible service enhancements into fire-based advanced life support. The station’s \$12.5 million relocation was originally approved and funded out of the 2017 Community, Culture and Safety Tax with \$6.2 million in additional General Fund support. The land acquisition and recent completion of the Fire Master Plan coincided with the design phase of the project and present the city with the ability to help achieve 9 of 22 of Fire’s master plan goals relating to system-wide facility capacity, expansion into ALS, and response improvement depending upon the station’s approved design. Design options showing varying station size or phasing will be carried through the Site Review regulatory process currently planned to continue through 2021. The station’s alternate designs lead to total construction costs ranging from \$25.5 million to \$31.7 million generating funding shortfalls of \$4.9 million to \$11.1 million. Construction is being delayed until 2023 to allow time for financial conditions to improve and station design to be fully vetted and finalized.

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INNOVATION & TECHNOLOGY

CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

Typically most of IT's projects are capital maintenance projects that involve the replacement and upgrade to existing systems and software. However, in the next three years, it is expected that significant departmental efforts will need to focus on transforming technical operations and capacity. The pace of change in technology is a significant factor to consider when planning projects, and offers both new opportunities and challenging threats to mitigate. The shifting composition of our workforce will also require attention as we emerge from the pandemic and return to an office environment significantly different from its previous design. This is likely to require investment in both capital and operating dollars.

A number of internal and constituent facing technology projects are planned for 2022. Planned completion of the of the Workday (HR/Payroll) project and a continuing phased implementation of the enterprise data platform. Pending voter approval of the CCS tax, the city will also begin a multi-year effort to implement a Constituent Relationship Management system in 2022. Additionally, the city is investing in upgrades to the existing network infrastructure, replacement of the virtual server and storage system, and replacement of the system for data backup and disaster recovery.

Increasingly technology projects offer opportunities to deliver services to the city organization while at the same time reducing the city's environmental footprint. For example, cloud delivered services reduce or eliminate the need for on premise hardware and leverage the power of large more efficiently managed data centers. Our cloud infrastructure vendor has pledged to operate with 100% renewable energy by 2025.

On a strategic level, the city is currently looking at how to treat capital funding for technology projects recognizing several factors:

- A strong shift towards a cloud-first technology posture;
- Shorter, more significant technology innovation, and obsolescence, cycles;
- Convergence of software and hardware;
- Rapidly increasing bandwidth consumption and connected devices; and
- Increased focus on mobile technology solutions and hybrid work environments.

INNOVATION & TECHNOLOGY CAPITAL

2022 CAPITAL PROJECTS

- Initiate constituent relationship management system implementation;
- Replacement of the virtual server and storage system;
- Replacement and upgrade of network firewall equipment;
- Replacement of the data backup and disaster recovery system;
- Phase 1 of broadband backbone construction project
- Initiate and begin implementation of Workday human resource & payroll information system;
- Redesign of the virtual server and storage system to facilitate the implementation/expansion of data resources to the Azure Cloud; and
- Begin implementation of enterprise-wide data platform.

OPERATING AND MAINTENANCE IMPACTS

Many of IT's CIP assets already have established maintenance and operations funding. Each year the Computer Replacement Fund rates are assessed and any significant changes in costs are incorporated into the coming years contribution rates – with a goal to keep those rates as even as possible. Any capital enhancement projects planned will identify projected increased operating costs when the funding request is made.

UNFUNDED PROJECTS AND EMERGING NEEDS

Unfunded projects and emerging needs fall into three categories: market dynamics, system replacement, and technology transformation.

SYSTEM REPLACEMENT

Based on the more than 300 applications managed across the city, total system replacement is estimated to be between \$8 million and \$18 million. The wide range is due to various factors, including opportunities for system/function consolidation, new tech market entrants/consolidation, a changing technology landscape, and increasing cost of contracted IT labor.

TECHNOLOGY TRANSFORMATION

IT is changing more quickly than it ever has. A few examples include cybersecurity, software defined infrastructure, preeminence of cloud technologies, expanding data use and needs, hybrid work environment, and the internet of things/connected devices.

MARKET DYNAMICS

Middle market technology firms that traditionally serve local governments are being consolidated and acquired more quickly than in the past. The outcome can be that a vendor chooses to support and continue one application over others from their portfolio of similar products. The impact to the city is that a system with a planned five to seven year lifecycle may only be vendor supported two to four years, and the city must move to a new product.

RACIAL EQUITY IMPACTS

Early phases of the broadband project will begin to address data connectivity challenges for under served members of the community. Target locations were chosen with input from council members and other city departments who offer direct service to these various communities. The goal is improved quality of data services and increased access to digital resources.

INNOVATION & TECHNOLOGY CAPITAL

CEAP PROJECTS

None

BOARD ACTION

N/A

Innovation & Technology							
	Estimated Total	2022	2023	2024	2025	2026	2027
	Cost	Recommended	Projected	Projected	Projected	Projected	Projected
Capital Program Total	\$ 10,700,800	\$ 867,800	\$ 5,930,000	\$ 575,000	\$ 1,455,000	\$ 1,360,000	\$ 513,000
CIP-Capital Enhancement Total	\$ 500,000	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -
Enterprise Data Platform	\$ 500,000	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -
General Fund CIP. The siloed nature of various departments throughout the city makes sharing of internal information and data relatively difficult, as often it is unknown what data exists, what form it exists in, and whether it is compatible with data collected in another department. Having a citywide centralized system will allow departments to integrate data from multiple sources and applications into one location. A data warehouse would improve data quality and consistency throughout the City. This initial phase of the project is funding for consulting and cloud hosting services. An increase in the CRF of \$30,000/year has already been built into the FY2020 rates for continued support of this solution. Additional funding for latter-phase implementation is pending CCS tax voter approval.							
CIP-Capital Maintenance Total	\$ 10,200,800	\$ 617,800	\$ 5,680,000	\$ 575,000	\$ 1,455,000	\$ 1,360,000	\$ 513,000
Software Replacement	\$ 5,400,000	\$ -	\$ 5,100,000	\$ -	\$ 300,000	\$ -	\$ -
This project reflects the software and other project expenses needed to ensure timely replacement of the city's software applications. These systems are necessary to conduct day to day city business.							
Network Hardware Replacement	\$ 2,925,000	\$ 460,000	\$ 280,000	\$ 500,000	\$ 900,000	\$ 460,000	\$ 325,000
This is an ongoing project and includes the hardware and related software used to provide and support a reliable and secure high-speed data and voice communications infrastructure to connect City computing devices to internal data repositories and computing services, while supporting connectivity to the Internet and other external data resources and services. Project involves maintenance and end of life equipment replacement. Most elements of the network infrastructure have a useful life of six years. This is the maximum lifecycle recommended by the equipment vendor and industry best practices.							
Server Hardware Replacement	\$ 850,000	\$ -	\$ -	\$ -	\$ -	\$ 850,000	\$ -
Hardware and related software necessary to provide and support the computing infrastructure that delivers critical services, including enterprise software applications (e.g. financial, payroll, permitting and licensing, electronic mail, etc.), critical departmental applications (e.g. police and fire records, court case management, recreation registration, etc.) enterprise data storage resources, internal/external web systems, and electronic document management repositories. Project includes maintenance and end of life equipment replacement.							
Security Administration	\$ 240,800	\$ 17,800	\$ -	\$ 75,000	\$ 105,000	\$ 25,000	\$ 18,000
Equipment used to provide and support network devices and software needed to ensure the city's network, server and computing infrastructure are secured against external Cyber-threats such as viruses, malware and hackers in compliance with FBI, CIP (Critical Infrastructure Protection) and PCI (Purchasing Card Industry) security standards. Project includes maintenance and end-of life-equipment replacement.							
Data Backup and Disaster Recovery	\$ 310,000	\$ 140,000	\$ -	\$ -	\$ -	\$ -	\$ 170,000
The project reflects the hardware, software and support needed to ensure reliable high speed backup of files, databases and applications stored on the city's enterprise servers and data storage sub-systems. Note that these systems are required not only for disaster preparedness and recovery purposes, but to meet legal records retention requirements.							
Database Hardware Replacement	\$ 475,000	\$ -	\$ 300,000	\$ -	\$ 150,000	\$ 25,000	\$ -
Hardware and related software necessary to provide and support the computing infrastructure that delivers critical database services. Project includes maintenance and end of life equipment replacement.							

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LIBRARY & ARTS

CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

Continuing to provide library destinations that welcome diversity, anchor the community, strengthen its identity, and allow staff members to provide service excellence to all community members is the purpose of the library's capital improvement program. In 2022, the Library in collaboration with the Facilities Department is proceeding with construction of a full-service branch library in North Boulder, a community-requested goal of the Master Plan. Completing this project is the primary focus of the library's capital program for the next two years. New, currently-unfunded projects will be pursued after the branch library is completed and its operating costs are funded. This will ensure adequate staff capacity is available within the Library and Facilities Department staffs to manage new capital projects.

NORTH BOULDER BRANCH LIBRARY:

The project budget was allocated in 2019/2020 and is funded from Community, Culture, and Safety (CCS) tax for capital improvements revenues, Development Excise Tax (DET) and impact fee revenues collected for the library, a council-initiated, one-time 2019 General Fund contribution, and Library Fund reserves. The total amount of CCS tax revenues for the project is \$5 million, \$4 million are from DET and impact fee revenues, a \$700,000 one-time General Fund contribution, and a generous \$500,000 donation from the Boulder Library Foundation.

The economic impacts of the COVID-19 pandemic were evident as the final project cost estimates obtained in 2020 were significantly more than the \$10.5 million budget. The project scope was reduced by more than \$2 million. The full build out of the makerspace was reduced to the building shell and utility rough-ins. The outdoor gardens and playground, and the roof-top photovoltaic panels were removed from the scope. The 2022 project bids were also significantly more than the budget even with the reduced scope. Further changes will be made to the building systems and materials used on the building's exterior to bring the cost within budget. If additional donor funding is obtained some of the reductions made to the scope may be added back in to the project.

LIBRARY & ARTS CAPITAL



OFFICE OF ARTS & CULTURE COMMUNITY CULTURAL PLAN:

The Office of Arts and Culture is nearing the close of phase two of the Community Cultural Plan. The mission of the division is “to facilitate an alignment in the community around the vision for culture: Together, we will craft Boulder’s social, physical, and cultural environment to include creativity as an essential ingredient for the well-being, prosperity, and joy of everyone in the community.” The Public Art Program is the primary capital component in the Cultural Plan, which is also guided by the biennial Public Art Implementation Plan and the Public Art Policy. A “percent for art rule” in the Policy generates much of the funding for new art projects which are tied to, and enhance, the Capital Improvement Projects of other departments. In 2022, The Office of Arts & Culture will coordinate with all city departments to determine the impacts of the Public Art Policy on their upcoming capital projects.

It is important to note that, after consultation with project managers in those departments, the outlook for funding will slow considerably. Staff projects that in 2022 the percent for art rule will generate about \$45,000 for all public art projects. In looking ahead, this trend continues in four of the next five years.

2022 CAPITAL PROJECTS

- None (construction of the North Boulder Branch Library is beginning in 2022, however)

OPERATING AND MAINTENANCE IMPACTS

In 2023, the north Boulder branch library will require approximately \$1 million in ongoing personnel and operating funds for security, equipment maintenance, courier service, etc. Ongoing building maintenance and utilities costs, which are managed by the Facilities Department, are currently estimated at \$300,000, annually.

LIBRARY & ARTS CAPITAL

UNFUNDED PROJECTS AND EMERGING NEEDS

LIBRARY

The 2018 Boulder Public Library Master Plan identifies unfunded projects for 2022 and later, such as: opening a Gunbarrel Corner Library; conducting a renovation feasibility study of the Main Library's north building; renovation of the Main Library's north building to upgrade and/or reconfigure the Canyon Theater, expand the BLDG 61 makerspace, and make more space for community partners; and Carnegie Library for Local History restoration.

Ongoing operating fund for grounds maintenance is an emerging need for the north Boulder branch library project that will need to be addressed through a joint 2023 budget request from the library and the Parks and Recreation Department. Cost estimates for grounds maintenance are forthcoming.

As the Library and Arts Department adds staff members to meet master plan goals and reconfigures spaces to support a hybrid (on site/ remote) work environment, there is also an emerging need to modify/add staff workspace. There may be some opportunity to reconfigure and modify current workspaces that may meet the criteria for a capital project. All city-owned library facility building systems will need to be assessed for energy sustainability in the next few years.

OFFICE OF ARTS & CULTURE:

With the waning of the Community Culture and Safety Tax, the percent for art rule is the only source of funding currently identified for public art commissioning. That leaves a gap of approximately \$255,000 below the level of funding recommended in the Community Cultural Plan.

Also, in 2022 the General Fund allocation for public art maintenance was reduced by a significant amount. This occurred at a time of expanded need: as this collection grows, and as costs for labor and materials balloon, the gap widens making it increasingly expensive to delay maintenance projects.

RACIAL EQUITY IMPACTS

LIBRARY

The north Boulder branch library project reduces disparities for marginalized or under served groups by providing convenient, safe access to library programs and services. Site design includes convenient multimodal access to community members who reside in surrounding neighborhoods and a walking path that connects directly to The Meadows manufactured home community property. No part of this project is expected to create a disparate racial impact or other unintended consequence result.

OFFICE OF ARTS & CULTURE

All public art projects follow a process for project initiation and artist selection to evaluate and act on racial and ethnic disparities. This includes public inquiry, staff evaluation, and ultimately discussions by the community public art selection panels and the Arts Commission. Adjustments are made to improve equitable outcomes after these discussions and effect everything from the site, the call for entry, selection criteria, public outreach, and more. The process to evaluate equity runs parallel to discussions of climate impacts.

LIBRARY & ARTS CAPITAL

CEAP PROJECTS

None

BOARD ACTION

LIBRARY

The Library Commission advises on overall priority for new library capital projects. For 2022, the Library Commission recommended not to add any new projects to the library's capital program nor to request additional city funding to address the north Boulder corner library project's budget deficit to implement the community's vision for the branch library. The commission's favorable recommendation for capital project funding from the Library Fund (required by city charter) and Library Fund reserves (not required) is sought to allocate funds to library projects.

OFFICE OF ARTS & CULTURE

After public outreach, the Arts Commission reviews and ultimately approves a biennial Public Art Implementation Plan which serves as the programmatic workplan. All public art projects then receive review and ultimately approval by community members serving on the public art selection panels followed by the Arts Commission before advancing to the City Manager for approval. The decisions of all these groups is informed by a technical review committee.



Untitled Mural by Patrick Maxcy, Office of Arts & Culture's Creative Neighborhoods Mural Program (photo credit: Lauren Click)



OPEN SPACE & MOUNTAIN PARKS

CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

The 2022 Open Space & Mountain Parks (OSMP) Department capital budget includes projects that are a part of the department's core mission, including capital maintenance of trailheads and trails; agricultural lands management; capital ecosystem maintenance and restoration; and strategic and resource planning. The department's 2022 capital budget fully incorporates guidance from the OSMP Master Plan for the second year. Projects will align with the Master Plan focus areas, which serve as departmental work program priorities for 2022:

AGRICULTURE TODAY AND TOMORROW

Agriculture and water projects aim to improve soil health, integrate sustainable agricultural practices and resource protection, take care of existing infrastructure, and support the next generation of ranchers and farmers.

COMMUNITY CONNECTIONS, EDUCATION, AND INCLUSION

Interpretive and integrated planning projects support enhanced communications across the system, foster connection with nature, and engage youth corps to encourage stewardship as a career and responsible lifestyle.

ECOSYSTEM HEALTH AND RESILIENCE

Ecological and restoration projects safeguard large habitat blocks and corridors, reduce undesignated trails, maintain and restore grasslands, forests, wetlands and riparian areas, control invasive species, and promote biodiversity of plants and animals.

RESPONSIBLE RECREATION, STEWARDSHIP, AND ENJOYMENT

These projects maintain and improve trails and visitor infrastructure, support enjoyable passive recreation opportunities on OSMP lands, protect scenic resources, and address visitation levels and growth where appropriate.

FINANCIAL SUSTAINABILITY

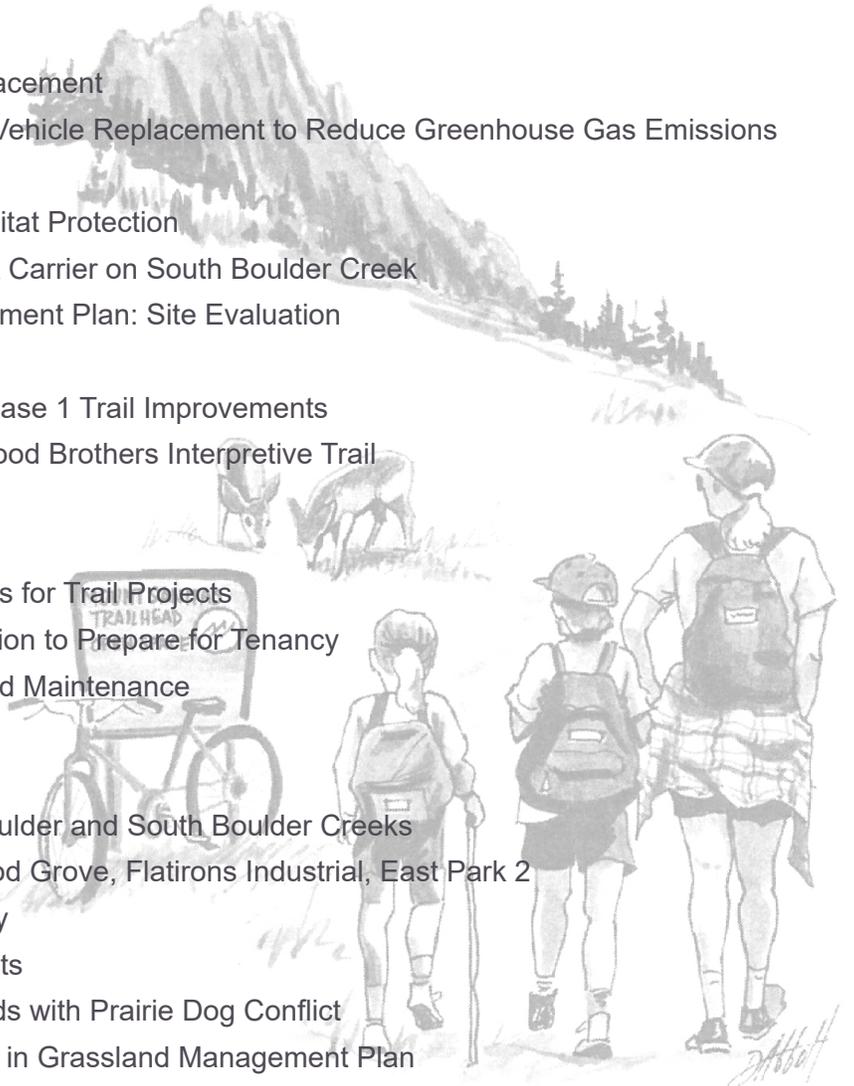
Capital projects across OSMP support department efforts to take care of what we have and understand total cost of system management. In 2022, OSMP will continue to invest in asset management and other systems in support of Master Plan objectives.

OPEN SPACE & MOUNTAIN PARKS CAPITAL

Like other departments, OSMP has experienced revenue shortfalls related to COVID-19 and has taken steps to steward Open Space Fund dollars during pandemic response and recovery. While the 2022 CIP conservatively accounts for multi-year revenue impacts of COVID-19, a voter-approved extension of the 0.15 percent sales tax through 2039 will allow the department to increase the CIP budget over previous years. During flood recovery, the department experienced higher than usual CIP totals to repair extensive flood damage on OSMP lands. The department then entered an era of changing revenues and constrained CIP totals in 2019 with the end of the General Fund transfer to OSMP and the reduction of a 0.33 percent sales tax to 0.22 percent. Beginning in 2022, the overall CIP budget marks a return to pre-flood averages and is within the normal range of \$4.0M to \$6.0M for the department CIP based on capacity of staff to execute the work.

2022 CAPITAL PROJECTS

- Address Immediate Property Needs After Acquisition
- Agricultural Fencing Infrastructure Installation and Maintenance
- Chapman Drive Trailhead Design and Construction
- Chautauqua Site Plan Design, Construction Documentation, and Permitting for Ranger Cottage Interior, Restrooms, and Site Circulation
- Coal Creek Restoration Planning
- Equipment Purchase, Repair, and Replacement
- Facility Improvements, Equipment and Vehicle Replacement to Reduce Greenhouse Gas Emissions
- Facility Repairs and Maintenance
- Fencing Installation for Wildlife and Habitat Protection
- Fish Passage Design at New Dry Creek Carrier on South Boulder Creek
- Fort Chambers/Poor Farm Site Management Plan: Site Evaluation
- Gebhard Site Plan Implementation
- Gunbarrel Site Plan Implementation: Phase 1 Trail Improvements
- Gunbarrel Site Plan Implementation: Wood Brothers Interpretive Trail
- Habitat Restoration at Gregory Canyon
- Hazard Tree Removal
- Hire Youth Corps. and Contracted Crews for Trail Projects
- Historic Agriculture Facilities Rehabilitation to Prepare for Tenancy
- Irrigation Infrastructure Improvement and Maintenance
- Land, Water, and Mineral Acquisitions
- Local Food Farm Sites Improvements
- Native Vegetation Restoration Along Boulder and South Boulder Creeks
- Public Safety Improvements: Cottonwood Grove, Flatirons Industrial, East Park 2
- Recreation Management Plan: Inventory
- Red Rocks Trails Complex Improvements
- Restoration of Irrigated Agricultural Fields with Prairie Dog Conflict
- Restore Wetland and Riparian Priorities in Grassland Management Plan



OPEN SPACE & MOUNTAIN PARKS CAPITAL

- Road, Trailhead, and Bridges Safety and Maintenance Repairs
- Rocky Mountain Greenway (RMG) Underpass Contribution
- Soil Health Improvement and Restoration on Unleased Agricultural Lands
- Soil Health Improvement on Leased Properties
- South Boulder Creek Instream Flow Initiative
- South Mesa Trailhead Refurbishment: Design and Permitting
- System-wide Gate Maintenance and Standardization
- System-wide Sign and Communication Enhancements
- Tall Oatgrass Management
- Visitation and Visitor Experience Survey Implementation
- Wetlands Restoration on Lower Boulder Creek

OPERATING AND MAINTENANCE IMPACTS

During the 2022 budget process, OSMP participated in the citywide requirement to reduce 10% of budget to ensure responsible fund stewardship during economic uncertainty. The 2022 reductions were balanced across expenditure types and included a reduction of \$1.8M to the 2022 CIP. The reduced CIP of \$4.5M continued to prioritize safety, system maintenance, and implementation of Tier 1 Master Plan projects. The department utilized its work planning system to make reductions based on criteria including maintenance condition, staffing impacts, project connection to Master Plan tiered strategies, and more. Reductions focused on rescaling and rephrasing projects to still accomplish system maintenance in 2022 while adhering to physical distancing and other regulations.

In 2022, OSMP will continue to focus on facility repairs and maintenance, restoring ecological functioning of riparian, floodplain, and grassland habitat, closing and restoring social trails, improving soil health, and addressing trail maintenance backlogs. The 2022 CIP projects are aimed at reducing deferred maintenance and the department expects minor reductions to ongoing operations and maintenance because of these efforts. For example, soil health improvement projects will increase resiliency to climate extremes, reducing the need for maintenance costs over time. Improving trail sustainability will reduce the need for ongoing maintenance throughout the year. Increases to operations and maintenance will occur where new infrastructure is added, for example, installation of new signs on trails and trailheads. OSMP is confident that any added O&M can be supported by existing operating budget.

UNFUNDED PROJECTS AND EMERGING NEEDS

The 2022 OSMP CIP partially funds some maintenance and enhancements projects. Maintenance projects are generally scalable and will receive incremental funding when revenues allow. Other 2022 CIP projects are phased over several years and will require funding in out-years to complete, for example the Gunbarrel and Chautauqua Integrated Site Plans, as well as restoration projects at Gregory Canyon and Coal Creek. Additional funding for restoration of wetlands and soil health improvements is an emerging need.

Based on strategies implemented in previous and current budget cycles, OSMP feels prepared to develop a 2022 budget that reflects financial realities and upholds the department's commitment to stewarding the land system. OSMP has maintained contingency reserves at 20% of operating plus debt, ensured strong fund balances, repaid debt in advance of expiring tax increments, de-obligated capital carryover, and improved work planning processes to better understand capital needs. OSMP will be actively monitoring and adapting to revenue projections over the next several years.

OPEN SPACE & MOUNTAIN PARKS CAPITAL

RACIAL EQUITY IMPACTS

The 2022 OSMP CIP prioritizes projects that maintain what we have and improve infrastructure, allowing for better access to the system and ensuring that all users experience benefits. As an example, the System-wide Sign and Communication Enhancements project seeks to reduce disparities for marginalized or under served groups. Translations and improved visual communications are included in the scope of the project, as well as deployment of mobile hotspots at select trailheads. This will allow for better access to information across the system.

With continuing impacts of COVID-19, it is a priority to keep trailheads open to ensure all people, not just neighbors of open space, have access to the system. The system has remained open to support mental health and well-being of all users over the last year. The 2022 CIP will continue to prioritize projects that increase accessibility through maintenance and improvements to infrastructure.

CEAP PROJECTS

None

BOARD ACTION

The Open Space Board of Trustees unanimously recommended the 2022-2027 CIP on June 9, 2022 after previous review at the April 14 and May 12 business meetings.

OPEN SPACE & MOUNTAIN PARKS CAPITAL

Open Space & Mountain Parks

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Capital Program Total	\$ 19,029,000	\$ 5,571,000	\$ 4,964,000	\$ 4,302,000	\$ 3,098,000	\$ 1,094,000	\$ -
CIP-Capital Enhancement Total	\$ 3,535,000	\$ 1,892,000	\$ 880,000	\$ 459,000	\$ 304,000	\$ -	\$ -
Gunbarrel Wood Brothers Inter Trail	\$ 200,000	\$ 50,000	\$ 150,000	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) This project implements actions called for in the approved Gunbarrel Hill Integrated Site Project (ISP), exploring options to improve nature-based learning and discovery on the Wood Brothers property to develop and foster ecostewards. In partnership with Growing Up Boulder (GUB) and Heatherwood Elementary, OSMP will incorporate youth-generated ideas for the nature discovery in accordance with existing regulations and site needs. The site will likely include a designated dog-walking loop with nature discovery learning pods along the way. This site has lower overall habitat quality and was designated as an appropriate location for nature discovery and dog-walking in the Gunbarrel Hill ISP. The project accomplishes key outcomes of two focus areas of the OSMP Master Plan: Community Connections, Education and Inclusion, and Responsible Recreation, Stewardship and Enjoyment. It primarily supports strategies CCEI. 3) Connect children and youth to the greater outdoors, CCEI. 6) Inspire environmental literacy and new involvement in OSMP, and RRSE. 9) Develop a learning laboratory approach to recreation.</p>							
Public Safety Improvements	\$ 150,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -
<p>(Important) Project addresses public safety improvements and natural resource protection regarding encampments at Cottonwood Grove, Flatirons Industrial, and East Park 2. Funding involves removing non-native trees such that visibility is improved and encampments are less likely to establish or re-establish. Encampments are a growing priority for the city due to safety concerns and impacts to natural resources. This project accomplishes key outcomes within three focus areas of the OSMP Master Plan: Ecosystem Health and Resilience, Responsible Recreation, Stewardship, and Enjoyment, and Community Connections, Education, and Inclusion It advances multiple strategies in the Master Plan, primarily addressing EHR. 1) Preserve and restore important habitat blocks and corridors, RRSE. 1) Assess and manage increased visitation, and CCEI. 2) Enhance communications with visitors.</p>							
Rocky Mountain Greenway Underpass	\$ 75,000	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) This project supports OSMP's payment toward the Rocky Mountain Greenway (RMG) project as part of a Regional Collaboration effort, previously funded in the CIP. RMG is the creation of an underpass beneath Co Hwy 128 connecting the High Plains/Coalton Trail access with the Rocky Flats National Wildlife Refuge (NWR) trails system. There will be a connection at Indiana St. from Rocky Flats to other trail systems south and east to the Rocky Mountain Arsenal NWR. The creation of the trail connections and the designation of a route may also accommodate the Colorado Front Range Trail providing additional benefit. A soil sampling and analysis plan will confirm that radionuclide concentrations are below previous measurements and thresholds for public health as well as onsite monitoring for the presence of radionuclides in the air during construction. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Ecosystem Health and Resilience and Responsible Recreation, Stewardship, and Enjoyment. It advances multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and corridors, RRSE.4) Encourage multimodal access to trailheads, and RRSE.6) Support a range of passive recreational experiences.</p>							
South Mesa Trailhead Refurbishment	\$ 400,000	\$ 50,000	\$ 350,000	\$ -	\$ -	\$ -	\$ -
<p>(Important) This project involves rehabilitating South Mesa Trailhead to improve drainage, visitor flow, and communication with visitors. This site needs professional grading and drainage plans to ensure infrastructural improvements will endure. Project includes conceptual designs, schematic plans, design development, construction documents with associated Class C, B, and A cost estimates, and any permitting as needed. OSMP will manage survey contract and oversee existing conditions mapping and base plan. This project accomplishes key outcomes in two focus areas of the OSMP Master Plan: Responsible Recreation, Stewardship and Enjoyment, and Community Connections, Education, and Inclusion. The project primarily addresses RRSE. 1) Assess and manage increased visitation, CCEI. 2) Enhance communications with visitors, and CCEI. 1) Welcome diverse backgrounds and abilities.</p>							
Gunbarrel Hill Trail Management	\$ 730,000	\$ 730,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) This project will design and construct "Loop A" and reconstruct and resurface 1.5 miles of road from the water tower east to N 95th Street as defined by the Integrated Site Plan (ISP) for Gunbarrel Hill that was completed in 2020. OSMP will designate the Loop A trail and close undesignated social trails that are impacting native grassland habitat. Separate but related 2021 and 2022 CIP projects will accomplish other ISP action items including habitat restoration and development of an interpretive trail at Wood Brothers. This trail project will improve ecological systems by increasing habitat block size while enhancing the visitor experience on a designated, more sustainable trail system. Closure of undesignated trails is expected to better protect one of the best breeding populations of Grasshopper Sparrows in Boulder County. This species is a grassland-dependent songbird of conservation concern considered an indicator for overall grassland ecosystem health. This project accomplishes key outcomes of two focus areas of the OSMP Master Plan: Ecosystem Health and Resilience, and Responsible Recreation, Stewardship, and Enjoyment. It links to multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and closures, EHR.4) Reduce undesignated social trails, RRSE. 2) Reduce Trail Maintenance Backlog and RRSE.7) Build new trails as guided by past and future plans.</p>							
Fencing Installation for Wildlife	\$ 100,000	\$ 50,000	\$ -	\$ -	\$ 50,000	\$ -	\$ -
<p>(Important) This project addresses fencing to protect sensitive species habitats, retrofitting existing fences to meet wildlife friendly specifications, and providing enforcement of visitation closures related to wildlife or wildlife habitat. Increasing visitor use, proliferation of social trails, and ongoing maintenance needs make new fencing projects necessary to protect sensitive natural resources. Often these are emergent needs that are identified and require a rapid response before usage patterns become well established. Each year, high priority projects are planned to protect wetland or riparian wildlife habitat but most projects address emergent needs across the system. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Ecosystem Health and Resilience and Responsible Recreation, Stewardship, and Enjoyment. It advances multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and corridors and RRSE.1) Assess and Manage Increased Visitation.</p>							
Fish Passage Design: New Dry Creek	\$ 65,000	\$ 65,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) OSMP will create fish passage at the New Dry Creek Carrier ditch. The project will create a fishway at the ditch diversion on South Boulder Creek that will be more easily navigable for native and sport fish, including several species of state concern. Irrigation diversion dams create barriers to the movement of aquatic organisms in rivers. Dams have been shown to disrupt spawning, fragment habitat, and isolate populations of native and sport fish. Creating fish passage will connect aquatic habitat that is currently fragmented. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Ecosystem Health and Resilience and Agriculture Today and Tomorrow. It advances multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and corridors, ATT.4) Protect water resources in a warmer future, and ATT.6) Support the success of ranchers and farmers.</p>							
Soil Health Imp on Leased Prop	\$ 383,000	\$ 85,000	\$ 97,000	\$ 99,000	\$ 102,000	\$ -	\$ -
<p>(Important) This project will improve soil health and increase resilience to climate extremes on leased agricultural properties. Funding will support systematic implementation of soil health principles: reducing tillage, integrating livestock, armoring soil, diversifying plants in time and space, and maintaining continuous live plant and root systems. Methods will include keyline plowing, cover-cropping, mob grazing, and compost application, while also experimenting with cutting-edge practices found in the agricultural literature and through consultation with colleagues at partner agencies. The work to monitor, restore, and disseminate OSMP's efforts in land regeneration and carbon sequestration creates opportunities for increasing resilience to climate change, reversing agricultural productivity declines, and increasing biodiversity. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow and Ecosystem Health and Resilience. It advances multiple strategies in the Master Plan, primarily addressing ATT.2) Increase soil health and resilience, ATT.6) Support the success of ranchers and farmers, and EHR.3) Address the global climate crisis here and now.</p>							
South Boulder Creek Instream Flow	\$ 120,000	\$ 60,000	\$ -	\$ 60,000	\$ -	\$ -	\$ -
<p>(Helpful) This project supports installation of additional flow monitors on South Boulder Creek. Flow monitors and an instream flow program will assist the city in mitigating impacts to South Boulder Creek stemming from expansion of Gross Reservoir. Funding additionally supports legal and engineering services for the filing of a junior water right in Gross Reservoir and acquisition analysis for water rights to fill the Gross Environmental Pool. OSMP will assist in developing a Stream Management Plan to the extent it improves ecological health of South Boulder Creek and in-stream flow. These actions deliver on commitments made in intergovernmental agreements relating to the Gross Reservoir project. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow and Ecosystem Health and Resilience. It advances multiple strategies in the Master Plan, primarily addressing ATT.4) Protect water resources in a warmer future, ATT.7) Integrate native ecosystems and agriculture, and EHR.1) Preserve and restore important habitat blocks and corridors.</p>							

OPEN SPACE & MOUNTAIN PARKS CAPITAL

Open Space & Mountain Parks

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Greenhouse Gas Emissions Reduction	\$ 200,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ -	\$ -
<p>(Important) This project will reduce OSMP greenhouse gas emissions and implement improvements that will help the City of Boulder achieve the goal of carbon neutrality by 2035. OSMP will work towards eliminating natural gas consumption, enhanced solar energy and soil carbon sequestration, and building upgrades to improve efficiency. The fleet will also be looked at and this project may support incremental funding needed (beyond the fleet replacement fund in the operating budget) to convert to electric vehicles and equipment. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Ecosystem Health and Resilience and Financial Sustainability. It advances multiple strategies in the Master Plan, primarily addressing EHR.3) Address the global climate crisis here and now, EHR.9) Reduce and offset OSMP's greenhouse gas emissions, and FS.4) Take care of what we have.</p>							
Red Rocks Trails Improvements	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) This CIP project will create trail and undesignated trail plans for Red Rocks Complex. OSMP will develop and implement a holistic trail plan that improves trails contributing to substantial deferred maintenance and closes and restores undesignated trails. This aligns with the West Trail Study Area Plan guidance to improve the Red Rocks area through trail repairs and small reroutes. This will also take care of undesignated trail concerns throughout the complex. This work will enhance visitor experience and reduce visitor impacts on the ecosystem. Construction plans will be carefully developed for incremental implementation. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Responsible Recreation, Stewardship, and Enjoyment and Ecosystem Health & Resilience. It advances multiple strategies in the Master Plan, primarily addressing RRSE.1) Assess and manage increasing visitation, RRSE.2) Reduce Trail Maintenance Backlog, and EHR.4) Reduce undesignated trails.</p>							
Chapman Drive Trailhead Des and Con	\$ 350,000	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) This project will design, permit, and construct a multi-modal Chapman Drive Trailhead that accommodates parking for passive recreational opportunities and anticipates and mitigates environmental impacts. OSMP will utilize design guidelines and standards to create a sustainable and functional trailhead that best serves the planned public uses in the West Trail Study Area Plan. A short-term trailhead was built in 2011 to accommodate parking when Chapman Drive Trail was completed. It is anticipated that demand for use in this area will re-establish and may increase after improvements to the Boulder Canyon Bike Path and completion of the Boulder Canyon Trail, and that 2022 will be the best time to shift from a short-term to a long-term trailhead solution that improves the existing layout. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Community Connections, Education, and Inclusion, and Responsible Recreation, Stewardship, and Enjoyment. It advances multiple strategies in the Master Plan, primarily addressing CCEI.1) Welcome diverse backgrounds and abilities, RRSE.1) Assess and manage increasing visitation, and RRSE.8) Provide welcoming and inspiring visitor facilities and services.</p>							
Gate Maintenance & Standardization	\$ 60,000	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) This project streamlines maintenance by standardizing and improving gates and hardware across the system. This includes new self-closing design and potential removal of unnecessary gates. No design guidelines currently exist regarding the width of gates, the design of turning radii, and other trail features that can restrict or facilitate trail use by those requiring the use of wheelchairs or other mobility devices. This project would reduce gate maintenance and complaints from the public and standardize materials, limiting wasted trips into the field to investigate prior to initiating a repair. It also allows implementation of the updated standard to use a D tube gate in which wasps are not able to nest. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Responsible Recreation, Stewardship, and Enjoyment and Agriculture Today and Tomorrow. It advances multiple strategies in the Master Plan, primarily addressing RRSE.2) Reduce Trail Maintenance Backlog, RRSE.8) Provide welcoming and inspiring visitor facilities and services, and ATT.1) Reduce the maintenance backlog for agriculture and water infrastructure.</p>							
System-wide Sign and Communication	\$ 652,000	\$ 167,000	\$ 183,000	\$ 200,000	\$ 102,000	\$ -	\$ -
<p>(Helpful) This CIP supports sign and communication enhancements that will replace and improve signs as called for in department plans. Signs will align with design guidelines and national standards, ensuring unified graphics for dog regulation signs system wide, signage for undesignated trails to inform users when they are leaving the system, updated maps for better wayfinding and increased crowd control at busy locations, and adding suggested routes based on difficulty as well as map destinations to cater to varying ability levels. Interpretive signs will be added at two locations to educate around natural, cultural, and agricultural history. Mobile hotspots for a pay by phone mobile app will be installed in our parking fee areas, which will decrease cash handling by staff and increase parking compliance. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Community Connections, Education, and Inclusion, and Responsible Recreation, Stewardship, and Enjoyment. It links to multiple strategies in the MP primarily addressing CCEI.2) Enhance communication with visitors and RRSE.8) Provide welcoming and inspiring visitor facilities and services.</p>							
CIP-Capital Maintenance Total	\$ 10,964,000	\$ 2,919,000	\$ 2,684,000	\$ 2,193,000	\$ 2,074,000	\$ 1,094,000	\$ -
Historic Ag Facilities Rehab	\$ 1,300,000	\$ 400,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ -	\$ -
<p>(Helpful) In accordance with the city's Agricultural Resources Management Plan, this project aims to recover historic structures for their intended purpose preserving the working landscape and its cultural resources. The Agricultural Resources Management Plan identified nine properties for their potential for development of a diversified vegetable and pastured livestock farm or micro-dairy for local food production. Each year, OSMP aims to complete at least one major renovation to an identified site, including remodeling the historic farmhouses to prepare them for agricultural tenancy. In 2022, project dollars will support renovations and upgrades to the Lewis House. The Lewis House is an historic structure on an OSMP agricultural property that has been vacant for many years. The rehabilitation work will make the house livable for agriculture tenants. This project accomplishes key outcomes of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow and Community Connections, Education, and Inclusion. It links to multiple strategies in the Master Plan, primarily addressing ATT.1) Reduce maintenance backlog for agriculture and water infrastructure, ATT.5) Encourage diverse and innovative agricultural operations, and CCEI.9) Preserve and protect Boulder's cultural heritage.</p>							
Local Food Farm Sites Improvements	\$ 775,000	\$ 125,000	\$ 310,000	\$ 210,000	\$ 130,000	\$ -	\$ -
<p>(Important) This project supports construction of new or significant enhancement of existing infrastructure on irrigated and grazing land. Infrastructure to be constructed includes irrigation ponds and/or cisterns and necessary pumps, and out-building construction or modifications to support these operations. Infrastructure improvement and enhancement projects will take place at Hunter-Kolb loafing</p>							
Agricultural Fencing Maintenance	\$ 436,000	\$ 90,000	\$ 90,000	\$ 84,000	\$ 86,000	\$ 86,000	\$ -
<p>(Important) This project will address deferred capital maintenance to internal and boundary fencing to allow continued leasing services to the agricultural community. The project also mitigates risk of encroachments onto OSMP leased lands if boundaries are not properly maintained. Each year, OSMP strives to maintain or replace 15,000-20,000 linear feet of fence based on priority needs across the system. Infrastructure to be maintained includes barbed wire and high tensile fences, livestock handling corrals, and vehicle access gates. Livestock grazing is the predominant use of OSMP land leased for agriculture, and fencing has been designed to reduce impacts to wildlife movements. Fencing also protects grassland habitats supported by grazing on agricultural properties. This project accomplishes outcomes of the Agriculture Today and Tomorrow focus area of the OSMP Master Plan. It links to multiple strategies in the Master Plan, addressing ATT.1) Reduce maintenance backlog for agriculture and water infrastructure, ATT.6) Support the success of ranchers and farmers, and ATT.9) Enhance enjoyment and protection of working landscapes.</p>							
Improve Soil Health and Agroecology	\$ 520,000	\$ 87,000	\$ 85,000	\$ 83,000	\$ 80,000	\$ 185,000	\$ -
<p>(Important) This project will improve soil health and restore unleased agricultural properties to prepare them for eventual leasing while enhancing ecosystem services including soil health and carbon sequestration. Restoration of soil health and subsequent growth of resilient plant communities will increase compliance with the Colorado Noxious Weed Act through eradication and suppression of noxious weeds. Methods will include compost application, keyline plowing, seeding, invasive plant species management, prairie dog barrier fence installation, field irrigation infrastructure maintenance, and staff-run irrigation. Tasks associated with this project address goals in the Grassland Plan and Agricultural Resource Management Plan as related to promoting local agricultural production on OSMP managed lands. This project accomplishes outcomes of the Agriculture Today and Tomorrow focus area of the OSMP Master Plan. It advances multiple strategies in the Master Plan, primarily addressing: ATT.1) Reduce the maintenance backlog for agriculture and water infrastructure, ATT.2) Increase soil health and resilience, and ATT.7) Integrate native ecosystems and agriculture.</p>							

OPEN SPACE & MOUNTAIN PARKS CAPITAL

Open Space & Mountain Parks

	Estimated Total	2022	2023	2024	2025	2026	2027
	Cost	Recommended	Projected	Projected	Projected	Projected	Projected
Irrigation Infra Maintenance	\$ 598,000	\$ 117,000	\$ 119,000	\$ 121,000	\$ 123,000	\$ 118,000	\$ -
<p>(Important) OSMP has invested heavily in agricultural water rights as part of its acquisition strategy and to support agricultural operations and enhanced vegetation and habitat condition. This project replaces or improves existing irrigation structures and infrastructure to deliver these water rights on priority agricultural leased and unleased lands, including diversion structures, irrigation ditches, laterals, wells, and measuring devices. Where appropriate, OSMP will add telemetry or measuring infrastructure. A well maintained and functioning water delivery infrastructure is critical to OSMP irrigated properties. In some cases, novel ecosystems of value have developed that are dependent on the continued delivery of these water rights. Maintenance priorities are established on a three-year basis and implemented annually based on conversations with the agriculture and water community. This project accomplishes key outcomes of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, and Ecosystem Health and Resilience. It primarily supports strategy ATT.1) Reduce maintenance backlog for agriculture and water infrastructure, ATT.4) Protect water resources in a warmer future, and ATT.6) Support the success of ranchers and farmers.</p>							
Resto of Irr Ag Fields: Prairie Dog	\$ 780,000	\$ 440,000	\$ 340,000	\$ -	\$ -	\$ -	\$ -
<p>(Important) An expedited review of prairie dog management and policy alternatives was accepted by OSBT and Council in 2020. This project will implement strategies over multiple years to reduce the impact of prairie dogs on irrigated agricultural land and agricultural tenants. Prairie dogs will be relocated or otherwise removed from strategic irrigated agricultural land to restore agricultural production. There are approximately 1,000 acres of irrigated agricultural land occupied by prairie dogs in the project area. These lands represent some of the best opportunities for sustainable agricultural operations on OSMP. Some of these lands are no longer able to be leased or be productive for agricultural uses due to the presence of prairie dogs. These properties will be restored to agricultural production after prairie dog removal. This project accomplishes key outcomes of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, and Ecosystem Health and Resilience. It advances multiple strategies in the Master Plan, primarily addressing ATT.2) Increase soil health and resilience, ATT.3) Address conflicts between agriculture and prairie dogs, and ATT.6) Support the success of ranchers and farmers.</p>							
Wetland Resto: Lower Boulder Creek	\$ 335,000	\$ 235,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) In accordance with the City Charter, the department will improve ecological functioning of lower Boulder Creek from 75th Street to Hwy 287. Improvements will restore riparian and floodplain wetlands that existed along Boulder Creek prior to gravel mining, converting formerly mined gravel pits (gravel ponds) to habitat that will support northern leopard frogs (a Colorado Tier 1 Species of Greatest Conservation Need), converting non-native grasslands and riparian areas to native species communities, and creating aquatic habitat to support several native fish species of concern. Heavy equipment will recontour the site and redistribute the numerous waste piles left over from mining operations. Seeding, planting and weed management will take place following earth work. The project will also help integrate ecological systems with agricultural management as called for in the OSMP Agricultural Resources Management Plan. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Ecosystem Health and Resilience and Agriculture Today and Tomorrow. It advances multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and corridors, EHR.6) Control invasive species, and ATT.5) Encourage diverse and innovative agricultural operations.</p>							
Native Vegetation Restoration	\$ 700,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ -
<p>(Helpful) This project will support the restoration of native vegetation along Boulder and South Boulder Creeks. Restoration includes large non-native tree removal projects, contracted herbaceous weed spraying and removal, seeding, planting, soil stabilization, maintenance mowing, native plantings, fencing, and other tasks related to restoring and enhancing native ecosystems in priority habitat areas. These project areas are largely riparian and wetland areas that received the lowest indicator ratings in the 2010 Grassland Ecosystem Management Plan (GMAP) and were further heavily damaged by flooding in 2013. This project accomplishes outcomes of the Ecosystem Health and Resilience focus area of the OSMP Master Plan. It advances multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and corridors and EHR.6) Control invasive species.</p>							
Tall Outgrass Management	\$ 375,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ -
<p>(Important) This project implements action items from the 2018 Tall Outgrass Ecological Impact Study. The project supports mapping, containment, eradication, and early detection of the aggressive non-native tall outgrass on OSMP lands with collaboration across the county and the Colorado Front Range. Actions include mowing, grazing, mechanical and herbicide treatments, research related to treatment efficacy, and monitoring in the eradication zones. Dollars may support fencing and water infrastructure to support cattle browsing to inhibit tall outgrass. Tall outgrass invasion poses an immediate threat to native ecosystems, decreases overall plant and animal species diversity, has the potential to change fuel loads and fire behavior, and has dramatically expanded its extent on OSMP lands in the past 5-10 years. This project accomplishes key outcomes of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, and Ecosystem Health and Resilience. It advances multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and corridors and EHR.6) Control invasive species.</p>							
Gebhard Site Plan Implementation	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) This project focuses on the implementation of tasks identified in the Gebhard Integrated Site Project (ISP), including restoration of trails and bridges as a result of new use patterns. Work identified in the Gebhard ISP is part of a larger ongoing restoration effort for South Boulder Creek. The undesignated social trails that have developed along the west side of South Boulder Creek impact habitat for native wildlife species and vegetation. Restoration tasks may include fence construction, seeding, and non-native vegetation management. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Ecosystem Health and Resilience and Responsible Recreation, Stewardship, and Enjoyment. It advances multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and corridors and RRSE.1) Assess and Manage Increased Visitation.</p>							
Habitat Restoration: Gregory Canyon	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) This project will reestablish a stable channel bed at Gregory Canyon using a regenerative stream restoration technique. In the 2013 flood, approximately 3,000 linear feet of the channel at Upper Gregory and Lower Long Canyon was severely eroded and downcut, lowering the local water table that supports riparian vegetation. This regenerative stream restoration technique uses minimally invasive restoration methods to raise the channel bed by installing small check-type dams at intervals along the channel. These dams catch sediment and raise the water table, eventually restoring the channel to its pre-disturbance elevations. OSMP will seek partnership grant funding from the Urban Drainage & Flood Control District (UDFCD). This project accomplishes outcomes of the Ecosystem Health and Resilience focus area of the OSMP Master Plan. It advances a key strategy in the Master Plan, addressing EHR.1) Preserve and restore important habitat blocks and corridors.</p>							
Hazard Tree Removal	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>(Important) This project focuses on hazard tree removal and emergent vegetation-related issues that arise across the open space system. Projects are identified through issues reported by the public, neighbors, and other City of Boulder departments. These issues can include hazard trees, noxious weeds, road right of ways, and sight lines. In most cases, these are maintenance issues and do not fall under OSMP's identified ecological priorities. A large emerging piece of this project addresses green ash trees impacted by Emerald ash borers, which are beginning to die and may pose a risk for trail users. This project accomplishes outcomes of the Ecosystem Health and Resilience focus area of the OSMP Master Plan. It advances multiple strategies in the Master Plan, primarily addressing EHR.6) Control invasive species.</p>							
Wetland and Riparian Resto	\$ 400,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -	\$ -
<p>(Helpful) This project implements priorities identified in the Grassland Ecosystem Management Plan, specifically in wetland and riparian areas. Approved by the Open Space Board of Trustees in 2009 and accepted by City Council in 2010, the Grassland Ecosystem Management Plan proposes specific on-the-ground management actions, public policies, and lands and water acquisition priorities to conserve the ecological values of OSMP's grasslands and ensure ongoing agricultural production. Projects vary in scale and scope and are dependent on best opportunities for restoration, need, and staffing capacity. Restoration activities in this CIP project will focus on removal of non-native vegetation to encourage native vegetation growth and habitat improvement. This project accomplishes outcomes of the Ecosystem Health and Resilience focus area of the OSMP Master Plan. It advances multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and corridors and EHR.6) Control invasive species.</p>							

OPEN SPACE & MOUNTAIN PARKS CAPITAL

Open Space & Mountain Parks

	Estimated Total	2022	2023	2024	2025	2026	2027
	Cost	Recommended	Projected	Projected	Projected	Projected	Projected
Facilities Assessment Repairs	\$ 2,330,000	\$ 400,000	\$ 470,000	\$ 480,000	\$ 490,000	\$ 490,000	\$ -
<p>(Important) In 2016 OSMP completed an inventory and assessment of structures and facilities across the open space land system. The assessment outlined current asset condition, specific annual actions needed to maintain the facilities, prioritization of the facilities, and estimated immediate and long-term maintenance and repair costs. This information was adopted as the OSMP Facilities Assessment and is used to prioritize facility maintenance to prevent deterioration of assets. This CIP funds the deferred facilities maintenance outlined in the assessment. Facilities maintenance supports outcomes across all focus areas of the Master Plan. In 2022, projects will primarily advance strategies ATT.1) Reduce the maintenance backlog for agriculture and water infrastructure, FS.4) Take care of what we have, and RRSE.8) Provide welcoming and inspiring visitor facilities and services.</p>							
Road, Trailhead, and Bridges Repair	\$ 550,000	\$ 100,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ -	\$ -
<p>(Important) This project supports cyclical inspection and maintenance of vehicle, pedestrian, and equestrian bridges including inventory and load rating compliance. Additionally, dollars support deferred road and engineered trail maintenance across roads and vehicle accessible trails owned by OSMP. Both the public and staff benefit from better maintained roads and it reduces future costs. This project accomplishes outcomes of two focus areas of the OSMP Master Plan: Responsible Recreation, Stewardship, and Enjoyment and Financial Sustainability. It advances multiple strategies in the Master Plan, primarily addressing RRSE.2) Reduce Trail Maintenance Backlog, RRSE.8) Provide welcoming and inspiring visitor facilities and services, and FS.4) Take care of what we have.</p>							
Equip Purchase, Repair & Replace	\$ 350,000	\$ 50,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -	\$ -
<p>(Important) This CIP will support replacing, maintaining, and adding OSMP equipment. This is vital to ensure required equipment is provided and in good working condition to keep staff safe and productive. This project is ongoing as needed to replace equipment that fails, is damaged, lost, or as new needs are identified. OSMP will seek to replace equipment with more energy efficient options with lower emissions. This project accomplishes outcomes of three focus areas of the OSMP Master Plan: Financial Sustainability, Agriculture Today and Tomorrow, and Ecosystem Health and Resilience. It advances multiple strategies in the Master Plan, primarily addressing FS.9) Invest in workforce development and operational needs, ATT.1) Reduce the maintenance backlog for agriculture and water infrastructure, and EHR.9) Reduce and offset OSMP's greenhouse gas emissions.</p>							
Address Immediate Property Needs	\$ 255,000	\$ 155,000	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -
<p>(Helpful) The OSMP Charter indicates that land may not be improved after acquisition unless such improvements are necessary to protect or maintain the land or to provide for identified charter purpose. This CIP project includes funds for immediate property needs after OSMP acquisitions. Funding will ensure the property is properly stabilized to enable smooth and efficient integration into the OSMP land system and minimize deferred maintenance. Addressing immediate property needs ensures strong short-term stewardship of the property while longer-term planning occurs. This project accomplishes key outcomes of the Financial Sustainability focus area of the OSMP Master Plan, primarily addressing FS.4) Take care of what we have.</p>							
Youth Corps and Contracted Crews	\$ 1,110,000	\$ 255,000	\$ 255,000	\$ 300,000	\$ 300,000	\$ -	\$ -
<p>(Helpful) This project supports annual hiring of contracted trail crews and youth corps to augment and accelerate work of inhouse trail crews and accomplish deferred trail maintenance. Annual contracts are scalable based on available crew weeks and trail maintenance needs. Corps members benefit from exposure to a variety of hard skills, career development, and an increased understanding of land use management. In 2020, 30% of our standard and temporary trails staff previously worked with an organization we partner with for conservation corps, and 66% of our standard and temporary trails staff have been part of a conservation corps. The annual work plan is determined based on trail condition assessment results from 2019. In 2022, work will continue on Mt. Sanitas, undesignated trail restoration, Red Rocks, Range View/Ute, Saddle Rock, and other general deferred maintenance. This project accomplishes key outcomes of two focus areas of the OSMP Master Plan: Community Connections, Education, and Inclusion and Responsible Recreation, Stewardship and Enjoyment. It links to multiple strategies in the Master Plan, primarily addressing RRSE.2) Reduce trail maintenance backlog, CCEI.3) Connect children and youth to the great outdoors, and CCEI.7) Cultivate leaders in stewardship.</p>							
CIP-CAPITAL PLANNING STUDIES	\$ 2,180,000	\$ 410,000	\$ 400,000	\$ 650,000	\$ 720,000	\$ -	\$ -
Fort Chambers/Poor Farm Site Manage	\$ 340,000	\$ 20,000	\$ 250,000	\$ 70,000	\$ -	\$ -	\$ -
<p>(Important) This project will assist with identifying short and long-term management actions at the Fort Chambers/Poor Farm property purchased by OSMP in 2018. This planning project will assess future needs, purposes, and functions around the farm fields, irrigation infrastructure, residence, associated outbuildings and the surrounding agricultural, natural, and cultural landscape. The plan will identify the best approach for the future management of the site and designations. This project will support citywide engagement with recognized tribes and indigenous peoples and will result in a fiscally constrained management approach for the buildings and property. The project accomplishes key outcomes of three focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, Community Connections, Education, and Inclusion, and Financial Sustainability. It advances multiple strategies in the Master Plan, primarily addressing ATT. 7) Integrate native ecosystems and agriculture, CCEI.4) Support citywide engagement with federally recognized American Indian Tribes and indigenous peoples, and FS.3) Understand total cost of system management.</p>							
Visitor Use Management Planning	\$ 130,000	\$ -	\$ 50,000	\$ 80,000	\$ -	\$ -	\$ -
<p>(Helpful) This project will continue department work to implement and adapt visitor management strategies guided by the 2005 Visitor Master Plan (VMP). Incorporating findings from visitor use studies and land management best practices OSMP will assess and update the types and specifications of in-use or potential visitor management practices the department may consider and deploy to manage visitor use and build a monitoring strategy to inform site-specific management decisions. OSMP will develop a toolkit of visitor use management strategies to consider in relation to other aspects of service delivery. Through this project, specific coordination work will occur on the systemwide trailhead shuttle feasibility study and regional visitor management coordination including efforts such as the NOCO 2050 project. This project accomplishes key objectives of the Master Plan in the Responsible Recreation, Stewardship, and Enjoyment focus area. The project primarily supports the strategy RRSE.1) assess and manage increasing visitation but also works towards RRSE.4) Encourage multimodal access to trailheads and RRSE.5) Manage passive recreation activities requiring an OSMP permit.</p>							
Chautauqua Ranger Cottage Site Plan	\$ 1,270,000	\$ 150,000	\$ -	\$ 400,000	\$ 720,000	\$ -	\$ -
<p>(Helpful) This site plan for the Chautauqua Ranger Cottage area will explore options for improving visitor flow and orientation, interpretive signs, interpretive exhibits, restrooms, and visitor amenities. Out-year work will explore programming, maintenance, and enforcement opportunities to help achieve desired outcomes. This project would include a phased approach to designing site improvements as well as costing that considers resource concerns, visitor experience, perceived crowding, and neighborhood impacts. This project accomplishes key outcomes of three focus areas of the OSMP Master Plan: Community Connections, Education, and Inclusion, Ecosystem Health and Resilience, and Responsible Recreation, Stewardship, and Enjoyment. It links to multiple strategies in the Master Plan, primarily addressing CCEI.2) Enhance communications with visitors, EHR.3) Address the global climate crisis here and now, and RRSE.8) Provide welcoming and inspiring visitor facilities and services.</p>							
Coal Creek Restoration Planning	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>(Helpful) This project includes initial planning, scoping, and design efforts for riparian restoration activities at Coal Creek. Work under this project will identify best opportunities and designs for implementation of restoration activities in future years. OSMP anticipates future CIP projects to focus on enhancements at Coal Creek based on the findings and recommendations during the planning process. This project accomplishes outcomes of the Ecosystem Health and Resilience focus area of the OSMP Master Plan. It advances multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and corridors.</p>							

OPEN SPACE & MOUNTAIN PARKS CAPITAL

Open Space & Mountain Parks

	Estimated Total	2022	2023	2024	2025	2026	2027
	Cost	Recommended	Projected	Projected	Projected	Projected	Projected

Recreation Management Plan	\$ 240,000	\$ 40,000	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -
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(Helpful) This project will replace the Visitor Use Master Plan by defining recreation activities broadly to include visitor recreation activities, interpretive opportunities, youth engagement, volunteering, outreach, ranger initiatives, visitor contacts, accessibility, equity, and permit programs. It will also confirm or establish systemwide investment priorities for recreation facilities across the system including trails and trailheads, parking, amenities, interpretive facilities, and transportation that will result in a set of coordinated, fiscally constrained and feasible implementation projects and programs. The plan will also look at visitation across the system and in specific geographic areas considering best practices to manage for positive experiences and mitigate resource impacts. This project accomplishes key outcomes in two focus areas of the OSMP Master Plan: Responsible Recreation, Stewardship, and Enjoyment and Community Connections, Education, and Inclusion. It advances multiple strategies in the Master Plan, primarily addressing RRSE.1) Assess and manage increased visitation, CCEI.1) Welcome diverse backgrounds and abilities, and CCEI.2) Enhance communications with visitors.

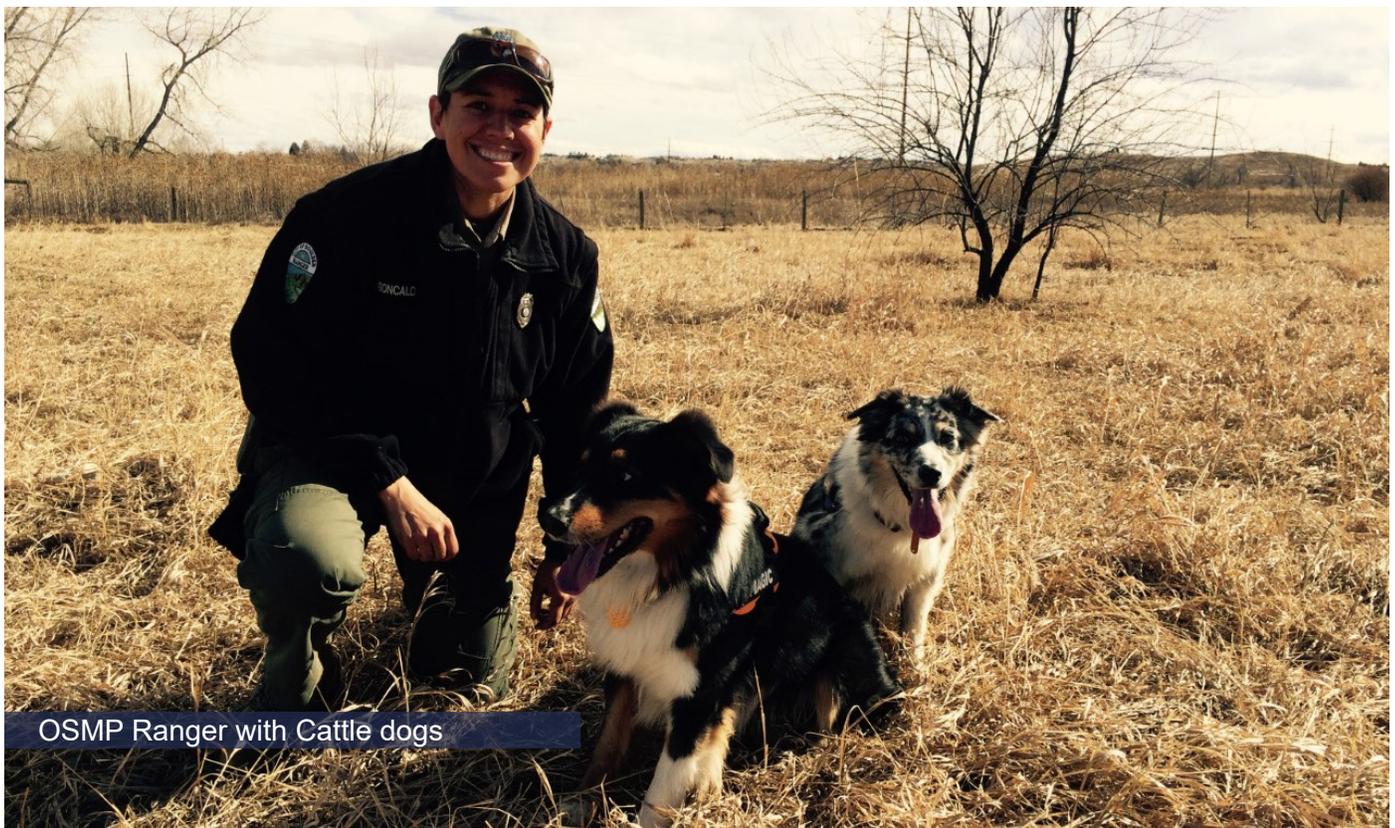
Visitation and Visitor Exp Survey	\$ 150,000	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -
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(Helpful) This project occurs on a systematic basis every five years to deliver a statistically valid 12-month visitor survey. The survey is conducted at OSMP exit points to understand, update, and trend information about the visitor population. This project combines the previously separate visitor, and resident recreation surveys for efficiency. General themes of the survey include visitor attributes and demographics, trip characteristics, ratings of OSMP services and facilities, and perceptions of interactions with other visitors, policy development, information preferences, potential management strategies, and other hot topic items. Updated and current visitor information is necessary to successfully manage operations, infrastructure planning, staffing allocation, amenity provision, and public process and decision making for recreation management. This project accomplishes key outcomes of the Responsible Recreation, Stewardship, and Enjoyment focus area of the OSMP Master Plan. It advances multiple strategies in the Master Plan, primarily addressing RRSE.1) Assess and manage increasing visitation, RRSE.6) Support a range of passive recreation experiences, and RRSE.9) Develop a learning laboratory approach to recreation.

CIP-Land Acquisition Total	\$ 2,350,000	\$ 350,000	\$ 1,000,000	\$ 1,000,000	\$ -	\$ -	\$ -
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Land, Water & Mineral Acquisition	\$ 2,350,000	\$ 350,000	\$ 1,000,000	\$ 1,000,000	\$ -	\$ -	\$ -
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(Important) In accordance with the City Charter and OSMP Master Plan, the department will acquire, maintain, preserve, and manage open space lands including water and mineral rights for ecological conservation, agriculture, passive recreation, urban shaping, and scenic beauty. OSMP will identify, assess, and acquire high priority properties and water and mineral rights as a means of expanding stewardship, restoration, recreation, agriculture, wildlife/ecological preservation, and scenic view protection opportunities. A separate but related project funds immediate stabilization and emergency maintenance of acquired properties. Acquisitions support the accomplishment of Master Plan outcomes across all focus areas but are tracked as investments under the Financial Sustainability focus area. The department anticipates that 2022 acquisitions will primarily support the strategy FS.5) Prioritize acquisitions in Boulder Valley's rural preservation area.



OSMP Ranger with Cattle dogs

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PARKS & RECREATION

CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

The comprehensive approach to the department's 2022 capital program is founded on implementing the key themes of the BPR Master Plan, primarily on taking care of existing assets that provide core services to the community while strategically enhancing key parks and facilities outlined within the department's capital investment strategy. In 2022, staff started the five-year update to the master plan as adopted within the current CIP to refine the goals and strategies to guide the next several years. Staff have consistently prioritized funding on specific projects that meet several criteria related to safety, usage, efficiencies, and revenue generation.

Staff have identified options for reducing spending strategically as a standard practice for this fiscal environment and especially as it applies to the CIP. For both 2022 as well as the full 6-year CIP, staff have performed careful analysis and projections for all funds that make up the department CIP and adjusted the spending accordingly to remain within funding projections while still maintaining a healthy fund balance for reserves. Staff will continue to monitor and adjust spending as necessary with new fund projections and revenue information are available related to COVID-19.

Staff have also been innovative in partnering when possible to leverage capital funding that align with many key themes identified in the BPR Master Plan, including:

COMMUNITY HEALTH AND WELLNESS

Parks and facilities are being improved with capital maintenance and enhancements to the Flatirons Golf Course Facility, Boulder Reservoir, and many outdoor facilities such as courts, playgrounds and ballfields. The amenities are critical to the department's core services and outlined in recent plans and studies.

TAKING CARE OF EXISTING FACILITIES

Through implementation of the Asset Management Software, improvements such as the East Boulder Community Park, sports fields, and East Boulder Community Center will extend the useful life of priority facilities and increase the condition of many assets.

PARKS & RECREATION CAPITAL

BUILDING COMMUNITY RELATIONSHIPS

BPR continues to address the Emerald Ash Borer epidemic in Boulder and maintain as much tree canopy as possible. With help from the Tree Trust, developed by the PLAY Boulder Foundation, staff are making progress in fighting the pest and planting replacement trees through capital funding.

YOUTH ACTIVITY AND ENGAGEMENT:

Many youth sports facilities and play areas will be enhanced and renovated through the 2022 projects that will continue to allow the department to focus on youth and provide opportunities for children in the community.

2022 CAPITAL PROJECTS

- Aquatics Facility Capital Enhancements
- Athletic Field Capital Enhancements
- Columbia Cemetery Capital Maintenance
- Capital Infrastructure Enhancements and Partnership Opportunities
- Parks and Recreation Strategic Planning Initiatives
- Natural Lands Management
- Boulder Reservoir South Shore Capital Enhancements
- Urban Forest Management
- Flatirons Golf Course Capital Enhancements
- Neighborhood and Community Park Capital Maintenance
- Recreation Facility Capital Maintenance



Boulder Flyers at the North Boulder Recreation Center

PARKS & RECREATION CAPITAL

OPERATING AND MAINTENANCE IMPACTS

The department prioritizes capital projects based on maintaining existing assets and decreasing the maintenance backlog of the department's portfolio of parks and facilities. Therefore, most projects included in the department's Capital Improvement Program will not have an impact on maintenance costs due to replacement of aging infrastructure and efficiencies associated with new and improved facilities and systems. However, as the department fulfills commitments relative to long-term planning needs such as the increase in facilities at Scott Carpenter Park, future phases of Valmont City Park, Boulder Junction Park, or Violet Neighborhood Park, the department will need to carefully design enhancements in sensitivity to the department's O&M funding and not overburden funds with maintenance of these new facilities. Staff are also carefully planning future facilities and current renovations to include energy efficiency and opportunities for reducing short-term and long-term O&M needs. This not only reduces maintenance costs and ongoing expenses but meets the city's climate goals by reducing emissions and achieving environmental sustainability objectives. As an example, irrigation systems are much more efficient now using digital systems, rain sensors, and other technology to not over water. Also, building systems include efficient lighting, pumps, and filters for pools and sustainable materials.

UNFUNDED PROJECTS AND EMERGING NEEDS

In the long-term, additional funding will need to be secured to develop any new major facilities, as well as improve service standards for maintenance operations and to fund deferred maintenance. The department's master plan includes a list of priority items to complete based on various funding levels (fiscally constrained, action and vision). The department's 2016 Capital Investment Strategy identified investments of \$104 million with available funding of only \$64 million over the next 10 years. Staff continue to evaluate deferred maintenance needs, including park sites and recreation facility needs, and have implemented an Asset Management Plan (AMP) to assist in capital planning and day-to-day operations. The current maintenance and facility improvements backlog, including major repairs and replacements, is significant. The department anticipates that this backlog will continue until funding levels reach appropriate amounts to accommodate life-cycle projections for the department's assets.

The current budget reflects an economic reality that is not predicted to shift anytime soon, and it is within this reality that the department must plan. With maintenance backlog estimated at over \$20 million on approximately \$298 million in assets, the department faces difficult trade-off decisions about how to manage and operate its facilities and provide its programs. City guidelines regarding capital improvement prioritize the maintenance of current assets over the development of new facilities, and through the master planning process, the community has indicated strong support for this concept. Even with the .25 cent sales tax renewal, the department must focus on maintaining and improving all deteriorating assets. Simultaneously, the department must respond to the community's shifting values related to new facilities by providing adequate facilities to meet those needs and by making them accessible to the entire community.

KEY UNFUNDED PROJECTS INCLUDE:

- Boulder Reservoir South Shore enhancements to accommodate increased use and visitation as well as basic amenities to support the regional destination as outlined in the Boulder Reservoir Master Plan and currently evaluated through the Concept Plan and Capital Strategy.
- The Recreation Facility Strategic Plan projected a total of \$4.5 million in deferred maintenance and an additional \$3 million over the next ten years in the three recreation centers. This funding need will also be refined and updated with the upcoming master plan related to the Recreation Facilities Needs Assessment.
- Increased capacity and additional facilities for youth and adult sports fields.

PARKS & RECREATION CAPITAL

- Expansion and enhancement of recreation centers and aquatics facilities that accommodate increased demand for lap swimming, fitness equipment and multi-use classroom space that could be expanded.
- To mitigate the impacts of limited funding, staff is:
- Working collaboratively with Facilities staff to prioritize funding for deferred major and ongoing facility maintenance.
- Deferring low-priority improvements and new capital projects that cannot be funded operationally.
- Completing projects to achieve energy efficiencies at recreation facilities; and
- Developing long-term partnerships and non-traditional funding sources to support desired new facilities and enhancements to existing facilities.

RACIAL EQUITY IMPACTS

Most of the department's CIP projects provide many benefits relating to racial equity and serving all members of our community. The department's key themes from the master plan outline community health and wellness as well as youth activity and engagement and building community and relationships. Each of these themes are woven into the department's capital planning and provide outcomes that allow all residents of Boulder to enjoy and access our many parks, facilities and programs. By focusing on the neighborhood and community parks, staff continue to strive to provide a neighborhood park within a half mile of every resident and a playground within a quarter mile to reduce the barriers of transportation for access. By upgrading and renovating rec facilities, the staff are providing more flexible and multiple use spaces that can continue to support programs that serve a broad section of the residents and reduce barriers related to costs of programs or times of day that programs are delivered. By focusing on our natural resources and specifically the urban forest, trees continue to provide many benefits to neighborhoods that might lack adequate shade or greenspace.

CEAP PROJECTS

- Violet Neighborhood Park
- East Mapleton Ballfield Renovations

BOARD ACTION

The Parks & Recreation Board (PRAB) unanimously approved the following two resolutions in support of the BPR 2022-2027 CIP at the June 28, 2022, meeting: a motion to approve the 2022 recommended expenditures from the Permanent Parks & Recreation Fund and a motion to approve the Draft 2022–2027 Parks & Recreation Department Capital Improvement Program.



PARKS & RECREATION CAPITAL

Parks & Recreation

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Capital Program Total	\$ 26,058,500	\$ 4,528,000	\$ 4,180,000	\$ 5,177,000	\$ 2,436,500	\$ 6,092,000	\$ 3,645,000
CIP-Capital Enhancement Total	\$ 11,228,000	\$ 2,438,000	\$ 1,210,000	\$ 2,830,000	\$ 100,000	\$ 4,000,000	\$ 650,000
Aquatic Facility Enhancements	\$ 3,188,000	\$ 1,638,000	\$ -	\$ -	\$ 100,000	\$ 1,000,000	\$ 450,000

Based on recommendations of the 2015 Boulder Aquatics Feasibility Plan, this project provides implementation of priority indoor and outdoor pool enhancements for Boulder's aquatics programs. In 2020, funding will provide the final touches to the new Scott Carpenter pool with infrastructure and equipment to operate the facility. In 2021, the East Boulder Community Center leisure pool will be redesigned with community input to determine a new and improved family aquatics experience. This work will include a new multi-use leisure pool for warm water classes and instruction, a new kids play structure and an outdoor splash pad will be completed in 2022 in partnership with Facilities and Asset Management funding necessary facility repairs. Finally, in 2025, funding is provided to partner with City Transportation to begin the design of the 30th street improvements along Scott Carpenter park to remain in compliance with necessary infrastructure required through the city's regulatory planning and development review process for Scott Carpenter Pool enhancements. The construction of the 30th street improvements is anticipated to be approximately \$1M and is required to be complete by 2026. This project is categorized as "helpful".

Valmont City Park - Phase 2	\$ 3,240,000	\$ -	\$ -	\$ 240,000	\$ -	\$ 3,000,000	\$ -
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This project provides for the development of the next major phase of Valmont City Park, south of Valmont Road. Potential amenities to be built include adventure playground elements, community garden space, a splash pad, skate elements, an event pavilion and additional parking. Final plans will be completed in 2023 to determine amenities for development as well as available funding. Final design and permitting will occur in 2024 with construction to commence in 2026. This project also allows for increased park service to the surrounding areas of east Boulder as well as the entire Boulder community. This project is categorized as helpful.

Flatirons Golf Course Enhancement	\$ 1,100,000	\$ 700,000	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000
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The Flatirons Golf Course is the only public course in Boulder and provides a highly desired recreation amenity while also contributing to funding sources through revenue generation. The golf course has many planned enhancements to ensure playability and provide necessary visitor amenities. This project will provide design and construction of a new pro shop, clubhouse and staff office to replace the former events center that was demolished as a result of the 2013 flood. The design of the replacement facility will occur in 2019, permitting in 2020 and construction to begin in 2021. In 2024, funding is provided to allow for various course improvements including tee boxes, cart paths, turf and irrigation maintenance. This project is categorized as amenity.

Capital Infrastructure Enhancements	\$ 1,600,000	\$ 100,000	\$ 1,000,000	\$ 500,000	\$ -	\$ -	\$ -
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This project will provide capital funding to implement enhancements at parks and facilities throughout the system. Currently undeveloped park sites such as Violet Park in north Boulder and Eaton Park in Gunbarrel have planned amenities that need to be implemented to meet service levels of surrounding neighborhoods. Other properties have seen a dramatic shift in land use adjacent to the park and warranting a redevelopment option to serve more residents such as Mapleton Ballfields. Additionally, this project will provide implementation of planned amenities at developed park sites that haven't been constructed such as restrooms, ballfields, additional sport courts and play areas. The Recreation Facility Needs Assessment completed in 2021 will also outline future priorities that will be funded through this project that will enhance the existing recreation facilities. In 2022, funding is provided to finalize the design of the undeveloped portions of Violet Park and Eaton Park that have been a priority for several years to extend the service areas of parks to adjacent neighborhoods.

East Mapleton Ballfield Enhancement	\$ 2,100,000	\$ -	\$ 210,000	\$ 1,890,000	\$ -	\$ -	\$ -
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As a result of the implementation of the Boulder Junction area along 30th street near Mapleton, the area has increased in residential units resulting in more demand for community park and recreation amenities such as playgrounds, dog parks, open lawn areas and other multi-use amenities. The original area plan indicated a goal of providing park and recreation amenities to this new residential area as development occurs. This project will result in the addition of new amenities at the existing East Mapleton Ballfield site that is in close proximity to Boulder Junction connected by the underpass along Goose Creek. A community planning project will be completed to determine the final design and priorities for construction. Any reduction in ballfields will be replaced at other sports complexes as indicated in the department's Athletic Field Study completed in 2015.

CIP-Capital Maintenance Total	\$ 14,340,500	\$ 1,940,000	\$ 2,870,000	\$ 2,287,000	\$ 2,216,500	\$ 2,032,000	\$ 2,995,000
General Park Improvements	\$ 5,400,000	\$ 900,000	\$ 900,000	\$ 900,000	\$ 900,000	\$ 900,000	\$ 900,000

This project provides funding for asset maintenance throughout the system as well as a complete renovation of one neighborhood park annually to meet the goals outlined within the BPR Master Plan and Capital Investment Strategy. The renovations typically include playground replacement, irrigation renovation, forestry maintenance, ADA compliance and shelter repairs. The current list of parks within the CIP include:

- 2021 -North Boulder Park
 - 2022 - East Boulder Community Park
 - 2023 - Martin Park
 - 2024 - Parkside Park
 - 2025 - Shanahan Ridge Park
 - 2026 - Elmer's Two-Mile Park
- This project is categorized as important.

Urban Forest Management	\$ 2,800,000	\$ 300,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
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Trees are important assets to the community and provide many benefits to Boulder. In September 2013, Forestry staff discovered an Emerald Ash Borer (EAB) infestation within the city. The subsequent delimitation survey showed that EAB was well established within a corridor in central Boulder. Over the next 15 years, EAB management, including tree removal, tree replacement, wood disposal and pesticide treatments will have a significant direct budgetary impact to the city and private residents. The loss of tree canopy will have considerable economic, social, and environmental impacts for decades. In September of 2015, an Information Item detailing the Emerald Ash Borer management plan was presented to City Council.

As a result of the recent discovery of the Emerald Ash Borer (EAB), a response plan has been developed to slow the spread of the pest and maintain a safe community from the potential hazards of multiple dead and dying trees within the urban core of the community. This project will provide funding to educate the community on safe EAB treatment, hire contractors for removal and replacement of the trees affected by the EAB to re-establish streetscapes and park areas that contribute to many of the sustainability goals of the city. This project will include renovation of parking areas, streetscapes, park areas and other sites to remove and replace the trees. The recent Urban Forest Strategic Plan outlined the need to increase annual tree plantings from 400 to 600 to maintain the existing canopy given the decline from EAB. This project provides plantings across the city on locations throughout Parks and Recreation properties. This project is categorized as important.

PARKS & RECREATION CAPITAL

Parks & Recreation

	Estimated Total	2022	2023	2024	2025	2026	2027
	Cost	Recommended	Projected	Projected	Projected	Projected	Projected

Recreation Facility Capital Maint \$ 2,000,000 \$ 500,000 \$ - \$ - \$ - \$ 500,000 \$ 1,000,000

Based on recommendations of the 2016 Facility Strategic Plan and upcoming Recreation Needs Assessment, this program will provide annual capital funding for implementation of key facility repairs and renovations at the city's three recreation centers to ensure acceptable facility conditions and continue cost-effectively meeting the needs of health and wellness opportunities within Boulder. This project is combined with funding from the Facilities and Asset Management (FAM) Division of Public Works. In 2021, exterior security cameras will be installed at all three recreation centers to increase safety outside the centers within the parking lots and discourage illegal activity outside of normal operating hours. In 2022, facility maintenance will be focused on the East Boulder Community Center in conjunction with the planned improvements to the leisure pool. This project is categorized as helpful.

Athletic Field Improvements \$ 189,000 \$ - \$ 63,000 \$ - \$ 63,000 \$ - \$ 63,000

Based on key recommendations of the Athletic Field Study, this program will allow implementation of field repairs and enhancements including turf, field renovations and expansion to accommodate additional capacity for sports uses. Average cost for a complete renovation of an irrigation system is \$63K which is necessary to ensure preventative maintenance of the systems. System failures can lead to field closures and loss of revenue from field use. In 2021, funding will be used to design parking lot expansion improvements for Pleasantview Fields. This project is categorized as "helpful".

Boulder Reservoir South Shore \$ 2,976,500 \$ - \$ 1,300,000 \$ 355,000 \$ 721,500 \$ 100,000 \$ 500,000

Continuing to implement the 2012 Master Plan and recent Concept Plan and Capital Strategy, this project will provide key improvements to the south shore recreation area and various visitor amenities to serve the region. Funding is planned through 2026 to continue key enhancement priorities that are outlined each year in the recently approved Concept Plan and Capital Strategy. Projects include a variety of amenities including but not limited to signage, dock repairs, trail connections, pavilions, facility maintenance, road repair, landscaping, and parking lot repair. This project is categorized as helpful.

Flatirons Golf Course Forestry Mgmt \$ 150,000 \$ 150,000 \$ - \$ - \$ - \$ - \$ -

One of the many qualities that makes the Flatirons Golf Course so desirable is the many mature trees throughout the course. In fact, 10% of all the trees that are within our parks are at the golf course and many are large mature trees that are in need of pruning and/or removal to ensure safety of the players. The median size of the trees is a 30" diameter trunk which is very large and costly to prune or remove and 45% of the trees are high-risk species such as Cottonwood and Willow that tend to break easily. This project will allow enough work to be completed to address the backlog of work and continue on a regular pruning rotation to ensure vibrant and safe trees for the future of the course.

Columbia Cemetery Capital Maintenan \$ 200,000 \$ 40,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000

The cemetery is a designated landmark and requires ongoing maintenance to meet the preservation requirements associated with all the infrastructure ranging from headstones, markers, ornamental fencing and grounds maintenance. This project will provide necessary funding to complete projects as well as local match for leveraging state grant funds. This project is categorized as a helpful project.

Natural Lands Management \$ 625,000 \$ 50,000 \$ 75,000 \$ 500,000 \$ - \$ - \$ -

The department's natural lands team manages over 1,000 acres of wildlife and vegetation conservation areas to support the regions vulnerable ecosystems within urban areas. Capital funding helps support planning and implementation of critical conservation measures and management strategies on the properties. In 2021, funding will provide an opportunity to partner with other department's in developing a comprehensive restoration and management plan for Boulder Creek to balance recreation and public use with maintaining the streams ecosystem which is critical to Boulder. In 2022, funding will allow for the replacement of a trail bridge at Coot Lake Natural Area that is in disrepair and in danger of failure if not replaced within the next year. In 2023, funding will allow the department to complete and inventory and prioritization of the department's populations of prairie dogs across the system to better manage the colonies aligned with the department's goals. In 2024, funding will allow the department to begin relocation of the prairie dogs at Valmont Park to allow for the next phase of planned improvements. This project is categorized as "Important".

CIP-Capital Planning Studies Total \$ 490,000 \$ 150,000 \$ 100,000 \$ 60,000 \$ 120,000 \$ 60,000 \$ -

Parks and Recreation Strategic Plan \$ 490,000 \$ 150,000 \$ 100,000 \$ 60,000 \$ 120,000 \$ 60,000 \$ -

As illustrated in the Boulder Parks and Recreation Master Plan, the department must consistently review the many programs, services and facilities to ensure alignment with the community expectations, best practices in the industry and strategic focus to meet the many goals of the master plan. This is achieved through ongoing planning and studies that are funded through the CIP. These various plans identify policy direction, budget priorities, operational adjustments and capital needs. The specific projects planned for each year include:

- 2022 – Reservoir Strategic Plan Update and regional multi-modal feasibility study
- 2023 – General Maintenance and Management Plan Update / Ops Maintenance Facility Assessment
- 2024 - Natural Lands Strategic Plan
- 2025 - Water Assets Strategic Plan
- 2026 - Facilities and Aquatics Plan update



POLICE

CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

The 2022 capital needs for the Boulder Police Department (BPD) focus on maintaining core services and improving the core services we provide. The department requests funding for the following projects:

PUBLIC SAFETY BUILDING 1ST FLOOR TILE REPLACEMENT

The tile floor on the first floor of the Public Safety Building is over 30 years old, dated-looking and is showing much wear and tear. Not only is the floor showing wear, some tiles are cracked while some are coming up and need to be replaced. Replacing the first-floor tiles will require less ongoing maintenance and give the first floor a consistent and more updated look. Approximate cost of this replacement is \$64,000.

2022 CAPITAL PROJECTS

- Public Safety Building 1st Floor Tile Replacement

OPERATING AND MAINTENANCE IMPACTS

The only operating impact is the ongoing replacement amounts needed for future bomb suit replacement. \$16,800 annually.

UNFUNDED PROJECTS AND EMERGING NEEDS

In the future, BPD will incorporate new initiatives into the planning and budget processes as city resources allow. Examples include: upgrading technology to improve response times and increase efficiency; and expanding the Public Safety Building to better accommodate staffing and technology needs.

PUBLIC SAFETY BUILDING EXPANSION AND RENOVATION

Construct a 25,000 square-foot expansion for Police functions, along with associated renovations to the existing facility. The renovation would focus on net zero, generating its required energy from an on-site solar system. This will provide many opportunities to leverage financial incentives such as rebates, production incentives for the solar system, or even tax credits (captured by a partner with tax liability and passed through

POLICE CAPITAL

to the city). These financial incentives can cover as much as 50% of the incremental cost that is required to go above the minimum energy code requirements. Estimated cost \$25 million to \$30 million.

EXPLOSIVES ORDINANCE/TACTICAL ROBOTS

The current robots were purchased in 2012. The current replacement fund has approximately \$100,000 towards the replacement. The actual costs for replacement will fall between \$400,000 and \$635,000. This is an underfunded project. Although generally referred to as 'bomb' robots, these robots perform many other life-saving tasks such as searching buildings and confined spaces for subjects which improves safety for both officers and subjects. For example, a robot was used to successfully disarm a person armed with a handgun.

RACIAL EQUITY IMPACTS

The above requests do not reduce any disparities for marginalized or under served groups and the BPD does not foresee any unintended consequence.

CEAP PROJECTS

None

BOARD ACTION

N/A

Police	Estimated Total		2022	2023	2024	2025	2026	2027
	Cost	Recommended	Projected	Projected	Projected	Projected	Projected	Projected
Capital Program Total	\$ 64,000	\$ 64,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIP-Capital Maintenance Total	\$ 64,000	\$ 64,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
PS Bldg 1st Floor Tile Replacement	\$ 64,000	\$ 64,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

BFCR Category: Helpful. The purpose of this project is to replace the tile flooring on the first floor of the Public Safety Building. The tile floor on the first floor of the Public Safety Building is over 30 years old, dated-looking and is beginning to show much wear and tear. Not only is the floor showing wear, some of the tiles are cracked while some are coming up and need to be replaced. Although we do have some replacement tiles on hand, the tiles are from different dye lots and there is a slight color difference. Some areas of the 1st floor have been replaced with different tiles altogether. Not only will replacing the first-floor tiles require less ongoing maintenance of fixing tiles but it will also give the first floor a consistent and more updated look.



TRANSPORTATION

CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

The projects that have been included in the Transportation Capital Improvement Program were selected and developed to implement Transportation Master Plan (TMP) investment policies and principles identified under Initiative 10 of the 2019 TMP Update “Funding the Transportation System”. The key investment principles include the following:

- Maintain and operate the existing, valuable multi-modal system, including investments in safety
- As additions are made to the system, address ongoing operation and maintenance needs
- Continue to advance innovations in the design, construction, operation, and maintenance of the system
- Strategically enhance the Complete Street network, prioritizing projects that have maximum impact improving safety, mobility, and efficiency
- Advance corridor studies integrating the city’s Sustainability Framework and resiliency strategy
- Leverage external funds extending the ability of local dollars to implement city goals. Continuously strive for efficiency and effectiveness in how work is accomplished Assure budget decisions are sustainable over time
- Keep in mind the goal of identifying long-term, sustainable funding that is tied to vehicle use

The 2019 TMP Update also identified the need to prioritize investment in the existing transportation system to preserve existing infrastructure as well as safety. A key area of focus within the TMP continues to be Low-Stress Walk/Bike Network, which consists of vertically separated bike infrastructure, buffered bike infrastructure and neighborhood green streets. Other key focus areas within the CIP include maintenance and enhancements to pedestrian infrastructure consistent with the 2019 Pedestrian Plan and a focus on Vision Zero enhancements and implementation.

Consistent with the 2019 TMP, the goal of each CIP project and program is to improve safety for all users of the transportation system, including pedestrians, cyclists, transit users, and vehicles. Each of these components are a focus within the individual CIP projects as well as multi-modal CIP programs. One example of this in

TRANSPORTATION CAPITAL

the program portion of the CIP includes the Neighborhood Speed Management Program (NSMP), which was a renewed focus area beginning in 2017, and continues as part of the 2022-2027 portfolio. Additionally, CIP line items that were created in the 2020 CIP will carry forward in the 2022-2027 program which include capital funding for implementation of the Low-Stress Walk/Bike network (aka neighborhood greenstreets), intersection and crossing safety improvements as part of Vision Zero, and transit infrastructure improvements in fulfillment of the Renewed Vision for Transit.

2022 CAPITAL PROJECTS

- HSIP/VZ Traffic Signal Reconstruction
- 30th Street Bikelanes
- Pavement Management Program
- Downtown Boulder Transit Station Improvements
- Arapahoe Multi-Use Path/Transit Enhancements
- Major Capital Reconstruction
- Safer Signals
- Sidewalk Maintenance
- Camera & Signal Enhancements
- 47TH/BNSF Sidewalk Crossing



OPERATING AND MAINTENANCE IMPACTS

The projects included in the current Transportation CIP will improve operational and/or maintenance conditions and needs. For example, the HSIP/VZ Traffic Signal Reconstruction project will improve operations, safety and reduce maintenance demands on staff because the infrastructure and technology will be new. Also, the Pavement Management Program repaves miles of city streets each year, which reduces the need to fill potholes by city maintenance crews. Major portions of CIP expenditures are focused on preservation of the system, which reduces costly total replacements of facilities and extends infrastructure service life at optimal timing intervals

UNFUNDED PROJECTS AND EMERGING NEEDS

The Transportation division has a number of unfunded projects identified in the Transportation Master Plan (TMP). These projects range from reconstructing existing underpasses and bridges, reconstructing aging streets, completing missing links of sidewalks and multi-use paths. Transportation has historically used an opportunistic approach to fund major rehabilitation, reconstruction, and enhancement projects by taking advantage of external grant funding opportunities. Transportation will continue to use an asset management/prioritization approach to taking on capital projects. This includes optimizing investments in the system in a manner that is fiscally prudent and consistent with the TMP.

Transportation funding is limited and highly dependent on sales tax. Transportation's dedicated sales tax revenue is not keeping up with inflation, resulting in declining purchasing power. Even with 78 percent of our expenditures going to essential operations and maintenance, we are still deferring maintenance, which is more costly over time. Outside of local funding, the city is facing increased competition for regional, state and federal funding. A 2019 needs assessment evaluated all areas of transportation's essential services in the community, including capital maintenance and the Capital Improvement Program (CIP). This assessment identified \$20.8 million in one-time capital expenditures.

TRANSPORTATION CAPITAL

KEY UNFUNDED PROJECTS INCLUDE:

- Large portions of the Low/Stress Walk and Bike Network
- A number of segments from the 30th Street and Colorado Avenue Corridor Complete Street Plan.
- The East Arapahoe Transportation Plan has identified key improvements for investment that should be prioritized in coming years.

RACIAL EQUITY IMPACTS

As the Low-Stress Walk/Bike Network and other key TMP initiatives are implemented, the Transportation and Mobility Department will factor in racial equity, to make sure that under served areas and populations are being considered equitably in the prioritization of projects and programs.

A specific projects that will reduce disparities for marginalized or under served groups include the 30th Street Protected Bikelanes which will improve travel choices for residents and travelers accessing CU-East and the major employment centers along Arapahoe and 30th. An example of a capital maintenance program that serves marginalized groups is the pavement management program, that improves ADA ramps on every street it touches, which improves accessibility and mobility for under served residents.

CEAP PROJECTS

DOWNTOWN BOULDER TRANSIT STATION IMPROVEMENTS

This project will expand the number of bays along Canyon Boulevard and 14th Street and adjacent to the Downtown Boulder Transit Station. This project is in fulfillment of the Renewed Vision for Transit goals and is funded in part by federal grant funds.

ARAPAHOE MULTI-USE PATH/TRANSIT ENHANCEMENTS

This project will upgrade existing and missing sidewalk sections to a multi-use along Arapahoe between Foothills and Cherryvale. It will also enhance existing transit stops and access along the corridor. This project is consistent with the Transportation Master Plan and the East Arapahoe Transportation Plan goals and is funded in part by federal grant funds.

BOARD ACTION

The Transportation Advisory Board (TAB) recommended approval of the draft 2022-2027 Capital Improvement Program on July 12, 2022.



TRANSPORTATION CAPITAL

Transportation

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
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Capital Program Total	\$ 88,088,020	\$ 18,555,187	\$ 20,799,625	\$ 12,385,833	\$ 12,542,250	\$ 12,083,500	\$ 11,721,625
CIP-Capital Enhancement Total	\$ 54,138,319	\$ 8,717,444	\$ 9,414,000	\$ 8,772,500	\$ 9,291,250	\$ 8,822,500	\$ 9,120,625
Misc Development Coordination	\$ 250,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ -

This ongoing funding is intended to construct infrastructure improvements in coordination with or prompted by potential private development. Throughout the year, situations arise where infrastructure improvements required in the vicinity of a proposed development should be made at the same time as the development, and for which a developer cannot be required to construct. Improvements that are typically included are bike and pedestrian, functional efficiency, safety, system preservation, and transit system improvements. This project is growth related because it addresses needs from new development. A major goal in the Transportation Master Plan is to create an integrated multimodal system and one that is supportive of land use patterns. In the near term, the money will be used for issues that arise during the year that are small items required to be constructed as a result of development or to coordinate with a development project. The projects are not known at this time.

Resilience Classification: Important

TIP Local Match/TMP Implementation	\$ 15,166,000	\$ 2,414,000	\$ 602,000	\$ 3,000,000	\$ 2,900,000	\$ 3,000,000	\$ 3,250,000
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This ongoing funding is for the implementation of capital enhancement projects identified in the Transportation Master Plan that will be prioritized in the current update to the master plan. This money will also be used as local match to leverage potential federal and state funding for project submitted in future years' DRCOG TIP submittal process or other funding match opportunities, developing conceptual plans for projects prior to submitting for possible external funding or for smaller high priority projects identified through the TMP process. If the city succeeds in acquiring external project funds, this money will become the city's funding match. And, in this case, new projects will be created in the CIP that will include the external funding and the city's match. This budget item allows flexibility to be ready to implement high priority projects that are identified through the TMP update that was completed in 2019. The highest priority projects identified in the TMP that best meet the DRCOG scoring criteria are submitted to compete for federal funding. Prior to finalizing the list of projects to submit for DRCOG TIP funding, staff will work with TAB to identify the best projects and then submit the project list to council for their review prior to submitting for potential funding.

Resilience Classification: Important

Pavement Management Program	\$ 29,978,125	\$ 4,850,000	\$ 4,850,000	\$ 4,900,000	\$ 5,000,000	\$ 5,125,000	\$ 5,253,125
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The City of Boulder's budget priorities for transportation funding are the safety and preservation of the transportation system, including maintaining all streets in a good and safe condition. The Transportation Division has established a Pavement Management Program (PMP) for Boulder's 300-mile street system, which includes inspecting and rating all streets on a three-year interval to maintain awareness of existing conditions and guide where pavement repairs will be made in future years.

The purpose of the Pavement Management Program is to provide the optimal level of funding, timing, and renewal strategies that will keep the citywide street pavement network at or above a "Good" OCI rating. The end result is that the best strategy may be to defer a costly reconstruction on one street in order to complete less expensive treatments on other streets to minimize its deterioration into a more costly type of treatment, such as reconstruction. Street treatments that may take place under this program include mill/overlay, chip-seal, and crack-fill/seal.

Resilience Classification: Essential

Ped Facs Enh Missing Links Crossing	\$ 815,000	\$ 115,000	\$ 125,000	\$ 125,000	\$ 135,000	\$ 150,000	\$ 165,000
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The Pedestrian Facilities budget is an ongoing funding program that includes the installation of missing sidewalk links and pedestrian crossing/safety treatments and potentially social paths and sidewalk widening improvements. The list of identified missing sidewalk links has been prioritized for construction. Crossing treatment improvements are prioritized citywide and include median refuge islands, crosswalk lighting, flashing signs, neck-downs, signing, lighting and/or pedestrian signals.

This program meets the Transportation Master Plan goal of creating an integrated, multimodal transportation system emphasizing the role of the pedestrian mode as the primary mode of travel as it is the beginning and end of every travel trip.

Resilience Classification: Essential

Neighborhood Speed Management Progr	\$ 1,580,000	\$ 250,000	\$ 275,000	\$ 275,000	\$ 275,000	\$ 275,000	\$ 230,000
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The focus of the Neighborhood Speed Management Program (NSMP) is to reduce speeding traffic on neighborhood streets. This can improve safety and the quality of life in Boulder's neighborhoods.

Resilience Classification: Essential

Downtown Boulder Transit Station Im	\$ 755,031	\$ -	\$ 755,031	\$ -	\$ -	\$ -	\$ -
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This project will expand the number of transit bays along Canyon Boulevard and 14th Street and adjacent to the Downtown Boulder Transit Station. This project is in fulfillment of Renewed Vision for Transit goals and is funded in part by federal grant funds.

Resilience Classification: Important

Arapahoe Multi-Use Path/Transit Enh	\$ 1,612,000	\$ 287,000	\$ 1,325,000	\$ -	\$ -	\$ -	\$ -
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This project will upgrade existing and missing sidewalk sections to a Multi-Use Path along Arapahoe between Foothills and Cherryvale. It will also enhance existing transit stops and access along the corridor. This project is consistent with the Transportation Master Plan and the East Arapahoe Transportation Plan goals and is funded in part by federal grant funds.

Resilience Classification: Important

47TH/BNSF Sidewalk	\$ 636,250	\$ -	\$ 127,500	\$ -	\$ 508,750	\$ -	\$ -
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Project includes pedestrian improvements

Resilience Classification: Important

Traffic Signal Broadband Fiber	\$ 400,000	\$ -	\$ -	\$ 200,000	\$ 200,000	\$ -	\$ -
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This project will construct infrastructure to connect city traffic signal equipment with the Broadband backbone network being installed by the IT Department.

Resilience Classification: Important

HSIP/VZ Traffic Signal Reconstructi	\$ 1,024,670	\$ 102,467	\$ 922,203	\$ -	\$ -	\$ -	\$ -
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Project: Traffic Signal Reconstruction projects to facilitate goals of Vision Zero and overall safety. Intersection locations include: Baseline/Broadway, Baseline/Mohawk, and Folsom/Pine.

Resilience Classification: Essential

TRANSPORTATION CAPITAL

Transportation

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
HSIP/VZ Baseline/Canyon	\$ 192,243	\$ 17,477	\$ 174,766	\$ -	\$ -	\$ -	\$ -

Improvement to existing Baseline and Canyon Creek pedestrian crossing to align with Vision Zero goals.

Resilience Classification: Essential

Low Stress Walk/Bike - Neighborhood	\$ 450,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
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This program will provide funding toward implementation of the low-stress walk/bike network including Neighborhood Green Streets.

Resilience Classification: Important

Renewed Transit Vision - Capital EI	\$ 260,000	\$ 25,000	\$ 35,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
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This program will provide capital maintenance and upgrades to transit facilities within the city transportation network.

Resilience Classification: Important

Greenways Program Transportation	\$ 585,000	\$ 97,500	\$ 97,500	\$ 97,500	\$ 97,500	\$ 97,500	\$ 97,500
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This project will provide Transportation's contribution to the overall greenways program. Funding will be opportunistic and prioritized with the other funding in the Greenways CIP. These funds will be combined with funding from the Transportation and Utilities Fund. This project is for an ongoing funding program.

Fourmile Canyon Creek CCS	\$ 434,000	\$ 434,000	\$ -	\$ -	\$ -	\$ -	\$ -
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Construction of a multi-use path underpass at 19th Street and path connections along Fourmile Canyon Creek. This project replaces a structurally deficient bridge and provides safer access to Crest View Elementary School for pedestrians and bicyclists. It also provides improved vehicular access on 19th Street, which is an emergency access route, during a major storm event. Capital tax funding is for non-flood improvements. This project is categorized as "Essential" using the Budgeting for Resilience framework.

CIP-Capital Maintenance Total	\$ 13,978,000	\$ 2,205,000	\$ 2,405,000	\$ 2,455,000	\$ 2,276,000	\$ 2,286,000	\$ 2,351,000
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Signal Maintenance & Upgrade	\$ 400,000	\$ -	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ -
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The Signal Maintenance and Upgrade project is an on-going program that is used for the installation of new traffic signals and signal upgrades. Budgeting as a capital project at \$400,000 every four years.

Major Capital Reconstruction	\$ 5,300,000	\$ 850,000	\$ 850,000	\$ 900,000	\$ 900,000	\$ 900,000	\$ 900,000
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The Major Capital Reconstruction project provides funding to repair existing transportation assets that are close to or at the end of their useful life. Repairs could be for roadway, bikeway, pedestrian or transit capital assets. This funding is primarily focused on improving the health of minor structures and bridges. This funding will provide the ability to complete the capital repairs that are not eligible for grant funding or to be used as leveraged funds for this type of project as opportunities arise.

Resilience Classification: Essential

Multiuse Path Capital Maintenance	\$ 2,595,000	\$ 425,000	\$ 425,000	\$ 425,000	\$ 435,000	\$ 435,000	\$ 450,000
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The City of Boulder's budget priorities for transportation funding are the safety and preservation of the transportation system, including maintaining all multi-modal corridors in a good and safe condition. The Transportation Division is charged with providing major maintenance to the off-street multi-use path network. This budget addresses activities such as replacing panels of concrete, flood proofing underpasses and re-decking pedestrian overpasses.

Resilience Classification: Essential

Sidewalk Maintenance	\$ 1,506,000	\$ 251,000	\$ 251,000	\$ 251,000	\$ 251,000	\$ 251,000	\$ 251,000
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The City of Boulder's budget priorities for transportation funding are the safety and preservation of the transportation system, including maintaining all pedestrian corridors and sidewalks in a good and safe condition. The Sidewalk Maintenance budget funds the Miscellaneous Sidewalk Repair Program which shares in sidewalk repairs anywhere in the city with property owners paying for half of the repair costs for sidewalks adjacent to their property, with no out of pocket maximum for residential property owners.

Resilience Classification: Essential

Vision Zero Capital Projects	\$ 300,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
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This program will implement safety measures and mitigation to address hazardous intersections and crossings.

Resilience Classification: Important

Ped Facilities Repair, Replace, ADA	\$ 3,877,000	\$ 629,000	\$ 629,000	\$ 629,000	\$ 640,000	\$ 650,000	\$ 700,000
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This ongoing program allows for repair, replacement and construction of existing and new sidewalks and construction of access ramps. Sidewalk repair priorities have been established in the Sidewalk Repair Program and yearly funding is spent accordingly. Compliance with ADA is resulting in additional expenditures for access ramps and driveway modifications.

This program meets the Transportation Master Plan (TMP) goal of creating an integrated, multimodal transportation system, emphasizing the role of the pedestrian mode as the primary mode of travel as it is in the beginning and end of every travel trip. The program also meets federal ADA requirements of working towards bringing sidewalks and access ramps up to the current federal standards. And, the TMP investment policies identify maintenance as the highest priority item to find.

Resilience Classification: Essential

CIP-Capital Planning Studies Total	\$ 333,333	\$ -	\$ -	\$ 333,333	\$ -	\$ -	\$ -
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Airport Master Plan	\$ 333,333	\$ -	\$ -	\$ 333,333	\$ -	\$ -	\$ -
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Airport Master Plan for 2024

Community Resilience Classification: Important

CIP-New Facility/Infrastructure Total	\$ 19,638,368	\$ 7,632,743	\$ 8,980,625	\$ 825,000	\$ 975,000	\$ 975,000	\$ 250,000
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TIP Local Match TMP Implementation	\$ 2,924,000	\$ 624,000	\$ 200,000	\$ 600,000	\$ 750,000	\$ 750,000	\$ -
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This ongoing funding is for the implementation of capital enhancement projects identified in the Transportation Master Plan that will be prioritized in the current update to the master plan. This money will also be used as local match to leverage potential federal and state funding for project submitted in future years' DRCOG TIP submittal process or other funding match opportunities.

TRANSPORTATION CAPITAL

Transportation

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
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28th-Colorado Intersection

This project will add protected bike lane elements along Colorado Avenue between Regent Drive to east of 28th Street (US 36) intersection. Improvements also include rebuilding pedestrian refuge islands, new crosswalk and bike lane markings, new southbound left turn lane on Colorado Avenue and traffic signal modifications.

Safer Signals

This project will improve ten intersections with high safety concerns because of high bicycle and foot traffic. Improvements include better signage and signals for left turns including converting the signalization from a green ball to a left turn flashing yellow arrow and converting the phasing from permitted to protected. Locations include Arapahoe and 15th, Broadway and Alpine, Broadway and Balsam, Baseline and Manhattan/Crescent, Pearl and 26th, Baseline and 55th, 28th and Kalmia, Arapahoe and 48th, Broadway and 20th/Regent and 30th and Aurora. Resilience Classification: Important

30th Street Protected Bike Lanes

This project will construct protected bicycle lanes from the north limits of the 30th/Colorado Underpass project to the south approach at the intersection with Arapahoe. Resilience Classification: Important

RTOT CAM-Sign Enhancements

The Regional Transportation Operations and Technology grant (RTOT) project will leverage local investment by installing equipment to connect controller/cabinets/peripheral equipment to the city's fiberoptic backbone. The RTOT project will connect priority segments of the city's 2040 MVRTP Regional Roadway System including Foothills Parkway (S.H. 157), 28th Street (S.H. 119/U.S. 36), Arapahoe Avenue (S.H. 7), Broadway (S.H. 93), etc. The fiberoptic network will provide a stable high capacity communication network and support the project installation of automated traffic signal performance measures (ATSPM) with the installation of main street advance detection, and CCTV.

Multiuse Path - Enhancements

This funding is an ongoing program for expanding and improving the off-street multiuse path network. The construction of multiuse path facilities is included in almost all other transportation CIP projects. This program provides additional funding for small-scope multiuse path projects and/or projects not specifically associated with other capital projects. Projects constructed with this funding meet the Transportation Master Plan goal of developing an integrated multimodal transportation system. Projects will be consistent with the current bike, pedestrian, and transit modal plans as well as the TMP, and the projects are prioritized yearly. Funds will be spent on implementing the confluence are park connections, including Airport to Andrus as the first connection, Valmont road as second connection priority, and 61st St as a third priority. Resilience Classification: Important

28th St Valmont to Iris

This is a continuation of an existing project for which we have been awarded \$4,700,000 in external grant funds to be awarded in the year 2021. This is for the 28th Street Multi-Modal Enhancements Project.



UTILITIES & GREENWAYS

CURRENT FOCUS IN THE 2022 CAPITAL BUDGET

The City of Boulder Public Works (PW) Department is dedicated to maintaining and improving the quality of life in Boulder by planning for future needs, promoting environmental quality, building and maintaining municipal infrastructure, managing public investments, and protecting health and safety (PW Mission Statement). The Utilities department helps meet this goal by ensuring the city's utility system is planned, engineered, built, operated, and maintained according to industry best practices. The city wishes to ensure infrastructure functioning to meet Boulder Valley Comprehensive Plan goals, city level of service goals, and to support other citywide efforts.

WATER UTILITY

The City of Boulder is responsible for a very large and complex treated source and treated water system valued at over \$2.3B. The capital improvements program focus for the Water Utility continues to be on rehabilitation and replacement of existing aging assets and addresses a combination of source water and treated water needs. The source water needs will include several large capital projects like the Barker Gravity Line rehabilitation. The Barker Supply system represents one of two major water supply pipelines to the Betasso Water Treatment facility. This project involves the rehabilitation of approximately 12 miles of raw water pipeline between Barker Reservoir and Kossler Reservoir and is estimated to be completed over a 12-year period. Additional source water projects include Albion Dam, and the Barker Dam Outlets works.

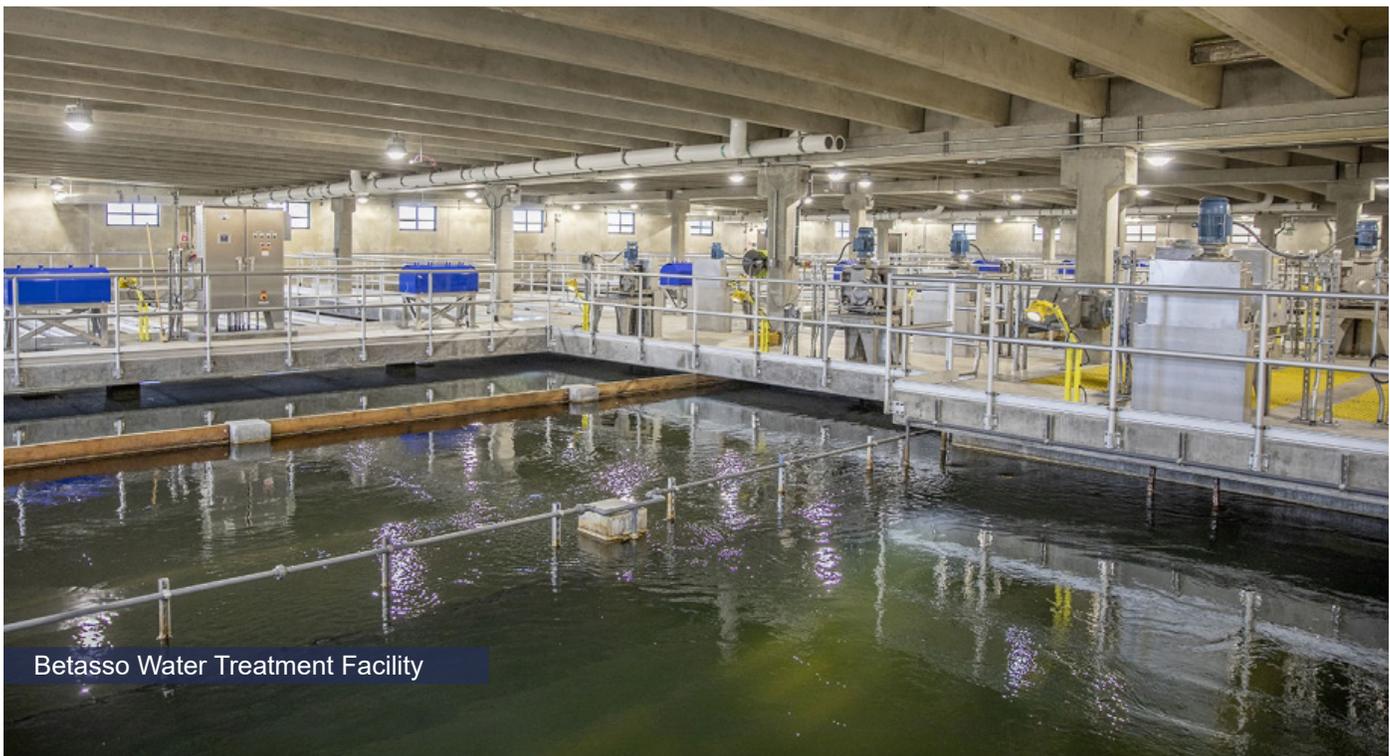
The capital improvements focus for the treated water system is on aging infrastructure rehabilitation. The plan also identifies new projects to meet the city's vision published in Boulder Valley Comprehensive Plan, regulatory drivers, and improvements for overall system reliability. Top priorities exist at both of the city's water treatment facilities (WTFs). Both WTFs have undergone various expansion and improvement projects to maintain service and the ability to meet increasingly more stringent regulations. Overall, these facilities have provided high-level service to city water customers. However, findings from the city's 2019 Asset Inventory & Maintenance (2019 AIM) project highlighted various aging and critical components that need capital Repair & Replacement (R&R), regular repairs, and various improvements. The 63rd WTF project is called the 63rd WTF Campus Electrical and High Service Pump Station Replacement project. This project includes the replacement of campus-wide medium voltage electrical components that are at the end of

UTILITIES & GREENWAYS CAPITAL

their useful life. The project also includes the replacement of the facility's six high service pumps which pump treated water into the city's water distribution system. Reinvestment at the BWTF is the city's next priority and focuses on addressing aging infrastructure and enhancing reliability within the treated water infrastructure system. These improvements include the bifurcation of the BWTF into two parallel treatment trains. That way, if any single capital asset on campus is out of service for regular maintenance or emergency scenarios, the combined system of BWTF and the 63rd St. WTF could still meet summer season demand now through buildout. Further, these improvements will address: 1) disinfection efficacy which is currently less than originally estimated; 2) Upgrades to provide disinfection under challenging water quality conditions, and 3) disinfection reliability and redundancy to allow one process tank at a time to be offline, for regular maintenance or emergency scenarios.

The water transmission and distribution systems are the large and small diameter pipes that represent the city's water delivery system. The water distribution system (12-inch diameter & smaller) is comprised of approximately 400 miles of pipe. This program has been replacing about 4 miles of pipe (1% of the system) annually in recent years to address aging steel, cast iron, and ductile iron pipe. This program is funded in alternating years and will next focus on replacement along 4th Avenue from Mapleton to near Linden.

In 2020, Utilities staff began a comprehensive evaluation of the water transmission system which is comprised of 65 miles of the system's larger (14-inch diameter & larger) pipes. This analysis will be completed in 2022. The purpose of the evaluation is to review the city's water transmission system operation, and to identify recommended improvements and additions to ensure the city can reliably meet identified level of service goals for water delivery and fire protection. The study will identify high priority projects to be included in the treated water Utility CIP. Utilities staff has included several placeholders in the CIP funded at \$10M each for projects to be located throughout the community. To fund these large projects, Utilities staff is recommending the water distribution system program funding be reduced from annual to semi-annual to accommodate funding needs for the water transmission system projects. The current CIP represents alternate year funding for both the water distribution and water transmission system projects.



Betasso Water Treatment Facility

UTILITIES & GREENWAYS CAPITAL

WASTEWATER UTILITY

The capital improvements focus for the Wastewater Utility continues to be on rehabilitation and replacement of existing assets as well as meeting current regulatory requirements. The Wastewater Utility priorities address a combination of wastewater collection system needs as well as capital projects at the Water Resource Recovery Facility (WRRF).

The 2017 Wastewater Collection System Master Plan (WWCSMP) identified four high priority (Tier 1) projects that were recommended to address larger diameter sewers with hydraulic limitations. Three of the four projects have funding identified in the six-year CIP. The largest of these projects is the realignment of the city's main interceptor sewer between Valmont Road and the WRRF. The Main Sewer Improvements Project, which is estimated at \$45-\$50 million has been identified for a revenue bond in 2022. Other high priority WWCSMP projects include the Goose Creek Trunk Sewer Project, the Baseline & Foothills Trunk Sewer Project (funded in 2022), and the Arapahoe Trunk Sewer Project.

The wastewater collection system rehabilitation program will continue with a focus on trenchless sewer lining with the goal of rehabilitating all non-plastic sewer pipe. Sewer lining improves system hydraulics, provides structural stability, and reduces inflow and infiltration of rainwater into the collection system. Informed by an extensive inspection program, the 2022 – 2027 rehabilitation program will expand sanitary manhole rehabilitation, ramping up to an ultimate goal of \$2,000,000 per year that would be sufficient to address known deficiencies in 20 years and account for the ongoing maintenance requirements of the system.

The largest WRRF capital project identified in the six-year CIP is a regulation-driven project to address effluent phosphorus limits that will be included in the new discharge permit. It is anticipated that Utilities will bond approximately \$20-\$25 million in 2023 for the project's construction phase. Other WRRF projects are driven by asset management, including a digester cover replacement, electrical and process automation system improvements, HVAC improvements, clarifier rehabilitation, and pump replacements.

STORMWATER & FLOOD MANAGEMENT UTILITY

The capital improvements focus for the Stormwater & Flood Management Utility will address a combination of flood mitigation projects as well as storm sewer improvement projects.

Major flood mitigation projects identified in the six-year CIP include Gregory Canyon Creek, Fourmile Canyon Creek, and South Boulder Creek. The Gregory Canyon Creek Improvements project will include two phases with the first in design this year and 2022. Gregory Canyon Creek Phase I construction funding is identified in the six-year CIP in 2023 at approximately \$12 million. This project, which will provide drainageway improvements to convey flood flows associated with the 10-year storm event. This phase will provide improvements between Arapahoe Avenue and Pennsylvania Avenue. The project's second phase is identified outside the 6-yr CIP.

The Fourmile Canyon Creek project will involve improvements at various locations. Utilities staff is coordinating with Transportation staff on the design and construction funding for these projects.

The South Boulder Creek Phase I flood mitigation improvements are identified in the six-year CIP in 2024 at an estimated cost of \$66M. This project will involve the construction of a detention facility on the south side of Hwy US 36 to prevent flood waters overtopping the highway and will provide the protection of approximately 1,900 structures located downstream. The South Boulder Creek Mitigation Plan was completed in 2015. In 2020, City Council provided direction for city staff to proceed with the project's preliminary design to address flood protection associated with the 100-year storm event. Funding has been identified for the project's final design and construction phases in the 6-year CIP.

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Flood mitigation plans are anticipated to be completed in 2022 for Upper Goose Creek, Twomile Creek, Skunk Creek, King’s Gulch, and Bluebell Creek. These plans will help identify future flood mitigation projects.

Capital improvements for the stormwater collection system will focus on expansion of the system into under served areas and capacity improvements to address hydraulic limitations identified in the 2017 Stormwater Master Plan (SMP). Specific projects will include an expansion of storm sewer system in the vicinity of Pearl Street from 17th Street to 21st Street. The six-year CIP includes approximately \$4 million in 2022 for this project. Another high priority project involves drainageway improvements and the expansion of the storm sewer system in the Upper Goose Creek basin. Open channel improvements have been identified for the reach between 19th Street and Folsom Avenue for an existing section of unimproved channel located behind the homes along Edgewood Drive. The 2017 SMP identified the Upper Goose Creek basin as the highest Tier 1 priority. This project would involve construction of new storm sewers and the upsizing of existing storm sewers located between 4th Street and 19th Street. The open channel and storm sewer components will be combined into a single project to address localized flooding in the area. The Upper Goose Creek storm sewer and flood management project is funded in 2024 at \$25 million.

RECOMMENDED UTILITY RATES FOR 2022

	PROPOSED RATE CHANGES			
	2022	2022	2023	2024
WATER	8%	7%	6%	6%
WASTEWATER	5%	5%	5%	5%
STORMWATER/FLOOD	12%	12%	12%	12%

SINGLE-FAMILY RESIDENTIAL MONTHLY BILL IMPACT

	2022 RATES	ANTICIPATED 2022 RATES	MONTHLY DIFFERENCE
WATER	\$45.12	\$48.23	\$3.11
WASTEWATER	\$39.34	\$41.31	\$1.97
STORMWATER/FLOOD	\$19.64	\$22.00	\$2.36
TOTAL	\$104.10	\$111.54	\$7.44

UTILITIES & GREENWAYS CAPITAL

GREENWAYS

The primary focus of the 2022-2027 Greenways CIP is on flood mitigation, bicycle and pedestrian multi-use paths, and habitat and water quality improvements along Fourmile Canyon Creek, Gregory Canyon, Skunk, and Twomile Canyon Creeks in anticipation of future major drainageway improvements along these corridors. For more information about the timing and details of these projects, please see the Utilities -Stormwater/Flood web page: <https://bouldercolorado.gov/creeks-of-boulder>.

A secondary focus for the 2022-2027 Greenways CIP is for habitat restoration and streambank stabilization projects along the Greenways corridors. Many streambank areas are degraded, eroding, and in need of restoration. The loss of ash trees, due to Emerald Ash Borer (EAB), has exacerbated this situation. Restoring the degraded streambanks also improves water quality, helps restore the urban tree canopy and supports pollinators and other native species. Funding is also being allocated in the 6-year CIP for a stream and habitat health assessment and updated operating plan.

2022 CAPITAL PROJECTS

WATER UTILITY

- Barker Gravity Line Rehabilitation
- Barker Dam Outlet Works Rehabilitation
- Albion Dam Rehabilitation
- 63rd Street Electrical Upgrades & High Service Pump Station Replacement
- Betasso Disinfection & Corrosion Control Improvements
- Betasso Supply & Backwash System Improvements
- Large Meter & Vault Replacement project
- Water Distribution System Replacement
- Water Transmission System Replacement

WASTEWATER UTILITY

- Main Sewer Improvements
- Baseline & Foothills Trunk Sewer
- Lower Goose Creek Trunk Sewer Replacement
- WRRF Low Voltage Electrical Upgrades
- WRRF Digester Arapahoe Trunk Sewer
- Sanitary Sewer Annual Rehab
- Sanitary Sewer Manhole Rehab
- Water Resource Recovery Facility (WRRF) Phosphorus Upgrades
- Cover Replacement

STORMWATER & FLOOD MANAGEMENT UTILITY

- Gregory Canyon Creek Phase I Improvements
- Fourmile Canyon Creek Improvements (Broadway, 19th Street)
- South Boulder Creek Phase I Improvements
- Stormwater Drainage Improvements



UTILITIES & GREENWAYS CAPITAL



OPERATING AND MAINTENANCE IMPACTS

The Utilities CIP identifies numerous projects and programs over a moving six-year period. The CIP projects and programs typically have a minimum estimated cost of \$50,000. There are typically corresponding operational and maintenance (O&M) costs associated with new infrastructure, however, many of projects also result in a reduced maintenance burden that can offset the increased maintenance of other projects. An example of this is the sanitary sewer rehabilitation program, where rehabilitated sewers reduce the O&M burden of root removal. Greenways habitat maintenance is routinely coordinated with Parks and Open Space maintenance staff. 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.

UNFUNDED PROJECTS AND EMERGING NEEDS

The city's Water, Wastewater, and Stormwater & Flood Management Utilities are enterprise funds that are funded by the rate payers who are provided city services. Enterprise funds are specifically dedicated to those services and cannot be used for other city needs. This is a different funding mechanism than the General Fund, which relies on city sales and use taxes, to fund other city departments. For this reason, Utilities may utilize a slightly different approach in explaining "unfunded projects and emerging needs". Utilities staff prioritize all capital project needs in the various funds through the master plan process and other more detailed evaluations. Projects are scheduled in the CIP based on their level of priority and can be postponed several years to minimize rate increases in a given year. Large capital projects that are funded through revenue bonds may require larger rate increases to cover the bond's debt service. All the projects in the Utilities six-year CIPs are funded if the projected future rate increases are enacted.

UTILITIES & GREENWAYS CAPITAL

There are many factors currently impacting the health and condition of the Greenways system, such as tree loss due to Emerald Ash Borer, pollinator and native species decline, spread of noxious weeds, contamination from pesticide use, and soil erosion. Significant environmental changes are taking place due to climate change compounding these factors and impacting natural ecosystems. Staff believe a collaborative approach across the city and community is needed to better face these challenges. The Greenways Program will continue to partner on projects funded through other departments and incorporating the objectives of the Greenways Program.

CEAP PROJECTS

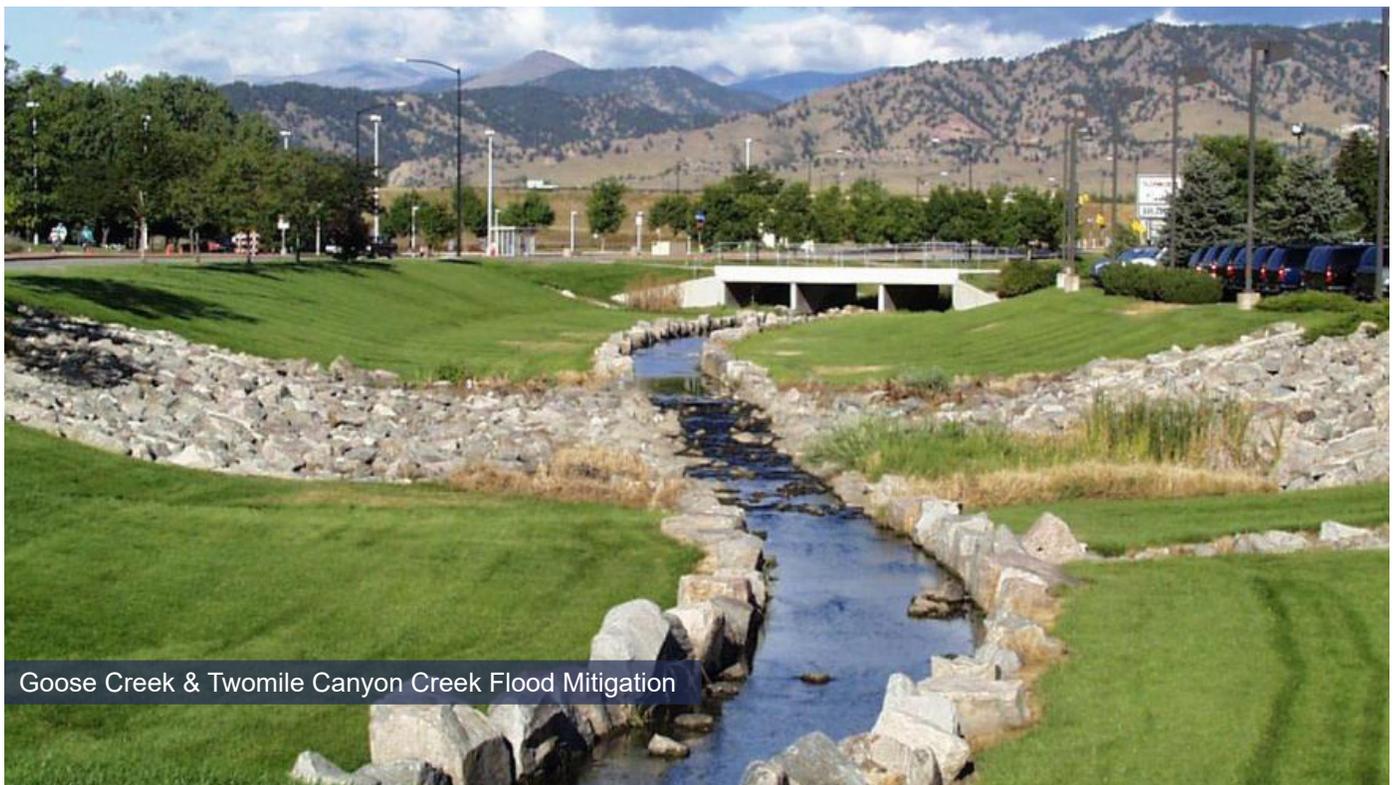
None

BOARD ACTION

The preliminary 2022 Utilities budget and the 2022-2027 CIP was presented to the WRAB on June 21, 2022 and at their July 19, 2022 meeting. The WRAB voted 4-0 to recommend the CIP and rates. The following language was included in the motion:

The Water Resources Advisory Board (WRAB) recommends approval of the 2022-2027 CIP for the Water, Wastewater, and Stormwater & Flood Management Utilities including proposed rate adjustments to support 2022 revenue increases of 7% in the Water Utility, 5% in the Wastewater Utility, and 12% in the Stormwater & Flood Management Utility, understanding that the costs in future years are subject to revision with the CU South costs as a notable example. Further, WRAB recommends additional outreach to the general public to convey the necessity for these rate increases.

A Greenways Advisory Committee meeting was held on July 26 to review the 2022-2027 Greenways Program CIP and provide a recommendation to City Council. The Greenways Advisory Committee approved the list of CIP projects.



UTILITIES & GREENWAYS CAPITAL

Water Utility

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Capital Program Total	\$ 154,700,000	\$ 54,805,000	\$ 16,000,000	\$ 28,055,000	\$ 19,260,000	\$ 15,600,000	\$ 20,980,000
CIP-Capital Enhancement Total	\$ 47,330,000	\$ 28,750,000	\$ 1,055,000	\$ 9,895,000	\$ 250,000	\$ 150,000	\$ 7,230,000
Barker Dam Outlet	\$ 10,750,000	\$ -	\$ 980,000	\$ 9,770,000	\$ -	\$ -	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. This project will provide funds for the rehabilitation/replacement of the existing outlet works system of Barker Dam. The Barker Dam outlet facilities are over 100-years old and in need of significant rehabilitation. The current configuration of the outlet gates requires that Barker Reservoir be nearly emptied to perform a thorough inspection once every 5-10 years. Reconfiguration of the outlet facilities would potentially eliminate the need to empty the reservoir for gate inspection. As currently envisioned, the project would require construction of a vertical shaft near the north embankment, inlet tunnels and one outlet tunnel, an outlet distribution facility, a pipeline to Barker Gravity Line, and valve house. The outlet facilities would provide the opportunity to develop a hydroelectric generation facility as well. Information regarding the alternative approaches will be provided as part of the Community & Environmental Assessment Process (CEAP).</p>							
Green Lake 2 Dam	\$ 6,930,000	\$ -	\$ 75,000	\$ 25,000	\$ 250,000	\$ -	\$ 6,580,000
<p>This project is categorized as Essential using the Budgeting for Resilience framework. This project will provide funds for the evaluation of alternatives and design of the rehabilitation of Green Lake 2 Dam. Green Lake 2 Dam needs extensive rehabilitation to allow continued full storage of water.</p>							
WitteMYer Ponds	\$ 750,000	\$ -	\$ -	\$ 100,000	\$ -	\$ -	\$ 650,000
<p>This project is categorized as Essential using the Budgeting for Resilience framework. WitteMYer Ponds consists of multiple reservoirs planned for potential use to facilitate city water exchanges. Alternatives for improving the ponds to reservoirs will be considered for final implementation.</p>							
Lakewood Hydroelectric/PRV	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. The Lakewood Hydroelectric station is located on the raw water transmission system near Betasso Water Treatment Facility. This project provides ongoing enhancements of hydro-electric equipment at this location as systems age or need to be replaced.</p>							
63rd WTF Campus Electrical & HSPS	\$ 17,900,000	\$ 17,900,000	\$ -				
<p>The City owns and operates two potable water treatment facilities that supply water to customers. These are the Betasso Water Treatment Facility (BWTF) rated at 40 million gallons per day (mgd) and the 63rd Water Treatment Facility (63rd WTF) rated at 16 mgd. Initial construction of the 63rdWTF took place in 1969 to provide critical backup supply during times when BWTF is offline for repairs or emergencies. In addition, the facility is required for use of critical water rights from the western slope. Since the 63rdWTF construction, various expansion and improvement projects have been constructed to maintain service and the ability to meet more stringent regulations. Overall, the facility has provided high-level service to City water customers but is aging and needs repairs. The focus of this project is twofold: 1) replacing major power supply and electrical components on the campus and to improve their reliability and redundancy and 2) Repair and replacement (R&R) of the largest power consuming treatment process on campus called the high service pump station (HSPS). The HSPS was built in 1969 and is the sole source of supply to the distribution system from the 63rd WTF. Minor repairs have been implemented over time, but the station is now at its end of useful life. The project also contemplates converting the existing power supply of the station to a lower voltage that is less hazardous and more easily maintained.</p>							
BWTF Disinfection & Corrosion	\$ 10,850,000	\$ 10,850,000	\$ -				
<p>The City owns and operates two potable water treatment facilities that supply water to customers. The vast majority of water is supplied to the City via the Betasso Water Treatment Facility (BWTF). Initial construction of the BWTF took place in 1964. Since then various expansion and improvement projects have been constructed to maintain service and the ability to meet more stringent regulations. The next phase of priority repair and replacement (R&R) focuses on two main items: 1) Disinfection capacity and 2) the lime and carbon dioxide chemical feeds systems used for corrosion control. Because these two aspects of the treatment process interact and work together they are being addressed in a single combined project.</p> <p>Currently regulatory driven disinfection occurs in two tanks known as clearwells. Clearwell #1 is baffled and performs most of the disinfection. Clearwell #2 is not baffled and therefore has limited capacity. Major repairs are required for Clearwell #1 in the next 5 years to repair corroded structural members and replace its interior and exterior coatings. This project focuses on baffling Clearwell #2 or adding disinfection capacity. This will help meet anticipated regulations, will add redundancy to allow for timely repairs to Clearwell #1, and provides needed system reliability improvements to meet level of service goals now through buildout. The project will also address priority repair and replacement (R&R) for the lime and carbon dioxide chemical feeds systems. These critical systems are used for conditioning treated water to prevent corrosion of pipes in the distribution system and to control of lead and copper levels for regulatory compliance.</p> <p>This project involves several CIP phases typical of a large-scale project: Alternatives Analysis, Preliminary Design, Final Design, Colorado Department of Public Health and Environment (CDPHE)</p>							
CIP-Capital Maintenance Total	\$ 103,650,000	\$ 25,555,000	\$ 13,745,000	\$ 17,960,000	\$ 18,430,000	\$ 15,000,000	\$ 12,960,000
Barker Gravity Pipeline Repair	\$ 29,250,000	\$ 6,020,000	\$ 6,040,000	\$ 4,820,000	\$ 3,970,000	\$ 4,120,000	\$ 4,280,000
<p>The Barker Gravity line is a 12-mile long pipeline that delivers water from Barker Reservoir in Nederland to Kossler Reservoir, located up Flagstaff Road. The pipeline is over 100 years old and repair</p>							
Transmission System R&R Program	\$ 21,500,000	\$ 1,500,000	\$ -	\$ 10,000,000	\$ 10,000,000	\$ -	\$ -
<p>The City owns, operates, and maintains an extensive, 65-mile potable water transmission system (i.e., pipes greater than 12-inches in diameter). This system has a replacement value of \$350M or about 20 percent of the value of the treated water system overall. The transmission system is of high importance because it supplies the vast majority of water to the system and has limited valving to isolate segments for repairs and/or emergency response. Historically, the City water transmission replacement program has been very limited as this portion the system has been relatively high functioning with few pipe breaks. Overall, the transmission pipe system has provided acceptable service to City customers but is at a point where reinvestment is needed to address aging infrastructure and to prevent and minimize pipe breaks and/or emergency scenarios. Furthermore, over the past 10-20 years City water demands have "grown into" the capacity of the system that previously could be used for redundancy. A formal Water Transmission Study is ongoing at this time recognizing the transmission system is aging and in need of a prioritized plan for reinvestment. The study is evaluating various key components of the transmission system to maintain high-quality service and flexibility for operations, maintenance, and emergency scenarios now through buildout. Funding is established in this budget cycle to launch and maintain a replacement program to stay on top of aging infrastructure issues.</p>							
BCH Penstock Repair	\$ 6,720,000	\$ 1,010,000	\$ 1,050,000	\$ 1,100,000	\$ 1,140,000	\$ 1,190,000	\$ 1,230,000
<p>The BCH Penstock is a pressure pipeline that delivers water from Kossler Reservoir to Boulder Canyon Hydro. This project is categorized as Essential using the Budgeting for Resilience framework. This project will provide funds for analysis and targeted repairs for areas discovered in the inspection in 2019. An analysis will be performed on approximate remaining operational life including recommendations from metallurgical and corrosion experts. The rehabilitation project is scheduled for 12 years at approximately 850 feet per year.</p>							
Kossler Dam	\$ 2,650,000	\$ 1,500,000	\$ 300,000	\$ 100,000	\$ 750,000	\$ -	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. Kossler Dam Face Rehabilitation Project was completed in 2015. Temporary repairs were constructed to the Kossler Reservoir Inlet Structure in 2017. Both the Inlet Structure and the Outlet Structure will require full rehabilitation/replacement within 10 years and is presently scheduled for 2025. Gate analysis in 2021 and replacement in 2022/2023. A bypass system is to be designed and implemented in 2022/2023.</p>							
Orodel Hydro/PRV Facility	\$ 275,000	\$ -	\$ 75,000	\$ -	\$ 200,000	\$ -	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. The Orodel facility is a treated water pressure reducing and hydroelectric facility located below Betasso Water Treatment Facility. This project is inspection of the Generator System and gen-set upgrades and updates to the electrical system/panel.</p>							

UTILITIES & GREENWAYS CAPITAL

Water Utility

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Sunshine Campus R&R & Improvements	\$ 3,200,000	\$ 3,200,000	\$ -	\$ -	\$ -	\$ -	\$ -
The City's potable water system includes two mountain-to-town pipelines and two hydroelectric stations. These facilities serve the primary purpose of controlling pressure and transferring water to the City in a cost-efficient and safe manner. The most critical of these sites is located in Sunshine Canyon and is referred to as the Sunshine Hydroelectric Facility. This campus conveys nearly 50							
Water Mains In-House R&R Program	\$ 2,400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000
The City of Boulder Public Works (PW) Department is dedicated to maintaining and improving the quality of life in Boulder by planning for future needs, promoting environmental quality, building and maintaining municipal infrastructure, managing public investments, and protecting health and safety (PW Mission Statement). The utilities division helps meet this goal by ensuring our utility system is engineered, built, operated, and maintained according to industry best practices. One key component is ongoing replacement of treated water pipes in the system that are at the end of their useful life. Timely replacement of old piping helps limit the number and frequency of pipe breaks in the system and the risks they impart on public health, the environment, customer service and cost efficiency of utility services. The City's program replaces about four to five miles of pipe per year, which is approximately a 100-yr replacement frequency. This project focuses on the components of these efforts most effectively performed by in-house City crews. Projects are prioritized through a comprehensive approach that considers overall utility reliability and redundancy, improvements required to serve the City Comprehensive Plan, City Council priorities, safety of the public and operations staff, regulations, available budget and revenues, timing of other PW projects, timing with other City department projects, and pavement management projects.							
Distribution Waterline Replacement	\$ 13,100,000	\$ 500,000	\$ 4,200,000	\$ -	\$ -	\$ 4,200,000	\$ 4,200,000
The City of Boulder Public Works (PW) Department is dedicated to maintaining and improving the quality of life in Boulder by planning for future needs, promoting environmental quality, building and maintaining municipal infrastructure, managing public investments, and protecting health and safety (PW Mission Statement). The utilities division helps meet this goal by ensuring our utility system is engineered, built, operated, and maintained according to industry best practices. One key component is ongoing replacement of treated water pipes in the system that are at the end of their useful life. Timely replacement of old piping helps limit the number and frequency of pipe breaks in the system and the risks they impart on public health, the environment, customer service and cost efficiency of utility services. The City's program replaces about four to five miles of pipe per year, which is approximately a 100-yr replacement frequency. Overall, the success of this program is demonstrated by the reduction of water main breaks from historic levels of >100 breaks per year to current levels of <40 breaks per year. Projects are prioritized through a comprehensive approach that considers overall utility reliability and redundancy, improvements required to serve the City Comprehensive Plan, City Council priorities, safety of the public and operations staff, regulations, available budget and revenues, timing of other PW projects, timing with other City department projects, and pavement management projects. The next phase of work will target pipeline replacement in 4th Avenue from Mapleton to about Linden.							
Meter Replacement Program	\$ 3,000,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Potable water customers are billed for their water use based a network of nearly 30,000 water meters. Meters in the system are tested by the City in accordance with AWWA best practices and overall provide reliable service to City customers and Utility Billing. However, many cohorts of meters are at the end of predicted lifespan and require replacement. The majority of these meters can be replaced via in-house crews to streamline schedule and save costs.							
Large Meter Improvements Phase 1	\$ 425,000	\$ 425,000	\$ -	\$ -	\$ -	\$ -	\$ -
Potable water customers are billed for their water use based a network of nearly 30,000 water meters. Meters in the system are tested by the City in accordance with best practices and overall provide reliable service to City customers and Utility Billing. However, many cohorts of meters are at the end of predicted lifespan and require replacement. The majority of these meters can be replaced via in-house crews to streamline schedule and save costs. However, some of the meters are located in vaults that need to be replaced due to issues related to age, safe access for operations and maintenance, and space required for modern meter equipment. The top priority vault is contemplated with this project phase at Broadway & Pennsylvania (CU Large Meter).							
Watershed Improvements	\$ 90,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ -	\$ -	\$ -
This project is categorized as Essential using the Budgeting for Resilience framework. General Watershed improvements for critical as recommended in the 2009 Source Water Master Plan. This project funds ongoing improvements to facilitate continued reliable operation of the watershed source water storage and delivery system. Fund augmentation needs will be assessed at the end of 2019.							
Instream Flow Structures and Gaging	\$ 100,000	\$ 10,000	\$ 50,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
This project is categorized as Essential using the Budgeting for Resilience framework. Boulder will install a stream gauge on Boulder Creek downstream of the Rural Ditch headgate and improve flow measurement along the reach. The stream gage will be used to measure instream flow water that Boulder is leasing to users below the headgate. Funding ongoing annual upgrades.							
Source Systems Condition Assessment	\$ 430,000	\$ -	\$ -	\$ -	\$ 430,000	\$ -	\$ -
This project is categorized as Essential using the Budgeting for Resilience framework. An assessment of the components that make up the City's source water system including a detailed inventory of all asset to determine the type of asset, structural and maintenance condition, redundancy, remaining useful life, and approximate replacement or rehabilitation costs.							
Silver Lake Dam	\$ 4,350,000	\$ -	\$ -	\$ -	\$ 400,000	\$ 3,950,000	\$ -
Silver Lake Dam is a critical storage reservoir and the largest reservoir in the North Boulder Creek system. This project will rehabilitate and/or replace the aging valve and piping system critical for water releases of the entire NBC supply system							
Albion Dam	\$ 9,870,000	\$ 9,870,000	\$ -	\$ -	\$ -	\$ -	\$ -
Albion Dam is one of several high elevation dams located in the North Boulder Creek Watershed, which is located to the west of Boulder in Indian Peaks Wilderness. The North Boulder Creek watershed is one of three watersheds that provide raw water to the city of Boulder. Albion Dam has a storage capacity of approximately 1,000 acre-feet (AF) which is about 1/12 the size of the							
Lakewood Pipeline	\$ 380,000	\$ -	\$ -	\$ 380,000	\$ -	\$ -	\$ -
This project provides funding for periodic inspection and maintenance on the Lakewood Pipeline.							
Source Water Rehabilitation Program	\$ 1,210,000	\$ 180,000	\$ 190,000	\$ 200,000	\$ 210,000	\$ 210,000	\$ 220,000
This project is categorized as Essential using the Budgeting for Resilience framework. Funding for capital maintenance for the critical source water facilities, hydroelectric, pressure reducing, and reversible pump-generator system components not identified as individual capital projects.							

UTILITIES & GREENWAYS CAPITAL

Water Utility

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Hydro Facilities Rehab Program	\$ 400,000	\$ 60,000	\$ 60,000	\$ 70,000	\$ 70,000	\$ 70,000	\$ 70,000
This project is categorized as Essential using the Budgeting for Resilience framework. Hydro maintenance for all facilities. Misc minor items/repairs/upgrades not included in specific CIP budgets.							
63rd WTF Chemical Feed Systems	\$ 1,700,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,700,000
The City owns and operates two potable water treatment facilities that supply water to customers. These are the Betasso Water Treatment Facility (BWTF) rated at 40 million gallons per day (mgd) and the 63rd Water Treatment Facility (63rd WTF) rated at 16 mgd. Initial construction of the 63rd WTF took place in 1969 to provide critical backup supply during times when BWTF is offline for repairs or emergencies. In addition, the facility is required for use of critical water rights from the western slope. Since the 63rd WTF construction, various expansion and improvement projects have been constructed to maintain service and the ability to meet more stringent regulations. Overall, the facility has provided high-level service to City water customers but is aging and needs repairs. The focus of this project is to repair, rehabilitate, replace, and improve several campus chemical feeds systems to meet potable water needs now through buildout as defined by the Boulder Valley Comprehensive Plan.							
Treated Water Misc. R&R	\$ 2,100,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000
The City of Boulder owns and operates a complex treated water utility system valued at approximately \$1.7 billion. Overall, these facilities provide high-level service to City water customers, but various components of the system need ongoing repairs and miscellaneous other improvements to address aging infrastructure, equipment obsolescence, and safe/reliable operations. The purpose of this project is to repair or replace miscellaneous capital assets or components within the treated water system as needed throughout the year. This project primarily involves selection and purchase of equipment per typical City purchasing policies. Where applicable for large-scale items, purchases may involve phasing such as alternatives analysis, design, permitting, and construction.							
Silver Lake Hydroelectric/PRV	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ -
The Silver Lake Hydroelectric station is located on the raw water transmission system near the Lakewood Reservoir. This project provides ongoing enhancements of hydro-electric equipment at this location as systems age or need to be replaced.							
A short term Programmable Logic Controller (PLC), which monitors input devices and provides output based on custom programming controls, was completed in 2016. In 2017, an alternatives analysis for permanent PLC upgrades will be conducted. The 2019 project funded the replacement of the needles/seats.							
Boulder Canyon Hydro	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ -
Boulder Canyon Hydroelectric – Maintenance and Inspection of the installed replacement unit (commercial operation started in 2013) and control systems. This project is categorized as Essential using the Budgeting for Resilience framework.							
CIP - CAPITAL PLANNING STUDIES	\$ 1,530,000	\$ 250,000	\$ 1,000,000	\$ -	\$ 130,000	\$ 150,000	\$ -
Maxwell Hydro/PRV Facility	\$ 50,000	\$ -	\$ -	\$ -	\$ 50,000	\$ -	\$ -
This project is categorized as Essential using the Budgeting for Resilience framework. The Maxwell facility is a treated water pressure reducing and hydroelectric facility located below Betasso Water Treatment Facility. This project is to completely replace the pump control valve.							
Sunshine Hydroelectric/PRV Facility	\$ 300,000	\$ 150,000	\$ -	\$ -	\$ -	\$ 150,000	\$ -
The Sunshine facility is a treated water pressure reducing and hydroelectric facility located below Betasso Water Treatment Facility. This project will inspect and rebuild the turbine.							
Kohler Hydro/PRV Facility	\$ 180,000	\$ 100,000	\$ -	\$ -	\$ 80,000	\$ -	\$ -
This project is categorized as Essential using the Budgeting for Resilience framework. The Kohler facility is a treated water pressure reducing and hydroelectric facility located below Betasso Water Treatment Facility. This project is an update to the complete overhaul of the pump valves (2019/2020) which includes: disassembly, inspection, repair and reassembly.							
Water System Master Plan & COS	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -
Utilities Engineering (UE) implements long-term utility planning processes to develop and prioritize projects within the Capital Improvement Program (capital projects), identify and plan utility improvements needed now and through buildout of the Boulder Valley Comprehensive Plan, and document implications for utility rates. As part of this planning process, the UE team periodically executes holistic, long-range master plans to catalogue infrastructure and funding needs anticipated in the water system (source water to customer meters) now and through buildout. The City's current master plan dates back to 2011 and an update is necessary. The purpose of this project is to update the master plan for the water fund as a whole (both source water and treated water systems) and to integrate a Cost of Service study (COS) to confirm appropriate revenue and rate needs near- and long-term as required for financial sustainability of the utility.							
CIP-New Facility/Infrastructure Total	\$ 2,190,000	\$ 250,000	\$ 200,000	\$ 200,000	\$ 450,000	\$ 300,000	\$ 790,000
NCWCD Conv - Boulder Feeder Canal	\$ 1,200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000
NCWCD Conv - Boulder Feeder Canal point source drainage inflow improvements on a priority basis.							
Barker Dam Hydroelectric	\$ 740,000	\$ 50,000	\$ -	\$ -	\$ -	\$ 100,000	\$ 590,000
This project is categorized as Essential using the Budgeting for Resilience framework. Analysis and develop hydroelectric potential if preferred as recommended in the Source Water Master Plan, MWH, 2008/2009.							
Carter Lake Hydroelectric	\$ 250,000	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ -
Analyze potential for hydroelectric facility on the city's portion of the Carter Lake Pipeline and then design and build if preferred. This project is categorized as Essential using the Budgeting for Resilience framework.							

UTILITIES & GREENWAYS CAPITAL

Wastewater Utility

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Capital Program Total	\$ 140,456,000	\$ 56,635,000	\$ 32,178,000	\$ 7,580,000	\$ 7,255,000	\$ 27,623,000	\$ 9,185,000
CIP-Capital Enhancement Total	\$ 28,398,000	\$ 1,990,000	\$ 22,598,000	\$ 955,000	\$ 75,000	\$ 305,000	\$ 2,475,000
Lower Goose Creek Trunk Sewer Repl	\$ 3,300,000	\$ -	\$ 3,300,000	\$ -	\$ -	\$ -	\$ -

One of four Tier One (highest priority) projects identified in the 2016 Wastewater Collection System Master Plan Update, the Goose Creek Trunk Sewer Replacement Project will address structurally deteriorated sections of trunk sewer and improve the ability of this sewer to handle wet weather flows.

S. Boulder Trunk Sewer Replacement	\$ 500,000	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ -
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The South Boulder Trunk Sewer Replacement Project is one of seven Tier 2 (medium priority) projects identified in the 2016 Wastewater Collection System Master Plan Update. The project will upsize 2.5

Meter Replacement Program	\$ 515,000	\$ 140,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
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This project is for replacing aging water meters that are used for customer billing and usage information. There are currently over 28,000 meters in the system, and most of them are reaching the end of their useful life at 15 – 20 years old. This project provides funding for a large meter (greater than 2 inch) replacement on an ongoing basis. These meters are tested annually and will be repaired or replaced as needed. The small meter (less than 2 inch) program will begin in 2022 and aim to replace all small meters within 10 years.

Water Resource Recovery Pumps	\$ 1,350,000	\$ 150,000	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ 900,000
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The existing pumps at the Boulder Water Resource Recovery Facility require rehabilitation. This project will fund the upgrade of those pumps on a recurring basis. The highest priority assets will be funded each cycle.

WRRF Permit Improvements	\$ 1,780,000	\$ 1,700,000	\$ -	\$ -	\$ -	\$ 80,000	\$ -
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[This is the design portion (non-bonded) portion of this project. The bonded construction dollars are in project 610WW69900.] The next major capital improvements project at the city's Water Resource Recovery Facility (WRRF) will target phosphorus removal in preparation for the Regulation 85 total phosphorus limitation that will appear in the city's updated State of Colorado Discharge Permit System (CDPS) Permit. The current permit expired in 2016 but has been administratively extended and is expected to be renewed in 2021, with an effective date in 2025. The city invested significantly over the last 15 years in nitrogen removal to meet current permit limits so, fortunately, the WRRF is already out-performing Regulation 85 nitrogen limitations. The source of the vast majority of phosphorus in the city's wastewater is human waste, so controlling phosphorus from commercial and industrial dischargers would not be an effective compliance strategy. A wastewater process engineering study, slated for early 2021, will take a hard look at recent industry advances in biological phosphorus removal and evaluate these alternatives against chemical phosphorus removal with the objective of selecting an alternative to proceed to preliminary design. The current CIP budget line item is escalated from a similar study in 2012, which recommended a chemical phosphorus removal alternative.

WRRF Activated Sludge	\$ 1,730,000	\$ -	\$ -	\$ 230,000	\$ -	\$ -	\$ 1,500,000
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This project will fund the scheduled rehabilitation of the Boulder Water Resource Recovery Facility's mechanical aeration system, which is a critical system supporting the microbiological process. Specifically, this money is for a preventative maintenance service through a qualified third-party. The typical agreements are 5-years and we pay in advance for annual services.

WRRF Permit Improvements - Proj. Bo	\$ 19,223,000	\$ -	\$ 19,223,000	\$ -	\$ -	\$ -	\$ -
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The next major capital improvements project at the city's Water Resource Recovery Facility (WRRF) will target phosphorus removal in preparation for the Regulation 85 total phosphorus limitation that will appear in the city's updated State of Colorado Discharge Permit System (CDPS) Permit. The current permit expired in 2016 but has been administratively extended and is expected to be

CIP-Capital Maintenance Total	\$ 111,058,000	\$ 54,645,000	\$ 8,580,000	\$ 6,625,000	\$ 7,180,000	\$ 27,318,000	\$ 6,710,000
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Sanitary Sewer Rehabilitation	\$ 23,100,000	\$ 3,500,000	\$ 3,600,000	\$ 3,800,000	\$ 3,900,000	\$ 4,100,000	\$ 4,200,000
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This project provides for the rehabilitation and improvement to the existing sanitary sewer piping of the city's wastewater collection system. The program is funded at approximately \$2,500,000 per year (2014) escalated at 4% annually in order to rehabilitate the entire system in approximately 20 years. The objectives of rehabilitation are to prevent pipe failure, improve system hydraulics, reduce infiltration of groundwater, and reduce ongoing maintenance needs.

Arapahoe Trunk Sewer Replacement	\$ 21,978,000	\$ -	\$ -	\$ 990,000	\$ 990,000	\$ 19,998,000	\$ -
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The Arapahoe Trunk Sewer Replacement Project is one of four Tier 1 (highest priority) projects identified in the 2016 Wastewater Collection System Master Plan Update. It will include replacement and u

Sanitary Sewer Manhole Rehab	\$ 5,750,000	\$ 500,000	\$ 750,000	\$ 750,000	\$ 1,000,000	\$ 1,250,000	\$ 1,500,000
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This project provides for the rehabilitation and improvement to the existing wastewater manholes that are part of the city's wastewater collection system. The program was funded at \$200,000 per year (2018) escalated by an inflation index; however, the asset condition assessment shows the need for increased funding to meet system needs. The project will be ramped up over the course of the 6-year CIP to eventually reach the recommended funding level of \$2,000,000 per year.

Collection System Monitoring	\$ 750,000	\$ 75,000	\$ 150,000	\$ 75,000	\$ 150,000	\$ 150,000	\$ 150,000
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This project provides funds for monitoring of the City's wastewater collection system. Flow monitoring informs capital project design and provides useful information about the impact of rainfall events on sanitary sewer flows.

Condition Assessment Program	\$ 3,390,000	\$ 890,000	\$ 460,000	\$ 480,000	\$ 500,000	\$ 520,000	\$ 540,000
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The Wastewater Utility Condition Assessment Program is intended to provide an ongoing comprehensive cleaning and assessment of the city's sanitary sewer collection system. There are approximately 370 miles of sanitary sewer pipe in the collection system.

UTILITIES & GREENWAYS CAPITAL

Wastewater Utility

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Main Sewer Improvements	\$ 44,500,000	\$ 44,500,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>The city's Wastewater Collection System Master Plan (WWCSMP) concluded that the city's sanitary sewer system performs very well under dry weather conditions. This means that the collection system has adequate capacity to convey the city's daily wastewater flow of approximately 10 million gallons per (mgd) day to the WRRF. The master plan identified that the system becomes overwhelmed in some locations when significant rainfall induced inflow & infiltration (I&I) enters the system and takes up conveyance capacity intended for the base sanitary sewer flow. Inflow and infiltration represents extraneous water that enters the sanitary sewer system, but the I&I volume can vary tremendously depending on the age and quality of the system. The WWCSMP identified four Tier 1 (high priority) projects to be completed to address collection system capacity related issues throughout the city. The 42-inch diameter Interceptor sewer realignment project is the largest of the four capacity driven projects. The existing pipeline is over 50 years old and at the end of its useful life. This replacement of the existing pipe will address several key issues including the following: This project will provide a new pipeline with a projected useful life of 75 to 100 years. It will address increased capacity needs to provide a greater level of service to the community by accommodating the estimated I&I contribution. Lastly, the new pipeline will be located further from Boulder Creek representing a less vulnerable condition from flooding. The Boulder County 1041 Permit process was completed in 2020 with acceptance from both the Boulder County Planning Commission and Boulder County Commissioners in. Preliminary design kicked off late 2020 and final design will be completed in 2022, with construction starting in 2022.</p>							
Inverted Siphon Replacement	\$ 4,300,000	\$ 4,300,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>Of the 370 miles of sanitary sewer in the city's wastewater collection system, there exists only one inverted siphon. This feature conveys wastewater flow from the majority of Gunbarrel underneath Boulder Creek on the property of the Boulder Water Resource Recovery Facility.</p>							
WRRF Primary Clarifiers	\$ 770,000	\$ 70,000	\$ 700,000	\$ -	\$ -	\$ -	\$ -
<p>The Water Resource Recovery Facility's primary clarifiers are concrete circular settling tanks with rotating steel mechanisms to separate solids from the water. They are located after the headworks and before the aeration basins (biological process). The mid-term rehabilitation in 2023 will recoat the rotating mechanisms. The long-term replacement in 2029 will replace mechanisms, drives, walkway bridges, and effluent weirs, baffles, and launders.</p>							
WRRF Secondary Clarifiers	\$ 550,000	\$ 50,000	\$ 500,000	\$ -	\$ -	\$ -	\$ -
<p>Secondary clarification is an essential unit process of the overall treatment system at the Boulder WRRF. Similar to the primary clarifiers, the internal componentry is submerged in wastewater and needs repair and rehabilitation periodically, and eventual replacement. This project is to repair the internal mechanism to provide full-utilization of the asset.</p>							
WRRF Hot Water Loop Replacement	\$ 1,900,000	\$ -	\$ 1,900,000	\$ -	\$ -	\$ -	\$ -
<p>Four buildings on the WRRF campus are heated by an underground hot water loop that is at the end of its useful life. This project will abandon portions of the line where conventional HVAC is favorable</p>							
WRRF Rehabilitation	\$ 1,970,000	\$ 510,000	\$ 270,000	\$ 280,000	\$ 290,000	\$ 300,000	\$ 320,000
<p>The Wastewater Utility Asset Management Planning Tool identified miscellaneous rehabilitation projects not identified in master plan documents. This funding could be for one project or several smaller projects.</p>							
WRRF Instrumentation/Control	\$ 1,100,000	\$ -	\$ -	\$ -	\$ 100,000	\$ 1,000,000	\$ -
<p>This project will fund the rehabilitation and/or replacement of instrumentation & control (I&C) facilities at the Boulder Water Resource Recovery Facility. These recommendations are based on the 2013 Process Automation System (PAS) Strategic Plan. The PAS Strategic Plan identified \$6,000,000 worth of I&C improvements to be completed over 10 years.</p>							
WRRF Electrical	\$ 1,000,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ -	\$ -
<p>This project will fund the rehabilitation of various existing electrical systems at the Boulder Water Resource Recovery Facility. Maintaining the facility's electrical infrastructure is a critical component to ensure adequate treatment. This project will include the replacement of numerous major electrical components, including Motor Control Centers and Load Centers.</p>							
CIP-Capital Planning Studies Total	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -
Wastewater Utility Master Plan	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -
<p>The Wastewater Utility Master Plan is supported by three primary planning documents for the wastewater Utility: the Wastewater Collection System Master Plan (WWCSMP), the Water Resource Recovery Facility</p>							

UTILITIES & GREENWAYS CAPITAL

Stormwater & Flood Management Utility

	Estimated Total Cost	2022 Recommended	2023 Projected	2024 Projected	2025 Projected	2026 Projected	2027 Projected
Capital Program Total	\$ 136,454,602	\$ 8,788,567	\$ 16,938,567	\$ 96,341,767	\$ 4,268,567	\$ 4,448,567	\$ 5,668,567
CIP-Capital Enhancement Total	\$ 120,934,602	\$ 6,488,567	\$ 14,528,567	\$ 93,811,767	\$ 1,628,567	\$ 1,688,567	\$ 2,788,567
Upper Goose Creek	\$ 26,233,200	\$ -	\$ -	\$ 26,233,200	\$ -	\$ -	\$ -

The 2017 Stormwater Master Plan (SMP) provided a comprehensive analysis of the city's stormwater conveyance infrastructure. The master plan identified several Tier 1 (high priority) projects to address new storm sewer improvements throughout the community. The Upper Goose Creek improvements project represents the highest priority project identified in the master plan. This project has two major components. The first component will involve drainageway improvements between 19th Street and Folsom Avenue. This is an unimproved section of drainageway with significant growth that has limited capacity to convey flood flows. Utilities staff will evaluate the potential of improving the channel capacity to convey flows associated with the 10-yr storm event through this section. The second component of the project will involve new storm sewer infrastructure improvements between 6th street and 19th street. Some of these storm sewer improvements will represent new piped infrastructure and some improvements will represent increasing the capacity of existing piped infrastructure.

South Boulder Crk Flood Mitigation	\$ 71,000,000	\$ 2,000,000	\$ 3,000,000	\$ 66,000,000	\$ -	\$ -	\$ -
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The South Boulder Creek (SBC) flood mitigation project is the largest proposed CIP project in the city's Stormwater & Flood Management Utility. The project involves providing 100-yr flood protection to the community along the South Boulder Creek drainageway. The project is currently in the first of three phases. Phase I involves the proposed development of a flood detention facility to be located along highway US 36. The purpose of this detention facility is to provide flood protection for areas north of Hwy 36 including the area known as the West Valley.

Gregory Creek Flood Mitigation	\$ 14,040,000	\$ 3,000,000	\$ 10,000,000	\$ -	\$ -	\$ -	\$ 1,040,000
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A flood mitigation plan for Gregory Canyon Creek was approved by City Council in December 2015. The plan identified various improvements, primarily involving replacement of culverts to increase the conveyance capacity of the channel to carry a 10-year storm event. This project is categorized as "Essential" using the Budgeting for Resilience framework.

<https://boulder.colorado.gov/flood/gregory-canyon-creek-flood-mitigation-study>

Greenways Program - Flood fund	\$ 585,000	\$ 97,500	\$ 97,500	\$ 97,500	\$ 97,500	\$ 97,500	\$ 97,500
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This funding will provide Utilities contributions to the overall Greenways Program. Funding will be prioritized with other funding in the Greenways CIP. These funds will be combined with funding from the Transportation Fund. This project is for an ongoing funding program. This project is categorized as "Important" using the Budgeting for Resilience framework.

<https://boulder.colorado.gov/water/greenways-program>

Greenways Program-Lottery Fund	\$ 906,402	\$ 151,067	\$ 151,067	\$ 151,067	\$ 151,067	\$ 151,067	\$ 151,067
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The funding will provide Lottery funds contributions to the overall greenways program. Funding will be opportunistic and prioritized with the other funding in the Greenways CIP. These funds will be combined with funding from the Transportation and Utilities Fund. This project is for an ongoing funding program.

<https://boulder.colorado.gov/water/greenways-program>

Local Drainage Improvements	\$ 6,810,000	\$ 1,030,000	\$ 1,070,000	\$ 1,110,000	\$ 1,150,000	\$ 1,200,000	\$ 1,250,000
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This capital project provides funds to improve local drainage problems which are small enough to be outside of the scope of a master planning effort. Most work funded by this program is intended to address system deficiencies highlighted through customer complaints. Funding is also used to supplement the storm sewer rehabilitation program.

Stormwater Quality Improvements	\$ 1,360,000	\$ 210,000	\$ 210,000	\$ 220,000	\$ 230,000	\$ 240,000	\$ 250,000
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This program will fund stormwater quality projects as identified in the Stormwater Master Plan and the stormwater quality engineering staff to improve water quality in Boulder Creek and its tributaries. This funding can be used for multiple efforts such as infrastructure maintenance, installation and planning studies.

CIP-Capital Maintenance Total	\$ 10,800,000	\$ 1,590,000	\$ 1,670,000	\$ 1,760,000	\$ 1,840,000	\$ 1,930,000	\$ 2,010,000
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Drainageway Maintenance/Enhancement	\$ 1,740,000	\$ 230,000	\$ 250,000	\$ 280,000	\$ 300,000	\$ 330,000	\$ 350,000
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The Drainageway Maintenance/Enhancement fund is intended to provide for larger maintenance related projects along the city's 16 major drainageways. This funding will address ongoing sediment removal efforts as well as large scale vegetation removal along the drainageways including efforts relating to the city's Emerald Ash Bore (EAB) removal program. This work will be performed by qualified private contractors. This project is categorized as "Essential" using the Budgeting for Resilience framework.

Storm Sewer Rehabilitation	\$ 4,530,000	\$ 680,000	\$ 710,000	\$ 740,000	\$ 770,000	\$ 800,000	\$ 830,000
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The program provides funds for the rehabilitation or replacement of existing storm sewers that have reached the end of their useful life.

Transportation Coordination	\$ 4,530,000	\$ 680,000	\$ 710,000	\$ 740,000	\$ 770,000	\$ 800,000	\$ 830,000
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This program will fund the reconstruction of existing storm sewers, the construction of new storm sewers and water quality improvements as part of on-going Transportation Division improvement projects. This project is for an ongoing funding program.

CIP-Land Acquisition Total	\$ 4,720,000	\$ 710,000	\$ 740,000	\$ 770,000	\$ 800,000	\$ 830,000	\$ 870,000
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Preflood Property Acquisition	\$ 4,720,000	\$ 710,000	\$ 740,000	\$ 770,000	\$ 800,000	\$ 830,000	\$ 870,000
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This project provides on-going funding for the purchase of properties from willing sellers in areas prone to flooding especially the city's high hazard regulatory area. The city periodically updates its flood mapping to reflect changing conditions and improvements in flood modeling. The highest risk properties are identified and prioritized for purchase, based on updated mapping for each of the drainageways. This project is categorized as "Important" using the Budgeting for Resilience framework.

The project is for an ongoing funding program. Funding has been escalated to reflect inflation.

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CEAP

Project planning and design for major capital projects takes a project outlined in a master plan and provides more detailed assessment to determine location, function, and design alternatives and preferred approaches. The process for review and approval of individual projects is identified in the annual CIP and budget approval process. At this time, various processes may be identified for a specific project.

- **Concept Plan and Site Review:** Concept Plans and Site Plans are reviewed by the interdepartmental staff Development Review Committee, departmental Advisory Boards, Planning Board, and City Council (call-up option).
- **Community and Environmental Assessment Process (CEAP):** The CEAP provides a framework for balanced and thoughtful consideration of environmental and social issues in the preliminary planning and design of capital projects. It also provides a forum for public discussion of broad level project issues relative to master plans and overall community goals. It is a tool to aid in the development and refinement of project design and impact mitigation options.
- **Project-Specific Community Process and Design:** Many projects are not required to go through concept and site review and would not benefit from a CEAP process. These typically have a project-specific design and public process to efficiently and appropriately identify community needs, concerns, and preferences. Many projects have been assessed through facility studies, area or facility planning processes, mitigation plans, or other studies. The processes are collaborative with multiple city and/or county departments.



CEAP

PROJECTS RECOMMENDED FOR CEAP

The Appendix to Title 2 of the Boulder Revised Code instructs that major capital improvement projects should be handled in accordance with the City Plans and Projects Handbook, dated November 2007. As such, a list of projects identified to undergo a CEAP is provided with the annual capital budget.

CEAP reviews are prepared when projects are in the site location and facility design phase. The primary purpose of the CEAP is to encourage the consideration of potential social and environmental impacts in planning and decision-making and, ultimately, to arrive at actions that achieve the objectives of the project with the fewest impacts. The intent of the CEAP is to make project planning more efficient by considering issues in advance of implementation.

CEAP findings are submitted by departments to their respective advisory board for review as part of CIP project approval. For those departments that do not have an advisory board, the Planning Board is responsible for reviewing CEAP findings as part of project approval. Council has the opportunity to call up projects for their review and approval. For those departments that do not have an advisory board, Planning Board is responsible for reviewing CEAP findings as part of project approval. The following capital improvement projects included in the 2020-2025 CIP were recommended to complete a Community and Environmental Assessment Process (CEAP).

TRANSPORTATION

DOWNTOWN BOULDER TRANSIT STATION IMPROVEMENTS

This project will expand the number of bays along Canyon Boulevard and 14th Street, adjacent to the Downtown Boulder Transit Station. This project is in fulfillment of the Renewed Vision for Transit goals and is funded in part by federal grant funds.

ARAPAHOE MULTI-USE PATH/TRANSIT ENHANCEMENTS

This project will upgrade existing and missing sidewalk sections to multi-use along Arapahoe between Foothills and Cherryvale. It will also enhance existing transit stops and access along the corridor. This project is consistent with the Transportation Master Plan and the East Arapahoe Transportation Plan goals and is funded in part by federal grant funds.

PARKS & RECREATION

VIOLET NEIGHBORHOOD PARK

This project will provide capital funding to implement enhancements at Violet Park in north Boulder that need to be realized to meet service levels of surrounding neighborhoods. In 2022, funding is provided to finalize the design of the undeveloped portions of Violet Park that have been a priority for several years.

EAST MAPLETON BALLFIELD RENOVATIONS

As a result of the implementation of the Boulder Junction area along 30th street near Mapleton, the area has increased in residential units resulting in more demand for community park and recreation amenities such as playgrounds, dog parks, open lawn areas and other multi-use amenities. A community planning project will be completed to determine the final design and priorities for construction. Any reduction in ballfields will be replaced at other sports complexes as indicated in the department's Athletic Field Study completed in 2015.

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