

CITY OF BOULDER, COLORADO
BOARDS AND COMMISSIONS MEETING MINUTES

Name of Board / Commission: Water Resources Advisory Board	
Date of Meeting: 16 November 2015	
Contact Information of Person Preparing Minutes: Rene Lopez 303-413-7149	
Board Members Present: Vicki Scharnhorst, Dan Johnson, Mark Squillace, Lesley Smith, Mike Barnes	
Board Members Absent: None	
Staff Present: Joe Taddeucci, Water Resources Manager Bret Linenfelser, Water Quality and Environmental Services Manager Russ Sands, Watershed Sustainability & Outreach Supervisor Katie Knapp, Engineering Project Manager Annie Noble, Acting Principal Engineer for Flood and Greenways Ward Bauscher, Engineering Project Manager Joanna Bloom, Source Water Administrator Rene Lopez, Board Secretary	
Consultants Present: Craig Jacobson of Icon Engineering, Inc.	
Meeting Type: Regular	
Agenda Item 1 – Call to Order	[7:02 p.m.]
Agenda Item 2 – Approval of the 21 September 2015 Meeting Minutes [7:02 p.m.]	
Motion to approve minutes from 21 September 2015 as presented.	
Moved by: Squillace Seconded by: Barnes	
Vote: 5:0	
Agenda Item 3 – Public Participation and Comment	[7:03 p.m.]
Public Comment:	
Michele Bishop; Co-Chair of Goss Grove Neighborhood Association - Came to let the board and staff know that both co-chairs of the neighborhood association are here to participate in any future developments in this area, they can address the neighborhood and bring feedback from residents.	
Jim Starry – Discussed creating flood and fire control using impoundments along the creek to create trout habitat and a beautiful scenery.	
Carl Norby– Bear Creek and Frasier Meadows area; reach 3 of the bear creek mitigation study, both creeks flow into storm drains causing sewage to back-up in homes during the flood. Since December – a cause was determined and mitigation plan was developed for the back-up. Requesting some of the Bear Creek area to be reassigned into the flood plain so that it can be maintained, and to keep the plans moving forward.	
Martha Jones – Bear Creek flood prevention– Requests improved storm and sewer drainage systems so water can flow by quickly rather than being obstructed. Suggestions for larger underground stormwater drains to accommodate increased water flows, new technology and new piping.	
Agenda Item 4 – Update on Bear Canyon Creek Mitigation Study	[7:24 p.m.]
Annie Noble and Ward Bauscher presented this item	
Annie provided an overview of the floodplain management program as context for this agenda item and Agenda Item 5. She also provided an update on the status, along with a handout, on the work group’s work efforts, which is attached for reference.	
Executive Summary from the Packet Materials:	
The purpose of this memorandum is to provide an update to the WRAB on the progress and current status of the Bear Canyon Creek Flood Mitigation Plan. An information item memo was submitted to the WRAB in April 2015 for this mitigation plan and is attached for reference as Attachment A. The projected timeline for the mitigation plan, as outlined in the previous memo, has been extended due to modeling challenges, including the comparison to and the incorporation of a two-dimensional model,	

and an increase in study area due to spill flow paths identified in the modeling. There is currently no adopted flood mitigation master plan for Bear Canyon Creek. Although improvements have been made along the creek over time, the 2013 flood showed that areas along the creek lack conveyance capacity during large storm events. As a result, the city retained AMEC Foster Wheeler (AMEC) in December 2014 to help identify mitigation needs and evaluate potential alternatives to alleviate future flooding along Bear Canyon Creek in the selected stream reaches. The study reaches are identified in Figure 1 below. AMEC's original scope of work included the analysis of three segments of the creek using the original one-dimensional HEC-RAS models. Development in the floodplain often triggers updates to the floodplain mapping through a letter of Map Revision (LOMR) processed through FEMA. AMEC modified the HEC-RAS model to incorporate revisions that occurred since the last mapping study into what is considered a "Best Information" model. The revisions made the model unstable and highlighted other modeling gaps. The older HEC-RAS technology is ineffective in modeling spill flows that leave the main channel. It was determined that the use of an updated two dimensional mapping technology (Flow-2D) might help staff and AMEC better understand the spill flow paths throughout the drainage way. The HEC-RAS and Flow 2D models would be compared and a determination of the degree and location of further model refinement would be examined.

As a result, the city expanded AMEC's scope of work to develop a more comprehensive model using Flow-2D to better define major flow paths and spill flows. As warranted, the Flow-2D model would be overlaid and converted to a 1-dimensional HEC-RAS model that is more appropriate for analysis of system hydraulics and corresponding flood mitigation measures.

To date, AMEC has established a survey of the baseline conditions along the drainage way, refined the working HEC-RAS model including incorporating Letter of Map Revisions (LOMRs) from several improvement projects, and identified potential mitigation alternatives. AMEC is currently modeling Bear Canyon Creek using Flow-2D and will compare it to the working model to determine where further model refinement is necessary. Once the model is sufficiently refined, alternatives will continue to be analyzed for incorporation in the Bear Canyon Creek Flood Mitigation Plan. The mitigation plan will be presented to WRAB for recommendation when complete.

WRAB Discussion Included:

- Questions regarding what is maintenance rather than capital improvements
- Questions regarding cooperation with CU campus
- Comments regarding channel work and mitigation as part of the modeling
- Comments requesting for alternatives in plan;
 - Maintenance being a primary goal
 - Suggestions for volunteers as an alternative
 - Maintenance budgets discussed

Agenda Item 5 – Public Hearing and Consideration of a Recommendation to City Council Regarding the Boulder Creek Restoration Master Plan [7:58 p.m.]

Katie Knapp and Craig Jacobson of Icon Engineering, Inc. presented this item.

Executive Summary from the Packet Materials:

The purpose of this memorandum is to present the Draft Boulder Creek Restoration Master Plan for the WRAB's consideration, input and recommendation to Council. The Executive Summary of the plan is included as Attachment A and the full plan is available at <http://www.iconeng.com/project/boulder-creek/>. The City of Boulder joined regional partners, including the Urban Drainage & Flood Control District (UDFCD), Boulder County, and the City of Longmont on the development of the Boulder Creek Restoration Master Plan. This study was also partially funded through the Colorado Water Conservation Board (CWCB) grant program. The purpose of the master plan is to develop guidance in planning ongoing and long-term watershed recovery efforts.

This project encompasses nearly 24-miles along Boulder Creek, extending from the confluence with Fourmile Creek, located within Boulder Canyon upstream of the City of Boulder, downstream to the confluence with the St. Vrain River, in the City of Longmont, as shown in the Project Overview Map (Attachment B). The master plan area crosses through the City of Boulder and also includes city-owned open space lands outside of the city limits.

The focus of this master plan is to provide a planning tool for stream and ecological restoration along Boulder Creek. As such, this master plan does not comprehensively evaluate Boulder Creek through the

City limits given that Boulder Creek through this reach resembles more of an urban stream corridor. Instead, the plan addresses specific areas of concern identified by the city staff and other interested parties who participated in the planning processes. Similarly, the plan does not reevaluate the current 100-year floodplain limits regulated by FEMA, although it is likely that the implementation of some proposed projects would improve flood conveyance and the regulatory floodplain limits. Icon Engineering was retained by the project team to develop and evaluate alternatives for Boulder Creek and prepare the draft master plan, which identifies and prioritizes feasible drainage, flood management, and restoration opportunities. Icon Engineering is requesting input on the draft master plan prior to finalization. City staff is recommending that the Civic Area Flood Information (Attachment C) be incorporated into the master plan.

The draft master plan is now being presented to the WRAB for consideration, input and a recommendation to City Council. After consideration and input from the WRAB and the Open Space Board of Trustees (OSBT), the master plan will be finalized and presented to City Council for acceptance.

Public Comment:

Donald Rogers – Questions regarding if Boulder Creek, in conjunction with Open Space, will remain as it is now going through Pit D – where it easily goes during a flood.

WRAB Discussion Included:

- Comments regarding specific species in the environmental assessment.
- Comments regarding partner stakeholders
- Questions regarding budgeting with Capital Improvement Projects.

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

Motion to recommend Council acceptance of the Boulder Creek Restoration Master Plan with the inclusion of the Civic Area Flood Information.

Motion by: Johnson; **Seconded:** Smith

Vote: 5:0

Motion Passes

Agenda Item 6 – Information Item - Sustainability Programs

[8:42 p.m.]

Russ Sands presented this item.

Executive Summary from the Packet Materials:

The purpose of this Information Item is to provide the Water Resources Advisory Board (WRAB) a summary of various sustainability and outreach initiatives that are being developed and implemented by the Watershed Sustainability and Outreach (WSO) Program that was created in 2014 as part of the Public Works, Utilities, Water Quality and Environmental Services (WQES) Group. This item does not require WRAB action and is intended to provide WRAB with a background on the WSO Program and related initiatives the WSO Program has helped lead.

WRAB Discussion Included:

- Green infrastructure comments
- Comments regarding transportation maintenance chemical use on water quality impacts
- Requests for metrics on improvements in water quality

Agenda Item 7 – Matters from Board:

[9:12 p.m.]

- Scharnhorst
 - Discussion of City Council 2016 Retreat Questions
 - Retreat scheduled for Dec. 8th 6-8pm
- Smith
 - Toured the watershed with Macon Cowles before the first snow
- Johnson
 - Update on the rate study requested

Agenda Item 8 - Matters from Staff:

[9:16 p.m.]

- Taddeucci

<ul style="list-style-type: none"> ○ RFP for Utility Rate Study in December scheduled ● Bret Linenfelser <ul style="list-style-type: none"> ○ Update on Water Fluoridation <ul style="list-style-type: none"> ▪ Formal recommendation from the US Department of Health and Human Services to lower dosage of fluoride to the lower optimal range of .0.7 milligrams per litre in treated water. The city plans to follow the recommendation and reduce the level of fluorosilicic acid (fluoride additive) to meet a level of 0.7 milligrams per litre fluoride in the treated water distribution system. The reduction in fluoride complies with the city's ordinance to add fluoride.
<p>Agenda Item 9 – Future Schedule [9:23 p.m.]</p> <p>The next WRAB meeting has been moved up to December 14th rather than Dec. 21st to better accommodate schedules</p>
<p>Adjournment [9:23p.m.]</p> <p>There being no further business to come before the Board at this time, by motion regularly adopted, the meeting was adjourned at 9:46 p.m.</p> <p>Motion to adjourn by: Smith Seconded by: Squillace</p> <p>Motion Passes 5:0</p>
<p>Date, Time, and Location of Next Meeting:</p> <p>The next WRAB meeting will be Monday, 14 December 2015 at 7:00 p.m., at the City's Municipal Services Center, 5050 East Pearl St., Boulder, CO 80301</p>

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>