

WATER RESOURCES ADVISORY BOARD MEETING

MEETING DATE: Monday, 19 September 2016

MEETING TIME: 6:00 p.m.

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

Agenda Highlights:

1. Call to Order (6:00 p.m.)
2. Approval of August 15, 2016 Meeting Minutes (6:05 p.m.)
3. Swearing in of new WRAB Member (6:07 p.m.)
4. *Public Comment (6:10 p.m.)
5. Presentation by Silvia Pettem – Boulder’s Flood History (6:20 p.m.)
6. Information Item - Utility Rate Study - Phase 2 (6:50 p.m.)
7. Matters from the Board (8:10 p.m.)
8. Matters from Staff (8:20 p.m.)
9. Discussion of Future Schedule (8:25 p.m.)
10. Adjournment (8:30 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: 15 August 2016	
Contact Information of Person Preparing Minutes: Rene Lopez 303-413-7149	
Board Members Present: Dan Johnson, Lesley Smith, Kirk Vincent, Mark Squillace Board Members Absent: None	
Staff Present: Jeff Arthur, Director of Public Works for Utilities Joe Taddeucci, Water Resources Manager Douglas Sullivan, Acting Principal Engineer for Water, Wastewater and Stormwater Ken Baird, Utilities Financial Manager Eric Ameigh, Project Coordinator for Public Works Russ Sands Rene Lopez, Board Secretary Consultants Present: Rick Giardina, Raftelis Financial Consultants, Inc. Andrew Rheem, Raftelis Financial Consultants, Inc.	
Meeting Type: Regular	
Agenda Item 1 – Call to Order	[7:01 p.m.]
Agenda Item 2 – Briefing from City Council Member Matt Appelbaum [7:02 p.m.]	
Agenda Item 3 – Approval of the 20 June 2016 Meeting Minutes	[7:45 p.m.]
Motion to approve minutes from 20 June 2016 as amended. Moved by: Smith Seconded by: Vincent Vote: 3:0 Squillace not eligible to vote	
Agenda Item 4– Public Participation and Comment	[7:47 p.m.]
Public Comment: Catherine Long Gates – Staff incredibly helpful and supportive. 1916 farming land purchased outside of the City of Boulder 2 water service accounts on property; one leased one owned. Combined stormwater bills exceed \$1100 per month. Disagrees strongly with recommendation for stormwater fee structure. Appeal process for fees should be available on a case by case basis with requirements for exemption. Please give consideration for one size does not fit all, and urban areas with agricultural lands is not a common thing in comparable cities.	
Agenda Item 5 – Information Item – Update on Rate Study	[7:53 p.m.]
Ken Baird, Eric Ameigh and Rick Giardina, Andrew Rheem of Raftelis Financial Consultants, Inc. presented this item. Executive Summary from the Packet Materials: In 2014, Utilities Division staff met with customers to better understand the impacts of proposed 2015 utility rate increases. 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. The Utilities Division periodically reviews its rate setting methodology to assure that utility rates are meeting community goals and are aligned with fee-based principles. These findings led staff to propose an 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. The initial public engagement process took place in April and May 2015 and consisted of three open houses and an online survey. More than 26,000 postcards were mailed to utilities customers to notify them about the engagement opportunities. In June 2015, staff presented to WRAB the results of the public engagement process, as well as options for the Utility Rate Study’s guiding principles and its areas of study (the June 2015 packet can be found here). Guiding principles are high-level goals and speak to what the rate structures should be designed to accomplish. The public engagement process did not indicate a strong need or desire to change the five	

existing guiding principles for the water rate structure. WRAB recommended that the guiding principles should apply not only to water but also to the other two utilities. In addition, it was determined that the stormwater/flood management utility should have a guiding principle specifically encouraging development that minimizes stormwater impacts. These discussions resulted in recommended guiding principles and their application across the three utilities, as shown in the following table.

WRAB Discussion Included:

- Discussions regarding using water budget options
- Comments regarding revenue generation
- Discussions regarding CII (commercial, industrial, institutional) accounts and adjusting their water budget
- Comments regarding staff impacts of multiple rate structure
- Discussions regarding block one and block two allocations
- Discussions regarding equity between residents by reducing block one and allocation amounts of block one reflecting consumption rates
- Discussions regarding different billing alternatives to the block system
- Discussions regarding impervious vs pervious areas in Non-Single Family Resident rate structures for stormwater

Agenda Item 7 - Matters from Board: **[10:36 p.m.]**

- *Consideration of a motion to amend Section 1.5, Regular Board Meetings, of the Water Resources Advisory Board Bylaws related to meeting start times.

Moved by: Johnson **Seconded by:** Vincent

Vote: 4:0

- Vincent – water conservation ideas submitted to resiliency plan
- Johnson – out for next meeting
- Suggestion to borrow money

Agenda Item 8 – Matters from Staff: **[10:39 p.m.]**

- Aug. 29th – BVCP update joint board meeting
- Boulder community hospital site – Sep 12th 11-5pm – Eco district
- CIP study session with council

Agenda Item 9 – Future Schedule **[10:50 p.m.]**

- 6pm start time
- Silvia Pettem to provide a presentation on her book
- Water efficiency plan
- Flood studies
- Rate Study

Adjournment **[11:00p.m.]**

There being no further business to come before the Board at this time, by motion regularly adopted, the meeting was adjourned at 11:00 p.m.

Motion to adjourn by: Squillace Seconded by: Vincent

Motion Passes 4:0

Date, Time, and Location of Next Meeting:

The next WRAB meeting will be **Monday, September 19th 2016 at 6:00 p.m.**, at the **City's Municipal Services Center, 5050 East 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: September 19, 2016

AGENDA TITLE: Information Item - Next Steps Related to Phase 2 Analysis for the Utility Rate Study

PRESENTER/S

Jeff Arthur, Director of Public Works for Utilities Ken Baird, Utilities Financial Manager Eric M. Ameigh, Public Works Projects Coordinator
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PURPOSE

The purpose of this item is to follow up on the August 2016 WRAB discussion related to the Utility Rate Study Phase 1 analysis. Through that discussion, WRAB provided feedback related to Phase 1 findings. This included generally affirming the key findings related to each of the three utility rate structures. Areas of discussion included Commercial, Industrial, Institutional (CII) water budgets, the residential indoor water budget allocation, the fixed-service charge in the wastewater fee, and alternative calculations for the stormwater/flood management fee. WRAB's feedback generally reflected consensus around which options to study for the key issues in the wastewater and stormwater/flood management rate structures. As such, staff is prepared to seek confirmation of support for studying options related to those issues. However, issues in the water utility led to significant conversation and some questions remain as time was limited for the August discussion. Staff is seeking additional feedback on key water issues at the September meeting. Confirmation of support for studying alternatives for the water utility issues may take place in October, depending on the need for additional discussion and clarification.

BACKGROUND

WRAB has received regular memos about the project since early 2015. A full project background can be found in the [August 2016 meeting packet](#).

In 2014, Utilities Division staff met with customers to better understand the impacts of proposed 2015 utility rate increases. 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. These findings, along with the fact that regular review of rate structures is an accepted best practice, led staff to propose an evaluation of the rate structure and associated calculations for water, wastewater, and stormwater/flood management utilities as part of the 2015 work plan.

Staff implemented a public engagement process in spring of 2015 and WRAB endorsed utility guiding principles and the project's areas of study at the June 2015 meeting. Based on WRAB feedback and guidance related to guiding principles and areas of study, staff developed a scope of work for the analysis phase of the project. The scope of work informed a request for

consultant proposals (RFP) which was issued in early November 2015. Raftelis Financial Consultants (RFC) was selected to assist with the project.

The analysis component of the project is roughly divided into three phases, as follows:

- *Phase 1 – Investigation and Assessment*
- *Phase 2 – Analysis of Potential Alternatives*
- *Phase 3 – Recommendations*

At the August 2016 WRAB meeting, consultants from RFC presented their preliminary findings, the most significant of which are outlined below at a summary level.

Water Utility, including Water Budgets

RFC identified the following five key issues relative to the existing water utility rate structure.

1. Water budget rate structures do not work well for diverse commercial, industrial and institutional (CII) customers.
2. Blocks 1 and 2 could be combined into a single block to provide for more consistent monthly water budgets. Alternatively, a modified definition could be applied where, quite simply, block 1 is defined as the indoor budget and block 2 as the outdoor budget.
3. Residential indoor water allocations exceed recent indoor water use.
4. Reliance on revenue generated in Blocks 3, 4 and 5 results in a level of revenue instability that could adversely impact utility operations.
5. Block width and block pricing may not be aligned with City pricing objectives.

Wastewater Utility

RFC identified the following two key issues relative to the existing wastewater utility rate structure.

1. Revenue insufficiency due to:
 - a. declining volume sales and
 - b. amount of revenue recovered through monthly service charge.
2. Industrial Pre-Treatment fees do not recover the costs incurred.

Stormwater/Flood Management Utility

RFC identified the following two key issues relative to the existing stormwater utility rate structure.

1. Non-single family rate structure is unnecessarily complex.
2. The current rate structure penalizes individual large lot customers.

ANALYSIS

The goal of Phase 1 is to determine which alternatives should be investigated for each of the three utilities during Phase 2. At the August meeting, a consensus appeared to emerge for how to proceed with studying alternatives for stormwater/flood management and wastewater. Staff is

seeking confirmation of support for studying specific options for those two utilities. Due to a lack of time, however, the discussion of key issues in the water rate structure did not result in a similarly clear consensus. Staff is seeking additional feedback on those issues before developing a proposed list of options to study.

Stormwater/Flood Management Fee Calculation Options

There was general WRAB consensus that RFC and staff should evaluate how best to address inequities in the current rate structure relative to non-residential customers and large lot properties with atypical impervious area to total surface area relationships. RFC will also be developing a “credit program” or other mechanism outside the rate structure itself that could provide incentives for low-impact developments and/or addressing large lot customers not addressed through modifications to the rate structure. The following represent three stormwater/flood management rate structure alternatives to be developed in Phase 2.

- Alternative 1 – Current rate structure with “credit program” or other mechanism
 - Maintain existing rate structure but simplify the fee calculation formula.
 - Address large lot and atypical properties through a system of credits.

- Alternative 2 – Fixed and Impervious Area Charge
 - Develop fixed customer cost per account.
 - Eliminate pervious component of existing rate structure.
 - Develop a rate per unit of impervious area as basis for non-residential charge.
 - A credit program could also accompany this alternative.

- Alternative 3 – Fixed, Impervious and Pervious Area Charge
 - Develop fixed customer cost per account.
 - Develop a rate per unit of impervious area as basis for non-residential charge.
 - Develop a rate per unit of pervious area as basis for non-residential charge.
 - A credit program could also accompany this alternative.

In order to evaluate any potential credit policies, RFC will review the revenue impact of each credit policy so that rate alternatives incorporate the need for any additional revenue recovery resulting from revenue reductions. Staff and RFC believe these alternatives have the potential to address the issue with large lot customers. If, however, the analysis finds that these alternatives cannot address the issue, staff will continue working on changes potentially outside of the rate structure, such as exception policies or changes to the city code.

Wastewater

There was general WRAB consensus that RFC and staff should study Industrial Pre-Treatment Program (IPT) full cost recovery options incorporating proposed increases in revenues as well as reductions in overall user charge revenue requirements.

There was also apparent WRAB consensus to increase the amount of revenue recovered through the monthly service charge. This will help alleviate some revenue variability, and reduce the rate increases that are needed to account for the downward trend in usage the city has experienced. The following represent three rate structure alternatives to be developed in Phase 2.

- Alternative 1 – Customer charge based on cost of service
 - Replace existing fixed charge with one based on the cost of providing wastewater service to each customer.
 - The exact methodology is to be determined, but RFC estimates this approach could increase fixed revenues from approximately 4% to approximately 9%.

- Alternative 2 – Fixed Revenue Percentage Target
 - Base fixed service charge on a desired percentage of fixed revenue for the utility.
 - A range of target scenarios will be evaluated, from approximately 10% of revenues up to 100%.

- Alternative 3 – Fixed service charge based on fixed costs
 - Increase fixed service charge, proportionately for all meter sizes, to recover fixed expenses, which are estimated at nearly 90% of utility expenses.

Within all the alternatives, the cost of service basis will be updated. RFC will also calculate customer bill impacts and the benchmarking implications relative to peer utilities in Colorado.

Water Budgets

Key findings related to the water rate structure led to significant discussion at the August meeting and some questions remain about which key issues to address and how. At the September meeting, staff will present additional information related to CII water budgets and the indoor residential allocation that will support the discussion. The conversation will help determine potential alternatives to analyze during Phase 2 work related to water issues.

CII Water Budgets

At the August WRAB discussion, RFC presented information related to the issues with assigning water budgets to the city's CII customers. CII customers traditionally experience much higher usage in Blocks 3,4, and 5, which represents out of budget use, than do residential customers and therefore effectively pay a higher unit cost for water than residential customers. A higher unit cost indicates that CII customers are inherently less efficient than residential customers but there is no evidence that this the case in reality.

Variations of use from budget are not uncommon in the CII customer class. Around 30% of CII customers in 2015 had annual usage at less than half of their water budget, and 13% had usage of more than one and one-half times their budget. This variation is not seen in residential customers, for which indoor and outdoor water usage patterns are relatively well understood. The manner in which CII water budgets have been set appears to have caused some customers to be charged in the upper rate tiers and others to be charged only at the discounted block one rate. These outcomes should occur only if customers are either inefficient water users or very efficient users, respectively. But, it is not clear that all CII water budgets are accurate and thus the determination of efficiency may also be inaccurate. If this is the case, there is a potential equity imperative for addressing the issue of CII water budgets.

The rate structure discourages wasteful use by sending a price signal when a customer exceeds the budget. However, the annual trends show usage in the upper blocks has stayed fairly consistent over the years and correlates strongly with the weather with little evidence of behavior change due to pricing. CII customers also have the option of changing how their water budget is calculated, but relatively few have taken advantage of this option.

Two conclusions may be drawn from these findings: first, some substantial portion of CII customers are not heeding the price signal and second, their budgets are likely not properly set, making the price signal unclear even it is received.

Residential Indoor Water Budgets

The preliminary analysis clearly showed that the average residential customer, both for single family and multifamily, uses far less than the base allocations of 7,000 and 4,000 gallons respectively. The original single family allocation was established with an assumption of a four-person household, a per capita usage of approximately 55 gallons per day, and some winter outdoor watering needs. Over time, however, indoor water use has steadily declined but the base allocation has not been adjusted downward to align with the new reality. As a result, the lowest priced water, which is meant for regular indoor needs, has been able to be used for outdoor watering. This has undermined the price signal effect and potentially decreased the conservation impact of water budgets.

WRAB was clear that it is interested in lowering the base allocation for residential customers to an amount that more accurately reflects today's water use. Staff is interested in WRAB feedback about the assumptions to be used in modeling potential changes to the base allocation, including the average household size and the number of gallons per capita per day.

NEXT STEPS

November – Staff will present WRAB with the results of the Phase 2 analysis and seek feedback on which rate structure adjustments to refine for final recommendation.

December – The final report and recommendations will be presented to WRAB for final feedback and recommendation to City Council. Depending on WRAB's recommendations, staff will evaluate the necessary next steps. If the recommendations fundamentally alter any of the rate structures, there could be a need for additional public process, customer outreach, and consultation with City Council. An analysis of implementation needs could also be required.

First Quarter 2017 – Staff will present project results, WRAB recommendations, and implementation next steps to City Council for their consideration.

ATTACHMENTS

None