

**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 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.)	[7:01 p.m.]
Agenda Item 3 – Public Participation and Comment Public Comment: None	[7:02 p.m.]
Agenda Item 4 – 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.	[7:04 p.m.]
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.

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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>