

Funding Overview

Each of the city's three utility funds is established as a separate enterprise fund designed to finance and account for each utility's facilities and services. Funding for the Utilities Division capital improvement program is derived primarily from monthly utility fees. The 2013–2018 Capital Improvement Program (CIP) was developed using the following proposed 2013 revenue increases from monthly utility fees:

- Water – 3%
- Wastewater – 5%
- Stormwater/ Flood Management – 3%

It is anticipated that these rate increases will result in a typical residential customer's annual utility bill increasing by \$29.00. Any revenue increases for 2013 will be reviewed by the Water Resources Advisory Board and considered by City Council. Approval of revenue increases that are different from what is listed above may impact the 2013–2018 CIP.

In addition to the monthly utility fees, significant revenue sources include Plant Investment Fees (PIFs) from new development or redevelopment and hydroelectric sales to Xcel Energy. Sales from monthly utility fees can be variable and reflect the overall growth of the service area and yearly weather fluctuations.

Other revenue sources include reimbursements from the Urban Drainage & Flood Control District (UDFCD, this is for stormwater/ flood management projects), Colorado Department of Transportation (CDOT) state and federal grants, and revolving loans from the Colorado Department of Public Health and Environment (none anticipated at this time). These revenues are project specific and are highly variable depending on the external agency's funding situation and priorities. Currently, the following projects are anticipated to qualify for such revenues:

- Pre-Flood Acquisition
- Wonderland Creek
- Fourmile Canyon Creek
- South Boulder Creek

If the above mentioned funds are insufficient, projects may be funded by issuing revenue bonds



75th Street Wastewater Treatment Plant



with the debt service financed by general utility charges. For the years 2013–2018, it is anticipated that new bonds will be issued for the following projects:

Water

- Betasso Water Treatment Plant Improvements (\$11.6 million in 2016) to fund improvements to the Betasso WTP to assure compliance with federal Safe Drinking Water Act regulations.
- Barker Dam Improvements (\$11.3 million in 2018) to fund repairs to the outlet works and construct a new hydroelectric facility
- Carter Lake Pipeline (\$27.4 million in 2018)



Construction of Barker Dam, 1910 by the Eastern Colorado Power Company. Photo courtesy the Carnegie Branch Library for Local History.

Stormwater and Flood Management

- South Boulder Creek Improvements (\$4.5 million in 2015) to fund improvements designed to mitigate flood hazards in the South Boulder Creek West Valley area.

Figure 12–1: Existing and Planned Utility Infrastructure Financed by Debt

Utility	Projects	Year Debt is Retired	Approximate Annual Debt Payment
Water	Boulder Reservoir WTP Imp	2016	\$ 858,000
	Multiple Projects including Silver Lake Pipeline, Barker Purchase	2019	\$ 2,522,000
	Lakewood Pipeline	2021	\$ 2,066,000
	<i>Betasso WTP Imp. (2016)*</i>	2035	\$ 1,125,000
	<i>Barker Dam Improvements (2018)</i>	2037	\$ 1,046,000
	<i>Carter Lake Pipeline (2018)</i>	2037	\$ 2,508,000
Wastewater	Marshall Landfill	2012	\$ 170,000
	WWTP Improvements	2025	\$ 3,500,000
	WWTP Improvements	2030	\$ 674,000
Storm/Flood	Multiple projects including Goose Creek Improvements	2018	\$ 385,000
	<i>South Boulder Creek Imp. (2015)</i>	2035	\$ 437,000

**Gray boxes are for anticipated, but not yet issued bonds.*

The water utility also pays a portion of the Northern Colorado Water Conservancy District’s debt related to the Windy Gap project. This debt will be retired in 2017 and Boulder’s annual debt payment is approximately \$1,650,000.



Accomplishments and Highlights

Water Utility

- The Water Utility Master Plan (WUMP) was completed and accepted by City Council in September 2011. The plan updates the Treated Water Master Plan (2000) and general planning information and population projections. The WUMP pulls together all of the previously separate master plans for different aspects of the city's Water Utility. Completion of the WUMP represents a major planning milestone for the Utilities Division.
- Almost 10,000 feet of old deteriorated water pipe was replaced. Pipe is being systematically replaced based on information from the asset management system that tracks factors such as pipe age, material, break history, type of break, diameter, system pressure and soil type.
- The roof of the Chautauqua Water Storage Tank was replaced and work completed in April 2012.
- A construction contract for the Boulder Canyon Hydroelectric Modernization Project was executed in 2011 and work is underway with project completion anticipated in the 3rd quarter 2012.
- A construction contract for remediation work at Kossler Reservoir was executed in 2011 and work is underway with project completion anticipated in the 2nd quarter of 2012.

Wastewater Utility

- The city is currently engaged in a major rehabilitation/improvement project at the 75th St. Wastewater Treatment Facility (WWTF). The project will replace the existing chlorine disinfection system with an ultraviolet (UV) disinfection system, improve the biosolids digesters, and upgrade the headworks. The project is expected to be completed in April 2013.
- A new discharge permit was issued to the City by the State of Colorado in May 2011 and includes some new more restrictive effluent limits for various water quality parameters. City staff commissioned an engineering analysis called the Nutrient Compliance Study (NCS) in early 2012 to determine the need for capital improvements due to the new permit limits. For more information and next steps, see the highlights section below.
- Certification information concerning the existing flood levee protecting the WWTF was submitted to the Federal Emergency Management Agency (FEMA) in late 2011. The information is intended to be sufficient for FEMA to accredit the levee.
- Analysis and recommendations for improvements to the city's IBM Pump Station were completed. This study included an analysis of the pumps and wetwell capacity, the rags removal system, as well as structural, mechanical, and electrical physical inspections. For more information and next steps, see the highlights section below.



Highlights of 2013–2018 Projects

Water

- Annual funding for waterline replacement continues at a rate of \$2,100,000 in 2012 dollars. This should be sufficient to maintain the current service level, as defined by water main breaks, over the next decade. However, in 2013 total funding of \$3,000,000 is proposed in order to provide for the replacement of additional waterlines located in residential streets scheduled to be reconstructed by the city's Transportation Division as part of the recently approved Capital Investment Bond Program. Completing water main replacement just ahead of street resurfacing results in significant savings since pavement restoration costs can be eliminated. Coordination also reduces the risk that the useful life of a newly reconstructed street will be impacted by a main break.
- It is recommended that the city continue its annual maintenance program of the Barker Gravity Line by prioritizing pipeline repair projects based on the most critical needs, providing enough earthen cover to protect the pipeline, and anchoring the pipeline in areas prone to landslides. Replacement or lining of pipe sections are options that may be used in different parts of the pipeline.
- It is recommended that capital funding be allocated in the 2015–2016 time period to address issues related to aging equipment at the Betasso Water Treatment Facility.
- The Carter Lake Pipeline is scheduled to begin design work in 2017, and is considered the best long-term solution to water quality, operational and security vulnerability issues related to drawing water directly from either the Boulder Feeder Canal or Boulder Reservoir.
- The Barker Dam outlet facilities are over 100-years old and in need of significant rehabilitation. Design work for this project will begin in 2017.
- The timeline associated with the lining of Wittemyer Ponds has been accelerated due to Denver Water's planned enlargement of Gross Reservoir.

Wastewater;

- Funding for the annual Sanitary Sewer Rehabilitation projects continues at of rate of \$500,000 in 2013 escalating at 4% annually to over \$600,000 in 2018.
- In March 2011 the city received a new discharge permit for the 75th Street wastewater treatment facility (WWTF) with an effective date of May 1, 2011. The city was successful in negotiating an extended schedule which requires compliance by December 1, 2017.
- Nutrient Criteria, specifically Regulation #85 and Regulation #31, were adopted by the Colorado Department of Public Health and Environment (CDPHE) in March 2012. The criteria will pose serious treatment challenges for the WWTF and will undoubtedly cause significant financial impacts. Approximately \$13.5 million of funding has been allocated in 2020 (outside of this year's budget planning horizon) to address Regulation #85. Regulation #31 contains much more stringent provisions and, if fully promulgated,

Utilities

estimated improvement costs are in excess of \$100 million. Funding for this regulation would be needed beginning in 2027.

- A comprehensive list of WWTF rehabilitation projects has been identified in the 20-year CIP based on staff input, engineering studies and the asset management database. For the current 6-year CIP, funding for the rehabilitation projects has been allocated to various WWTF components as shown in the detailed CIP list.
- The CDPHE is requiring that the city provide overflow protection at the IBM Pump (Lift) Station. Additional funding is recommended in 2013 to address this and other issues related to this aging facility.

Stormwater and Flood Management

- The Wonderland Creek Greenways Improvement Project is proposed to implement flood mitigation measures along Wonderland Creek from just upstream of Iris Avenue to Foothills Parkway and extend the multi-use trail from Foothills Parkway to the intersection of Iris Avenue and 30th Street.
- TIP funding was granted in early 2012 for the Wonderland Creek at 28th Street project in the amount of \$900,000. Total project cost is estimated to be \$4–\$5 million.
- A project along Fourmile Canyon Creek includes 100 year flood mitigation at 19th Street, multi-use path and an emergency access connection from 19th Street to Tamarack. Total estimated cost is \$1.4 million.
- Funding has been allocated for the mitigation of South Boulder Creek flood hazards in 2015.

Funding is recommended in 2013 to increase the capacity of Boulder Slough along the north side of Pearl Street. This project would be performed in conjunction with the Transportation Division project – Pearl Parkway Multi-Use Path: 30th to Foothills.

Relationship to Guiding Principles

The proposed Utilities Division CIP is consistent with these guiding principles in that 1) all projects (except those noted below) have been identified and prioritized through Council accepted master plans 2) capital improvements are designed to achieve community sustainability goals, 3) funds to operate and maintain the project or program have been identified, 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs (except for the WWTP permit issue identified below, 5) the maintenance and enhancement of city-wide business systems is captured elsewhere in the CIP, 6) projects sustain or improve maintenance of existing assets before investing in new assets, 7) project have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency, 8) capital projects have been screened through a cost/benefit analysis, 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.



The projects identified in the 2012–2017 CIP are intended to implement these guiding principles and are consistent with the department master plans identified below.

In 2002 it was decided to develop an overarching master plan for each of the City’s three utilities. More detailed plans have been developed for major functional areas. Recent master plans include recommendations for CIP projects over a 20–year time period. The project recommendations consider the prioritization listed below as well as information from the Utilities Division asset management system. This system includes replacement cost, useful life and condition rating which have been documented for each significant utility asset. This information informs the six–year CIP.

Current Utilities Division master plans include:

Water

- Source Water Master Plan – 2009
- Treated Water Master Plan (TWMP) – 2011
- Water Utility Master Plan (WUMP) – 2011.

Wastewater

- Wastewater Collection System Master Plan – 2010
- Wastewater Utility Master Plan – 2010.

Stormwater/ Flood Management

- Stormwater Master Plan –2007
- Comprehensive Flood and Stormwater (CFS) Master Plan – 2004.

Prioritization

The overall program and funding priorities are reflected in the timing of projects over the six–year CIP time period. In addition to master plan recommendations, the following factors were considered in determining the overall program and funding priorities:

Water and Wastewater

- Reliability of water and wastewater collection, delivery and treatment
- Water quality and other environmental regulations
- Worker health and safety
- Opportunity to collaborate with other city projects, such as transportation
- Opportunity to collaborate with other utility providers to leverage funds or obtain federal or state grants
- Potential for operation and maintenance cost savings
- Accommodating new growth and development.



Stormwater and Flood Management

- Life safety (high hazard) mitigation
- Flood emergency response capability
- Critical facility (vulnerable population) hazard mitigation
- Property damage mitigation
- Collaboration with other Greenways Program Objectives
- Potential for operation and maintenance cost savings
- Accommodating new growth and development.

Within current appropriations all projects proposed have sufficient funds for ongoing operations and maintenance, and 90% of the Water Utility and Wastewater Utility projects are focused on maintaining or improving existing assets. Other Water and Wastewater Utility projects are intended to construct facilities required to comply with new regulations. In the Stormwater and Flood Management Utility, the majority of the project funding is focused on life safety and critical facility hazard mitigation issues.

Projects Not in Master Plans

There is only one project that is not currently identified in a Council approved master plan – the Boulder Slough flood mitigation project. This project was recently identified based on 1) updated analysis and mapping of Boulder Slough and 2) ability to collaborate with the Transportation Division East Pearl St. improvement project. Funding is recommended in 2013 based primarily on the ability to leverage funds with the Transportation Division. This project will be highlighted during the public hearings with WRAB, Planning Board and City Council to confirm its priority and recommended funding.

New Projects

The following new projects have been identified in the 6-year CIP:

Water

- Construction of Pearl Street Hydroelectric / Pressure Reducing Facility
- Security improvements at Lakewood Dam
- Lining of Wittemyer Ponds
- Construction of Carter Lake Hydroelectric facilities.

Wastewater

None.

Stormwater/ Flood Management

- Improvements to Four Mile Canyon Creek – Upland to Violet
- Construction of increased capacity at the Boulder Slough.



Deferred, Eliminated, or Changed Projects

Funding for several projects has been deferred beyond the current six-year CIP period or reduced during the current six-year CIP period because of revenue limitations and construction costs inflation.

Projects that have been delayed due to budget limitations include:

Water

- Carter Lake Pipeline (funding delayed, begin design in 2017)
- Carter Lake Hydroelectric (funding delayed, begin design in 2018)
- Barker Dam Outlet (funding delayed, begin design in 2017)
- Barker Dam Hydro (funding delayed, begin design in 2017).

Wastewater

- Improvements in the “Goose Creek 5 Master Plan Project” basin (funding delayed, begin planning in 2017).

Stormwater/ Flood Management

- Upper Goose Creek Drainage (funding reduced).

It should be noted that the proposed CIP assumes funding for the replacement/rehabilitation of existing Utilities assets at a level of 75% of the predicted rate based on a recent asset management analysis. Staff believes this will be adequate and sustainable since renewal and rehabilitation techniques and approaches can be accomplished at a lower cost than complete replacement.

The proposed CIP budget should be adequate to address essential projects within the six-year planning time frame. The delays in the projects listed above are not expected to have a significant negative effect on the service level of the city’s utilities systems. Therefore there are no unfunded needs identified within the 6-year CIP.

However, to continue to meet capital project needs, including the recommended asset replacement goals of 60–75% and compliance with permit regulations, higher utility rate increases will be needed in the near future as indicated in the following table. The preliminary 2013 increases are in bold.

Utility	2012	2013	2014	2015
Water	3%	3%	4%	4%
Wastewater	3%	5%	5%	5%
Stormwater/Flood Management	3%	3%	3%	3%

Staff will continue to monitor and refine the asset replacement analysis and adjust the actual replacement rate within the 60–75 percent range as part of the annual budget process. Asset re-

Utilities



placement at 75 percent of the predicted level has been used to formulate the 2013–2018 CIP budget.

Unfunded Projects and Emerging Needs

Construction Cost Inflation

Construction cost inflation is tracked using the Engineering News Record (ENR) Cost Index for Denver and the Colorado Department of Transportation (CDOT) Colorado Construction Cost Index. The ENR index is a composite index based on costs for: 1) local portland cement, 2) local 2x4 lumber, 3) national structural steel, and 4) local union wages plus fringes for carpenters, bricklayers and iron workers. The CDOT index is a composite index based on costs for 1) unclassified excavation, 2) hot bituminous pavement 3) concrete pavement, 4) structural steel and 5) reinforcing steel. The ENR index is more reflective of equipment and building construction such as projects that occur at the treatment plants. The Colorado Construction Cost Index is more reflective of heavy civil construction such as roadway and major drainageway work. The following table presents information concerning these indices through December 2011:

Index	2011 Change	Running Average Yearly Change	
		5 years	10 years
ENR Construction Cost Index for Denver	8%	4%	5%
CDOT Colorado Construction Cost Index	7%	2%	9%

Based on this information it is recommended that capital improvement construction costs be escalated at a rate of 4% during the planning period. This is an increase from the 3% construction cost inflation rate estimated in previous annual budgeting processes.

Emerging Needs

Emerging needs have been identified as part of the recent Water Utility Master Plan. During the development of this master plan, a technical analysis was performed regarding the city's water treatment facilities and other infrastructure. The analysis indicates that this infrastructure should be adequate to meet water demand needs well into the future with little need for capacity expansion. However, a comprehensive analysis of existing assets pointed to the poor condition and aging of some mechanical and electrical equipment at the Betasso WTF. The Betasso WTF is the city's primary water treatment facility and has deteriorated during almost 50 years of continuous operation despite on-going maintenance and rehabilitation. These issues, combined with inherent deficiencies in certain treatment process, are the reasons that large capital funding is recommended in 2015–2016.

Regulatory changes are another source of uncertainty and create emerging needs. For example, as



explained in the Accomplishments and Highlights section of this memo, the city received a new discharge permit for the 75th Street WWT in 2011 with new effluent limits. Complying with these limits will require a combination of regulatory negotiations, environmental studies and WWTF capital improvements.

2013–2018 Funding Summary By Department

PUBLIC WORKS - STORMWATER AND FLOOD MANAGEMENT UTILITY

	Estimated Total Cost	2013 Recommended	2014 Projected	2015 Projected	2016 Projected	2017 Projected	2018 Projected	2013 - 2018 Total	Previously Allocated Funding	Unfunded Amount
Existing Facility - Enhancements / Upgrades										
Boulder Slough	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ -
Stormwater Quality Improvements	331,649	50,000	52,000	54,080	56,243	58,493	60,833	331,649	-	-
Transportation Coordination	-	250,000	260,000	270,400	281,216	292,465	304,163	1,658,244	-	-
Tributary Greenways Program - Stormwater & Flood	-	97,500	97,500	97,500	97,500	97,500	97,500	585,000	525,122	-
Wonderland Creek - Foothills to 30th Street	6,000,000	500,000	1,200,000	-	-	-	-	1,700,000	3,224,000	-
Wonderland Creek at 28th Street	5,465,000	1,350,000	2,050,000	1,500,000	-	-	-	4,900,000	-	-
South Boulder Creek Flood Mitigation	40,000,000	-	-	5,575,000	-	-	-	5,575,000	300,000	34,125,000
Upper Goose Creek Drainage	16,671,840	-	-	175,000	750,000	750,000	750,000	2,425,000	-	14,246,840
Fourmile Canyon Creek - Upland to Violet	3,500,000	-	-	-	1,000,000	1,000,000	500,000	2,500,000	-	200,000
Utility Billing Computer System Replacement	-	-	-	-	-	250,000	-	250,000	-	-
Subtotal	\$ 72,468,489	\$ 2,747,500	\$ 3,659,500	\$ 7,671,980	\$ 2,184,959	\$ 2,448,458	\$ 1,712,496	\$ 20,424,893	\$ 4,049,122	\$ 48,571,840
Existing Facility - Rehab / Repair / Deficiency Correction										
Storm Sewer Rehabilitation	\$ -	\$ 100,000	\$ 260,000	\$ 270,400	\$ 281,216	\$ 292,465	\$ 304,163	\$ 1,508,244	\$ -	\$ -
Subtotal	\$ -	\$ 100,000	\$ 260,000	\$ 270,400	\$ 281,216	\$ 292,465	\$ 304,163	\$ 1,508,244	\$ -	\$ -
Land Acquisition										
Preflood Property Acquisition	\$ -	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 550,000	\$ 600,000	\$ 3,150,000	\$ -	\$ -
Subtotal	\$ -	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 550,000	\$ 600,000	\$ 3,150,000	\$ -	\$ -
Total	\$ 72,468,489	\$ 3,347,500	\$ 4,419,500	\$ 8,442,380	\$ 2,966,175	\$ 3,290,923	\$ 2,616,659	\$ 25,083,137	\$ 4,049,122	\$ 48,571,840

2013–2018 Funding Summary By Department

PUBLIC WORKS - WASTEWATER UTILITY

	Estimated Total Cost	2013 Recommended	2014 Projected	2015 Projected	2016 Projected	2017 Projected	2018 Projected	2013 - 2018 Total	Previously Allocated Funding	Unfunded Amount
Existing Facility - Enhancements / Upgrades										
Utility Billing Computer System Replacement	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -
Subtotal	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -
Existing Facility - Rehab / Repair / Deficiency Correction										
Sanitary Sewer Manhole Rehabilitation	\$ 663,297	\$ 100,000	\$ 104,000	\$ 108,160	\$ 112,486	\$ 116,986	\$ 121,665	\$ 663,297	\$ -	\$ -
Sanitary Sewer Rehabilitation	3,316,487	500,000	520,000	540,800	562,432	584,929	608,326	3,316,487	-	-
WWTP Cogeneration	150,000	150,000	-	-	-	-	-	150,000	-	-
Biosolids Processing and Dewatering	1,150,000	-	150,000	1,000,000	-	-	-	1,150,000	-	-
WWTP Electrical	980,000	-	100,000	-	80,000	800,000	-	980,000	-	-
WWTP Pumps	450,000	-	150,000	-	150,000	-	-	300,000	150,000	-
WWTP Laboratory	100,000	-	-	50,000	-	-	-	50,000	50,000	-
Marshall Landfill	100,000	-	-	-	100,000	-	-	100,000	-	-
Collection System Monitoring	58,493	-	-	-	-	58,493	-	58,493	-	-
Tier 1 Goose Creek 5 Master Plan Project	3,289,851	-	-	-	-	25,000	622,683	647,683	-	2,642,168
WWTP Activated Sludge	182,498	-	-	-	-	182,498	-	182,498	-	-
Subtotal	\$ 10,440,626	\$ 750,000	\$ 1,024,000	\$ 1,698,960	\$ 1,004,918	\$ 1,767,906	\$ 1,352,674	\$ 7,598,458	\$ 200,000	\$ 2,642,168
New Construction - Growth Related Facility / Additions										
IBM Pump Station	\$ 1,050,000	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ 550,000	\$ -
Subtotal	\$ 1,050,000	\$ 500,000	\$ -	\$ 500,000	\$ 550,000	\$ -				
New Construction - Not Growth Related										
WWTP Permit Improvements	\$ 3,680,869	\$ 200,000	\$ 150,000	\$ 1,500,000	\$ 112,486	\$ 253,064	\$ 1,265,319	\$ 3,480,869	\$ 200,000	\$ -
Subtotal	\$ 3,680,869	\$ 200,000	\$ 150,000	\$ 1,500,000	\$ 112,486	\$ 253,064	\$ 1,265,319	\$ 3,480,869	\$ 200,000	\$ -
Total	\$ 15,421,495	\$ 1,450,000	\$ 1,174,000	\$ 3,198,960	\$ 1,117,404	\$ 2,270,970	\$ 2,617,993	\$ 11,829,327	\$ 950,000	\$ -

2013–2018 Funding Summary By Department

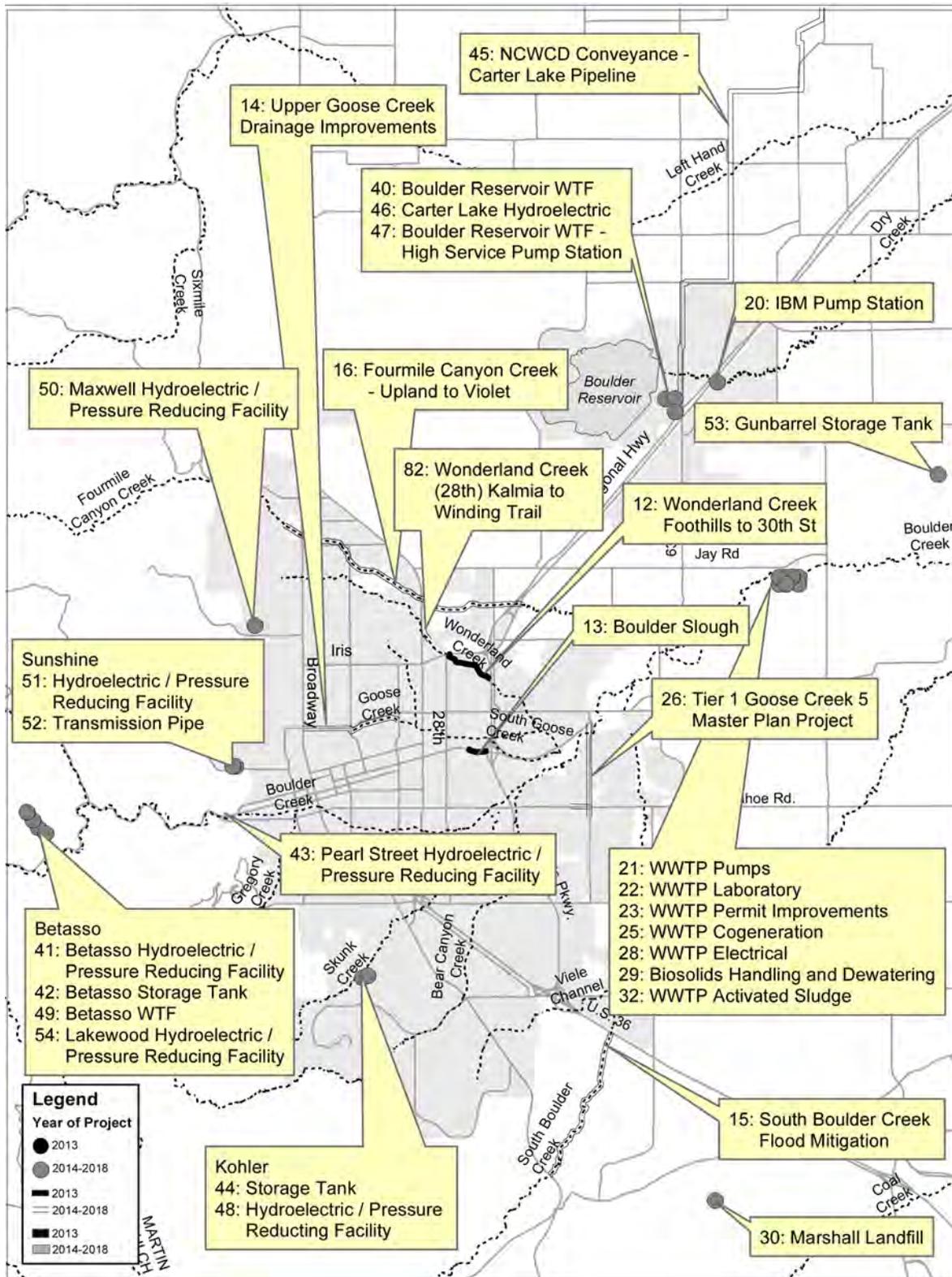
PUBLIC WORKS - WATER UTILITY

	Estimated Total Cost	2013 Recommended	2014 Projected	2015 Projected	2016 Projected	2017 Projected	2018 Projected	2013 - 2018 Total	Previously Allocated Funding	Unfunded Amount
Existing Facility - Enhancements / Upgrades										
Automated Meter Reading	\$ -	\$ 450,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 450,000	\$ -	\$ -
Sunshine Transmission Pipe	800,000	800,000	-	-	-	-	-	800,000	-	-
Utility Billing Computer System Replacement	528,771	-	-	-	-	500,000	-	500,000	28,771	-
Pearl Street Hydroelectric / Pressure Reducing Facility	267,664	-	-	-	-	-	24,333	24,333	-	243,331
Subtotal	\$ 1,596,435	\$ 1,250,000	\$ -	\$ -	\$ -	\$ 500,000	\$ 24,333	\$ 1,774,333	\$ 28,771	\$ 243,331
Existing Facility - Rehab / Repair / Deficiency										
Barker Gravity Pipeline Repair	\$ -	\$ 350,000	\$ 364,000	\$ 378,560	\$ 667,416	\$ 595,911	\$ 619,748	\$ 2,975,635	\$ -	\$ -
Betasso WTF	17,470,903	200,000	100,000	1,549,628	15,621,275	-	-	17,470,903	-	-
Boulder Reservoir WTF High Service Pump Station	162,800	112,800	-	-	-	-	-	112,800	50,000	-
Green Lake 2 Dam	4,835,130	75,000	-	-	-	-	432,739	507,739	-	4,327,391
Gunbarrel Storage Tank	265,798	265,798	-	-	-	-	-	265,798	-	-
Kohler Hydroelectric / Pressure Reducing Facility	50,000	50,000	-	-	-	-	-	50,000	-	-
Maxwell Hydroelectric / Pressure Reducing Facility	50,000	50,000	-	-	-	-	-	50,000	-	-
Waterline Replacement	14,829,248	3,000,000	2,184,000	2,271,360	2,362,214	2,456,703	2,554,971	14,829,248	-	-
Lakewood Hydroelectric / Pressure Reducing Facility	100,000	-	100,000	-	-	-	-	100,000	-	-
Lakewood Pipeline	260,000	-	260,000	-	-	-	-	260,000	-	-
Albion Dam	4,477,446	-	-	81,120	-	-	-	81,120	-	4,396,326
Barker Dam and Reservoir	498,560	-	-	378,560	-	-	-	378,560	120,000	-
Kohler Storage Tank	1,138,362	-	-	103,487	1,034,875	-	-	1,138,362	-	-
Watershed Improvements	371,620	-	-	81,120	-	-	-	81,120	290,500	-
Barker Dam Outlet	8,572,652	-	-	-	75,000	772,514	7,725,138	8,572,652	-	-
Betasso Hydroelectric / Pressure Reducing Facility	100,000	-	-	-	100,000	-	-	100,000	-	-
Barker-Kossler Penstock Repair	291,986	-	-	-	-	116,986	-	116,986	175,000	-
Betasso Storage Tank	292,465	-	-	-	-	292,465	-	292,465	-	-
Sunshine Hydroelectric / Pressure Reducing Station	271,875	-	-	-	-	271,875	-	271,875	-	-
Witemyer Ponds	5,110,663	-	-	-	-	100,000	455,515	555,515	-	4,555,148
Lakewood Dam	124,707	-	-	-	-	-	124,707	124,707	-	-
Subtotal	\$ 59,274,215	\$ 4,103,598	\$ 3,008,000	\$ 4,843,835	\$ 19,860,780	\$ 4,606,454	\$ 11,912,818	\$ 48,335,485	\$ 635,500	\$ 13,278,865
New Construction - Not Growth Related										
Barker Dam Hydroelectric	\$ 4,024,805	\$ -	\$ -	\$ -	\$ 50,000	\$ 361,346	\$ 3,613,459	\$ 4,024,805	\$ -	\$ -
NCWCD Conveyance - Carter Lake Pipeline	31,201,614	-	-	-	100,000	2,737,469	27,374,690	30,212,159	989,455	-
Carter Lake Hydroelectric	2,800,000	-	-	-	-	50,000	250,000	300,000	-	2,500,000
Subtotal	\$ 38,026,419	\$ -	\$ -	\$ -	\$ 150,000	\$ 3,148,815	\$ 31,238,149	\$ 34,536,964	\$ 989,455	\$ 2,500,000
On-Going Projects										
Boulder Reservoir WTF	\$ -	\$ 116,000	\$ 82,000	\$ -	\$ 164,000	\$ -	\$ -	\$ 362,000	\$ -	\$ -
Subtotal	\$ -	\$ 116,000	\$ 82,000	\$ -	\$ 164,000	\$ -	\$ -	\$ 362,000	\$ -	\$ -
Total	\$ 98,897,069	\$ 5,469,598	\$ 3,090,000	\$ 4,843,835	\$ 20,174,780	\$ 8,255,269	\$ 43,175,300	\$ 85,008,782	\$ 1,653,726	\$ 16,022,196



Capital Improvements Program 2013 — 2018

Public Works/Water, Wastewater, Stormwater and Flood Utilities



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Project Name: Boulder Slough

Project at a Glance

Project Type:	Existing Facility – Enhancements / Upgrades		
Department:	PW/ Stormwater and Floo	Subcommunity:	Crossroads
Funding Source:	Stormwater & Flood Man	BVCPArea:	Area I
Project Number:	431016	Map Number:	13
CEAP Required:	Yes	CEAP Status:	No

Project Description

This project provides funds to increase the conveyance capacity of Boulder Slough along the north side of Pearl Street west of Foothills Parkway in conjunction with the Transportation Division project – Pearl Parkway Multi-Use Path: 30th to Foothills. This project was recently identified based on 1) updated analysis and mapping of Boulder Slough and 2) ability to collaborate with the Transportation Division East Pearl St. improvement project. Funding is recommended in 2013 based primarily on the ability to leverage funds with the Transportation Division.

This project will begin in 2013.

Costs:

1. Planning: \$ 50,000
2. Land Acquisition: \$
3. Construction: \$ 450,000

The project is anticipated to complete construction in 2014.

Relationship to Guiding Principles

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

Public process and issues will be managed by the Transportation Division as part of the project – Pearl Parkway Multi-Use Path: 30th to Foothills. The CEAP has been initiated and is anticipated to be completed in 2012.

Relationship with Other Departments

Transportation Division

Change from Past CIP

New project and funding



Boulder Slough continued

Estimated Total Cost

Project Cost

Project Cost \$500,000

Total Project Cost \$500,000

Unfunded Amount

Unfunded Amount

Project Cost Total \$500,000

Funding Total (\$500,000)

Total Unfunded \$0

Capital Funding Plan

Funding Prior to 2013 \$0

Six Year Funding Plan

2013 \$500,000

2014 \$0

2015 \$0

2016 \$0

2017 \$0

2018 \$0

Subtotal \$500,000

Total Funding Plan \$500,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Fourmile Canyon Creek – Upland to Violet

Project at a Glance

Project Type:	Existing Facility – Enhancements / Upgrades		
Department:	PW/ Stormwater and Floo	Subcommunity:	North Boulder
Funding Source:	Stormwater & Flood Man	BVCPArea:	Area I
Project Number:	431729	Map Number:	16
CEAP Required:	Yes	CEAP Status:	No

Project Description

Project includes improvements to Fourmile Canyon Creek from Upland to Violet, flood mitigation, environmental restoration and off-street trail connections. These improvements will be done in conjunction with Greenways, Transportation Division and the Parks Department.

There is \$2,500,000 from flood and \$811,323 from Greenways shown in the CIP in 2016-2018 for improvements along Fourmile between Upland and Violet. Based on very conceptual plans, this project is estimated to cost approximately \$3.5 million

- 1. Planning: \$900,000 (2012-2016)
- 2. Acquisition: \$600,000 (2012-2016)
- 3. Construction: \$2,000,000 (2018-2019)

The project is anticipated to be completed in 2019.

Relationship to Guiding Principles

This project was recommended by the Fourmile Canyon Creek Flood Mitigation Study, the Greenways Master Plan.

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

Flood mitigation planning was completed in 2009. A CEAP will be completed for each project.

Relationship with Other Departments



Fourmile Canyon Creek – Upland to Violet continued

All work along the Greenways is coordinated through the Greenways staff group that includes representatives from the Open Space Department, Parks and Recreation Department, Planning Department and Transportation and Utilities Divisions.

Change from Past CIP

New project

Estimated Total Cost

Unfunded Amount

Project Cost

Unfunded Amount

Project Cost \$3,500,000

Project Cost Total \$3,500,000

Funding Total (\$2,500,000)

Total Project Cost \$3,500,000

Total Unfunded \$200,000

Capital Funding Plan

Funding Prior to 2013 \$0

Six Year Funding Plan

2013 \$0

2014 \$0

2015 \$0

2016 \$1,000,000

2017 \$1,000,000

2018 \$500,000

Subtotal \$2,500,000

Total Funding Plan \$2,500,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Preflood Property Acquisition

Project at a Glance

Project Type:	Land Acquisition		
Department:	PW/ Stormwater and Floo	Subcommunity:	System-wide
Funding Source:	Stormwater & Flood Man	BVCPArea:	System-wide
Project Number:	431622	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project provides funds for the purchase of properties in areas prone to flooding especially the city's high hazard regulatory area. Properties have been identified and prioritized along each of the city's major drainageways. Property owners have been contacted regarding the city's interest. The majority of properties in the high hazard flood zone are along Boulder Creek, Goose Creek and Fourmile Canyon Creek. The city is currently pursuing purchase of a property at 810 Marine Street, along Gregory Canyon Creek. This property is in the high hazard and flood conveyance zones.

This project is for an ongoing funding program.

Relationship to Guiding Principles

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

Property owners have been contacted regarding the city's interest in purchasing.

Relationship with Other Departments

This project relates to the city's Greenways Program and Transportation Program.

Change from Past CIP

Funding increased to account for anticipated 4% cost inflation



Preflood Property Acquisition continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost		Project Cost Total	
		Funding Total	
Total Project Cost		Total Unfunded	

Capital Funding Plan	
Funding Prior to 2013	
Six Year Funding Plan	
2013	\$500,000
2014	\$500,000
2015	\$500,000
2016	\$500,000
2017	\$550,000
2018	\$600,000
Subtotal	\$3,150,000
Total Funding Plan	

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:
No increase, funded by existing operating budget

**Project Name:** South Boulder Creek Flood Mitigation**Project at a Glance**

Project Type:	Existing Facility – Enhancements / Upgrades		
Department:	PW/ Stormwater and Floo	Subcommunity:	Multiple Subcommunities
Funding Source:	Stormwater & Flood Man	BVCPArea:	System-wide
Project Number:	431202	Map Number:	15
CEAP Required:	Yes	CEAP Status:	No

Project Description

The city completed a remapping study of the South Boulder Creek floodplain in 2007 and a risk assessment in 2009. The revised floodplain now includes approximately 700 structures in the 100-year floodplain, an increase of approximately 240 structures. The risk assessment estimates over \$200 million in damages would result from a 100-year storm event.

The Utilities Division is currently exploring mitigation alternatives, with the focus on mitigating impacts in the West Valley area. Flood mitigation alternatives have been narrowed to five, further refined and a staff recommendation made. The analysis and staff recommendation will be presented to the public, boards and City Council in late 2012 and early 2013. Funding for flood mitigation alternatives analysis began in 2010.

The mitigation alternatives range in cost from \$35 to \$48 million. Funding shown in the CIP is intended as seed money in the hopes of securing outside grants or federal money to complete the selected alternative. The cost of design, property acquisition and construction will be dependent on the final selected alternative.

This project is being coordinated with U.S. 36 improvements.

Relationship to Guiding Principles

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

Evaluation of South Boulder Creek flood issues and associated public process is on-going.

Relationship with Other Departments

Planning Department, Boulder County, University of Colorado, Open Space Department, Boulder Valley School District

Change from Past CIP

Funding for construction delayed one year to refine alternatives.



South Boulder Creek Flood Mitigation continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$40,000,000	Project Cost Total	\$40,000,000
		Funding Total	(\$5,875,000)
Total Project Cost	\$40,000,000	Total Unfunded	\$34,125,000

Capital Funding Plan	
Funding Prior to 2013	\$300,000
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$5,575,000
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$5,575,000
Total Funding Plan	\$5,875,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:
No increase, funded by existing operating budget



Project Name: Storm Sewer Rehabilitation

Project at a Glance

Project Type: Existing Facility – Rehab / Repair / Deficiency Correction
Department: PW/ Stormwater and Floo **Subcommunity:** System-wide
Funding Source: Stormwater & Flood Man **BVCPArea:** System-wide
Project Number: 431760 **Map Number:** 0
CEAP Required: No **CEAP Status:** NA

Project Description

The project provides funds for the rehabilitation of existing storm sewers.

This project is for an ongoing funding program.

In 2013, \$ 100,000 will be spent on the project as described above.

Relationship to Guiding Principles

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

Transportation Division

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Storm Sewer Rehabilitation continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost		Project Cost Total	
		Funding Total	
Total Project Cost		Total Unfunded	

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$100,000
2014	\$260,000
2015	\$270,400
2016	\$281,216
2017	\$292,465
2018	\$304,163

Subtotal \$1,508,244

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Stormwater Quality Improvements

Project at a Glance

Project Type:	Existing Facility – Enhancements / Upgrades		
Department:	PW/ Stormwater and Floo	Subcommunity:	System-wide
Funding Source:	Stormwater & Flood Man	BVCPArea:	System-wide
Project Number:	431775	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will fund stormwater quality projects as identified in the Stormwater Master Plan. This project will improve water quality in Boulder Creek and it's tributaries.

This project is for an ongoing funding program. In 2013, \$ 50,000 will be spent to address stormwater quality issues along Arapahoe Ave.

Relationship to Guiding Principles

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

Transportation Division

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Stormwater Quality Improvements continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$331,649	Project Cost Total	\$331,649
		Funding Total	
Total Project Cost	\$331,649	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$50,000
2014	\$52,000
2015	\$54,080
2016	\$56,243
2017	\$58,493
2018	\$60,833
Subtotal	\$331,649

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:
No increase, funded by existing operating budget



Project Name: Transportation Coordination

Project at a Glance

Project Type: Existing Facility – Enhancements / Upgrades
Department: PW/ Stormwater and Floo **Subcommunity:** System-wide
Funding Source: Stormwater & Flood Man **BVCPArea:** System-wide
Project Number: 431780 **Map Number:** 0
CEAP Required: No **CEAP Status:** NA

Project Description

This project 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. In 2013, \$250,000 will be spent on the project as described above.

Relationship to Guiding Principles

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

Coordination with the City's Transportation Division

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Transportation Coordination continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost		Project Cost Total	
		Funding Total	
Total Project Cost		Total Unfunded	

Capital Funding Plan	
Funding Prior to 2013	
Six Year Funding Plan	
2013	\$250,000
2014	\$260,000
2015	\$270,400
2016	\$281,216
2017	\$292,465
2018	\$304,163
Subtotal	\$1,658,244
Total Funding Plan	

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:
No increase, funded by existing operating budget



Project Name: Tributary Greenways Program – Stormwater & Flood

Project at a Glance

Project Type:	Existing Facility – Enhancements / Upgrades		
Department:	PW/ Stormwater and Floo	Subcommunity:	System-wide
Funding Source:	Stormwater & Flood Man	BVCPArea:	System-wide
Project Number:	431630	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

The program is intended to improve and protect the many riparian corridors that pass through the city. Improvements include pedestrian/bicycle paths, drainage and flood control structures, and preservation and enhancement of natural features. A portion of the capital funding for this program was shifted to needed maintenance of existing system beginning in 2012. See Greenways CIP/Budget section. Project funding is ongoing. This project represents the Utilities Division contribution to the program.

This project is for an ongoing funding program. In 2012, \$ 97,500 will be spent on the project as described above.

Relationship to Guiding Principles

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

The Greenways Program is coordinated with parks, utilities, planning, OSMP

Change from Past CIP



Tributary Greenways Program - Stormwater & Flood continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost		Project Cost Total	
		Funding Total	(\$1,110,122)
Total Project Cost		Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$525,122
Six Year Funding Plan	
2013	\$97,500
2014	\$97,500
2015	\$97,500
2016	\$97,500
2017	\$97,500
2018	\$97,500
Subtotal	\$585,000
Total Funding Plan	\$1,110,122

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:
Decreased funding to move operating expenses of \$52,500 to Operating budget



Project Name: Upper Goose Creek Drainage

Project at a Glance

Project Type: Existing Facility – Enhancements / Upgrades
Department: PW/ Stormwater and Floo **Subcommunity:** Central Boulder
Funding Source: Stormwater & Flood Man **BVCPArea:** Area I
Project Number: 431459 **Map Number:** 14
CEAP Required: Yes **CEAP Status:** No

Project Description

This project will fund the construction of a drainage improvements in the Upper Goose Creek drainage between Broadway and 19th Street. City staff has observed localized flooding in this area. The scope and need for this project has been confirmed by the recently completed Stormwater Master Plan.

This project will begin in 2015.
Costs:

- 1. Planning: \$ 1,070,000
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 10,700,000

The project is anticipated to complete construction in 2028 because of funding limitations.

Relationship to Guiding Principles

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

The public process will be initiated in 2012.

Relationship with Other Departments

Coordination with the City's Transportation Division

Change from Past CIP

Funding reduced in 2016 to accommodate other project needs.



Upper Goose Creek Drainage continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$16,671,840	Project Cost Total	\$16,671,840
		Funding Total	(\$2,425,000)
Total Project Cost	\$16,671,840	Total Unfunded	\$14,246,840

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$175,000
2016	\$750,000
2017	\$750,000
2018	\$750,000
Subtotal	\$2,425,000
Total Funding Plan	\$2,425,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:
No increase, funded by existing operating budget



Project Name: Utility Billing Computer System Replacment

Project at a Glance

Project Type: Existing Facility – Enhancements / Upgrades
Department: PW/ Stormwater and Floo **Subcommunity:** System-wide
Funding Source: Stormwater & Flood Man **BVCPArea:** System-wide
Project Number: 431453 **Map Number:** 0
CEAP Required: No **CEAP Status:**

Project Description

This project is for the replacement of the existing Utility Billing Computer System. Funding of \$250,000 is recommended in year 2017 for this project.

This project will begin in 2017.
Costs:

- 1. Planning: \$ 25,000
- 2. Land Acquisition: \$ 0
- 3. Installation: \$ 225,000

The project is anticipated to complete the installation in 2018.

Relationship to Guiding Principles

This project is consistent with the goals of the wastewater utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) this project will enhance the city's IT and Financial systems through easier, quicker, and more complete billing processing and tracking; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated

Relationship with Other Departments

None

Change from Past CIP



Utility Billing Computer System Replacment continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost		Project Cost Total	
		Funding Total	(\$250,000)
Total Project Cost		Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$250,000
2018	\$0
Subtotal	\$250,000
Total Funding Plan	\$250,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:
No increase, funded by existing operating budget



Project Name: Wonderland Creek – Foothills to 30th Street

Project at a Glance

Project Type:	Existing Facility – Enhancements / Upgrades		
Department:	PW/ Stormwater and Floo	Subcommunity:	Palo Park
Funding Source:	Stormwater & Flood Man	BVCPArea:	Area I
Project Number:	431011	Map Number:	12
CEAP Required:	Yes	CEAP Status:	yes

Project Description

This project will fund flood mitigation improvements along Wonderland Creek. The flood mitigation planning process was completed in 2009, allowing the city to move forward with the implementation of selected flood mitigation projects. The first of these projects will be upstream of Foothills Parkway with a new culvert at the Burlington Northern and Sante Fe Railway and Boulder White Rocks ditch crossings.

The CIP includes funding for the Wonderland Creek Foothills to 30th St project

The Foothills to 30th St. project funding began prior to 2012, with funding for the CEAP. Design and construction will be funded from carry over money from Greenways which totaled \$355,000 and carry over from flood \$3.7 million (including \$660,000 from pre-flood property acquisition) with additional funding of \$2,000,000 in federal transportation funds (outside funding) with the distribution as follows:
1.Planning: \$800,000
2.Acquisition: \$1,500,000
3.Construction: \$3,755,000

All of the fudning shown in 2013 and 2014 is federal TIP funds.

The project is anticipated to be completed in 2016 for an estimated design and construction cost of \$6 million.

Relationship to Guiding Principles

This project is listed in the Greenways Master Plan and the Transportation Master Plan and the Fourmile Canyon Creek and Wonderland Creek Flood Mitigation Plan and the North Boulder Subcommunity Plan.

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

Flood mitigation planning was completed in 2009. A CEAP was completed for this project.

Relationship with Other Departments

This project relates to the City's Greenways Program and Transportation Program

Change from Past CIP



Wonderland Creek – Foothills to 30th Street continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$6,000,000	Project Cost Total	\$6,000,000
		Funding Total	(\$4,924,000)
Total Project Cost	\$6,000,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$3,224,000
Six Year Funding Plan	
2013	\$500,000
2014	\$1,200,000
2015	\$0
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$1,700,000
Total Funding Plan	\$4,924,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$1,000 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:
No increase, funded by existing operating budget

**Project Name:** Wonderland Creek at 28th Street**Project at a Glance**

Project Type:	Existing Facility – Enhancements / Upgrades		
Department:	PW/ Stormwater and Floo	Subcommunity:	Crossroads
Funding Source:	Stormwater & Flood Man	BVCPArea:	Area I
Project Number:	431012	Map Number:	82
CEAP Required:	Yes	CEAP Status:	No

Project Description

Project includes improvements to Wonderland Creek, flood mitigation, environmental restoration and off-street trail connections.

The Wonderland at 28th St (from Kalmia to Winding Trail) will begin with a CEAP and design in 2012. The total project cost is \$5,465,000, with \$565,441 from Greenways and \$4,000,000 from flood and \$900,000 from TIP distributed as follows:

- 1 Planning: \$960,000 (2012–2015)
- 2 Acquisition: \$200,000 (2013–2015)
- 3 Construction: \$4,305,000 (2015–2016)

\$100,000 in 2013 and \$800,000 in 2014 is Federal funding (TIP)

Funding is also shown in the Greenways CIP \$295,000 in 2014 and \$270,441 in 2015

Relationship to Guiding Principles

This project is listed in the Greenways Master Plan and the Transportation Master Plan and the Fourmile Canyon Creek and Wonderland Creek Flood Mitigation Plan and the North Boulder Subcommunity Plan.

This project is consistent with the goals of the Stormwater and Flood Management Utility as articulated in the Boulder Revised Code and the Comprehensive Flood and Stormwater (CFS) Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

The CEAP for this project will be initiated in 2012 and reviewed by the Greenways Advisory Committee.

Relationship with Other Departments

All work along the Greenways is coordinated through the Greenways staff group that includes representatives from the Open Space Department, Parks and Recreation Department, Planning Department and Transportation and Utilities Divisions.

Change from Past CIP

This project was moved up in the CIP as a result of receiving federal TIP funding



Wonderland Creek at 28th Street continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$5,465,000	Project Cost Total	\$5,465,000
		Funding Total	(\$4,900,000)
Total Project Cost	\$5,465,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$1,350,000
2014	\$2,050,000
2015	\$1,500,000
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$4,900,000
Total Funding Plan	\$4,900,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$1,000 **Funding Source:** Stormwater and Flood Management Utility Enterprise Fund

Additional Annual O&M Description:
will be covered by existing maintenance staff



Project Name: Biosolids Processing and Dewatering

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Wastewater Utility	Subcommunity:	Area III
Funding Source:	Wastewater Utility Fund	BVCPArea:	Area III
Project Number:	421670	Map Number:	29
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for rebuilding the biosolids dewatering centrifuges and overhaul equipment associated with gravity thickener No. 1.

This project will begin in 2014.

Costs:

1. Planning: \$ 100,000
2. Land Acquisition: \$ 0
3. Construction: \$ 1,050,000

The project is anticipated to complete construction in 2015.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Biosolids Processing and Dewatering continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$1,150,000	Project Cost Total	\$1,150,000
		Funding Total	(\$1,150,000)
Total Project Cost	\$1,150,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$150,000
2015	\$1,000,000
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$1,150,000
Total Funding Plan	\$1,150,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Collection System Monitoring

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Wastewater Utility	Subcommunity:	System-wide
Funding Source:	Wastewater Utility Fund	BVCPArea:	System-wide
Project Number:	421450	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project provides funds for monitoring of the City's wastewater collection system. This will be accomplished by using temporary flow measuring devices placed in selected manholes. Funds have been allocated to provide flow monitoring every five years beginning in 2012. This project is for an ongoing funding program.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Collection System Monitoring continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$58,493	Project Cost Total	\$58,493
		Funding Total	
Total Project Cost	\$58,493	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$58,493
2018	\$0
Subtotal	\$58,493

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: IBM Pump Station

Project at a Glance

Project Type: New Construction – Growth Related Facility / Additions
Department: PW/ Wastewater Utility **Subcommunity:** Gunbarrel
Funding Source: Wastewater Utility Fund **BVCPArea:** Area I
Project Number: 421521 **Map Number:** 20
CEAP Required: No **CEAP Status:**

Project Description

This project involves providing overflow protection at the IBM lift station per the Colorado Department of Public Health and Environment (CDPHE) regulations. Additional funding is recommended in 2013 to address this and other issues related to this aging facility. An engineering consultant report commissioned in 2011 provides an analysis of the pump station's hydraulic and storage capacity, power redundancy, as well as other rehabilitation issues. Some of the current 2012 funding is being used to complete an inflow and infiltration (I&I) study to attempt to quantify the volume of storm water entering the wastewater collection system during rain events. Following completion of the I&I study some of the 2012 funding will be used for the design of the recommended pump station improvements. The remainder of the 2012 funding and the additional 2013 funding will be used for the construction of the design improvements.

This project will begin in 2011.

Costs:

- 1. Planning: \$ 50,000
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 1,000,000

The project is anticipated to complete construction in 2014.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Additional funding added in 2013



IBM Pump Station continued

Estimated Total Cost

Project Cost

Project Cost \$1,050,000

Total Project Cost \$1,050,000

Unfunded Amount

Unfunded Amount

Project Cost Total \$1,050,000

Funding Total (\$1,050,000)

Total Unfunded \$0

Capital Funding Plan

Funding Prior to 2013 \$550,000

Six Year Funding Plan

2013 \$500,000

2014 \$0

2015 \$0

2016 \$0

2017 \$0

2018 \$0

Subtotal \$500,000

Total Funding Plan \$1,050,000

Additional Annual Operations and Maintenance

Additional Annual O&M: Funding Source: Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Marshall Landfill

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Wastewater Utility	Subcommunity:	Area III
Funding Source:	Wastewater Utility Fund	BVCPArea:	Area III
Project Number:		Map Number:	30
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will fund the decommissioning of the Marshall Landfill Treatment Facility. The facility was originally constructed to eliminate groundwater contamination at the original landfill site. The money will be used for landfill cap maintenance and repair and demolition of the groundwater treatment facility.

Based on EPA approval, the groundwater collection system was shut down on Nov. 30, 2004. The treatment plant and collection system equipment will need to be preserved. In addition, there are approximately 180 sampling and monitoring wells located on the site, many of which are no longer used or necessary. Part of the shutdown process will entail sealing the unnecessary wells in place. This work would be required by the EPA as part of the Superfund site decommissioning process.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Marshall Landfill continued

Estimated Total Cost

Project Cost

Project Cost \$100,000

Total Project Cost \$100,000

Unfunded Amount

Unfunded Amount

Project Cost Total \$100,000

Funding Total (\$100,000)

Total Unfunded \$0

Capital Funding Plan

Funding Prior to 2013 \$0

Six Year Funding Plan

2013 \$0

2014 \$0

2015 \$0

2016 \$100,000

2017 \$0

2018 \$0

Subtotal \$100,000

Total Funding Plan \$100,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Sanitary Sewer Manhole Rehabilitation

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Wastewater Utility	Subcommunity:	System-wide
Funding Source:	Wastewater Utility Fund	BVCPArea:	System-wide
Project Number:	421454	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project provides for the rehabilitation and improvement to the existing wastewater manholes that are part of the city's sewer system. This project is funded at approximately \$100,00 per year.

This project is for an ongoing funding program. In 2012, \$ 100,000 will be spent on the project as described above.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

Trasnportation Division

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Sanitary Sewer Manhole Rehabilitation continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$663,297	Project Cost Total	\$663,297
		Funding Total	
Total Project Cost	\$663,297	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$100,000
2014	\$104,000
2015	\$108,160
2016	\$112,486
2017	\$116,986
2018	\$121,665
Subtotal	\$663,297

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Sanitary Sewer Rehabilitation

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Wastewater Utility	Subcommunity:	System-wide
Funding Source:	Wastewater Utility Fund	BVCPArea:	System-wide
Project Number:	421002	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project provides for the rehabilitation and improvement to the existing collector sewer piping of the City's wastewater collection system.

Funding for the annual Sanitary Sewer Rehabilitation projects continues at of rate of \$500,000 in 2013 escalating at 4% annually to over \$600,000 in 2018. This should be sufficient to maintain the current service level, over the next decade.

This project is for an ongoing funding program.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

Transportation Division

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Sanitary Sewer Rehabilitation continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$3,316,487	Project Cost Total	\$3,316,487
		Funding Total	
Total Project Cost	\$3,316,487	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$500,000
2014	\$520,000
2015	\$540,800
2016	\$562,432
2017	\$584,929
2018	\$608,326
Subtotal	\$3,316,487

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Tier 1 Goose Creek 5 Master Plan Project

Project at a Glance

Project Type: Existing Facility – Rehab / Repair / Deficiency Correction
Department: PW/ Wastewater Utility **Subcommunity:** Central Boulder
Funding Source: Wastewater Utility Fund **BVCPArea:** Area I
Project Number: 421002 **Map Number:** 26
CEAP Required: No **CEAP Status:**

Project Description

This project will provide funds for rehabilitation of the Goose Creek interceptor, which was identified as a Tier 1 rehabilitation project in the 2009 Wastewater Collection System Master Plan (WWCSMP). The 2017 funding is for the evaluation only. The 2018 funding is for the design and part of the construction.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Tier 1 Goose Creek 5 Master Plan Project continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$3,289,851	Project Cost Total	\$3,289,851
		Funding Total	(\$647,683)
Total Project Cost	\$3,289,851	Total Unfunded	\$2,642,168

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$25,000
2018	\$622,683
Subtotal	\$647,683
Total Funding Plan	\$647,683

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Utility Billing Computer System Replacement

Project at a Glance

Project Type: Existing Facility – Enhancements / Upgrades
Department: PW/ Wastewater Utility **Subcommunity:** System-wide
Funding Source: Wastewater Utility Fund **BVCP Area:** System-wide
Project Number: 421453 **Map Number:** 0
CEAP Required: No **CEAP Status:**

Project Description

This project is for the replacement of the existing Utility Billing Computer System. Funding of \$250,000 is recommended in year 2017 for this project.

This project will begin in 2017.
Costs:

- 1. Planning: \$ 25,000
- 2. Land Acquisition: \$ 0
- 3. Installation: \$ 225,000

The project is anticipated to complete the installation in 2018.

Relationship to Guiding Principles

This project is consistent with the goals of the wastewater utility as articulated in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) this project will enhance the city's IT and Financial systems through easier, quicker, and more complete billing processing and tracking; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Utility Billing Computer System Replacement continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$250,000	Project Cost Total	\$250,000
		Funding Total	
Total Project Cost	\$250,000	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$250,000
2018	\$0
Subtotal	\$250,000

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: WWTP Activated Sludge

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Wastewater Utility	Subcommunity:	Area III
Funding Source:	Wastewater Utility Fund	BVCPArea:	Area III
Project Number:	421357	Map Number:	32
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will fund the rehabilitation of part of the existing activated sludge facilities at the 75th Street WWTP. The 2017 funding is to provide maintenance on the three Turblex blowers which provide the air to the aeration basins.

This project will begin in 2017.
Costs:

1. Planning: \$ 0
2. Land Acquisition: \$ 0
3. Construction: \$ 182,498

The project is anticipated to complete construction in 2017.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding eliminated in 2012 and added in 2017



WWTP Activated Sludge continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$182,498	Project Cost Total	\$182,498
		Funding Total	
Total Project Cost	\$182,498	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$182,498
2018	\$0
Subtotal	\$182,498

Total Funding Plan \$182,498

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: WWTP Cogeneration

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Wastewater Utility	Subcommunity:	Area III
Funding Source:	Wastewater Utility Fund	BVCPArea:	Area III
Project Number:	421329	Map Number:	25
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will fund rehabilitation of the cogeneration (generation of electricity and heat from methane gas produced by the anaerobic digesters) facilities at the 75th Street WWTP. The 2013 funding is for a major overhaul of the co-gen engines that occurs every seven years.

This project will begin in 2013.

Costs:

1. Planning: \$ 0
2. Land Acquisition: \$ 0
3. Construction: \$ 150,000

The project is anticipated to complete construction in 2015.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



WWTP Cogeneration continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$150,000	Project Cost Total	\$150,000
		Funding Total	(\$150,000)
Total Project Cost	\$150,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$150,000
2014	\$0
2015	\$0
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$150,000
Total Funding Plan	\$150,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: WWTP Electrical

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Wastewater Utility	Subcommunity:	Area III
Funding Source:	Wastewater Utility Fund	BVCPArea:	Area III
Project Number:	421439	Map Number:	28
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will fund the rehabilitation of the existing electrical systems at the 75th Street WWTP. This project will include the replacement of numerous major electrical components. The 2014 funding is for the design and construction of one unit. The 2016 funding is for design and the 2017 funding is for construction of eight units.

This project will begin in 2014.
Costs:

- 1. Planning: \$ 98,000
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 882,000

The project is anticipated to complete construction in 2018.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



WWTP Electrical continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$980,000	Project Cost Total	\$980,000
		Funding Total	(\$980,000)
Total Project Cost	\$980,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$100,000
2015	\$0
2016	\$80,000
2017	\$800,000
2018	\$0
Subtotal	\$980,000
Total Funding Plan	\$980,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: WWTP Laboratory

Project at a Glance

Project Type: Existing Facility – Rehab / Repair / Deficiency Correction
Department: PW/ Wastewater Utility **Subcommunity:** Area III
Funding Source: Wastewater Utility Fund **BVCPArea:** Area III
Project Number: **Map Number:** 22
CEAP Required: No **CEAP Status:**

Project Description

This project will provide funds for the rehabilitation and improvement of the existing chemical/biological laboratory and the 75th St. WWTP. The funds will be used for the replacements of counters, sinks, cabinets, and other laboratory equipment.

This project will begin in 2015.
Costs:

- 1. Planning: \$ 10,000
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 90,000

The project is anticipated to complete construction in 2016.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



WWTP Laboratory continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$100,000	Project Cost Total	\$100,000
		Funding Total	(\$100,000)
Total Project Cost	\$100,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$50,000
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$50,000
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$50,000
Total Funding Plan	\$100,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: WWTP Permit Improvements

Project at a Glance

Project Type:	New Construction – Not Growth Related		
Department:	PW/ Wastewater Utility	Subcommunity:	Area III
Funding Source:	Wastewater Utility Fund	BVCPArea:	Area III
Project Number:	421617	Map Number:	23
CEAP Required:	No	CEAP Status:	

Project Description

This project is intended to address additional WWTP facilities required to meet new effluent regulations identified in the 2011 Colorado Discharge Permit System (CDPS) Permit. In March 2011 the city received a new discharge permit for the 75th Street wastewater treatment facility (WWTF) with an effective date of May 1, 2011. Additional or new permit requirements that will require some level of investment to comply with include: 1) substantially lower daily maximum ammonia effluent limits; 2) a new daily maximum nitrate effluent limit; and 3) a substantially lower arsenic effluent limit. The city was successful in negotiating an extended compliance schedule which requires compliance with the ammonia and nitrate effluent limits by December 1, 2017. A two year compliance schedule was provided to comply with the arsenic effluent limit. Complying with the ammonia, nitrate and arsenic effluent limits will require a combination of regulatory negotiations, environmental studies and WWTF capital improvements. Staff has identified funding in the 2013–2018 CIP to address improvements that will be required to meet the new effluent regulations. The 2013 and 2014 funding will be used to provide new probes, instrumentation and controls at four plant locations including the headworks, centrate, aeration basins, and the plant effluent. The 2012 funding is being used to support an engineering analysis called the Nutrient Compliance Study (NCS). The NCS will evaluate the WWTF's ability to meet the new discharge regulations, and will include a list of recommendations regarding modifications to existing facilities as well as new required facilities. The 2015–2017 funding will be used to evaluate and construct various plant modifications that may include carbon addition, and also to evaluate the needs of the next permit cycle.

This project began in 2012.

Costs:

- 1. Planning: \$ 348,086
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 3,132,783

The project is anticipated to complete construction in 2018.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

This process will begin in 2013.

Relationship with Other Departments

None



WWTP Permit Improvements continued

Change from Past CIP

Funding adjusted in 2015 and 2016

Estimated Total Cost

Unfunded Amount

Project Cost

Unfunded Amount

Project Cost \$3,680,869

Project Cost Total \$3,680,869

Funding Total (\$3,680,869)

Total Project Cost \$3,680,869

Total Unfunded \$0

Capital Funding Plan

Funding Prior to 2013 \$200,000

Six Year Funding Plan

2013 \$200,000

2014 \$150,000

2015 \$1,500,000

2016 \$112,486

2017 \$253,064

2018 \$1,265,319

Subtotal \$3,480,869

Total Funding Plan \$3,680,869

Additional Annual Operations and Maintenance

Additional Annual O&M: Funding Source: Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: WWTP Pumps

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Wastewater Utility	Subcommunity:	Area III
Funding Source:	Wastewater Utility Fund	BVCPArea:	Area III
Project Number:	411339	Map Number:	21
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will fund the rehabilitation of existing pumps at the 75th Street WWTP. The 2014 funding is for the secondary pump station including the variable frequency drives (VFD's). The 2016 funding is for future pumps based on the asset management needs.

This project will begin in 2014.
Costs:

1. Planning: \$ 45,000
2. Land Acquisition: \$ 0
3. Construction: \$ 405,000

The project is anticipated to complete construction in 2016.

Relationship to Guiding Principles

This project is consistent with the goals of the Wastewater Utility as specified in the Boulder Revised Code and the Wastewater Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding delayed one year



WWTP Pumps continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$450,000	Project Cost Total	\$450,000
		Funding Total	(\$450,000)
Total Project Cost	\$450,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$150,000
Six Year Funding Plan	
2013	\$0
2014	\$150,000
2015	\$0
2016	\$150,000
2017	\$0
2018	\$0
Subtotal	\$300,000
Total Funding Plan	\$450,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Wastewater Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Albion Dam

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:		Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for the evaluation of alternatives for the rehabilitation of Albion Dam, located in the City's Watershed. The downstream face of Albion Dam is in poor condition and continues to degrade. Design and construction costs inflated at a 4% annual rate are currently projected in 2022- 23 with a total estimated cost of \$4,477,446.

The evaluation phase of the project will begin in 2016 and be completed in 2017.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as articulated in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Albion Dam continued

Estimated Total Cost

Project Cost

Project Cost \$4,477,446

Total Project Cost \$4,477,446

Unfunded Amount

Unfunded Amount

Project Cost Total \$4,477,446

Funding Total (\$81,120)

Total Unfunded \$4,396,326

Capital Funding Plan

Funding Prior to 2013 \$0

Six Year Funding Plan

2013 \$0

2014 \$0

2015 \$81,120

2016 \$0

2017 \$0

2018 \$0

Subtotal \$81,120

Total Funding Plan \$81,120

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Automated Meter Reading

Project at a Glance

Project Type:	Existing Facility – Enhancements / Upgrades		
Department:	PW/ Water Utility	Subcommunity:	System-wide
Funding Source:	Water Utility Fund	BVCPArea:	System-wide
Project Number:	411454	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project provides funds for the replacement of water meter transponders. Trace transponders will be replaced with Orion transponders. The Orion transponders are considered to be better technology, have a longer life and are compatible with the electronic water monitors (refrigerator magnets). The project is underway and it will take several years to complete the work associated with over 28,000 accounts. Therefore on-going funding is recommended until 2013.

This project is for an ongoing funding program. In 2013, \$450,000 of funding is proposed to complete the work described above.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as articulated in the Boulder Revised Code and the Water Utility Master Plan

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) this project will enhance the city's IT and Financial systems through easier, quicker, and more complete billing processing and tracking; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding reduced in 2013



Automated Meter Reading continued

Estimated Total Cost

Project Cost

Project Cost

Total Project Cost

Unfunded Amount

Unfunded Amount

Project Cost Total

Funding Total

Total Unfunded

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$450,000
2014	\$0
2015	\$0
2016	\$0
2017	\$0
2018	\$0

Subtotal \$450,000

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Barker Dam and Reservoir

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411110	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for deficiency corrections at the existing Barker Dam, including security related projects.

This project will begin in 2015.
Costs:

- 1. Planning: \$ 40,000
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 338, 560

The project is anticipated to complete construction in 2016.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as articulated in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) this project will enhance the city's IT and Financial systems through easier, quicker, and more complete billing processing and tracking; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Barker Dam and Reservoir continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$498,560	Project Cost Total	\$498,560
		Funding Total	(\$498,560)
Total Project Cost	\$498,560	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$120,000
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$378,560
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$378,560
Total Funding Plan	\$498,560

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Barker Dam Hydroelectric

Project at a Glance

Project Type:	New Construction – Not Growth Related		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:		Map Number:	0
CEAP Required:	Yes	CEAP Status:	No

Project Description

Design and construction of a new hydroelectric facility to be integrated into the Barker Dam Outlet Works Project. The anticipated capacity is 1.5 megawatts total. Alternative approaches to the project will be considered by City staff and technical consultants as part of a technical analysis to be initiated in 2016. Information regarding the alternative approaches will be provided as part of the CEAP.

This project will begin in 2017.

Costs:

1. Planning: \$ 411,346
2. Land Acquisition: \$ 0
3. Construction: \$ 3,613,459

The project is anticipated to complete construction in 2019.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as articulated in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) this project will enhance the city's IT and Financial systems through easier, quicker, and more complete billing processing and tracking; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

The CEAP will be initiated in 2016

Relationship with Other Departments

Energy Utility Office

Change from Past CIP

Funding added in 2016 for alternatives analysis



Barker Dam Hydroelectric continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$4,024,805	Project Cost Total	\$4,024,805
		Funding Total	(\$4,024,805)
Total Project Cost	\$4,024,805	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$50,000
2017	\$361,346
2018	\$3,613,459
Subtotal	\$4,024,805
Total Funding Plan	\$4,024,805

Additional Annual Operations and Maintenance

Additional Annual O&M: \$37,000 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

Operating costs will be offset by increased hydroelectric revenue.



Project Name: Barker Dam Outlet

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411109	Map Number:	0
CEAP Required:	Yes	CEAP Status:	No

Project Description

This project will provide funds for repairs or replacement of the existing outlet works 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 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. Alternative approaches to the project will be considered by City staff and technical consultants as part of a technical analysis to be initiated in 2016. Information regarding the alternative approaches will be provided as part of the CEAP.

This project will begin in 2016.

Costs:

1. Planning: \$ 847,514
2. Land Acquisition: \$ 0
3. Construction: \$ 7,725,138

The project is anticipated to complete construction in 2019.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

The CEAP will be initiated in 2016.

Relationship with Other Departments

None

Change from Past CIP

Funding added in 2016 for alternatives analysis



Barker Dam Outlet continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$8,572,652	Project Cost Total	\$8,572,652
		Funding Total	(\$8,572,652)
Total Project Cost	\$8,572,652	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$75,000
2017	\$772,514
2018	\$7,725,138
Subtotal	\$8,572,652
Total Funding Plan	\$8,572,652

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Barker Gravity Pipeline Repair

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411106	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for repairs to the existing Barker gravity pipeline. Barker Gravity Pipeline is a critical component of the city's source water system because it conveys the city's Barker Reservoir/Middle Boulder Creek water to Betasso WTF. Stored water from Barker Reservoir and direct flows from Middle Boulder Creek are used to meet approximately 35 percent of the city's annual water needs. The city has, as part of an ongoing maintenance effort, already replaced and rehabilitated segments of the 11-mile Barker Gravity Pipeline that showed the most degradation or highest likelihood of failure. It is recommended the City continue its annual maintenance program, prioritizing based on the most critical needs, and also consider providing enough earthen cover to protect the pipeline, and anchor the pipeline in areas prone to landslides or other damaging events. Section replacement or lining are options that may each work well in different parts of the pipeline. The city should coordinate with the USFS concerning maintenance activities on federal land. The projected funds will allow for continued minor rehabilitation efforts (repair of leaks, siphons, etc, as has been done over the past several years) and an evaluation of pilot replacement/lining alternatives through 2016.

In addition, the funding for this project in 2016 will also support on-going Federal permitting issues associated with the Barker Water System. A request has been made to convert the current Federal Energy Regulatory Commission(FERC) licensed project to a FERC small conduit exemption from licensing. There are significant technical and legal analysis and documentation required to support this request and to obtain a separate land use authorization from the U.S. Forest Service for continued occupancy of federal land by the Barker Gravity Pipeline.

This project is for an ongoing funding program. In 2013, \$350,000 will be spent on the project as described above.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Barker Gravity Pipeline Repair continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost		Project Cost Total	
		Funding Total	
Total Project Cost		Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$350,000
2014	\$364,000
2015	\$378,560
2016	\$667,416
2017	\$595,911
2018	\$619,748

Subtotal \$2,975,635

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Barker-Kossler Penstock Repair

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411107	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for analysis and repair of the existing Barker-Kossler Penstock including the need for replacement or targeted repairs with metallurgy and corrosion experts.

This project will begin in 2017.
Costs:

- 1. Planning: \$ 15,000
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 101,986

The project is anticipated to complete construction in 2017.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Barker-Kossler Penstock Repair continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$291,986	Project Cost Total	\$291,986
		Funding Total	(\$291,986)
Total Project Cost	\$291,986	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$175,000
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$116,986
2018	\$0
Subtotal	\$116,986
Total Funding Plan	\$291,986

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Betasso Hydroelectric / Pressure Reducing Facility

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411974	Map Number:	41
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will fund rehabilitations to the Betasso Hydroelectric / Pressure Reducing Facility including an overhaul of the existing turbine-generator equipment.

This project will begin in 2016.
Costs:

- 1. Planning: \$ 0
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 100,000

The project is anticipated to complete construction in 2017.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Betasso Hydroelectric / Pressure Reducing Facility continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$100,000	Project Cost Total	\$100,000
		Funding Total	
Total Project Cost	\$100,000	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$0
2014	\$0
2015	\$0
2016	\$100,000
2017	\$0
2018	\$0
Subtotal	\$100,000

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Betasso Storage Tank

Project at a Glance

Project Type: Existing Facility – Rehab / Repair / Deficiency Correction
Department: PW/ Water Utility **Subcommunity:** Outside Planning Area
Funding Source: Water Utility Fund **BVCPArea:** Outside Planning Area
Project Number: **Map Number:** 42
CEAP Required: No **CEAP Status:** NA

Project Description

This project will provide funds for the rehabilitation and exterior painting of the Betasso Storage Tank. The facility is an elevated steel tank that has deteriorated due to weather and other environmental factors that primarily affect the protective paint coating.

This project will begin in 2017.
Costs:

- 1. Planning: \$ 15,000
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 277,465

The project is anticipated to complete construction in 2018.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as articulated in the Boulder Revised Code and the Treated Water Master Plan.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation

Estimated Total Cost Unfunded Amount

Project Cost		Unfunded Amount	
Project Cost	\$292,465	Project Cost Total	\$292,465
		Funding Total	(\$292,465)
Total Project Cost	\$292,465	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$292,465
2018	\$0
Subtotal	\$292,465
Total Funding Plan	\$292,465



Betasso Storage Tank continued

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Betasso WTF

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411947	Map Number:	49
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provides funds for rehabilitations and improvements to the Betasso WTP. The Betasso WTF is the city's primary WTF and has deteriorated during almost 50 years of continuous operation despite ongoing maintenance and rehabilitation. Also, pretreatment capacity limitations of the existing flocculation/sedimentation process result in residuals that comprise more water content than desired. This results in inadequate residuals dewatering capacity using the existing drying beds and lagoons. The city is currently using private contract hauling services to overcome this limitation.

Funding in 2013 and 2014 will be used to fund a pre-treatment and residual study, chemical storage tanks and piping and rehabilitation of the combined influent flow meter.

Funding in 2015 will be used for design of the major rehabilitation and improvement project.

Funding in 2016 is for the construction of the major rehabilitation and improvement project and includes:

- \$3,500,030 Water fund
- \$11,996,245 Bond Proceeds
- \$125,000 Bond Issuance Costs

The project is anticipated to to be completed in 2018.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Betasso WTF continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$17,470,903	Project Cost Total	\$17,470,903
		Funding Total	
Total Project Cost	\$17,470,903	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$200,000
2014	\$100,000
2015	\$1,549,628
2016	\$15,621,275
2017	\$0
2018	\$0
Subtotal	\$17,470,903

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Boulder Reservoir WTF

Project at a Glance

Project Type:	On-Going Projects		
Department:	PW/ Water Utility	Subcommunity:	Gunbarrel
Funding Source:	Water Utility Fund	BVCPArea:	Area I
Project Number:	411652	Map Number:	40
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for on-going maintenance and rehabilitation of the Boulder Reservoir Water Treatment Facility. Funding in 2013, 2014 and 2016 will be used to replace effluent flow meters, chemical feed and process controls, pressure and flow instruments, filter effluent flash mix system and filter controls.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Boulder Reservoir WTF continued

Estimated Total Cost

Project Cost

Project Cost

Total Project Cost

Unfunded Amount

Unfunded Amount

Project Cost Total

Funding Total

Total Unfunded

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$116,000
2014	\$82,000
2015	\$0
2016	\$164,000
2017	\$0
2018	\$0
Subtotal	\$362,000

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Boulder Reservoir WTF High Service Pump Station

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Gunbarrel
Funding Source:	Water Utility Fund	BVCPArea:	Area I
Project Number:	411011	Map Number:	47
CEAP Required:	No	CEAP Status:	NA

Project Description

This project provides funds for the installation of variable frequency drives on selected high service pumps at the Boulder Reservoir Water Treatment Facility. This equipment will increase the energy efficiency of the pumps

This project will begin in 2012.

Costs:

1. Planning: \$ 50,000
2. Land Acquisition: \$ 0
3. Construction: \$ 112,8000

The project is anticipated to complete construction in 2014.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated

Relationship with Other Departments

None

Change from Past CIP



Boulder Reservoir WTF High Service Pump Station continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$162,800	Project Cost Total	\$162,800
		Funding Total	(\$162,800)
Total Project Cost	\$162,800	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$50,000
Six Year Funding Plan	
2013	\$112,800
2014	\$0
2015	\$0
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$112,800
Total Funding Plan	\$162,800

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Carter Lake Hydroelectric

Project at a Glance

Project Type:	New Construction – Not Growth Related		
Department:	PW/ Water Utility	Subcommunity:	Gunbarrel
Funding Source:	Water Utility Fund	BVCPArea:	Area I
Project Number:		Map Number:	46
CEAP Required:	Yes	CEAP Status:	No

Project Description

This project provides funds for the design of a new hydroelectric facility at or near the Boulder Reservoir Water Treatment Facility. The possibility of this facility would be made available by the construction of the Carter Lake Pipeline Project. Funding allocated in the current CIP is for planning and design only. Construction funding (unfunded in the City 2013–2018 CIP) is allocated in the Water Utility 20-year CIP in 2019 and is expected to be fully allocated in 2019 in the City 2014–2019 CIP.

This project will begin in 2017
Costs:

- 1. Planning and Design: \$ 300,000
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 2,500,000 (2019)

The project is anticipated to complete construction in 2020.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

The CEAP will be initiated in 2017.

Relationship with Other Departments

Energy Utility Office

Change from Past CIP

New project



Carter Lake Hydroelectric continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$2,800,000	Project Cost Total	\$2,800,000
		Funding Total	(\$300,000)
Total Project Cost	\$2,800,000	Total Unfunded	\$2,500,000

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$50,000
2018	\$250,000
Subtotal	\$300,000
Total Funding Plan	\$300,000

Additional Annual Operations and Maintenance

Additional Annual O&M: Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget (needs to be confirmed)



Project Name: Green Lake 2 Dam

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411627	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for the evaluation of alternatives and design of the rehabilitation of Green Lake 2 Dam, located in the City's Watershed. Green Lake 2 Dam is in need of extensive rehabilitation to allow continued storage of water. Proposed 2013 funds are for evaluation of alternatives. Funding allocated in the current CIP is for planning and design only. Construction funding (unfunded in the City 2013–2018 CIP) is allocated in the Water Utility 20-year CIP in 2019 and is expected to be fully allocated in 2019 in the City 2014–2019 CIP.

This project will begin in 2013
Costs:

1. Planning and Design: \$ 507,739
2. Land Acquisition: \$ 0
3. Construction: \$ 4,327,391 (2019)

The project is anticipated to complete construction in 2020.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Green Lake 2 Dam continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$4,835,130	Project Cost Total	\$4,835,130
		Funding Total	(\$507,739)
Total Project Cost	\$4,835,130	Total Unfunded	\$4,327,391

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$75,000
2014	\$0
2015	\$0
2016	\$0
2017	\$0
2018	\$432,739
Subtotal	\$507,739
Total Funding Plan	\$507,739

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:
No increase, funded by existing operating budget



Project Name: Gunbarrel Storage Tank

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Area III
Funding Source:	Water Utility Fund	BVCPArea:	Area III
Project Number:	411670	Map Number:	53
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for the rehabilitation of the interior paint of the Gunbarrel Storage Tank.

This project will begin in 2013.
Costs:

1. Planning: \$ 30,000
2. Land Acquisition: \$ 0
3. Construction: \$ 235,798

The project is anticipated to complete construction in 2014.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Gunbarrel Storage Tank continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$265,798	Project Cost Total	\$265,798
		Funding Total	
Total Project Cost	\$265,798	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$265,798
2014	\$0
2015	\$0
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$265,798

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 **Funding Source:** Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Kohler Hydroelectric / Pressure Reducing Facility

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	South Boulder
Funding Source:	Water Utility Fund	BVCPArea:	Area I
Project Number:	411376	Map Number:	48
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for the rehabilitation of the Kohler Hydroelectric / Pressure Reducing Facility including rehabilitation of interior piping.

This project will begin in 2013.

Costs:

1. Planning: \$ 5,000
2. Land Acquisition: \$ 0
3. Construction: \$ 45,000

The project is anticipated to complete construction in 2013.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Kohler Hydroelectric / Pressure Reducting Facility continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$50,000	Project Cost Total	\$50,000
		Funding Total	(\$50,000)
Total Project Cost	\$50,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$50,000
2014	\$0
2015	\$0
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$50,000
Total Funding Plan	\$50,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Kohler Storage Tank

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	South Boulder
Funding Source:	Water Utility Fund	BVCPArea:	Area I
Project Number:	411671	Map Number:	44
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for the rehabilitation of the Kohler Storage Tank including design for the replacement of the existing roof.

This project will begin in 2015.
Costs:

1. Planning: \$ 103,487
2. Land Acquisition: \$ 0
3. Construction: \$ 1,034,875

The project is anticipated to complete construction in 2017.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Kohler Storage Tank continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$1,138,362	Project Cost Total	\$1,138,362
		Funding Total	(\$1,138,362)
Total Project Cost	\$1,138,362	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$103,487
2016	\$1,034,875
2017	\$0
2018	\$0
Subtotal	\$1,138,362
Total Funding Plan	\$1,138,362

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Lakewood Dam

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411981	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for security improvements at Lakewood Reservoir.

This project will begin in 2018.
Costs:

1. Planning: \$ 10,000
2. Land Acquisition: \$ 0
3. Construction: \$ 114,707

The project is anticipated to complete construction in 2019.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Lakewood Dam continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$124,707	Project Cost Total	\$124,707
		Funding Total	(\$124,707)
Total Project Cost	\$124,707	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$0
2018	\$124,707
Subtotal	\$124,707
Total Funding Plan	\$124,707

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget.



Project Name: Lakewood Hydroelectric / Pressure Reducing Facility

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Area III
Funding Source:	Water Utility Fund	BVCPArea:	Area III
Project Number:	411801	Map Number:	54
CEAP Required:	No	CEAP Status:	NA

Project Description

This project provides funds for the rehabilitation of the Lakewood pressure reducing valve.

This project will begin in 2014.

Costs:

1. Planning: \$ 10,000
2. Land Acquisition: \$ 0
3. Construction: \$ 90,000

The project is anticipated to complete construction in 2015.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Lakewood Hydroelectric / Pressure Reducing Facility continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$100,000	Project Cost Total	\$100,000
		Funding Total	(\$100,000)
Total Project Cost	\$100,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$100,000
2015	\$0
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$100,000
Total Funding Plan	\$100,000

Additional Annual Operations and Maintenance

Additional Annual O&M: Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

To be determined, operating costs will be offset by increased hydroelectric revenue.



Project Name: Lakewood Pipeline

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411780	Map Number:	0
CEAP Required:	Yes	CEAP Status:	Yes

Project Description

Funds have been budgeted in 2014 for re-inspection of the Lakewood Pipeline due to concerns with the original pipeline construction. Based on observations made during the 2009 inspection it is recommended that the frequency of inspections be reduced to one every five years. No funds have been budgeted for pipeline repair costs. Funds would be transferred from the Lakewood Pipeline Remediation Reserve to cover the costs.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Lakewood Pipeline continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$260,000	Project Cost Total	\$260,000
		Funding Total	
Total Project Cost	\$260,000	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$0
2014	\$260,000
2015	\$0
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$260,000

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Maxwell Hydroelectric / Pressure Reducing Facility

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	North Boulder
Funding Source:	Water Utility Fund	BVCPArea:	Area I
Project Number:	411342	Map Number:	50
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for the rehabilitation of the Maxwell Hydroelectric / Pressure Reducing Facility including rehabilitation of interior piping.

This project will begin in 2013.
Costs:

- 1. Planning: \$ 5,000
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 45,000

The project is anticipated to complete construction in 2014.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Maxwell Hydroelectric / Pressure Reducing Facility continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$50,000	Project Cost Total	\$50,000
		Funding Total	(\$50,000)
Total Project Cost	\$50,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$50,000
2014	\$0
2015	\$0
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$50,000
Total Funding Plan	\$50,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Existing operating budget.

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: NCWCD Conveyance – Carter Lake Pipeline

Project at a Glance

Project Type:	New Construction – Not Growth Related		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411547	Map Number:	45
CEAP Required:	Yes	CEAP Status:	No

Project Description

This project will provide funds for the planning, design and construction of a pipeline from Carter Lake to the Boulder Reservoir Water Treatment Facility. The Pipeline is considered the best long-term solution to water quality, operational and security vulnerability issues related to drawing water directly from either the Boulder Feeder Canal or Boulder Reservoir. A 1041 permit application for this project has been submitted to Boulder County and it is anticipated a permit will be issued in 2012. Information from the 1041 permit will be incorporated into the CEAP document. The Northern Colorado Water Conservancy District is the lead agency and the City of Boulder and the Left Hand Water District are project participants. The pipeline would also provide the opportunity to develop a hydroelectric generation facility.

This project will begin in 2016.
Costs:

- 1. Planning and Design: \$ 2,838,469
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 27,374,690

The project is anticipated to complete construction in 2019.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

A 1041 permit application for this project has been submitted to Boulder County and it is anticipated a permit will be issued in 2012. Information from the 1041 permit will be incorporated into the CEAP.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



NCWCD Conveyance – Carter Lake Pipeline continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$31,201,614	Project Cost Total	\$31,201,614
		Funding Total	(\$31,201,614)
Total Project Cost	\$31,201,614	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$989,455
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$100,000
2017	\$2,737,469
2018	\$27,374,690
Subtotal	\$30,212,159
Total Funding Plan	\$31,201,614

Additional Annual Operations and Maintenance

Additional Annual O&M: Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description: To Be Determined



Project Name: Pearl Street Hydroelectric / Pressure Reducing Facility

Project at a Glance

Project Type:	Existing Facility – Enhancements / Upgrades		
Department:	PW/ Water Utility	Subcommunity:	Area III
Funding Source:	Water Utility Fund	BVCPArea:	Area III
Project Number:		Map Number:	43
CEAP Required:	No	CEAP Status:	NA

Project Description

This project provides for the installation of a hydroelectric turbine and generator at the city’s Pearl Street pressure reducing facility. Currently water pressure is reduced using a pressure reducing valve which wastes the available energy in the water. This energy could be used to produce electricity. Funding allocated in the current CIP is for planning and design only. Construction funding (unfunded in the City 2013–2018 CIP) is allocated in the Water Utility 20–year CIP in 2019 and is expected to be fully allocated in 2019 in the City 2014–2019 CIP.

This project will begin in 2018.
Costs:

1. Planning and Design: \$ 24,333
2. Land Acquisition: \$ 0
3. Construction: \$ 267,664 (2019)

The project is anticipated to complete construction in 2020.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

Energy Utility Office

Change from Past CIP

New Project



Pearl Street Hydroelectric / Pressure Reducing Facility continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$267,664	Project Cost Total	\$267,664
		Funding Total	(\$24,333)
Total Project Cost	\$267,664	Total Unfunded	\$243,331

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	
2017	\$0
2018	\$24,333
Subtotal	\$24,333
Total Funding Plan	\$24,333

Additional Annual Operations and Maintenance

Additional Annual O&M: Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

To be determined, operating costs will be offset by increased hydroelectric revenue.



Project Name: Sunshine Hydroelectric / Pressure Reducing Station

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Area III
Funding Source:	Water Utility Fund	BVCPArea:	Area III
Project Number:		Map Number:	51
CEAP Required:	No	CEAP Status:	No

Project Description

This project will provide funds for the rehabilitation of the Sunshine Hydro/PRV Station including flow meter and rehabilitation or replacement of the existing control system.

This project will begin in 2017.

Costs:

1. Planning: \$ 30,000
2. Land Acquisition: \$ 0
3. Construction: \$ 241,875

The project is anticipated to complete construction in 2018.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Sunshine Hydroelectric / Pressure Reducing Station continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$271,875	Project Cost Total	\$271,875
		Funding Total	(\$271,875)
Total Project Cost	\$271,875	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$271,875
2018	\$0
Subtotal	\$271,875
Total Funding Plan	\$271,875

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Sunshine Transmission Pipe

Project at a Glance

Project Type:	Existing Facility – Enhancements / Upgrades		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:	411006	Map Number:	52
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funds for the rehabilitation of the Sunshine Transmission Pipe. The pipe is a cement mortar lined steel pipeline that has deteriorated during its operation over a period of several decades. Funding allocated in 2013 will provide for inspection, installation of access manholes and rehabilitation or replacement of the existing cement mortar lining.

This project will begin in 2013.

Costs:

1. Planning: \$ 80,000
2. Land Acquisition: \$ 0
3. Construction: \$ 720,000

The project is anticipated to complete construction in 2014.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

Open Space Department

Change from Past CIP



Sunshine Transmission Pipe continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$800,000	Project Cost Total	\$800,000
		Funding Total	(\$800,000)
Total Project Cost	\$800,000	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$0
Six Year Funding Plan	
2013	\$800,000
2014	\$0
2015	\$0
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$800,000
Total Funding Plan	\$800,000

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Utility Billing Computer System Replacement

Project at a Glance

Project Type: Existing Facility – Enhancements / Upgrades
Department: PW/ Water Utility **Subcommunity:** System-wide
Funding Source: Water Utility Fund **BVCPArea:** System-wide
Project Number: 411453 **Map Number:** 0
CEAP Required: No **CEAP Status:**

Project Description

This project is for the replacement of the existing Utility Billing Computer System. Funding of \$250,000 is recommended in year 2017 for this project.

This project will begin in 2017.
Costs:

- 1. Planning: \$ 50,000
- 2. Land Acquisition: \$ 0
- 3. Installation: \$ 450,000

The project is anticipated to complete the installation in 2018.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as articulated in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) this project will enhance the city's IT and Financial systems through easier, quicker, and more complete billing processing and tracking; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP



Utility Billing Computer System Replacement continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$528,771	Project Cost Total	\$528,771
		Funding Total	(\$528,771)
Total Project Cost	\$528,771	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$28,771
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$0
2016	\$0
2017	\$500,000
2018	\$0
Subtotal	\$500,000
Total Funding Plan	\$528,771

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Existing operating budget

Additional Annual O&M Description:
No increase, funded by existing operating budget



Project Name: Waterline Replacement

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	System-wide
Funding Source:	Water Utility Fund	BVCPArea:	System-wide
Project Number:	411389	Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project provides funds for the reconstruction of waterlines that are part of the city's water distribution system. Many of the city's existing waterlines are corroded or otherwise deteriorated and must be replaced. The city currently experiences approximately 60–80 main breaks per year and these cause unplanned outages in water service as well as disruption to vehicle travel and damage to public and private property. Although the number of main breaks is not considered excessive, the average age of the city's distribution system is over 40 years and it is anticipated that substantial funds will be required to maintain a functioning water distribution system over time. In some cases deficiencies in this system have been identified due to fire flow requirements of the Insurance Services Office (ISO).

Funding for annual waterline replacement continues at a rate of \$2,100,000 in 2012 dollars. This should be sufficient to maintain the current service level, as defined by water main breaks, over the next decade. However, in 2013 total funding of \$3,000,000 is proposed in order to provide for the replacement of additional waterlines located in residential streets that will be reconstructed by the city's Transportation Division as part of the recently approved Capital Investment Bond Program. The replacement of these waterlines will be more efficient since the cost of pavement patching can be minimized since the Transportation Division will be funding the cost of new pavement as part of the street reconstruction effort.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

Transportation Division

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Waterline Replacement continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$14,829,248	Project Cost Total	\$14,829,248
		Funding Total	
Total Project Cost	\$14,829,248	Total Unfunded	\$0

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$3,000,000
2014	\$2,184,000
2015	\$2,271,360
2016	\$2,362,214
2017	\$2,456,703
2018	\$2,554,971
Subtotal	\$14,829,248

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Watershed Improvements

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:		Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project will provide funding for miscellaneous improvements in the city's Silver Lake watershed including valve and monitoring system rehabilitation or replacement.

This project will begin in 2015.
Costs:

- 1. Planning: \$ 8,000
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 73,120

The project is anticipated to complete construction in 2016.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan.

This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

No additional public process is anticipated.

Relationship with Other Departments

None

Change from Past CIP

Funding increased to account for anticipated 4% construction cost inflation



Watershed Improvements continued

Estimated Total Cost		Unfunded Amount	
Project Cost		Unfunded Amount	
Project Cost	\$371,620	Project Cost Total	\$371,620
		Funding Total	(\$371,620)
Total Project Cost	\$371,620	Total Unfunded	\$0

Capital Funding Plan	
Funding Prior to 2013	\$290,500
Six Year Funding Plan	
2013	\$0
2014	\$0
2015	\$81,120
2016	\$0
2017	\$0
2018	\$0
Subtotal	\$81,120
Total Funding Plan	\$371,620

Additional Annual Operations and Maintenance

Additional Annual O&M: \$0 Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget



Project Name: Witemyer Ponds

Project at a Glance

Project Type:	Existing Facility – Rehab / Repair / Deficiency Correction		
Department:	PW/ Water Utility	Subcommunity:	Outside Planning Area
Funding Source:	Water Utility Fund	BVCPArea:	Outside Planning Area
Project Number:		Map Number:	0
CEAP Required:	No	CEAP Status:	NA

Project Description

This project provides funding for the lining of Witemyer Ponds based on the probability that Denver Water will receive a permit for the enlargement of Gross Reservoir in the near future. Based on the Intergovernmental Agreements (IGA) between Boulder, Lafayette and Denver Water, Boulder has agreed to use its water rights to fill the Environmental Pool to the degree that Lafayette is unable to do so with its water rights. Long term, Boulder's Open Space and Mountain Parks Department (OSMP) would provide the necessary water rights and the Water Utility would provide space in a lined Witemyer Ponds complex. However, because OSMP currently doesn't have any water rights that can readily be used for this purpose, the Water Utility would use its CBT and Windy Gap water to the extent it doesn't affect municipal water deliveries. OSMP would pay the Utilities Division for the water that is used solely for this purpose since some of the water could be leased to downstream users. Detailed plans and studies are needed to determine how this will be accomplished. Longer term, OSMP would either change the water rights associated with some of its ditch company shares, or acquire new water. Although lining of Witemyer is not necessarily required to get the Gross program underway, it would be useful to recapture the dedicated instream flow water. Without the lined ponds, any water used for Gross will be lost and more overall water will be needed.

Funding allocated in the current CIP is for planning and design only. Construction funding (unfunded in the City 2013–2018 CIP) is allocated in the Water Utility 20-year CIP in 2019 and is expected to be fully allocated in 2019 in the City 2014–2019 CIP.

This project will begin in 2017
Costs:

- 1. Planning and Design: \$ 555,515
- 2. Land Acquisition: \$ 0
- 3. Construction: \$ 4,555,148 (2019)

The project is anticipated to complete construction in 2020.

Relationship to Guiding Principles

This project is consistent with the goals of the water utility as specified in the Boulder Revised Code and the Water Utility Master Plan. This project is consistent with the guiding principles based on the following considerations; 1) projects have been identified and prioritized through a Council accepted master plan; 2) capital improvements are designed to achieve community sustainability goals; 3) funds to operate and maintain the project or program have been identified; 4) adequate financial capacity and flexibility is available to respond to emerging, unanticipated needs; 5) the maintenance and enhancement of city-wide business systems is not relevant to the Utilities Division CIP because this issue requires a city-wide initiative and is captured elsewhere in the city CIP; 6) projects sustain or improve maintenance of existing assets before investing in new assets; 7) projects have been identified to meet legal mandates, maintain public safety and security, leverage external investments, promote community partnerships, reduce operating cost and improve efficiency; 8) when applicable capital projects have been screened through a cost/benefit analysis; 9) the CIP provides sufficient reserves to allow for a strong bond rating and the ability to address emergencies and natural disasters.

Public Process Status, Issues

The strategy for public process will be defined during next year's budget process.

Relationship with Other Departments

None



Witemyer Ponds continued

Change from Past CIP

New project

Estimated Total Cost

Unfunded Amount

Project Cost

Unfunded Amount

Project Cost \$5,110,663

Project Cost Total \$5,110,663

Funding Total (\$555,515)

Total Project Cost \$5,110,663

Total Unfunded \$4,555,148

Capital Funding Plan

Funding Prior to 2013 \$0

Six Year Funding Plan

2013 \$0

2014 \$0

2015 \$0

2016 \$0

2017 \$100,000

2018 \$455,515

Subtotal \$555,515

Total Funding Plan \$555,515

Additional Annual Operations and Maintenance

Additional Annual O&M: Funding Source: Water Utility Enterprise Fund

Additional Annual O&M Description:

No increase, funded by existing operating budget.

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