

WATER RESOURCES ADVISORY BOARD MEETING

MEETING DATE: Monday, 22 June 2015

MEETING TIME: 7:00 p.m.

MEETING LOCATION: Municipal Services Center, 5050 Pearl St., Boulder, CO 80301

Agenda Highlights:

1. Call to Order (7:00 p.m.)
2. Approval of 18 May Meeting Minutes (7:01 p.m.)
3. *Public comment (7:05 p.m.)
4. *Public Hearing and Consideration of a Recommendation to City Council Regarding the 2016 Utilities (Water, Wastewater, and Stormwater/Flood Management) 6-year Capital Improvement Program (CIP) (7:15 p.m.)
5. *Public Hearing and Consideration of a Motion Regarding the Utility Rates Study Guiding Principles, Issues, and Key Questions (7:45 p.m.)
6. Matters (8:45 p.m.)
 - From Board
 - From Staff
7. Discussion of Future Schedule (8:55 p.m.)
8. Adjournment (9:00 p.m.)

* Public Comment Item

Agenda item times are approximate.

Information:

- Please contact the WRAB Secretary email group at:
WRABSecretary@bouldercolorado.gov
- Packets are available on-line at: <http://www.bouldercolorado.gov> – [A to Z, Water Resources Advisory Board \(WRAB\), Next Water Resources Advisory Board Meeting](#)

**CITY OF BOULDER, COLORADO
BOARDS AND COMMISSIONS MEETING MINUTES**

Name of Board / Commission: Water Resources Advisory Board	
Date of Meeting: 18 May 2015	
Contact Information of Person Preparing Minutes: Andrea Flanagan 303.413.7372	
Board Members Present: Vicki Scharnhorst, Dan Johnson, Lesley Smith Board Members Absent: Ed Clancy, Mark Squillace	
Staff Present: Jeff Arthur, Director of Public Works for Utilities Joe Taddeucci, Water Resources Manager Bob Harberg, Principal Engineer Douglas Sullivan, Acting Principal Engineer for Water, Wastewater and Stormwater Russ Sands, Watershed Sustainability & Outreach Supervisor Kurt Bauer, Engineering Project Manager Annie Noble, Flood and Greenways Engineering Program Coordinator Katie Knapp, Engineering Project Manager Kristin Dean, Utilities Planner Ken Baird, Utilities Financial Manager Andrea Flanagan, Board Secretary	
Cooperating Agencies Present: Craig Jacobson, Consultant with ICON Engineering, Inc. Alan Turner, Senior Project Manager, CH2M HILL Shea Thomas, Urban Drainage and Flood Control District	
Meeting Type: Regular	
Agenda Item 1 – Call to Order	[7:00 p.m.]
Agenda Item 2 – Approval of the 27 April 2015 Meeting Minutes [7:01 p.m.]	
Motion to approve minutes from April 27 as presented. Vote: Tabled until a quorum is met (Ed Clancy & Mark Squillace absent; Leslie Smith absent at April 27 meeting.)	
Agenda Item 3 – Public Participation and Comment	[7:02 p.m.]
Public Comment: None	
Agenda Item 4 –	[7:04 p.m.]
Public Hearing and Consideration of a Recommendation to City Council Regarding the Skunk Creek, Bluebell Canyon Creek and King’s Gulch Floodplain Mapping Update Katie Knapp and Utilities staff presented the item to the board.	
Executive Summary from the Packet Materials:	
Agenda Item 4 –	[7:04 p.m.]
Public Hearing and Consideration of a Recommendation to City Council Regarding the Skunk Creek, Bluebell Canyon Creek and King’s Gulch Floodplain Mapping Update Katie Knapp and Utilities staff presented the item to the board.	
Executive Summary from the Packet Materials: Floodplain mapping provides the basis for flood management by identifying the areas at the highest risk of flooding. This information is essential for determining areas where life safety is threatened and property damage is likely and is the basis for floodplain regulations and the National Flood Insurance Program (NFIP). The city’s floodplain maps need to be periodically updated to reflect changes in the floodplain resulting from land development, flood mitigation improvements, new topographic mapping information and new mapping study technologies.	
The Skunk Creek Floodplain Mapping Update includes the King’s Gulch, Skunk and Bluebell Canyon Creek floodplains between the city limits to east of Foothills Parkway where Skunk Creek confluences into Bear Canyon Creek.	

Engineering consultants provided hydraulic modeling to update the existing Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) and City of Boulder floodplains, water surface elevations, conveyance and high hazard zones.

Engineering consultants provided hydraulic modeling to update the existing Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) and City of Boulder floodplains, water surface elevations, conveyance and high hazard zones.

The proposed mapping of the Skunk Creek Floodplain would result in a net:

- Increase of 38 structures identified in the 100-year floodplain;
- Decrease of 22 structures identified in the conveyance zone and;
- Decrease of 19 structures identified in the high hazard zone.

WRAB Discussion Included:

- Question about ICON report. Stated there seems that there were a lot of comments about inconsistencies in the report.
- Request for further clarification regarding Anderson report, not quite understood what “approximate studies” means in the peer review summary of this report.
- Question regarding additional hydraulic modeling regarding software for culvert analysis program.
- Question regarding the difference in the number of structures that were in the floodplain.
- Question regarding adjustments done by ICON and if there were differences in the information after the peer review.
- Question about grade changes on Mariposa and how they didn’t quite fit with comments about how much the flood event actually moved.
- Question about whether the peer-reviewed comments made by ICON have been reviewed by Anderson in order to help answer questions proposed by community?

Public Comment:

Christina Jurgens

Concerned that too much of the water from Bluebell Canyon Creek is mapped that it flowed down Columbine, rather than where it was actually observed during flood. Concern that there are errors in proposed flood map that misrepresent the risk to her property and possibly other properties. Regarding item 53, which points out in the peer review that flood maps need to follow topography, question of syntheses of two kinds of mapping and worried about errors in representation of potential risk. Worried that proposed map represents inaccuracies that present risk. Residents have not heard of any structures that were flooded in this particular section. Asks why the proposed floods from Bluebell Canyon Creek to Mariposa, from 16th to 17th smaller than the northward flows at 18th and 19th? Seems by looking at it, they should be more similar to each other. Feels this is a mistake. What method was used to determine the split at 20th and Columbine?

Beth Robinson

Noticed big difference this time in the conveyance zone on her block. Several people are constructing drainage pipes from the back conveyance zones to the front of the street from the easement at the back of the property. This will impact at least one property owner on the block, who is not able to rebuild without extensive regrading.

Kris Miller

Home has been in 100-year flood zone since moved in 2006 and has contacted the city multiple times to state that they should not be. Was told by city that all studies were approximate at that time and no official mapping was done. Was told in 2012 that a “real study” would be conducted and in April 2013, was informed by city that they were going to be taken out of the flood zone with this study, but it is a long process. She and neighbor were not flooded during the 2013 event. Lives on the corner and the flood jumped the banks and flooded south on Mariposa instead and flood didn’t even go near her property. When she called again, she was told that she was still in the floodplain. Concerned about the study. The flood actually occurred south of her property. Would like to know what happened and why she is still in the flood zone when the flood didn’t affect her property?

R. Chris Roark

Asked whether it was taken into account that there is a bridge at lower McClintock that significantly diverted water during the flood event, which washed out and ended up on his property. Bridge is no longer there and is not going to be replaced. Will this be considered in the flood mapping?

Ali Yager

Lives at the corner of 20th and Mariposa. All the water at 15th came down Mariposa and wants to know what the city can or should do to deal with the water that jumps onto Mariposa? Maintenance of Bluebell Creek between Mariposa and Columbine, which theoretically is where the water should go. Question is about maintenance of the systems that should be carrying water, which are not working properly.

Motion by: Scharnhorst; **Seconded by:** Johnson

Vote: 3:0 (Ed Clancy, Mark Squillace absent)

Motion Passes as amended

Staff requests Water Resources Advisory Board consideration of this matter and action in the form of the following motion:

Based upon concurrence from Anderson regarding ICON's responses to the peer review, we move to recommend that City Council adopt the Skunk Creek, Bluebell Canyon Creek and King's Gulch floodplain mapping update.

Agenda Item 5 -

[7:42 p.m.]

Public Hearing and Consideration of a Recommendation to City Council Regarding the South Boulder Creek Floodplain Mitigation Plan

Kristin Dean, Kurt Bauer and Utilities staff presented the item to the board.

Executive Summary from the Packet Materials:

A Recommended Plan for flood mitigation along South Boulder Creek was presented to the public, Water Resources Advisory Board (WRAB), Open Space Board of Trustees (OSBT) and City Council at a Study Session in 2014. The Recommended Plan was comprised of three phases:

- Phase I: Regional detention facility at US 36;
- Phase II: West Valley improvements; and,
- Phase III: Arapahoe Avenue detention.

In 2014, the WRAB and City Council were generally supportive of the mitigation proposed under Phases II and III. The OSBT also indicated their support for Phases II and III as it was not seen to have effects on city open space properties. However, significant concern was voiced by both boards and by City Council regarding potential environmental impacts, including those to Open Space and Mountain Parks (OSMP) lands from the proposed US 36 regional stormwater detention facility (Phase I). As a result, staff was directed to evaluate other options, including potential use of a larger portion of the University of Colorado's CU South property to shift impacts away from environmentally sensitive areas.

Since then, six additional options were developed for US 36 detention, all designed to prevent the overtopping of US 36 during a 100-year design storm and reduce flooding impacts downstream and each with fewer impacts to OSMP than the original proposal. This memorandum presents the US 36 regional detention options, a comparison of potential impacts to OSMP and CU lands and a summary of potential next steps. Staff is recommending that the Phases II and III concepts remain unchanged in the mitigation master plan and that Phase I be accomplished using Colorado Department of Transportation (CDOT) Right of Way (ROW) and CU Campus South (Option D) for construction of a regional stormwater detention facility at US 36. In this alternative, the berm would be located within the existing CDOT right of way, and, with the exception of potential temporary impacts from construction of the berm, OSMP lands would only be affected when stormwaters are retained. Each of the additional options have a greater impact on CU's land than the plan that was presented in 2014. However, while CU prefers the 2014 plan, they have also indicated they are willing to discuss use of their land to facilitate the implementation of Option D for regional detention.

WRAB Discussion Included:

- Question about cost estimates of property acquisition and property access rights and if they are included in the study?
- Statement that this seems to be a lot of embankment, which probably makes for significant cost relative to storage.
- Questioned how many acre feet is the storage for the proposed alternative and what are differences between the options?
- Stated that most of the concerns were about open space and possibly may hit a brick wall. Stated that pleased with the many options that came forward and that the resources were protected.
- Questioned if counts were taken of population of prebble mice in open space?
- Questioned how option D compares to the flood event in 2013?
- Commented that pleased with the engagement between CU and the city to discuss this topic.
- Stated that option D will require working with CU and CDOT. Asks what next steps are after voting on this item.
- Asked about timeline for CEAP projects?
- Asked for more information about liability concerns presented by public comment.
- Questioned level of confidence by staff that option D can be successful in the environmental planning process.

Public Comment:**Pete Palmer**

Retired professor of geology and has lived in Boulder for almost 35 years. As an earth scientist, he recognizes global warming and the associated increase in the frequency of extreme weather events. As global temperatures rise, so does probability of these extreme weather events. Entering El Nino period, where warming is a known consequence. Likelihood of repeat of 2013 flood event is significantly higher than the 100-year to 500-year events anticipated in earlier planning. Supports South Boulder Creek Action Group and urges that we speed up Highway 36 flood mitigation efforts.

Karl Anuta

Map is disarming, appears that Cherryvale area is really bad, but what is really bad is Foothills Parkway. Represents Frasier Meadows residents and again asks that Board support some kind of flood retention system south of US 36. Option D appears to be really good. Lives must be considered. Very concerned about the process taking 5 years, which will worry residents for another 5 years. Urges that we move ahead as fast as possible and please ask City Council to do the same.

Dick Leupold

President of Resident Council for Frasier Meadows Retirement Community. Supports efforts to add berm to south side of US 36 to keep flood waters out of neighborhood. Wife was pushed through 2 feet of mud in her wheelchair during flood event. If it weren't for a series of miraculous events that night, there might not have been such positive outcome. People would have drowned in parking garage. Fortunate that no fatalities occurred. Encourages Board to approve the South Boulder Creek Action Group's motion to build a structure to prevent this from occurring in the future. Asks residents of Frasier Meadows to stand in support of his message (which they did).

Bob Ritzen

Director of Care at Frasier Meadows. Series of miraculous events happened that day. Flooding happened in the afternoon and staff stayed to assist. Evacuated skilled nursing area, which housed memory care residents, many of whom have low beds. Water rose quickly in this area and residents were evacuated very quickly. Staff and others pulled together to move residents to safety, without injuries. Residents move there thinking they are secure. Recent visitor from disaster relief visited and asked how many residents died after the event. Encourages as much haste as possible from the Board to make a decision for flood mitigation. Does not want to worry about the safety of residents every time it rains.

Peter Baston

Company runs programs for large insurance companies that insure projects like this. Spoke with CDOT and asked what mitigation upgrades are being proposed for US 36, without which Boulder cannot be a resilient city? Was told that it was going to be left up to the City of Boulder on the South Boulder Creek

Project, which means that CDOT has dumped liability on the city. If anything happens with any flood mitigation, the city will be held liable. Encourages as part of due diligence to understand the liabilities involved in what is being accepted and how this affects the city's resiliency.

Jeff McWhirter

President of Southeast Boulder Neighborhood Association. Ironic that his community did not get hit as badly as Frasier Meadows. Lucky in that respect. South Boulder Creek did not overtop, just many sewage back-up issues. Should be noted that this is not even the big 100-year flood. This was unique because there were 36 hours of notice. Also concerned with long-term impacts. Supports overall mitigation efforts. Continues to bring up questions about west valley improvements. What is going to happen with the piping of dry creek ditch and detention pond? Under impression that specific details of the plan will be considered during this EAP. Wants to make sure that everyone is on the same plan as we move into the future.

Tim Johnson

CEO at Frasier meadows. Can't speak to how many Prebble (mice) lives were lost. Can speak to lives that were not lost at Frasier. Speaks to importance of human life, which he would love for the Board to talk about, along with the mice and plant life. Appreciates the Board listening to this community. Makes an emotional plea that any consideration be made be done so on an expedited time frame. Residents are living in fear of a repeat flood. Residents are concerned with recent rain events. Staff have been checking around the clock and have begun planning for evacuation, should the need arise. The thought of doing this for the next five years is beyond comprehension. For the sake and safety of Frasier and nearby residents, please act with dispatch.

Rick Mahon

Represents South Boulder Creek Action Group. Thanks staff for responding to 99% of these issues. States that the berm height is a non-issue. Life-safety factor is beyond measurable. CU is interested in alternatives. Please speed this along.

Kathie Joyner

With South Boulder Creek Action Group. Weather makes everyone very, very nervous. Everyone is on edge and worried that a future rain events are going to overtop US 36. Needs to know that the city is responsible for providing relief. Encourages Board to recommend to Council that we move forward as quickly as possible to ensure safety of all residents in the South Boulder Creek floodplain. Asks for a show of hands from all people in audience who concur with this type of recommendation.

Steve Karakitsios

The plan has been studied for so long and asks that a recommendation be made. "Analysis paralysis" is over and need to just move forward with a recommendation. Option D looks like the best resolution with CU and CDOT. Encourages Board to expedite as much as possible.

David McGuire

Impact potential for construction, encourages staff to compare scope and duration of impacts with some of the other impacts on Open Space. Not a very big difference. No one bought into the area knowing they were going to be flooded when homes were bought 30 years ago. Home wasn't mapped in until 2012. Water goes over US 36 and we need to figure out how to stop it as quickly as possible.

Peter Ornstein

Everyone on street experienced sanitary sewer backups. System was overcharged, mostly from water that was building up because of so much rain. The new proposal does deal with stormwater overflow predictions and does address the floodplain issues, but does not know if it addresses sanitary sewer system back-up issues that residents actually experienced. All systems were overcharged. Recommends that we move forward and take a hard look at sanitary system.

Bob Matthias

Echoes all comments from tonight. Based on meeting attended four years ago, he understood that the reason for flooding is due to the overtopping of US 36, which is caused by the fact that the cross section of the bridge is too small to retain flood waters. In the process of rebuilding US 36, why was the cross section of that bridge not increased? If they had done this, a lot of the damages could have been avoided during

this event.

Kathleen Motylenski

Speaks on behalf of South Boulder Creek Action Group. Videos and photos are available to show the level of damages. On September 13th, it went from a lot of rain to about 4 feet of water in 20 minutes. Flood sirens couldn't even be heard. Absolutely miraculous that no lives were lost. We can't let this happen twice. Appreciates all the studies and alternatives, but timing is critical. This can happen again in the coming months. Residents are scared. Encourages Board to forge ahead as soon as possible.

Terri Walters

Thanks Board and staff for working really hard with all the competing issues. This situation is terrifying. Lives with family in a home that is dead in the way of the flood path. Lost everything in 2013. River of rock went through home and ruined antique furniture. This was a 50-year event. Could only afford to rebuild a structure about half the size. Please hurry.

Motion by: Smith; **Seconded by:** Scharnhorst

Vote: 3:0 (Ed Clancy, Mark Squillace absent)

Motion Passes as presented

Staff requests Water Resources Advisory Board consideration of this matter and recommends action in the form of the following motion:

Motion to recommend that City Council accept the South Boulder Creek Major Drainageway Flood Mitigation Plan including Option D (single berm using Colorado Department of Transportation (CDOT) Right of Way) for 'Regional Detention at US 36' along with the Downstream Improvements as the recommended comprehensive alternative to mitigate flood risks associated with South Boulder Creek.

Agenda Item 6 –

[9:00 p.m.]

Information Item – Preliminary Capital Improvements Program

Ken Baird, Joe Taddeucci, Douglas Sullivan and other Utilities staff presented the information item to the board.

As part of the city's annual budget process, Utilities develops a six-year planning budget, this year for the time period of 2016 through 2021. The Water Resources Advisory Board (WRAB) role in this process is defined in the Boulder Revised Code: “. . . to review all environmental assessments and capital improvements conducted or proposed by the utilities division.” Utilities staff has formulated initial revenue and expenditure projections for each of the three utility funds through the year 2021. Within the budget process, City Council approves and appropriates funds only for the first year, 2016.

WRAB will be asked to make a recommendation to City Council regarding the 2016-2021 CIP at its June meeting. The Planning Board will review the complete city CIP, including utilities, in July. City Council will discuss the CIP in August at a study session, and the overall budget is scheduled to be adopted by City Council in October.

WRAB Discussion Included:

- Requested that presentation slides be sent to Board for further review.
- Asked about areas that are underserved and if there is a way to add a storm drainage system there, which would require ripping up streets?
- Asked if feedback was provided from open houses regarding rate study increases?
- Asked about potential to save revenue based on the fact that we pay \$300 an acre foot whether it is used or not?
- Asked for clarification on outcome goal of the rate study and whether or not it would be revenue neutral, positive, or negative?
- Asked if there would be some benefit to having a revenue generating rate structure change?
- Requested additional information about financial reserves and how it is programmed.
- Asked if staff have received an increased volume of calls by residents since the rate increase

proposal?	
Agenda Item 8 – Matters from the Board: Board Member Smith brought up the below matter(s): <ul style="list-style-type: none"> • Acknowledges that residents are traumatized by the 2013 flood event. • Asks if there is anything further the city can do to reduce the level of anxiety that residents feel with future weather events? Board Member Scharnhorst brought up the below matter(s): <ul style="list-style-type: none"> • Asked if there are any plans for the next few days’ impending storms. Board Member Johnson brought up the below matter(s): <ul style="list-style-type: none"> • Asked what we are doing as of result of the 2013 flood event? Concerned with rising creeks during recent rain events. • Requested confirmation about length of interceptor pipe. 	[9:54 p.m.]
Agenda Item 8 – Matters from Staff: <ul style="list-style-type: none"> • Boulder Civic Area Update • Boulder Creek Mitigation Plan • GAC (Greenways) CIP • Bob Harberg presented a history book to the Board about Boulder’s Wastewater, written by Silvia Pettem. 	[10:00 p.m.]
Agenda Item 9 – Future Schedule <ul style="list-style-type: none"> • Recommendation on 2016 Capital Improvements Program (CIP) • Recommendation on Rate Study Guiding Principles 	[10:15 p.m.]
Adjournment There being no further business to come before the Board at this time, by motion regularly adopted, the meeting was adjourned at 10:16 p.m. Motion to adjourn by: Smith; Seconded by: Johnson Motion Passes 3:0 (Ed Clancy & Mark Squillace absent)	[10:16 p.m.]
Date, Time, and Location of Next Meeting: The next WRAB meeting will be Monday, 22 June 2015 at 7:00 p.m. , at the City's Municipal Services Center, 5050 Pearl St., Boulder, CO 80301	

APPROVED BY:

Board Chair

Date

ATTESTED BY:

Board Secretary

Date

An audio recording of the full meeting for which these minutes are a summary, is available on the Water Resources Advisory Board web page.

<https://bouldercolorado.gov/boards-commissions/water-resources-advisory-board-next-meeting-agenda-and-packet>

CITY OF BOULDER

**WATER RESOURCES ADVISORY BOARD
AGENDA ITEM**

MEETING DATE: June 22, 2015

AGENDA TITLE: Public hearing and consideration of a recommendation regarding the 2016 Utilities (Water, Wastewater and Stormwater/ Flood Management) 6-year Capital Improvement Program (CIP)

PRESENTERS:

Jeff Arthur, Director of Public Works for Utilities
Ken Baird, Utilities Financial Manager
Douglas Sullivan, Acting Principal Engineer – Water, Wastewater, and Stormwater
Annie Noble, Acting Principal Engineer – Flood and Greenways

EXECUTIVE SUMMARY:

As part of the city’s annual budget process, Utilities staff develops a six-year planning budget, this year for the time period of 2016 through 2021. The Water Resources Advisory Board (WRAB) role in this process is defined in the Boulder Revised Code: “. . . to review all environmental assessments and capital improvements conducted or proposed by the utilities division.” Utilities staff has formulated revenue and expenditure projections for each of the three utility funds through the year 2021. Within the budget process council approves and appropriates funds only for the first year, 2016.

At the April 27 and May 18, 2015 WRAB meetings, staff presented the preliminary 2016 Utilities budget including the six-year capital improvement program. Since the May 18 meeting, the following change within the Water Utility CIP has been incorporated into the Capital budget: \$150,000 was added in 2016 for the Boulder Reservoir Water Treatment Facility for replacement of failing filter valve actuators.

This packet contains information concerning the Recommended 2016 Utilities Budget and the 2016-2021 Utilities CIP. The attached fund financials and CIP spreadsheets (**Attachment A** – Water Utility, **Attachment B** – Wastewater Utility and **Attachment C** -Stormwater / Flood Management Utility) reflect actual revenues and expenditures for 2014, updated revenue projections/rate increases for the planning period and updated CIP.

Staff requests a recommendation from the WRAB concerning the 2016 Utilities Budget including the 6-year Capital Improvement Program (CIP) and associated Monthly Utility Rates. Staff will submit the CIP to the Planning Board which will meet to discuss the citywide CIP and make a recommendation to City Council on August 6. City Council study sessions are scheduled for August 11, 2015 concerning the proposed city-wide 2016-2021 CIP and on September 8 and September 22 on the preliminary 2016 city-wide budget. City Council is scheduled to hold first and second readings on adoption of the budget on October 6 and October 20 respectively.

STAFF RECOMMENDATION:

Staff recommends that WRAB make the following motion related to the 2016-2021 CIP:

The Water Resources Advisory Board recommends approval of the 2016-2021 CIP for the Water, Wastewater, and Flood/Stormwater Utilities including proposed rate adjustments to support 2016 revenue increases of 8% in the water utility, 5% in the wastewater utility, and 4% in the stormwater and flood control utility.

FISCAL IMPACTS:

The following percentage increases in additional revenue from the monthly utility fees are currently being recommended by Utilities staff for 2016 to fund the preliminary Utilities budget and capital improvements program. These increases are consistent with projections provided during the budget process in 2014.

Water	8%
Wastewater	5%
Stormwater/ Flood Management	4%

BOARD FEEDBACK:

The preliminary 2016 Utilities budget and 2016-2021 CIP were presented to the WRAB on April 27 and May 18, 2015. The Board provided comments as documented in the meeting minutes including discussion of rates, water conservation, key projects, and questions regarding the Colorado-Big Thompson (C-BT) water supply.

PUBLIC FEEDBACK:

Board input and a public hearing is scheduled for this meeting.

BACKGROUND:

The Utilities Division provides quality water services, as desired by the community, in a manner which emphasizes efficient management of fiscal and natural resources, and protects human and environmental health. Each of the city's three utilities (water, wastewater and stormwater/flood management) is a separate enterprise fund established to finance and account for the acquisition, operation and maintenance of each utility's facilities and services while maintaining designated reserves and meeting debt service requirements.

Revenues generated from monthly utility bills are the largest revenue source for each utility. Other significant sources of funds include development fees (plant investment fees), hydroelectric revenues, funding from the Urban Drainage and Flood Control District (UDFCD) and interest earnings.

The majority of the utilities expenditures are for rehabilitating and improving the capital infrastructure either through the capital improvements program (cash financed) or through annual debt payments for revenue bonds that have been issued to fund capital improvements.

WRAB is responsible for making a recommendation to City Council on the 6-year CIP. The

following operating adjustments are not part of the CIP, but are provided for reference.

- Within the Water Fund, an increase to appropriations of \$90,000 from Fund Balance is recommended for costs associated with residual hauling at the Betasso Water Treatment Plant. The prior contract for this service expired, and new bids were solicited for 2015 and beyond, and the unit cost for disposal increased by 50%. The 2016 Betasso Water Treatment Plant CIP project is planned to include an on-site residuals processing system.
- Within the Water Fund in the Water Resources workgroup, additional funds are requested due to increased rates for source water delivered from C-BT.
- In the Water Fund, \$35,000 is requested to provide funds for electric standby charges at the Boulder Canyon Hydro (BCH) Facility. An agreement with an electric utility is needed to supply power to the facility (lights, heat, etc.) when hydroelectric equipment is not generating. The City is party to a standard agreement for standby electric service with Xcel (BCH is connected to Xcel’s transmission line). This agreement was needed after the BCH Modernization Project and a new power purchase agreement with Tri-State. As a result of these updates, annual revenue has increased roughly \$400,000 per year, which more than offsets this standby charge.
- Also within the Water Fund, \$17,300 is requested to meet the terms of an agreement with the City of Nederland. The City of Boulder is reimbursing Nederland for the ongoing costs of enhanced wastewater treatment processes that meet phosphorus limit requirements. This agreement was made to improve source water quality.

ANALYSIS:

The preliminary 2016 budget reflects the following revenue increases: 8% Water, 5% Wastewater, and 4% Stormwater/Flood Management. The following table summarizes the 2015 adopted revenue increase and proposed revenue increase projections for 2016-2018. The proposed 2016 increases are in bold.

Table 1 – Proposed Rate Increases

	2015	2016	2017	2018
Water	5%	8%	8%	8%
Wastewater	30%	5%	5%	5%
Stormwater/Flood Management	75%	4%	8%	8%

Customer Bill Impact

The proposed 2016 revenue increases (8%-5%-4%) would increase a typical residential customer’s total monthly utility bill by approximately \$5.00, or an increase of approximately \$60 annually. The following table shows the estimated monthly impact for single-family residential and example commercial/industrial/institutional customers.

Table 2 – Estimated Monthly Bill Impacts

Customer	Combined Monthly Bill 2015 Rates	Combined Monthly Bill 2016 Rates	Monthly Bill Increase	Percent Change
Single-Family Residential	\$80	\$85	\$5	6%
Hotel	\$3,452	\$3,657	\$205	6%
Grocery Store	\$8,006	\$8,502	\$497	6%
Large Format Retailer	\$3,066	\$3,224	\$158	5%
Pearl Street Retail	\$120	\$127	\$7	6%
Industrial/Institutional	\$6,677	\$7,063	\$387	6%
Downtown Restaurant	\$333	\$353	\$20	6%
Downtown Restaurant/Brewery	\$763	\$809	\$45	6%

ANTICIPATED REVENUE BONDS:

The current 2016-2021 utility fund financials reflect several bond issuances (and associated debt payments) to fund the following capital projects:

Water:

1. Betasso Water Treatment Plant Improvements (\$24 million in 2016) to fund improvements to maintain compliance with federal Safe Drinking Water Act regulations
2. Southern Water Supply Pipeline II (Carter Lake Pipeline) and the 2018 Waterline Replacement budget (\$37.6 million in 2018)
3. Barker Dam Outlet and Boulder Reservoir Water Treatment Facility (\$10.3 million in 2020) to fund repairs to the outlet works

Wastewater:

1. Sanitary Sewer Bond (\$10 million in 2015) to fund replacement of large diameter interceptor pipe
2. WWTF Improvements (\$18.5 million in 2020) to fund phosphorus treatment to meet Regulation 85 requirements

Stormwater and Flood Management:

1. Wonderland Creek and Four Mile Canyon Creek projects (\$23 million in 2015)
2. South Boulder Creek Improvements (\$25 million in 2018) to fund improvements designed to mitigate flood hazards in the South Boulder Creek West Valley area

The following table summarizes the debt obligations of the utilities, the year the debt is retired and the average annual debt payment. Items shown in italics are projects that are anticipated to be funded by issuing bonds.

Table 3 – Debt Obligations

Utility	Projects	Year Debt is Retired	Approximate Annual Debt Payment
Water	Boulder Reservoir WTF Improvements	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>	<i>2036</i>	<i>\$2,160,000</i>
	<i>Carter Lake Pipeline and Waterline Replacement (2018)</i>	<i>2038</i>	<i>\$3,568,700</i>
	<i>Barker Dam Improvements and Boulder Reservoir WTP Imp.(2020)</i>	<i>2040</i>	<i>\$983,773</i>
Wastewater	WWTP Improvements	2025	\$3,500,000
	WWTP Improvements	2030	\$674,000
	<i>Sanitary Sewer Pipe (2015)</i>	<i>2035</i>	<i>\$800,000</i>
	<i>WWTP Improvements – Reg 85 (2020)</i>	<i>2040</i>	<i>\$1,757,500</i>
Storm/Flood	Multiple projects including Goose Creek Improvements	2018	\$385,000
	<i>Wonderland Creek and Four Mile Canyon Creek Imp. (2015)</i>	<i>2035</i>	<i>\$1,725,000</i>
	<i>South Boulder Creek Imp. (2018)</i>	<i>2038</i>	<i>\$2,150,000</i>
	<i>South Boulder Creek Imp. (2021)</i>	<i>2041</i>	<i>\$1,425,000</i>

****Projects shown in italics are proposed 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.

In early June the City was informed of the credit rating for the upcoming Wonderland Creek and Four Mile Canyon Creek Improvement bonds -- Aa1 from Moody’s and AAA from Standard and Poor’s (S&P) which is the same as recent bond issues. According to a recent S&P report, only around 6% of their rated water and sewer issuers receive the AAA rating. This high rating is due to strengths such as “a prolonged trend of strong financial operations,” a “manageable capital program with additional debt needs,” and a “robust and diverse local economy,” S&P’s recent rating report is included in **Attachment D**.

NEXT STEPS:

The current schedule of major budget milestones is provided below. Elements involving the WRAB are highlighted in bold italics.

Milestone	Date
WRAB Recommendation on CIP/Budget	June 22, 2015
Departmental Budget Review by City Manager	May/June 2015
Planning Board Recommendation on CIP	August 6, 2015
City Council Study Session on CIP	August 11, 2015
City Council Study Session on Budget	September 8 and 22, 2015
City Council Consideration/Adoption of Budget	October 6 and 20, 2015

Attachments:

- A: Water - Fund Financial and Capital Improvement Program
- B: Wastewater - Fund Financial and Capital Improvement Program
- C: Stormwater/ Flood Management - Fund Financial and Capital Improvement Program
- D: Standard and Poor's Rating Report

Attachment A - PROPOSED WATER CIP

	A	H	I	J	K	L	M	N	O	
1	15-Jun-15									
2				CITY OF BOULDER						
3				DRAFT 2016-2021 CAPITAL IMPROVEMENT PROGRAM						
4				WATER UTILITY FUND						
5										
6	Assumed Inflation Rate	2014	2015	2016	2017	2018	2019	2020	2021	
7	PROJECT NAME	ACTUAL	REVISED	PROPOSED	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED	
8										
9	Treated Water Pressure Reducing and Hydroelectric Facilities									
10	Kohler Hydro/PRV Facility	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	
11	Maxwell Hydro/PRV Facility	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	
12	Orodel Hydro/PRV Facility	\$0	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0	
13	Sunshine Hydro/PRV Facility	\$0	\$0	\$0	\$271,875	\$0	\$0	\$0	\$0	
14	Pearl Street Hydro/PRV Facility	\$0	\$0	\$0	\$0	\$24,333	\$243,331	\$0	\$0	
15	Subtotal - Treated Water PRV and Hydro	\$0	\$100,000	\$75,000	\$271,875	\$24,333	\$243,331	\$0	\$0	
16										
17	Water Treatment Facilities									
18	Betasso WTF	\$413,974	\$1,108,318	\$900,000	\$0	\$0	\$0	\$0	\$0	
19	Betasso WTF - Bond Proceeds	\$0	\$0	\$24,000,000	\$0	\$0	\$0	\$0	\$0	
20	Bond Issuance Costs	\$0	\$0	\$240,000	\$0	\$350,000	\$0	\$100,000	\$0	
21	Boulder Reservoir WTF	\$203,296	\$7,100	\$314,000	\$0	\$0	\$0	\$2,000,000	\$0	
22	Boulder Res WTF - Bond Proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
23	Subtotal - Water Treatment Facilities	\$617,270	\$1,115,418	\$25,454,000	\$0	\$350,000	\$0	\$2,100,000	\$0	
24										
25	Treated Water Pump Stations									
26	Cherryvale Pump Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
27	Boulder Reservoir WTF High Service Pump	\$0	\$84,289	\$0	\$0	\$0	\$0	\$0	\$0	
28	Iris Pump Stations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
29	Subtotal - Treated Water Pump Stations	\$0	\$84,289	\$0	\$0	\$0	\$0	\$0	\$0	
30										
31	Treated Water Storage Tanks									
32	Gunbarrel Storage Tank	\$644,449	\$39,746	\$0	\$0	\$0	\$0	\$0	\$0	
33	Maxwell Storage Tank	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
34	Booten Storage Tank	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
35	Devil's Thumb Storage Tank	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	
36	Kohler Storage Tank	\$64	\$103,487	\$799,875	\$0	\$0	\$0	\$0	\$0	
37	Chautauqua Storage Tank	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
38	Betasso Storage Tank	\$0	\$0	\$0	\$292,465	\$0	\$0	\$0	\$0	
39	Boulder Reservoir Storage Tank	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
40	Subtotal - Treated Water Storage Tanks	\$644,513	\$193,233	\$799,875	\$292,465	\$0	\$0	\$0	\$0	
41										
42	Treated Water Distribution System									
43	Zone Isolation Valves	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
44	Catholic Protection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
45	Waterline Replacement	\$3,293,113	\$3,522,017	\$3,352,960	\$3,487,078	(\$0)	\$3,771,624	\$3,922,489	\$4,079,389	
46	Subtotal - Treated Water Distribution System	\$3,293,113	\$3,522,017	\$3,352,960	\$3,487,078	(\$0)	\$3,771,624	\$3,922,489	\$4,079,389	
47										
48	Treated Water Transmission System									
49	Sunshine Transmission Pipe	\$568,313	\$2,259,938	\$0	\$0	\$0	\$0	\$0	\$0	
50	Boulder Canyon - Orodel to Fourmile Pipe	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
51	Mountain Transmission Pipes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
52	Zone 1 Transmission Pipes	\$0	\$0	\$0	\$0	\$250,000	\$0	\$0	\$250,000	
53	Zone 2 Transmission Pipes	\$0	\$0	\$0	\$250,000	\$0	\$0	\$250,000	\$0	
54	Zone 3 Transmission Pipes	\$0	\$0	\$1,200,000	\$0	\$0	\$250,000	\$0	\$0	
55	Subtotal - Treated Water Transmission System	\$568,313	\$2,259,938	\$1,200,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	
56										
57	Source Water Transmission System									
58	Lakewood Pipeline	\$0	\$530,400	\$0	\$0	\$0	\$316,330	\$0	\$0	
59	Silver Lake Pipeline	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
60	Source Water Transmission Pipe Inspection	\$0	\$73,653	\$0	\$0	\$0	\$0	\$0	\$0	
61	Subtotal - Source Water Transmission System	\$0	\$604,053	\$0	\$0	\$0	\$316,330	\$0	\$0	
62										
63	Barker Water System									
64	Barker Gravity Pipeline Repair	\$305,389	\$475,882	\$667,416	\$1,169,859	\$1,216,653	\$1,265,319	\$1,315,932	\$1,368,569	
65	Barker-Kossler Penstock Repair	\$0	\$0	\$0	\$116,986	\$0	\$0	\$0	\$0	
66	Barker Dam Outlet	\$0	\$0	\$100,000	\$175,000	\$0	\$835,551	\$0	\$0	
67	Barker Dam Outlet - Bond Proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$8,355,509	\$0	
68	Barker Dam and Reservoir	\$2,625	\$495,174	\$65,000	\$50,000	\$0	\$0	\$0	\$0	
69	Barker Hydro System Integration	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
70	Barker Relicensing	\$25,377	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
71	Barker Instream Flow Release	\$0	\$6,052	\$0	\$0	\$0	\$0	\$0	\$0	
72	Barker Residence	\$78,481	\$214,799	\$0	\$0	\$0	\$0	\$0	\$0	
73	Betasso Penstock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
74	Kossler Dam	\$56,204	\$135,738	\$75,000	\$0	\$0	\$0	\$0	\$0	
75	Subtotal - Barker Water System	\$468,076	\$1,327,645	\$907,416	\$1,511,844	\$1,216,653	\$2,100,870	\$9,671,441	\$1,368,569	
76										
77	Raw Water Storage Reservoirs									
78	Albion Dam	\$0	\$80,000	\$125,000	\$0	\$341,636	\$3,416,361	\$0	\$0	
79	Silver Lake Dam	\$0	\$75,000	\$0	\$0	\$100,000	\$0	\$0	\$0	
80	Island Lake Dam	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	
81	Green Lake 1 Dam	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
82	Green Lake 2 Dam - Bond Proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
83	Green Lake 2 Dam	\$0	\$24,719	\$0	\$0	\$0	\$0	\$75,000	\$486,773	
84	Green Lake 3 Dam	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
85	Goose Lake Dam	\$0	\$20,000	\$0	\$0	\$75,000	\$0	\$0	\$0	
86	Boulder Reservoir	\$0	\$0	\$50,000	\$0	\$0	\$0	\$118,434	\$0	

Attachment A - PROPOSED WATER CIP

	A	H	I	J	K	L	M	N	O
1	15-Jun-15								
2				CITY OF BOULDER					
3				DRAFT 2016-2021 CAPITAL IMPROVEMENT PROGRAM					
4				WATER UTILITY FUND					
5									
6	Assumed Inflation Rate	2014	2015	2016	2017	2018	2019	2020	2021
7	PROJECT NAME	ACTUAL	REVISED	PROPOSED	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED
8									
87	Lakewood Dam	\$0	\$0	\$0	\$0	\$124,707	\$0	\$0	\$0
88	Skyscraper Dam	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$171,071
89	Witemyer Ponds	\$0	\$0	\$0	\$0	\$0	\$100,000	\$492,685	\$4,926,849
90	Subtotal - Raw Water Storage Reservoirs	\$0	\$199,719	\$175,000	\$0	\$691,343	\$3,516,361	\$686,119	\$5,584,692
91									
92	Other Raw Water Facilities								
93	Farmer's Ditch	\$0	\$0	\$0	\$0	\$0	\$108,160	\$0	\$0
94	Anderson Ditch	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
95	Source Water Facilities Rehab Program			\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
96	Watershed Improvements	\$78,886	\$146,357	\$80,000	\$0	\$0	\$0	\$100,000	\$0
97	Nederland WWTP	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
98	Instream Flow Structures and Gaging	\$0	\$48,428	\$0	\$0	\$0	\$0	\$0	\$0
99	Como Creek Diversion Structure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
100	Lakewood Diversion Structure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
101	Silver Lake Diversion Structure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
102	NCWCD Conveyance - Boulder Feeder Can	\$25	\$61,271	\$0	\$0	\$0	\$0	\$0	\$0
103	NCWCD Conveyance - Carter Lake Pipeline	\$250,000	\$500,000	\$850,000	\$2,036,322	\$0	\$0	\$0	\$0
104	NCWCD Conveyance/Waterline replacemer	\$0	\$0	\$0	\$0	\$37,565,263	\$0	\$0	\$0
105	Subtotal - Other Raw Water Facilities	\$328,910	\$756,056	\$1,080,000	\$2,186,322	\$37,715,263	\$258,160	\$250,000	\$150,000
106									
107	Source Water Pressure Reducing, Pumping and Hydroelectric								
108	Lakewood Hydroelectric/PRV	\$0	\$0	\$130,000	\$0	\$0	\$300,000	\$0	\$0
109	Silver Lake Hydroelectric/PRV	\$0	\$150,000	\$25,000	\$50,000	\$80,000	\$0	\$0	\$0
110	Boulder Reservoir Intake and Pumping	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
111	Betasso Hydroelectric / Pressure Reducing I	\$134,404	\$0	\$0	\$380,000	\$480,000	\$0	\$0	\$0
112	Barker Dam Hydroelectric	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
113	Barker Dam Hydro	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
114	Boulder Canyon Hydroelectric	\$100,755	\$33,641	\$0	\$0	\$0	\$0	\$0	\$0
115	Boulder Canyon Hydro - Grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
116	Boulder Canyon Hydro - Grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
117	Carter Lake Hydroelectric	\$0	\$0	\$0	\$0	\$50,000	\$250,000	\$0	\$0
118	Carter Lake Hydro	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500,000	\$0
119	Source Water Pressure Reducing, Pumping	\$0	\$0	\$0	\$0	\$0	\$0	\$193,472	\$201,210
120	Subtotal - Source Water PRV, Pumping and H	\$235,159	\$183,641	\$155,000	\$430,000	\$610,000	\$550,000	\$2,693,472	\$201,210
121									
122	Water Distribution System Expansion								
123	Annexation Related Water System Expansio	\$0	\$2,551,700	\$0	\$0	\$0	\$0	\$0	\$0
124	Subtotal - Water Distribution System Expans	\$0	\$2,551,700	\$0	\$0	\$0	\$0	\$0	\$0
125									
126	Water System Monitoring and Metering								
127	Automated Meter Reading	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$684,285
128	Water System Security/Quality Improvemen	\$13,996	\$150,000	\$150,000	\$150,000	\$150,000	\$90,000	\$0	\$0
129	Source Water Monitoring and Protection	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0
130	Distribution System Water Quality	\$14,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0
131	Data Communications System	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
132	September 2013 Flood Disaster Recovery	\$860,072	\$304,301	\$0	\$0	\$0	\$0	\$0	\$0
133	Yards Master Plan Implementation	\$13,553	\$86,321	\$0	\$0	\$0	\$0	\$0	\$0
134	Utility Billing Computer System	\$0	\$100,000	\$0	\$0	\$0	\$0	\$125,000	\$0
135	Subtotal - Water System Monitoring and Mete	\$901,722	\$740,622	\$250,000	\$250,000	\$250,000	\$190,000	\$125,000	\$684,285
136									
137	TOTAL CAPITAL USES OF FUNDS	\$7,057,076	\$13,638,331	\$33,449,251	\$8,679,585	\$41,107,591	\$11,196,676	\$19,698,520	\$12,318,145

Attachment B - DRAFT WASTEWATER CIP

	A	H	I	J	K	L	M	N	O
1	15-Jun-15								
2		CITY OF BOULDER							
3		DRAFT 2016 - 2021 CAPITAL IMPROVEMENT PROGRAM							
4		WASTEWATER UTILITY FUND							
5									
6	Assumed Inflation Rate	2014	2015	2016	2017	2018	2019	2020	2021
7	PROJECT NAME	ACTUAL	REVISED	PROPOSED	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED
8									
9	Wastewater Treatment								
10	WWTF Pumps	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0
11	WWTF Permit Improvements	\$438,080	\$4,194,112	\$150,000	\$0	\$750,000	\$1,500,000	\$0	\$136,857
12	WWTF Nutrient Management Grant	\$144,485							
13	WWTF Permit Improvements - Proj. Bond	\$0	\$0	\$0	\$0	\$0	\$0	\$18,500,000	\$0
14	WWTF Laboratory	\$25,163	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0
15	Lower Boulder Creek Enhancement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16	WWTF Headworks	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17	WWTF Headworks - Proj. Bond	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18	WWTF Instrumentation/Control	\$0	\$1,127,477	\$0	\$674,918	\$701,915	\$729,992	\$759,191	\$0
19	WWTF Electrical	\$0	\$0	\$120,000	\$1,200,000	\$0	\$0	\$0	\$0
20	WWTF Activated Sludge	\$0	\$389,376	\$0	\$175,479	\$0	\$0	\$0	\$0
21	WWTF Primary Clarifiers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	WWTF Secondary Clarifiers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23	WWTF UV Disinfection	\$2,356	\$2,998	\$0	\$0	\$0	\$0	\$0	\$0
24	WWTF UV Disinfection - Proj. Bond	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	WWTF Permit Improvements - 2010 Bond	\$15,148	\$1,198	\$0	\$0	\$0	\$0	\$0	\$0
26	WWTF Rehabilitation	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000	\$375,000
27	Valmont Butte	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28	Biosolids Processing & Dewatering	\$110,044	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29	WWTF Biosolids Digester	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30	WWTF Biosolids Digester - Proj. Bond	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31	WWTF Cogeneration	\$0	\$39,995	\$0	\$0	\$0	\$0	\$184,481	\$0
32	WWTF Digester Complex	\$0	\$0	\$0	\$0	\$0	\$200,000	\$2,000,000	\$0
33	September 2013 Flood Disaster Recovery	\$453,442	\$606,987	\$0	\$0	\$0	\$0	\$0	\$0
34	WWTF Digester Cleaning	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35	Bond Issuance Costs	\$0	\$125,000	\$0	\$0	\$0	\$0	\$125,000	\$0
36	Subtotal - Wastewater Treatment Plant	\$1,208,718	\$6,487,143	\$470,000	\$2,050,397	\$1,451,915	\$2,429,992	\$21,718,672	\$511,857
37									
38	Marshall Landfill								
39	Marshall Landfill	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0
40	Subtotal - Marshall Landfill	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0
41									
42	Wastewater System Monitoring and Metering								
43	Yards Master Plan Implementation	\$6,777	\$36,046	\$0	\$0	\$0	\$0	\$0	\$0
44	Automated Meter Reading	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
45	Utility Billing Computer System	\$0	\$50,000	\$0	\$0	\$0	\$0	\$65,000	\$0
46	Subtotal - Monitoring and Metering	\$6,777	\$86,046	\$0	\$0	\$0	\$0	\$65,000	\$0
47									
48	Collection and Conveyance System Rehabilitation								
49	Collection System Monitoring	\$338,636	\$3,426	\$0	\$0	\$0	\$0	\$0	\$0
50	Condition Assessment Program		\$780,000	\$811,200	\$843,648	\$877,394	\$912,490	\$948,989	\$986,949
51	Sanitary Sewer Rehabilitation	\$403,808	\$3,000,161	\$2,758,080	\$2,868,403	\$2,983,139	\$3,102,465	\$3,226,563	\$3,355,626
52	Sanitary Sewer Rehabilitation - Bond	-	10,000,000	-	-	-	-	-	-
53	Sanitary Sewer Manhole Rehabilitation	\$51,186	\$208,000	\$216,320	\$224,973	\$233,972	\$243,331	\$253,064	\$657,966
54	IBM Pump Station	\$79,395	\$1,235,402	\$0	\$0	\$0	\$0	\$0	\$0
55	Tier 1 Boulder Creek 2 Master Plan Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
56	Tier 1 Goose Creek 1/1A Master Plan Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$329,278
57	Tier 1 Goose Creek 3 Master Plan Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
58	Tier 1 Goose Creek 5 Master Plan Project	\$0	\$0	\$0	\$0	\$25,000	\$647,590	\$1,346,988	\$1,400,867
59	Tier 2 Boulder Creek 1 Master Plan Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
60	Tier 2 Boulder Creek 3 Master Plan Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
61	Tier 2 Boulder Creek 4 Master Plan Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
62	Tier 2 Goose Creek 4 Master Plan Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
63	Tier 2 Gunbarrel 1 Master Plan Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
64	Tier 2 Gunbarrel 2 Master Plan Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
65	Tier 2 South Boulder Creek 1 Master Plan Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
66	Subtotal - Sewer System Rehabilitation	\$873,024	\$15,226,990	\$3,785,600	\$3,937,024	\$4,119,505	\$4,905,875	\$5,775,604	\$6,730,686
67									
68	Wastewater System Expansion								
69	Annexation Related WW System Expansion	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
70	Subtotal - Wastewater System Expansion	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
71									
72	TOTAL CAPITAL USES OF FUNDS	\$2,088,519	\$21,800,178	\$4,355,600	\$5,987,421	\$5,571,420	\$7,335,867	\$27,559,277	\$7,242,543

**PROPOSED
CITY OF BOULDER
2016 FUND FINANCIAL**

	A	B	G	I	K	M	O	Q	S	U
1	STORMWATER/FLOOD MANAGEMENT UTILITY									
2										
3										
4										
5										
6		Beginning Fund Balance	\$ 16,195,856	\$ 15,450,198	\$ 12,962,605	\$ 12,687,611	\$ 11,314,975	\$ 7,763,938	\$ 7,590,235	\$ 7,142,802
7										
8		Sources of Funds								
9		Operating-								
10		Service Charge Fees	\$ 5,592,683	\$ 5,482,012	\$ 9,612,708	\$ 10,017,210	\$ 10,840,224	\$ 11,730,857	\$ 12,577,121	\$ 13,106,367
11		Projected Rate Increases		4,111,509	384,508	801,377	867,218	821,160	503,085	524,255
15		Non-Operating--								
16		Plant Investment Fees	818,369	600,000	300,000	300,000	300,000	300,000	300,000	300,000
17		Urban Drainage District Funds	50,000	800,785	882,835	957,835	930,000	400,000	400,000	400,000
18		State and Federal Grants	4,794,503	2,655,468	-	-	-	-	-	-
19		Interest on Investments	71,936	97,318	129,626	190,314	226,299	155,279	151,805	142,856
20		Intergovernmental Transfers (KICP Program)	2,000	144,200	148,526	152,982	157,571	162,298	167,167	172,182
21		Rent and other miscellaneous revenue	44,561	40,000	40,000	40,000	40,000	40,000	40,000	40,000
22		Miscellaneous nonrecurring revenue	-	-	-	-	-	-	-	-
23		Sale of Real Estate - Yards Masterplan	-	357,375	-	-	-	-	-	-
24		Projected Bonds	-	23,075,000	-	-	25,325,000	-	-	-
25		TOTAL NON-OPERATING SOURCES OF FUNDS	5,781,369	\$27,770,145	\$1,500,987	\$1,641,131	\$26,978,871	\$1,057,577	\$1,058,972	\$1,055,038
26										
27		Total Sources of Funds	\$ 11,374,052	\$ 37,363,666	\$11,498,203	\$ 12,459,718	\$ 38,686,313	\$ 13,609,594	\$ 14,139,178	\$ 14,685,660
28										
29		Uses of Funds								
30		Operating-								
31		Administration	\$ 439,228	\$ 433,414	\$ 475,873	\$ 490,149	\$ 504,854	\$ 519,999	\$ 535,599	\$ 551,667
32		Planning and Project Management	1,066,947	1,253,577	1,289,594	1,328,282	1,368,130	1,409,174	1,451,449	1,494,993
33		Stormwater Contract Management	61,111	49,442	49,442	50,925	52,453	54,027	55,647	57,317
34		Stormwater Quality and Education	782,766	943,360	1,059,847	1,091,642	1,124,392	1,158,123	1,192,867	1,228,653
35		System Maintenance	1,035,053	1,618,165	1,372,134	1,413,298	1,455,697	1,499,368	1,544,349	1,590,679
38		Sick/Vacation Accrual	4,326	50,000	50,000	51,500	53,045	54,636	56,275	57,964
39		TOTAL OPERATING USES OF FUNDS	3,389,431	4,347,958	4,296,890	4,425,797	4,558,571	4,695,328	4,836,188	4,981,273
40										
41		Debt--								
42		Goose Creek 1998 Revenue Bond	-	-	-	-	-	-	-	-
43		Refunding of the Goose Creek 1998 Revenue Bond	385,117	387,038	381,675	386,138	380,175	-	-	-
44		Projected Bond - South Boulder Creek	-	-	-	-	2,125,000	2,125,000	2,125,000	2,125,000
45		Projected Bond - Wonderland Creek	-	862,500	1,656,000	1,656,000	1,656,000	1,656,000	1,656,000	1,656,000
47		TOTAL DEBT SERVICE	385,117	1,249,538	2,037,675	2,042,138	4,161,175	3,781,000	3,781,000	3,781,000
48										
49		Transfers-								
50		Cost Allocation	219,451	246,288	248,170	260,579	273,607	287,288	301,652	316,735
51		Planning & Development Services	128,511	132,367	136,338	140,428	144,641	148,980	153,450	158,053
52		General Fund - Utilities Attorney	17,629	19,986	19,644	20,430	21,247	22,097	22,760	23,443
53		TOTAL TRANSFERS OUT	365,591	398,641	404,152	421,436	439,495	458,365	477,862	498,230

Attachment C - PROPOSED STORMWATER/FLOOD CIP

	A	G	H	I	J	K	L	M	N
1	15-Jun-15								
2		CITY OF BOULDER							
3		DRAFT 2016-2021 CAPITAL IMPROVEMENT PROGRAM							
4		STORMWATER AND FLOOD MANAGEMENT UTILITY FUND							
5									
6	Assumed Inflation Rate	2014	2015	2016	2017	2018	2019	2020	2021
7	PROJECT NAME	ACTUAL	PROJECTED	PROPOSED	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED
8									
9	Major Drainageways								
10	Elmer's Twomile Creek	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	Goose Creek	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12	South Boulder Creek	\$72,856	\$451,683	\$750,000	\$750,000	\$0	\$0	\$0	\$0
13	South Boulder Creek - Bond Proceeds	\$0	\$0	\$0	\$0	\$25,000,000	\$0	\$0	\$0
14	Bond Issuance Costs	\$0	\$0	\$0	\$0	\$325,000	\$0	\$0	\$0
15	Skunk Canyon Creek	\$0	\$0	\$0	\$100,000	\$500,000	\$0	\$0	\$0
16	Sunshine Creek	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17	Twomile Canyon Creek	\$0	\$0	\$0	\$100,000	\$500,000	\$0	\$0	\$0
18	Bluebell Canyon Creek - King's Gulch	\$0	\$0	\$0	\$100,000	\$500,000	\$0	\$0	\$0
19	Viele Channel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20	Four Mile Canyon Creek	\$0	\$0	\$0	\$0	\$500,000	\$1,250,000	\$1,250,000	\$500,000
21	Four Mile Canyon Creek - Upland to Violet	\$0	\$0	\$500,000	\$500,000	\$500,000	\$250,000	\$0	\$0
22	Four Mile Canyon Creek - 19th to 22nd - Bor	\$71,909	\$2,000,000	\$0	\$0	\$0	\$0	\$0	\$0
23	Bear Canyon Creek	\$0	\$100,000	\$500,000	\$0	\$0	\$0	\$0	\$0
24	Gregory Canyon Creek	\$0	\$100,000	\$500,000	\$0	\$0	\$0	\$0	\$0
25	Boulder Creek	\$0	\$600,000	\$0	\$2,500,000	\$2,250,000	\$0	\$0	\$0
26	Boulder Slough	\$788,165	\$0	\$0	\$0	\$0	\$0	\$0	\$0
27	Wonderland Creek	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28	Wonderland Creek - Foothills to 30th	696,684	\$1,708,735	\$0	\$0	\$0	\$0	\$0	\$0
29	Wonderland Creek at 28th St.	399,202	\$628,221	\$0	\$0	\$0	\$0	\$0	\$0
30	Wonderland Creek - Bond Proceeds	\$0	\$21,000,000	\$0	\$0	\$0	\$0	\$0	\$0
31	Bond Issuance Costs	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0
32	Preflood Acquisition	\$875	\$3,355,520	\$500,000	\$550,000	\$600,000	\$633,000	\$660,000	\$684,285
33	Greenways Program Transfer	\$814	\$710,282	\$97,500	\$97,500	\$97,500	\$97,500	97,500	97,500
34	Subtotal - Major Drainageway Improvements	\$2,030,505	\$30,729,441	\$2,847,500	\$4,697,500	\$30,772,500	\$2,230,500	\$2,007,500	\$1,281,785
35									
36	Miscellaneous								
37	Yards Master Plan Implementation	\$6,777	\$43,223	\$0	\$0	\$0	\$0	\$0	\$0
38	CU Bike/Ped Bridge Replacement I	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0
39	September 2013 Flood Disaster Recovery	5,314,477	\$494,672						
40	Utility Billing Computer System	\$0	\$50,000	\$0	\$0	\$0	\$0	\$65,000	\$0
41	Subtotal - Miscellaneous Drainage Improvem	\$5,321,254	\$787,895	\$0	\$0	\$0	\$0	\$65,000	\$0
42									
43	Stormwater Management								
44	Upper Goose Creek	\$0	\$175,000	\$750,000	\$750,000	\$750,000	\$1,000,000	\$1,165,547	\$1,221,869
45	Local Drainage Improvements		\$712,400	\$730,080	\$759,283	\$789,655	\$821,241	\$854,090	\$986,949
46	Stormwater Quality Improvements	\$1,322	\$274,675	\$162,000	\$169,000	\$175,500	\$182,500	\$190,000	\$197,390
47	Storm Sewer Rehabilitation	\$194,114	\$444,156	\$270,400	\$281,200	\$292,500	\$304,000	\$632,700	\$657,966
48	Transportation Coordination	\$436,702	\$366,017	\$324,500	\$337,500	\$351,000	\$365,000	\$633,000	\$657,966
49	Subtotal - Localized Drainage Improvements	\$632,138	\$1,972,248	\$2,236,980	\$2,296,983	\$2,358,655	\$2,672,741	\$3,475,337	\$3,722,139
50									
51	TOTAL CAPITAL USES OF FUNDS	\$7,983,897	\$33,489,584	\$5,084,480	\$6,994,483	\$33,131,155	\$4,903,241	\$5,547,837	\$5,003,924



RatingsDirect®

Summary:

Boulder, Colorado; Water/Sewer

Primary Credit Analyst:

Gregory Dziubinski, Chicago (312) 233-7085; gregory.dziubinski@standardandpoors.com

Secondary Contact:

Scott D Garrigan, Chicago (1) 312-233-7014; scott.garrigan@standardandpoors.com

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Rationale

Outlook

Related Criteria And Research

Summary:

Boulder, Colorado; Water/Sewer

Credit Profile

US\$23.235 mil storm wtr and flood mgmt rev bnds ser 2015 due 12/01/2034

<i>Long Term Rating</i>	AAA/Stable	New
Boulder storm wtr & flood mgt rev bnds		
<i>Long Term Rating</i>	AAA/Stable	Affirmed

Rationale

Standard & Poor's Ratings Services assigned its 'AAA' rating to Boulder, Colo.'s series 2015 storm water and flood management revenue bonds. At the same time, Standard & Poor's affirmed its 'AAA' rating on the city's series 2010 storm water and flood management revenue refunding bonds. The outlook is stable.

System strengths, in our view, include:

- A robust and diverse local economy, with high income indicators;
- Strong maximum annual debt service coverage (DSC);
- A prolonged trend of strong financial operations; and
- A manageable capital program with additional debt needs.

Net income derived from the Boulder Storm Water and Flood Management Utility, which includes fees and interest earnings, secures the bonds. Other bond provisions include:

- A covenant to set rates that generate net revenues of no less than 1.25x annual debt service;
- A limitation on additional bond issuance only if net revenues for the most recent fiscal year, adjusted for approved rate increases, are at least 1.25x pro forma maximum annual debt service; and
- A debt service reserve funded at the lesser of 10% of par or 125% of average annual debt service.

Boulder's Storm Water and Flood Management Utility serves roughly 34,034 accounts. The customer base is stable, with less than 1% growth annually due to the city's built-out status. Residential customers account for nearly two-thirds of consumption. Residential accounts are charged a flat monthly storm water and flood management fee, with a formula-driven charge for commercial and multifamily accounts. A typical city water and sewer bill includes these charges. Current monthly rates average \$13.46 for a single-family home on 7,000 square feet of property. Officials last increased rates in January 2015, by 75% to help fund capital needs. Management is currently conducting a rate study, with the results expected to be reviewed and incorporated into the utility's 2017 rates.

The system's financial performance and DSC have been strong in recent years. Average annual DSC ranged from 5.2x to 6.5x between fiscals 2011 and 2013, and coverage for unaudited fiscal 2014 was 5.3x. Pro forma financials show coverage declining to 3.0x through 2017, although we still consider this level strong. In addition, the utility still maintains what we consider a strong cash position: \$16.5 million as of fiscal year-end 2013, equal to over five years'

operating expenditures. Management plans to draw down reserves to partially fund the utility's capital improvement program. The utility generated a strong \$2.6 million in operational income (before debt service) in fiscal 2013.

The utility's capital plan focuses on installing additional drainage infrastructure and flood mitigation improvements along Fourmile Canyon, Wonderland Creek, and Boulder Creek, as well as floodplain improvements to South Boulder Creek, storm sewer rehabilitation, and pre-flood property acquisition. At this time, management plans to issue roughly \$25 million in additional new-money debt in 2018 as part of its financing for planned capital expenditures. Other anticipated financing for planned capital expenditures includes plant investment and connection fees, and future rate and fee increases.

Boulder, with an estimated 100,493 residents, is 25 miles north of Denver. The University of Colorado (about 29,000 students), the city's leading employer, anchors what we view as Boulder's diversified economy. The university also serves as a magnet for technology and research jobs. Additional leading employers include IBM Corp., Oracle Corp., and Ball Corp. City income indicators are good-to-strong relative to national levels, in our opinion, with median household effective buying income (EBI) at 98%, and per capita EBI at 134% of the corresponding U.S. levels. A large student population influences these percentages.

The entity's revenue base is predominantly local, with local service charges, derived through an autonomous rate-setting process, representing virtually all entity revenues. Coupled with operating expense flexibility, this limits exposure to federal revenue.

Outlook

The stable outlook reflects our expectation that the city's strong management of system finances and operational liquidity will continue to support strong DSC. The outlook also reflects our view of the city council's proactive rate-setting approach, limited additional capital needs given the area's built-out nature, and a strong city economy that includes above-average wealth levels. Maintenance of the 'AAA' rating is conditional on the utility either meeting or exceeding financial projections.

Related Criteria And Research

Related Criteria

- USPF Criteria: Key Water And Sewer Utility Credit Ratio Ranges, Sept. 15, 2008
- USPF Criteria: Standard & Poor's Revises Criteria For Rating Water, Sewer, And Drainage Utility Revenue Bonds, Sept. 15, 2008
- USPF Criteria: Methodology: Definitions And Related Analytic Practices For Covenant And Payment Provisions In U.S. Public Finance Revenue Obligations, Nov. 29, 2011
- Ratings Above The Sovereign: Corporate And Government Ratings—Methodology And Assumptions, Nov. 19, 2013

Related Research

- U.S. Municipal Water And Sewer Utilities 2014 Sector Outlook: Learning To Do More With Less, Jan. 9, 2014
- 2014 Review Of U.S. Municipal Water And Sewer Ratings: How They Correlate With Key Economic And Financial Ratios, May 12, 2014

- U.S. State And Local Government Credit Conditions Forecast, April 2, 2015

Complete ratings information is available to subscribers of RatingsDirect at www.globalcreditportal.com. All ratings affected by this rating action can be found on Standard & Poor's public Web site at www.standardandpoors.com. Use the Ratings search box located in the left column.

Attachment D - Standard and Poor's Rating Report

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**CITY OF BOULDER
WATER RESOURCES ADVISORY BOARD
AGENDA ITEM**

MEETING DATE: June 22, 2015

AGENDA TITLE: Public Hearing and Consideration of a Motion Regarding the Utility Rates Study Guiding Principles, Issues, and Key Questions

PRESENTER/S

Jeff Arthur, Director of Public Works for Utilities Joe Taddeucci, Water Resources Manager Bret Linenfelser, Water Quality Environmental Services Manager Joanna Crean, Public Works Senior Project Manager Ken Baird, Utilities Financial Manager Russ Sands, Watershed Sustainability and Outreach Supervisor Joanna Bloom, Source Water Administrator Bronwyn Weygandt, Billing Services Supervisor Annie Noble, Acting Principal Engineer for Flood and Greenways Eric M. Ameigh, Public Works Projects Coordinator
--

PURPOSE

The purpose of this item is to secure a recommendation from the Water Resources Advisory Board (WRAB) on the issues, key questions, guiding principles, and workplan for the utility rates study.

QUESTIONS FOR THE BOARD

1. What questions does WRAB have about the public engagement process?
2. What feedback does WRAB have on the recommended guiding principles?
3. What feedback does WRAB have on the potential areas of study?

STAFF RECOMMENDATION

Staff recommends that WRAB discuss and vote on one or more motions that support:

1. A recommended set of utility rate structure guiding principles; and
2. A recommended draft plan of work for studying key questions and issues.

BACKGROUND

In late 2014, Utilities staff met with customers to better understand the impacts of utility rate increases approved by council in the fall of 2014. Many customers indicated they did not understand utility rate structures and/or had questions and concerns about the calculation of the charges on their utility bills. It is also best practice to periodically review rate setting methodology to assure the rates are meeting community goals and are aligned with fee-based principles. These findings led staff to propose evaluation of the rate structure and associated calculations for water, wastewater, and stormwater/flood

management utilities as part of the 2015 work plan. As a first step, a public engagement process was implemented to solicit broader feedback across all customer classes.

Public Engagement and Feedback

The initial public engagement process took place in April and May 2015 and consisted of three open houses and an online survey.

The open houses were held on April 29 and 30. Each open house was tailored to a specific customer class though all events were open to all customers. The three events had the following attendance:

- Commercial, Industrial and Institutional Customers (CII) (**11 attendees**)
- Multifamily Customers (**6 attendees**)
- Single Family Customers (**11 attendees**)

The online survey was open for five weeks and received 123 responses, of which 77 percent were single family customers, 11 percent were multifamily, and the remaining were primarily CII customers.

The public engagement opportunities were publicized via the Daily Camera (press release and News from City Hall), the city's website, the city's social media outlets, and most importantly through a post card mailed to each utility customer (approximately 26,000 in total). Despite limited participation, the open houses and online survey revealed some key themes as follows:

- Concern still exists about the 2015 rate increases amongst the customers who responded.
- There seems to be a general lack of understanding by many customers who responded about how current utility charges work.
- While stability and predictability of revenue is critical for operating the utilities, respondents also said stability and predictability in their bills is important to them. Approximately 80% of survey respondents said it is extremely or somewhat important. Open house attendees had an opportunity to weigh in on possible goals for the rate structures and also supported this goal as a top choice. Feedback indicated that predictability in their bills on a monthly and yearly basis would be beneficial to them.
- Amongst the customers who responded, there is support for the stormwater rate structure to encourage improvements that decrease stormwater impact. Examples might include incentives for removal of impervious surface or installation of detention facilities. 68% of survey respondents said it is either extremely or somewhat important.
- Both the open houses and the survey show support for a stormwater structure that varies by location within the city. Over 60% of survey respondents said it is either extremely or somewhat important. Open house attendees also supported this as a top choice amongst possible goals for the stormwater/flood management utility rate structure.

A summary of the results from the survey and open house goal voting exercise can be found in Attachment A. The complete results of the survey can be found [here](#).

GUIDING PRINCIPLES

In 2003 and 2004, WRAB, staff, and City Council engaged in a process to analyze the existing rate structure, to develop alternative structures that could meet the city's goals, and to ultimately choose a new approach. Staff and consultants developed and analyzed over 20 alternatives for their ability to meet the following water utility rate structure principles:

- Discourage wasteful use, while promoting all justified types and amounts of use;
- Be effective in yielding total revenue requirements;
- Provide revenue stability and predictability;
- Fairly allocate the total cost of service among the customer classes of service to attain equity; and
- Be dynamic in its ability to respond to changing supply and demand conditions and/or environmental concerns.

The utility rates study project provides a potential opportunity to both reaffirm the existing principles and to formally establish principles for wastewater and stormwater/flood management.

The guiding principles are high level goals and speak to what the rate structures should be designed to accomplish. They are not necessarily intended to address each and every thing that the utilities do. For instance, there are certain "givens" such as meeting regulatory and legal requirements that are not reflected in the guiding principles.

The public engagement process did not indicate a strong need or desire to change to the five guiding principles for water. A number of the principles also appear to apply to wastewater and stormwater/flood management. Therefore, staff believes the list could be slightly amended and organized in such a way that it not only represents a general set of principles across the three utilities, but that it also works in a customized way for each utility. Toward that end, staff has identified the following addition to the list that would specifically relate to the stormwater/flood management utility:

"Encourage effective onsite management of stormwater." This is a reflection of existing policy and practice that recognize the importance of onsite best management practices in reducing impacts to public infrastructure and natural drainageways.

As a result of the addition, the list of utilities rate structure guiding principles would be organized as follows:

Principle	Water Utility	Wastewater Utility	Stormwater/Flood Management Utility
Discourage wasteful use, while promoting all justified types and amounts of use.	X		
Be effective in yielding total revenue requirements.	X	X	X
Provide revenue stability and predictability for the utilities.	X	X	X
Fairly allocate the total cost of service across customer classes to attain equity.	X	X	X
Be dynamic in its ability to respond to changing supply and demand conditions and/or environmental concerns.	X		
Encourage effective onsite management of stormwater.			X

Over time, the guiding principles for all utilities should be referenced regularly and guide decision making at the policy level. For the utility rates study, the guiding principles will be used as a contextual framework for all analyses and will be used to shape any recommendations that may emerge. To aid in WRAB’s conversation, a Draft Interpretations Matrix can be found in Attachment B.

POTENTIAL AREAS OF STUDY

The purpose of the public engagement effort was to make sure staff did not proceed with analysis of rate structures without input from customers. The engagement process did not indicate a need for large-scale changes to existing rate structures. There are, however, a handful of issues and key questions that staff may pursue subject to input from WRAB. Attachment C illustrates how the potential areas of study relate to the guiding principles.

Effectiveness of Water Budgets

When water budgets were established, the rate structure was designed to adhere to the aforementioned principles. With the data from seven years of water budgets, staff believes now may be a good time to determine how well the water rate structure and water budgets are accomplishing those stated goals. Some analysis has already been completed along these lines. For example, the CII Water Budgets study has provided insights into equity within the CII customer class. A new analysis could focus on the equity between all customer classes. In addition, the Water Conservation Futures Study is currently being updated and will provide information about the progress on water conservation as well as possible goals for the future.

Cost of Service

Cost of service analyses are important to conduct on a routine basis. The analysis will determine the true costs of providing different utility services to each customer class. All three utilities would be analyzed.

Fixed vs. Variable Charges

In the water and wastewater utilities, customers pay both a fixed service charge based on meter size, and a variable quantity charge based on water consumption. Along with cost of service, this is another issue that should be revisited on a regular basis to make sure the relationship between fixed and variable charges accurately reflects the utilities' costs to provide services and conforms to industry standards.

Outside City vs. Inside City Charges

In the water and wastewater utilities, customers pay different amounts based on whether they are inside the city or outside the city. Along with cost of service and fixed and variable charges, the difference in these charges should be revisited on a regular basis to make sure the relationship accurately reflects the utilities' costs to provide services and conforms to industry standards.

Stormwater/Flood Management Calculation Methodology

A few issues have arisen in recent years about the fee calculation methodology that may be worth exploring.

First, the current stormwater monthly fee calculation uses the same basic methodology across all customer classes. Customers other than single family residential are assessed stormwater charges based on the ratios of their lot size and impervious area to a typical single family residential lot. Some large customers have questioned whether a more complex methodology might better account for unique characteristics of their properties. For example, the fee for a large agricultural property is largely driven by lot size even though the runoff impacts may not be proportionally larger than those of a single family residential lot.

Second, while revenue is collected based on a formula that compares the stormwater runoff impact of individual properties, different properties benefit from the utility in different ways. A property at the top of hill benefits from having downstream infrastructure to mitigate its runoff impacts. A downstream property benefits from having those impacts mitigated. A property in a floodplain might benefit from a capital project that alleviates the needs for flood insurance. A property already outside the floodplain still benefits from projects that mitigate impacts to access and utility service and may have already benefited from previous mitigation projects.

The public engagement process and other recent input indicate some desire to look into a different rate structure that would vary fees based on location within the city. Despite the above mentioned rationale, some customers do not believe they should pay the regular stormwater/flood management fee if their neighborhoods lack stormwater infrastructure or do not have flood risks that necessitate flood management projects. Although existing policy and practice recognize stormwater and flood management services as a city-wide benefit, staff could analyze potential changes that might allocate costs based on more localized benefits.

NEXT STEPS

Following WRAB input on the guiding principles and a proposed approach to studying issues and key questions, next steps will be as follows:

- July 2015: Staff will organize the issues and key questions into individual scopes of work and further organize those scopes into a larger project workplan. At that point, staff will determine which analyses, if any, can be completed in-house and which are likely to require consulting resources. In the cases where consulting help will be needed, staff will begin to draft requests for proposals.
- August 18, 2015: Staff will update City Council and seek any additional guidance on the direction of the project.
- Late August, 2015: Post requests for proposal.
- September 2015: Select consultants, sign contracts, and begin work.
- November 2015: Staff update to WRAB on preliminary findings and project progress.
- December 2015: Staff update to council on preliminary findings and project progress.

ATTACHMENTS

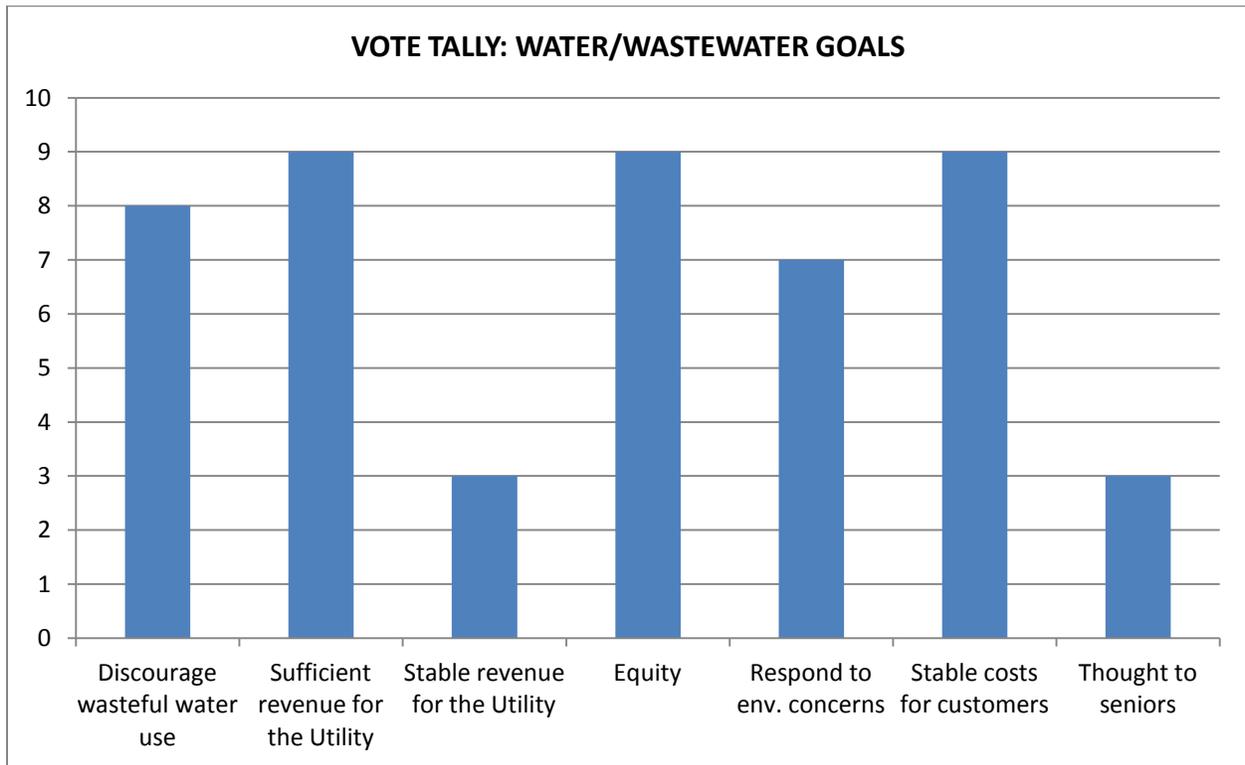
Attachment A – Results from Open Houses and Online Survey

Attachment B – Draft Principles Interpretations Matrix

Attachment C – Relation of Issues and Key Questions to Guiding Principles

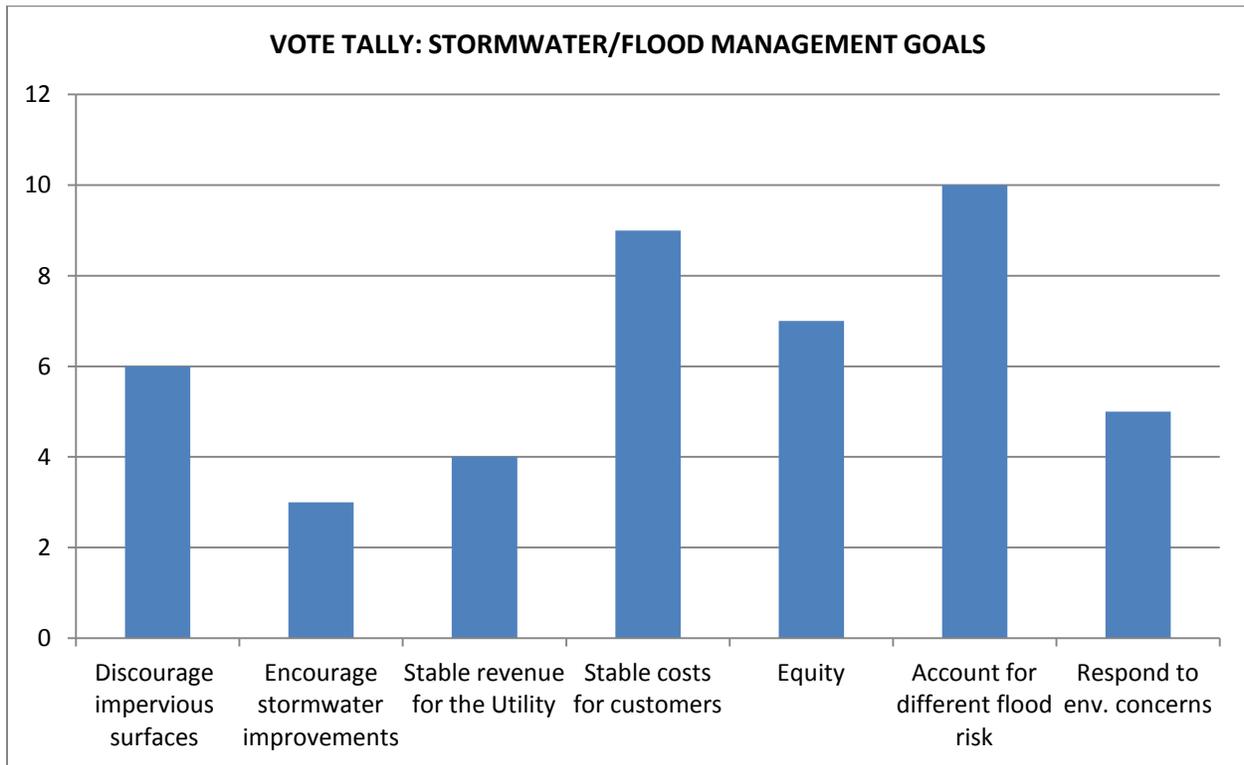
Total Results of Dot Voting Exercise from Open Houses

Water/Wastewater Goal	Ranking
Provide stable and predictable monthly costs for customers.	1 st (tie)
Yield sufficient funding to cover the costs of operating the utilities.	1 st (tie)
Fairly allocate the total cost of service among different customer types to attain equity.	1 st (tie)
Discourage wasteful water use, while promoting all justified types and amounts of use.	4 th
Be dynamic in its ability to respond to changing supply and demand conditions and/or environmental concerns.	5 th
Provide stable and predictable revenue for the utilities.	6 th (tie)
Give thought to senior citizens (write in).	6 th (tie)



Total Results of Dot Voting Exercise from Open Houses

Stormwater/Flood Management Goals	Ranking
Account for the differences in flood risk and flood mitigation needs across different parts of the city	1 st
Provide stable and predictable monthly costs for customers.	2 nd
Fairly allocate the total cost of service among different customer types to attain equity.	3 rd
Discourage impervious surfaces that create stormwater runoff.	4 th
Be dynamic in its ability to respond to changing supply and demand conditions and/or environmental concerns.	5 th
Provide stable and predictable revenue for the utility.	6 th
Encourage stormwater improvements that lessen the impact of stormwater runoff.	7 th



City of Boulder Utility Rates Survey

Monday, June 01, 2015

123

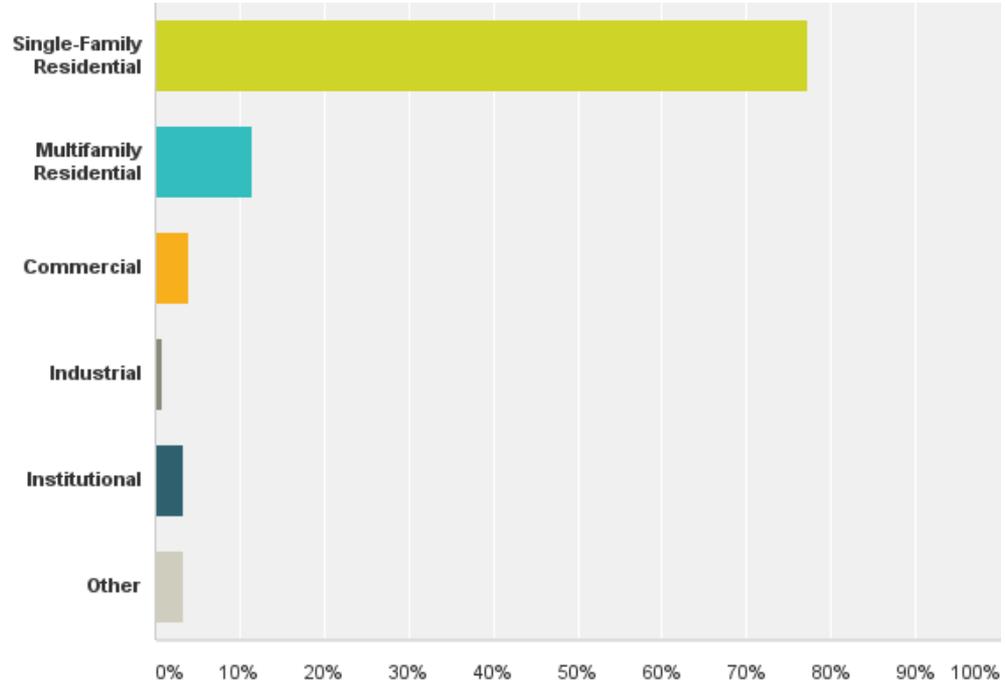
Total Responses

Date Created: Wednesday, April 15, 2015

Complete Responses: 110

Q1: Which customer category best describes you? If you have multiple types of accounts, such as one for business and one for your home, please fill out a separate survey for each.

Answered: 123 Skipped: 0



Attachment A

Q1: Which customer category best describes you? If you have multiple types of accounts, such as one for business and one for your home, please fill out a separate survey for each.

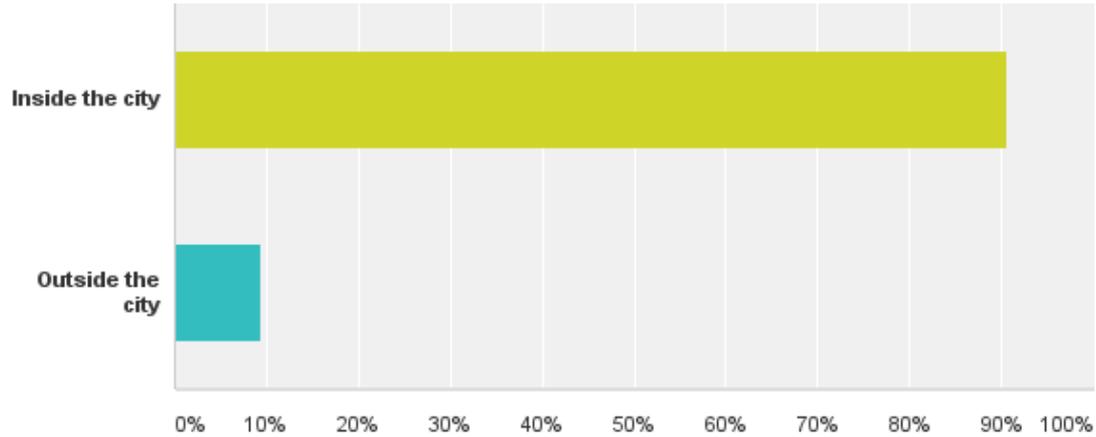
Answered: 123 Skipped: 0

Attachment A

Answer Choices	Responses
Single-Family Residential	77.24% 95
Multifamily Residential	11.38% 14
Commercial	4.07% 5
Industrial	0.81% 1
Institutional	3.25% 4
Other	3.25% 4
Total	123

Q2: Is your account for a property inside the City of Boulder or outside the City of Boulder?

Answered: 74 Skipped: 49



Q2: Is your account for a property inside the City of Boulder or outside the City of Boulder?

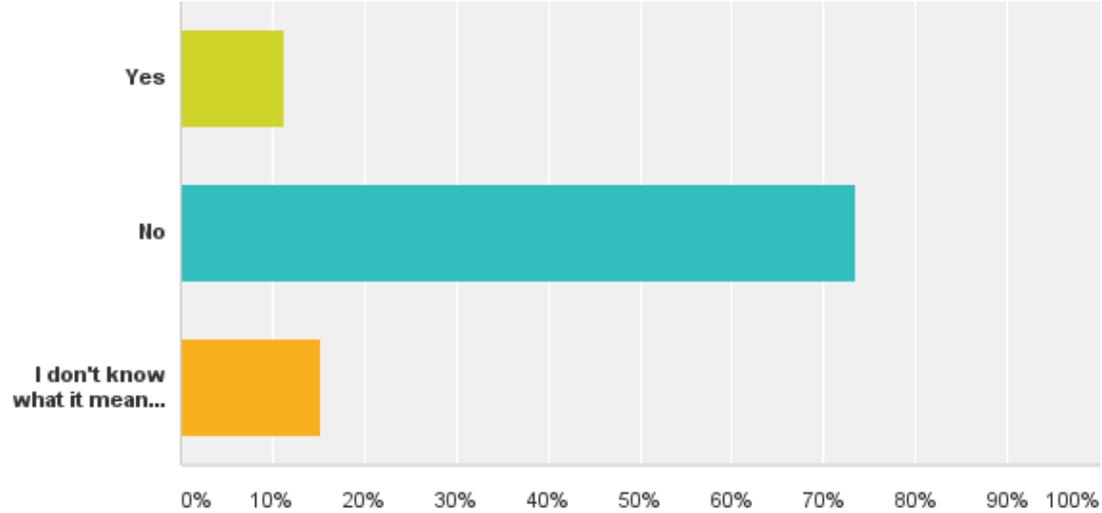
Answered: 74 Skipped: 49

Answer Choices	Responses
Inside the city	90.54% 67
Outside the city	9.46% 7
Total	74

Q3: Have you ever requested an adjustment to your water budget? (Single Family)

Answered: 98 Skipped: 25 (skipped by non-single family customers)

Attachment A



Q3: Have you ever requested an adjustment to your water budget? (Single Family)

Answered: 98 Skipped: 25 (skipped by non-single family customers)

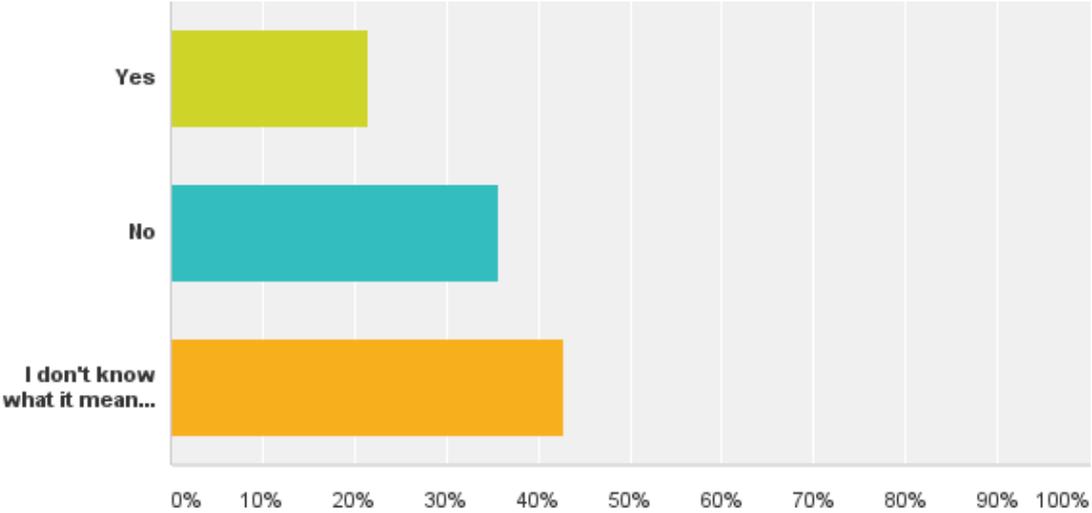
Answer Choices	Responses	
Yes	11.22%	11
No	73.47%	72
I don't know what it means to request an adjustment	15.31%	15
Total		98

Attachment A

Q4: Have you ever requested an adjustment to your water budget? (Multifamily)

Answered: 14 Skipped: 109 (skipped by non-multifamily customers)

Attachment A



Q4: Have you ever requested an adjustment to your water budget? (Multifamily)

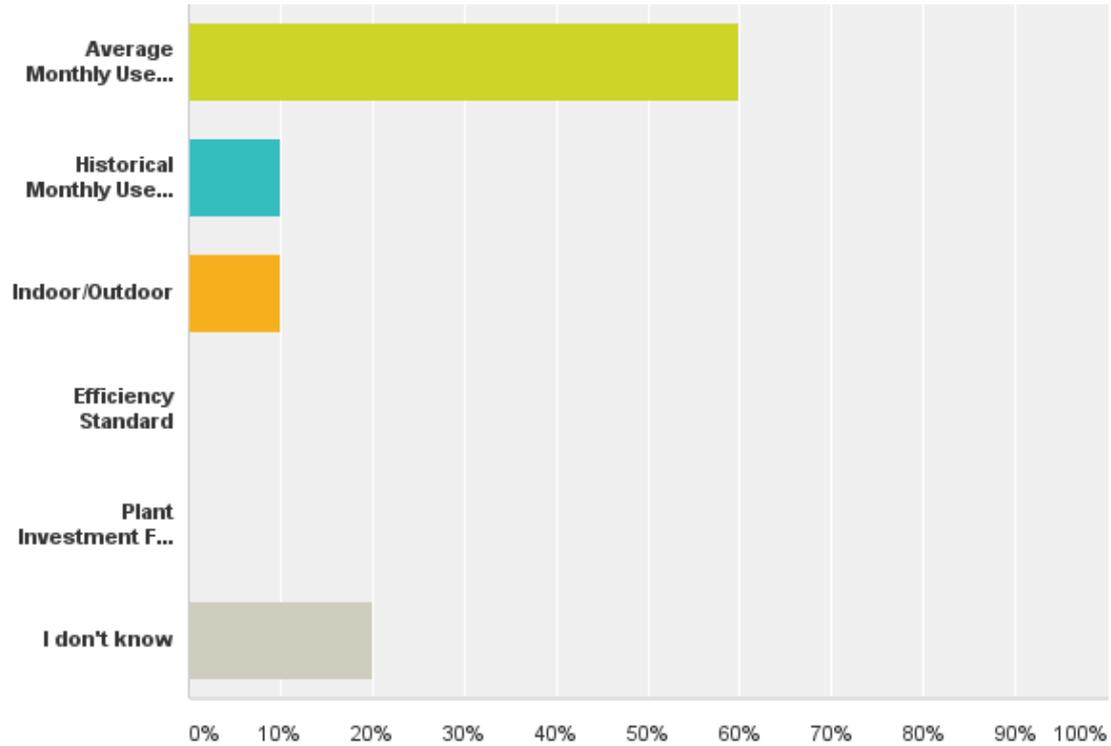
Answered: 14 Skipped: 109 (skipped by non-multifamily customers)

Answer Choices	Responses	
Yes	21.43%	3
No	35.71%	5
I don't know what it means to request an adjustment	42.86%	6
Total		14

Attachment A

Q5: What type of water budget do you have? (Commercial, Industrial, Institutional)

Answered: 10 Skipped: 113 (skipped by non-CII customers)



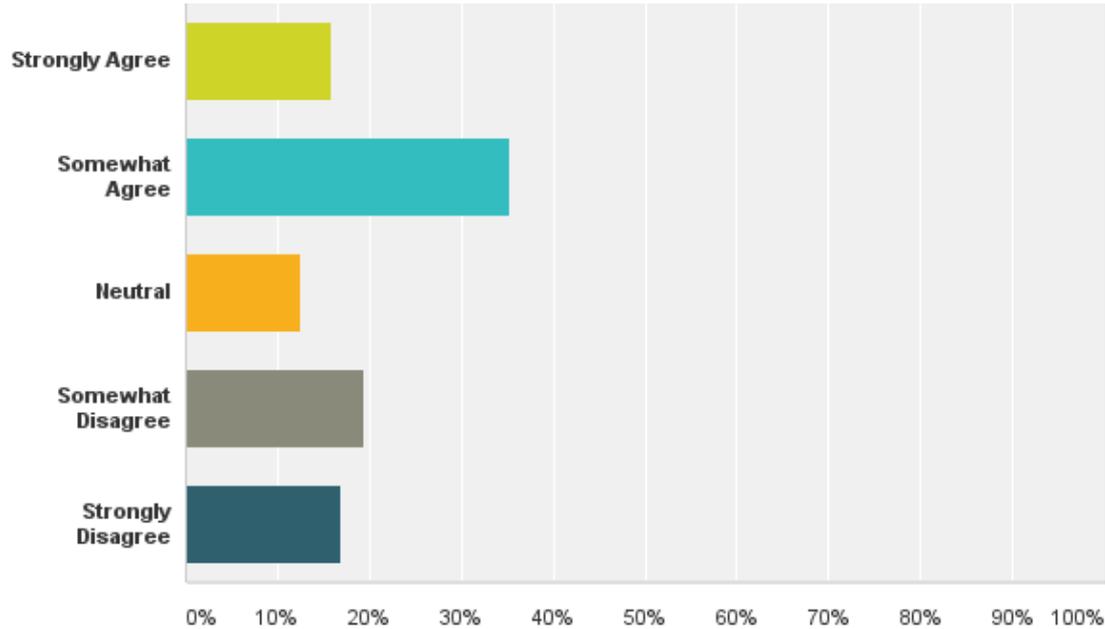
Q5: What type of water budget do you have? (Commercial, Industrial, Institutional)

Answered: 10 Skipped: 113 (skipped by non-CII customers)

Answer Choices	Responses
Average Monthly Use (AMU)	60.00% 6
Historical Monthly Use (HMU)	10.00% 1
Indoor/Outdoor	10.00% 1
Efficiency Standard	0.00% 0
Plant Investment Fee (PIF)	0.00% 0
I don't know	20.00% 2
Total	10

Q6: Please indicate your level of agreement with the following statement: "I understand how my utility bill is calculated."

Answered: 119 Skipped: 4



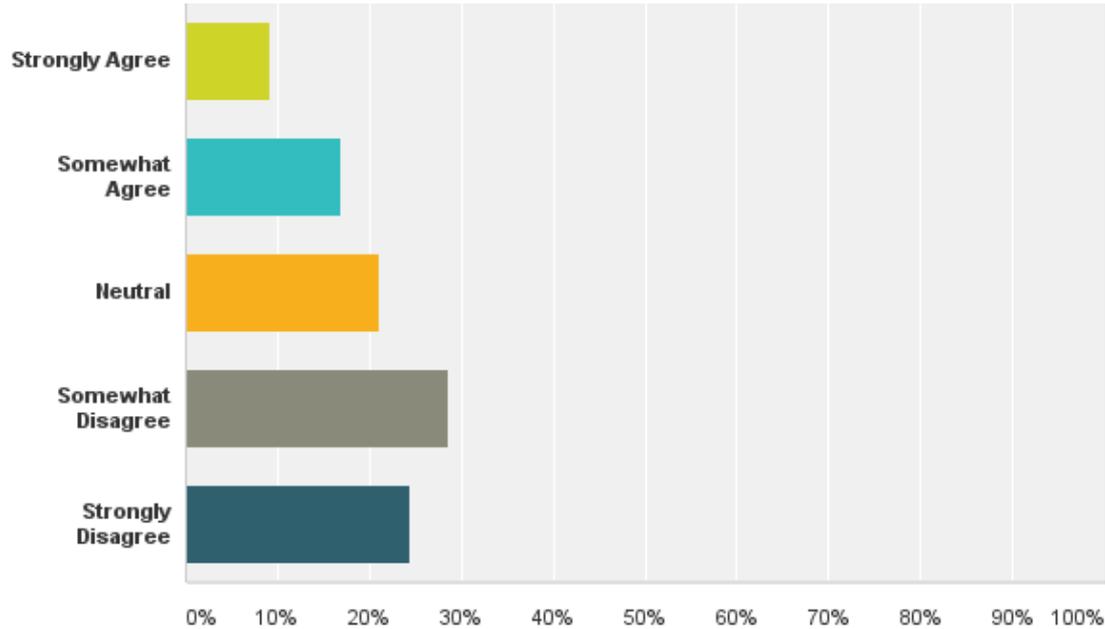
Q6: Please indicate your level of agreement with the following statement: "I understand how my utility bill is calculated."

Answered: 119 Skipped: 4

Answer Choices	Responses
Strongly Agree	15.97% 19
Somewhat Agree	35.29% 42
Neutral	12.61% 15
Somewhat Disagree	19.33% 23
Strongly Disagree	16.81% 20
Total	119

Q7: Please indicate your level of agreement with the following statement: "Overall, I feel the utility rates are fairly charged to customers."

Answered: 119 Skipped: 4



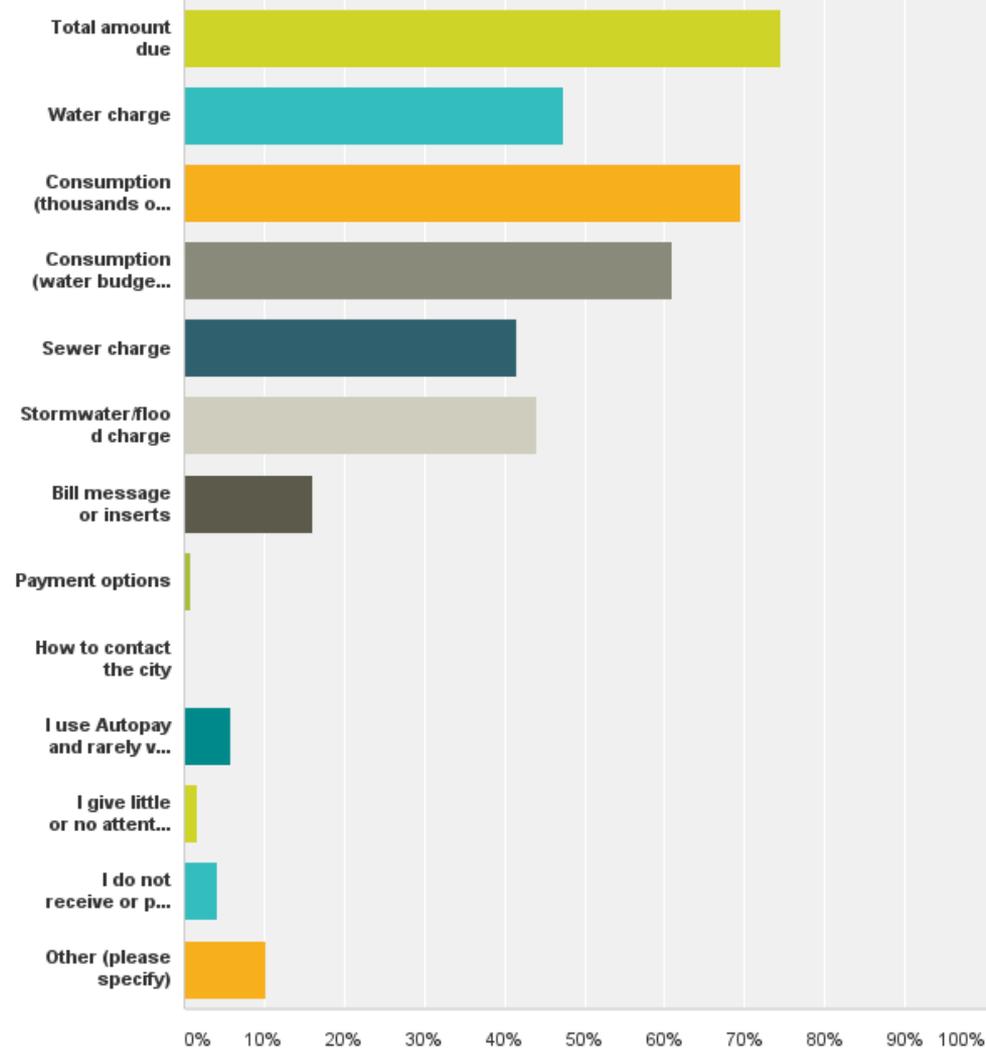
Q7: Please indicate your level of agreement with the following statement: "Overall, I feel the utility rates are fairly charged to customers."

Answered: 119 Skipped: 4

Answer Choices	Responses	
Strongly Agree	9.24%	11
Somewhat Agree	16.81%	20
Neutral	21.01%	25
Somewhat Disagree	28.57%	34
Strongly Disagree	24.37%	29
Total		119

Q8: I pay the most attention to the following portions of my utility bill (please check all that apply).

Attachment A



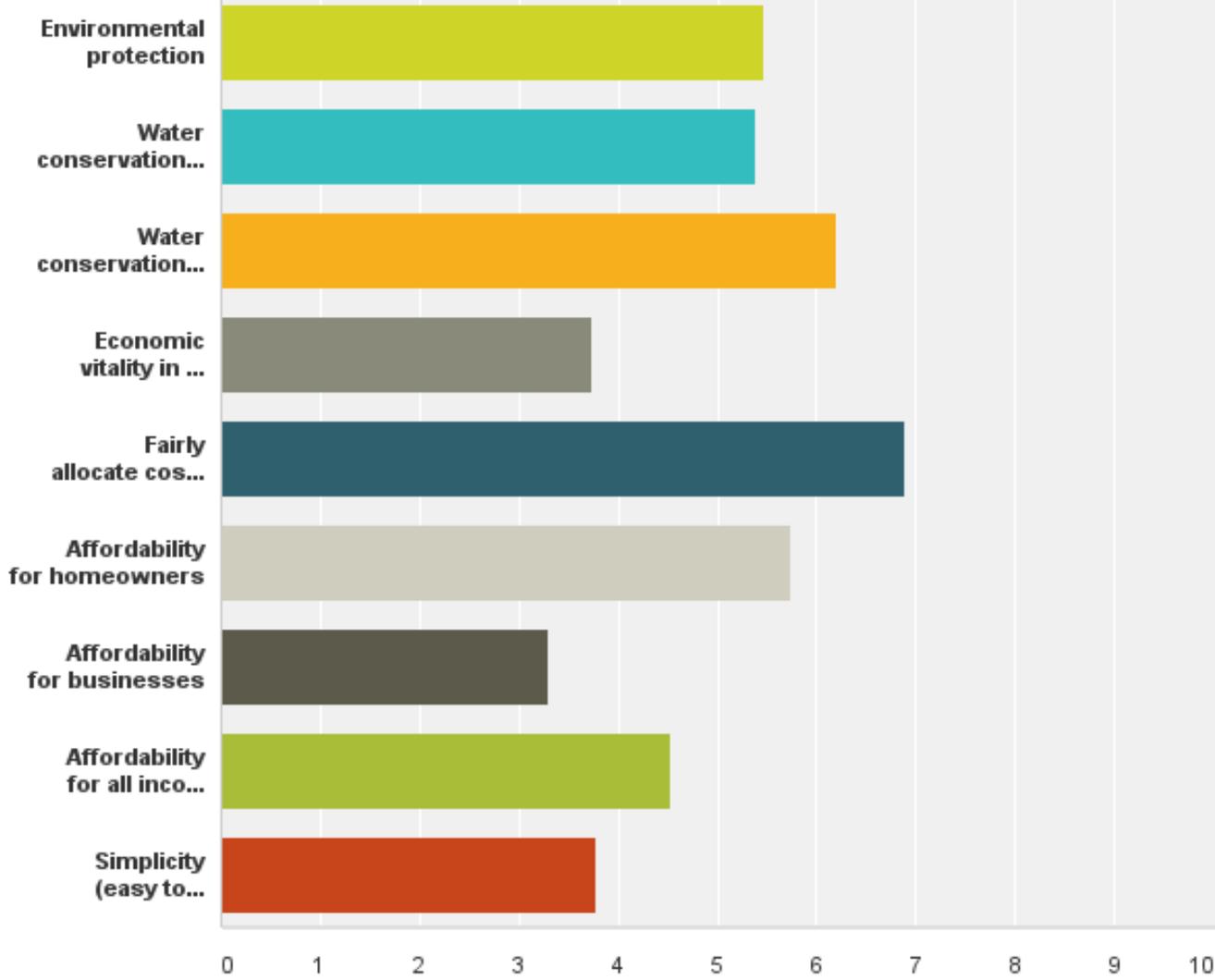
Answered: 118 Skipped: 5

Q8: I pay the most attention to the following portions of my utility bill (please check all that apply).

Answer Choices	Responses	
Total amount due	74.58%	88
Water charge	47.46%	56
Consumption (thousands of gallons used)	69.49%	82
Consumption (water budget graph)	61.02%	72
Sewer charge	41.53%	49
Stormwater/flood charge	44.07%	52
Bill message or inserts	16.10%	19
Payment options	0.85%	1
How to contact the city	0.00%	0
I use Autopay and rarely view my bill	5.93%	7
I give little or no attention to my bill	1.69%	2
I do not receive or pay my own bill	4.24%	5
Other (please specify)	10.17%	12
Total Respondents: 118		

Answered: 118 Skipped: 5

Q9: Utility rate structures for water, wastewater, and stormwater/flood should be designed to support the following (Please rank – 1 being the highest and 9 the lowest.)



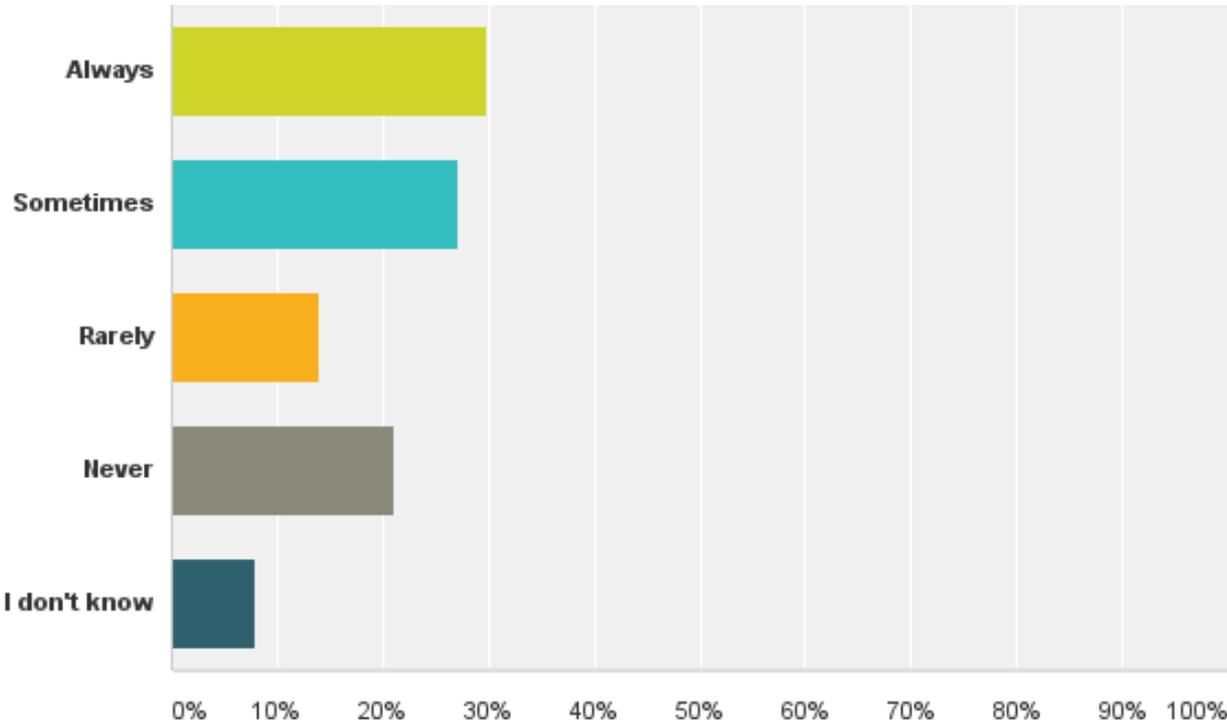
Q9: Utility rate structures for water, wastewater, and stormwater/flood should be designed to support the following (Please rank – 1 being the highest and 9 the lowest.)

	1	2	3	4	5	6	7	8	9	Total	Score
Environmental protection	12.82% 15	9.40% 11	17.09% 20	14.53% 17	10.26% 12	9.40% 11	11.97% 14	9.40% 11	5.13% 6	117	5.46
Water conservation during non-drought periods	5.13% 6	17.95% 21	14.53% 17	14.53% 17	11.97% 14	12.82% 15	7.69% 9	10.26% 12	5.13% 6	117	5.38
Water conservation during drought periods	13.68% 16	12.82% 15	20.51% 24	17.09% 20	16.24% 19	11.11% 13	6.84% 8	0.85% 1	0.85% 1	117	6.21
Economic vitality in the community	0.85% 1	4.27% 5	4.27% 5	12.82% 15	11.11% 13	18.80% 22	15.38% 18	15.38% 18	17.09% 20	117	3.74
Fairly allocate costs to customers	33.33% 39	19.66% 23	6.84% 8	12.82% 15	11.97% 14	6.84% 8	3.42% 4	4.27% 5	0.85% 1	117	6.89
Affordability for homeowners	16.24% 19	15.38% 18	11.97% 14	6.84% 8	9.40% 11	20.51% 24	11.97% 14	7.69% 9	0.00% 0	117	5.74
Affordability for businesses	1.71% 2	3.42% 4	5.13% 6	5.13% 6	6.84% 8	11.11% 13	25.64% 30	23.08% 27	17.95% 21	117	3.29
Affordability for all income levels	6.84% 8	8.55% 10	11.97% 14	11.11% 13	14.53% 17	5.13% 6	8.55% 10	19.66% 23	13.68% 16	117	4.52
Simplicity (easy to understand)	9.40% 11	8.55% 10	7.69% 9	5.13% 6	7.69% 9	4.27% 5	8.55% 10	9.40% 11	39.32% 46	117	3.77

Answered: 117 Skipped: 6

Q11: In 2007, water budgets were developed to encourage water efficiency. Have water budgets influenced you, or those you live with, to conserve water?

Answered: 114 Skipped: 9



Attachment A

Q11: In 2007, water budgets were developed to encourage water efficiency. Have water budgets influenced you, or those you live with, to conserve water?

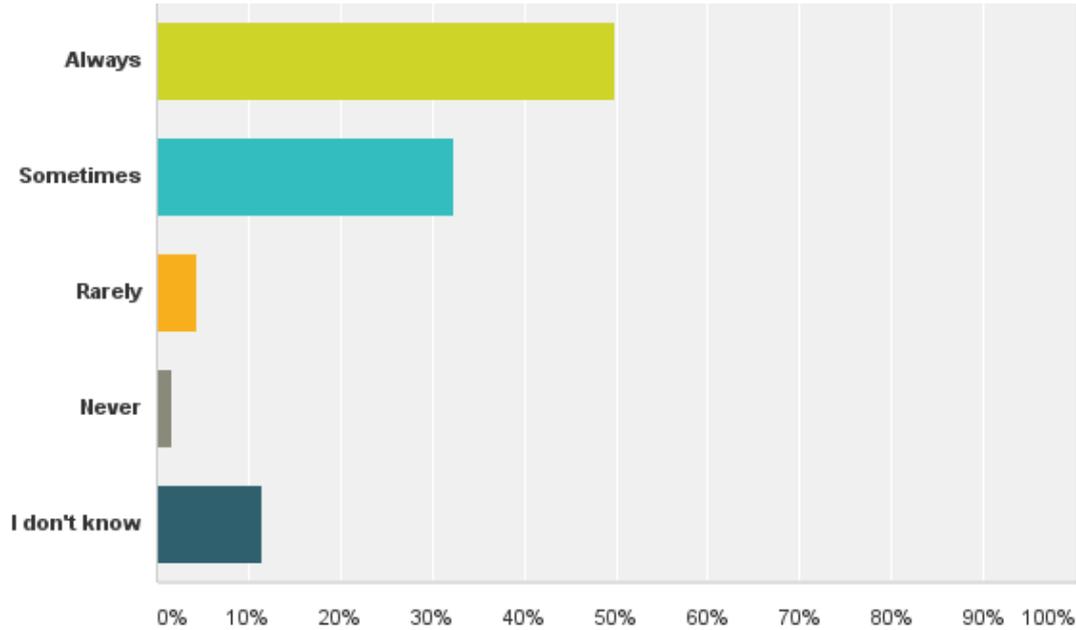
Answered: 114 Skipped: 9

Answer Choices	Responses
Always	29.82% 34
Sometimes	27.19% 31
Rarely	14.04% 16
Never	21.05% 24
I don't know	7.89% 9
Total	114

Attachment A

Q12: Are you usually able to stay within your water budget?

Answered: 114 Skipped: 9



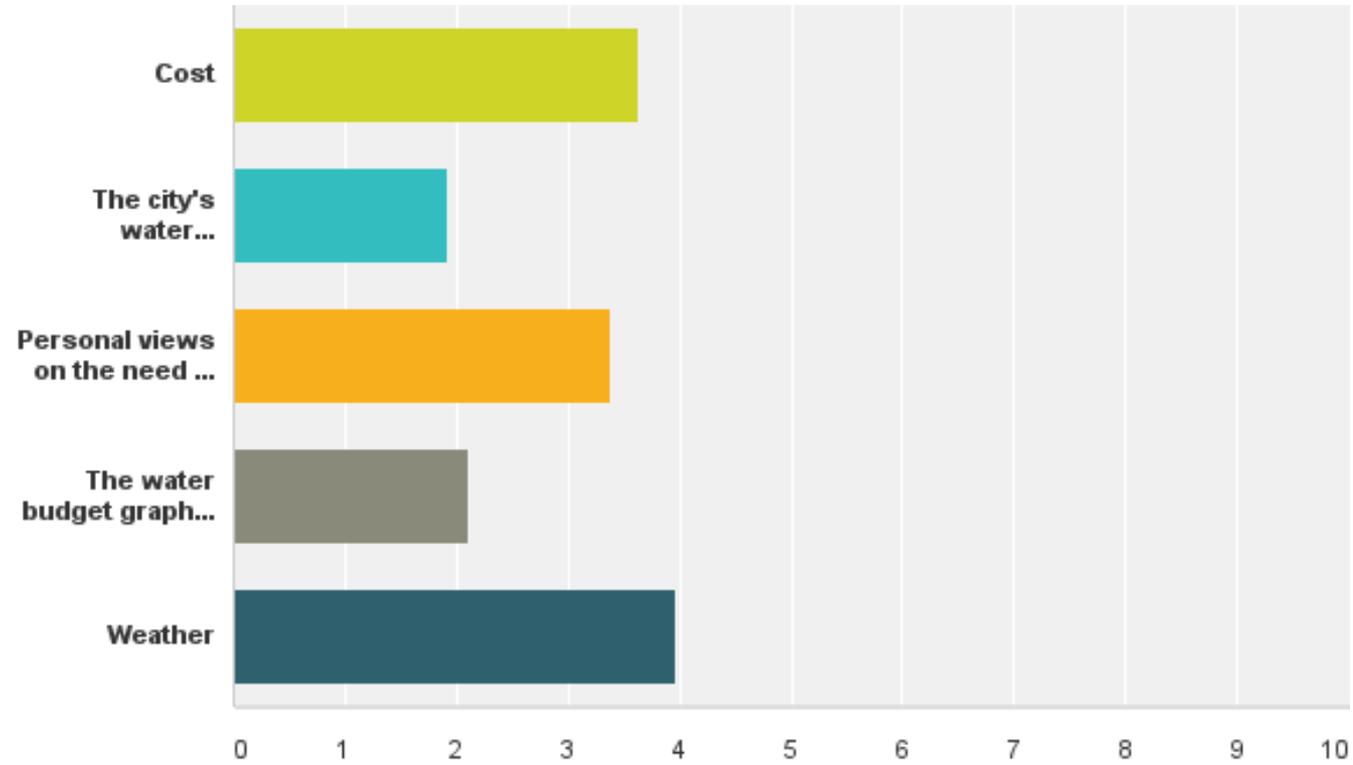
Q12: Are you usually able to stay within your water budget?

Answered: 114 Skipped: 9

Answer Choices	Responses
Always	50.00% 57
Sometimes	32.46% 37
Rarely	4.39% 5
Never	1.75% 2
I don't know	11.40% 13
Total	114

Q13: Please rank the following factors as they relate to their influence on your SUMMER water usage (1 having the most influence and 5 the least influence.)

Answered: 114 Skipped: 9



Attachment A

Q13: Please rank the following factors as they relate to their influence on your SUMMER water usage (1 having the most influence and 5 the least influence.)

Answered: 114 Skipped: 9

	1	2	3	4	5	Total	Score
Cost	28.95% 33	28.95% 33	26.32% 30	7.89% 9	7.89% 9	114	3.63
The city's water conservation outreach and education efforts	1.75% 2	6.14% 7	15.79% 18	35.09% 40	41.23% 47	114	1.92
Personal views on the need for water conservation	28.07% 32	18.42% 21	24.56% 28	21.05% 24	7.89% 9	114	3.38
The water budget graph on my bill	1.75% 2	14.04% 16	14.04% 16	33.33% 38	36.84% 42	114	2.11
Weather	39.47% 45	32.46% 37	19.30% 22	2.63% 3	6.14% 7	114	3.96

Attachment A

Q15: How important do you believe each of these goals should be for the city's Water and Wastewater Utilities' rate structures?

Attachment A

	Extremely Important	Somewhat Important	Neutral	Slightly Important	Not Important	Total
The rate structures should discourage wasteful water use, while promoting all justified types and amounts of use.	50.00% 56	31.25% 35	9.82% 11	4.46% 5	4.46% 5	112
The rate structures should yield sufficient funding to cover the costs of operating the Utilities.	55.86% 62	29.73% 33	9.91% 11	3.60% 4	0.90% 1	111
The rate structures should provide stable and predictable revenue for the Utilities.	23.21% 26	41.07% 46	21.43% 24	8.04% 9	6.25% 7	112
The rate structures should fairly allocate the total cost of service among different customer types to attain equity.	48.18% 53	28.18% 31	16.36% 18	1.82% 2	5.45% 6	110
The rate structures should be dynamic in their ability to respond to changing supply and demand conditions and/or environmental concerns.	26.13% 29	36.94% 41	18.02% 20	9.01% 10	9.91% 11	111
The rate structures should provide stable and predictable monthly costs for customers.	45.54% 51	33.04% 37	10.71% 12	7.14% 8	3.57% 4	112

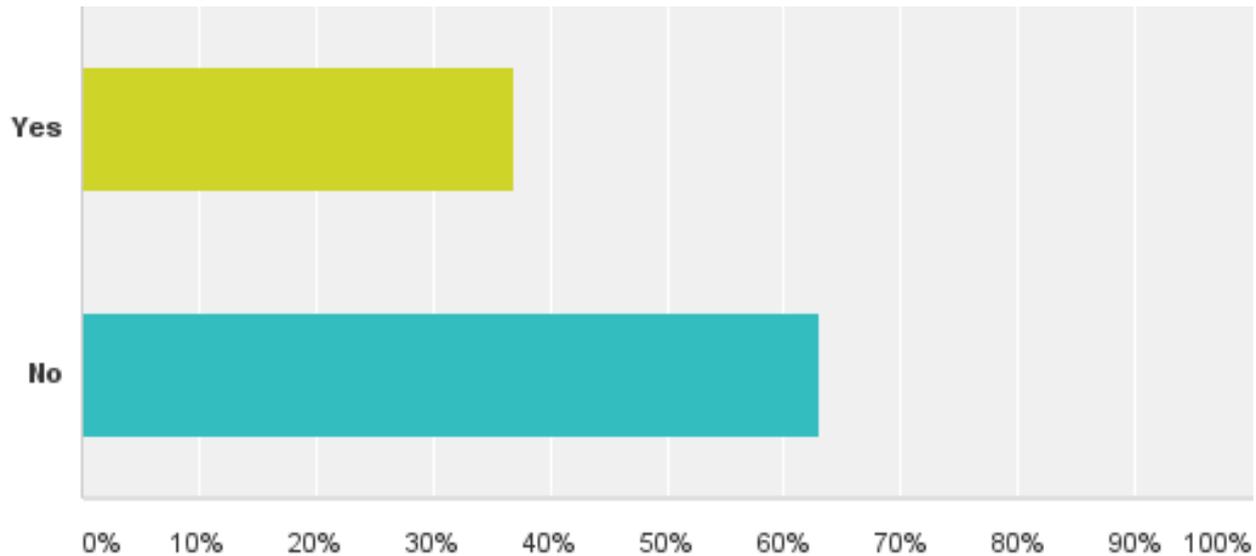
Answered: 112 Skipped: 11

Q17: How important do you believe each of these goals should be for the city's Stormwater/Flood rate structure?

	Extremely Important	Somewhat Important	Neutral	Slightly Important	Not Important	Total
The rate structure should discourage impervious surfaces that create stormwater runoff, such as parking lots.	29.91% 32	25.23% 27	15.89% 17	13.08% 14	15.89% 17	107
The rate structure should encourage stormwater improvements that lessen the impact of stormwater runoff.	36.70% 40	33.94% 37	14.68% 16	11.01% 12	3.67% 4	109
The rate structure should provide stable and predictable revenue for the Utility.	27.27% 30	41.82% 46	12.73% 14	10.00% 11	8.18% 9	110
The rate structure should provide stable and predictable monthly costs for customers.	42.73% 47	40.00% 44	6.36% 7	7.27% 8	3.64% 4	110
The rate structure should fairly allocate the total cost of service among different customer types to attain equity.	41.28% 45	34.86% 38	10.09% 11	7.34% 8	6.42% 7	109
The rate structure should account for the differences in flood risk and flood mitigation needs across different parts of the city.	27.03% 30	34.23% 38	16.22% 18	8.11% 9	14.41% 16	111
The rate structure should be dynamic in its ability to respond to changing environmental concerns.	18.18% 20	45.45% 50	19.09% 21	9.09% 10	8.18% 9	110

Q20: Would you be interested in participating in potential future engagement opportunities on the topic of water, wastewater, and/or stormwater/flood utility rate structures?

Answered: 100 Skipped: 23



Q20: Would you be interested in participating in potential future engagement opportunities on the topic of water, wastewater, and/or stormwater/flood utility rate structures?

Answered: 100 Skipped: 23

Answer Choices	Responses
Yes	37.00% 37
No	63.00% 63
Total	100

Attachment B – Draft Principles Interpretations Matrix

Principle	Water Utility	Wastewater Utility	Stormwater/Flood Utility
Discourage wasteful use, while promoting all justified types and amounts of use.	Balance the need for water conservation with business and household needs for water supply.	N/A	N/A
Encourage better onsite management of stormwater.	N/A	N/A	Use best management practices to reduce impacts to public infrastructure and natural drainageways.
Be effective in yielding total revenue requirements.	Recover the utility's costs.	Recover the utility's costs.	Recover the utility's costs.
Provide revenue stability and predictability for the utilities.	Avoid too much variation in revenue from month to month and year to year.	Avoid too much variation in revenue from month to month and year to year.	Avoid too much variation in revenue from month to month and year to year.
Fairly allocate the total cost of service across customer classes to attain equity.	Strive for equity within and between customer classes.	Strive for equity within and between customer classes.	Strive for equity within and between customer classes.
Be dynamic in its ability to respond to changing supply and demand conditions and/or environmental concerns.	Be flexible enough to effectively respond to drought conditions.	N/A	N/A

Attachment C – Relation of Issues and Key Questions to Guiding Principles

Principle	Water Utility	Wastewater Utility	Stormwater/Flood Utility
Discourage wasteful use, while promoting all justified types and amounts of use.	Effectiveness of Water Budgets: How have they impacted conservation?		
Encourage effective onsite management of stormwater.			Is the current calculation methodology appropriate for all customers? Are there possible incentives to encourage better stormwater management on private property and how could they work?
Be effective in yielding total revenue requirements.	Effectiveness of Water Budgets: Are they effective in meeting the utility's need to recover costs?		How might any changes to the calculation methodology affect the utility's ability to recover its costs?
Provide revenue stability and predictability for the utilities.	Effectiveness of Water Budgets: Is revenue stable and predictable and what factors are at play? Are fixed service charges and quantity charges at the ideal levels for the utility to recover its costs?	Is revenue stable and predictable and what factors are at play? Are fixed service charges and quantity charges at the ideal levels for the utility to recover its costs?	
Fairly allocate the total cost of service across customer classes to attain equity.	Effectiveness of Water Budgets: Is the rate structure as equitable as possible?		
Be dynamic in its ability to respond to changing supply and demand conditions and/or environmental concerns.	Effectiveness of Water Budgets: Has the structure been effective in limiting consumption during drought conditions?		