

**Project Name** | Flood Management Policy and Program

**Date** | 2/28/2022

**To / Contact info** | BCWD Board of Managers

**Cc / Contact info** | Karen Kill / BCWD Administrator

**From / Contact info** | Allison Mark / EOR, Camilla Correll, PE; Ryan Fleming, PE / EOR

**Regarding** | Flood Management Workshop Summary

## BCWD Floodplain Management Program Special Board Workshop Summary

This memo summarizes the discussion that took place at the February 16, 2022 Flood Management Program Special Workshop conducted for the Brown's Creek Watershed District (BCWD) Board of Managers and its Citizens Advisory Committee (CAC). The goal of the workshop was to discuss BCWD's role in flood prevention and mitigation and decide what policy and programmatic components the board may wish to adopt in order to address current and future flood-related issues.

The following people were in attendance at this workshop:

- Klayton Eckles, BCWD Manager
- Celia Wirth, BCWD Manager
- Jerry Johnson, BCWD Manager
- Chuck LeRoux, BCWD Manager
- Rob McKim, BCWD Manager
- Anne Maule Miller (CAC)
- George Vania (CAC)
- Karen Kill (BCWD Admin)
- Camilla Correll (EOR)
- Allison Mark (EOR)
- Ryan Fleming (EOR)

## Workshop Agenda

The following items were covered at the workshop.

1. Review and approve Issue Statement
2. Define key terms (Floodplain Management, Flood Prevention, Flood Mitigation, Risk)
3. Summarize 2017-2026 Watershed Management Plan (WMP) language regarding Flood Management
4. Discussion of BCWD's role in flood management and policy direction
5. Next steps

## Issue Statement

The workshop began with a review of the following Issue Statement drafted by EOR and the BCWD Administrator. The statement is intended to both inform the public and guide the Board in the development of an effective, actionable watershed management plan (WMP) update and policy language.

"BCWD has experienced **localized flooding** which has put private properties and public infrastructure at risk of flooding. In addition, hydrologic and hydraulic model updates using

NOAA Atlas 14 rainfall data indicate that there are now properties with **inadequate freeboard** which puts them at risk for flooding. The BCWD recognizes that the risk of flooding now and into the future will increase in frequency and magnitude as a result of **climate change.**”

Manager Wirth questioned the public’s sensitivity to the term “climate change” and wanted to know if this needed to be referred to directly in the Issue Statement. District Staff indicated that the current watershed management plan already has an issue statement addressing climate change adaptation and didn’t see a need to be sensitive to this term. Additional discussion of the statement centered on the use of technical jargon which the public may not readily understand and how to incorporate language that reflects the adaptability required to anticipate a future of changing climate conditions.

Workshop attendees unanimously supported the statement, with the inclusion of more flexible, publicly accessible language.

### **Key Terms**

Camilla Correll, District Engineer reviewed the following terms to assist with the discussion:

- Floodplain
- Flood Prevention
- Flood Mitigation
- Flood Risk

During this section of the Workshop, the Board weighed the value of using the “prevention” terminology and how it may or may not adequately reflect the inherent uncertainty in climate change. One suggestion was to tie any BCWD prevention programs or policies to a particular storm event. The Board recognized the need to develop effective public communications that clarify the BCWD’s protective and preventative role regarding flooding impacts.

### **Relationship to the 2017-2026 Watershed Management Plan**

Ms. Correll reviewed existing policy language contained in the following sections of the 2017-2026 WMP:

- Section 3.6 Floodplain Management
- Section 3.9 Monitoring and Data Collection
- Section 3.10 Regulations
  - o Rules Section 2.0 Stormwater Management
  - o Rules Section 7.0 Floodplain and Drainage Alterations
- Section 3.11 Climate Change Adaptation

Reviewing the existing WMP sections prompted a discussion of the BCWD’s role in flood management as compared to the role of member communities and other public entities such as Federal Emergency Management Agency. Manager McKim noted that BCWD can continue to manage future development and the stormwater management issues associated with increasing impervious surface. Manager McKim also inquired about property acquisition within floodplains as a potential strategy.

These questions tied into the larger issue of how the BCWD can manage relationships with member communities of differing capacity while delineating responsibilities for flood-related issues.

President Eckles stressed that the BCWD functions best as a collaborator with other entities and arbiter of intercommunity, cross-border issues. He suggested that the BCWD can serve its residents best by augmenting member community programs rather than assuming all responsibilities for stormwater management. Further discussion with the member communities will be necessary to determine how to best collaborate and determine roles for the communities and the BCWD.

Manager McKim suggested that the BCWD develop a decision-tree on the District's role in flood management in an effort to identify where the District would be most effective.

## **Policy and Programs Discussion**

During this portion of the workshop, attendees reviewed two tables: one which identified existing and potential programmatic components to address flood prevention and one which identified potential programmatic components to address flood mitigation.

### *Flood Prevention*

Ms. Correll offered the following definition for the term "Flood Prevention" - Flood control methods that are used to reduce or prevent (where able) the detrimental effects of flood waters, usually by reducing the rate and volume of stormwater runoff being discharged to downstream resources.

Administrator Kill clarified that many existing watershed district flood prevention programs identified in the presentation were not originally developed to address flooding, but could be retooled to address flood-related issues.

During the discussion, the following points were made related to the individual program components presented at the meeting.

- Rules
  - o Manager McKim asked what the policy means when it refers to "protecting structures."
  - o Ann Maule-Miller asked Manager Eckles to explain how the City of Woodbury addressed filling of floodplain for the implementation of flood mitigation projects. The Board recognized that this may be something that needs to be addressed in the rules.
- Cost-Share Program
  - o The program is currently targeted toward promoting stewardship and education/outreach.
- Flood Monitoring and Alert Systems
  - o Administrator Kill clarified that water levels in the lakes in the watershed are not being monitored in real-time but that this is something that could be achieved if the Board was interested.
- Capital Improvement Project (CIP) Program
  - o The framework is available for BCWD to implement projects, but the existing WMP does not identify flood prevention CIPs.
- Regional Stormwater Management Program

- Anne Maule-Miller suggested that the District consider working with the cities to manage available storage in existing stormwater management facilities. She pointed to an example in London, England.
- Education and Outreach
- Stormwater Banking
  - Manager McKim was interested in hearing what local communities/watershed districts have adopted a stormwater banking program. George Vania mentioned an example in Bois-De-Sioux Watershed District - the North Ottawa Impoundment Project. Administrator Kill noted that there are examples of a fee-in-lieu of program, as a part of several metro watershed district permit programs, typically for collaboration with public entities on linear project.
- Flood Prevention Coordination
  - See previous comments noted above.

### *Flood Mitigation*

Ms. Correll offered the following definition for the term “Flood Mitigation” - Flood mitigation involves managing the effects of flooding, rather than trying to prevent it altogether. Flood mitigation strategies can be structural or non-structural.

The BCWD currently does not operate programs that explicitly deal with flood mitigation. However, the policy evaluation and collective knowledge indicate that few watershed districts and entities effectively approach mitigation and, like BCWD, largely operate prevention programs.

During the discussion about flood mitigation, the following points were made related to the individual program components presented at the meeting.

- Education and Outreach
  - Identify a list of people or services who can help when a property is flooded.
  - Develop guidance on what can and can't be done under BCWD rules when property is flooded.
  - Increase awareness for those properties at highest risk of flooding.
- Technical Analysis
- Technical Assistance
  - Administrator Kill discussed past resident communication regarding rising water levels. The BCWD's first response is to visit the site or contact the community to determine if there is a specific cause for the sudden change. Several past concerns were due to beavers blocking culverts or the channel of Brown's Creek. Administrator Kill reminded the Board that the BCWD does not have a policy on beaver management.
- Cost Share for Flood Protection Strategies
  - CAC member Miller assumes that local communities and other public entities have their own capacity for technical analysis and do not need this service from BCWD. She asked if the BCWD should focus on private cost-share projects versus public projects.

- Manager Eckles still interested in the development of this program, but wants it to be implemented in partnership with member communities.
- Manager Wirth stated that we should find out what role the cities are taking and what their capacity is for technical analysis.
- Property / Asset Acquisition
  - Manager McKim asked if the BCWD has considered acquiring wetlands to protect or create additional storage in the system.

A poll conducted to gauge preferences for programmatic approaches revealed split priorities amongst the attendees, prompting further discussion over the desired approach to flood management. The polling results are displayed in the figure below.

Consensus gathered around two central themes: expanding public education, outreach, and written guidance on navigating flood-related issues; and acting as a partner for member communities and other public entities to coordinate large projects, support intra-community programs, and resolve cross-border conflicts.

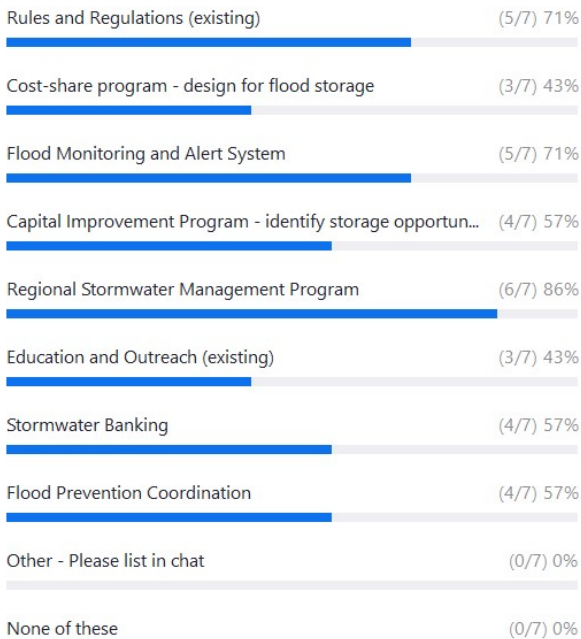
President Eckles reiterated that the BCWD's strength lies in its strategic, regional approach and that strength should be communicated to its member communities. Manager Wirth highlighted the importance of providing a public statement that communicates the District's current stance as well as its capacity to adapt the policy to uncertain, changing conditions. CAC Member Miller suggested beginning with low-cost activities such as technical assistance and education while learning how current properties such as her own may interact with flooding under current rules. Outreach will remain critical to the Board's work as homeowners vary in their approach to flood risk.

## Flood Prevention

Poll | 1 question | 7 of 10 (70%) participated

1. Which of these prevention roles would you like BCWD to take? (select all that apply) (Multiple Choice) \*

7/7 (100%) answered



## Flood Mitigation

Poll | 1 question | 7 of 10 (70%) participated

1. Which of these mitigation roles would you like BCWD to take? (select all that apply) (Multiple Choice) \*

7/7 (100%) answered



## Next Steps

The Board agreed on its preference for a policy focused on expanding its current flood management activities to focus on education & outreach, technical assistance, and technical analysis, while allowing room for future adaptation and exploration of other options. This approach would provide time for the Board to learn more about the issues and for the District to build on current relationships with member communities.

The next steps were determined as follows:

1. Draft policy language for consideration at the March Board meeting. Once drafted, this Policy language should be shared with the District's member communities so they know the District's stance on flood prevention and flood mitigation and can best collaborate.
2. While the Managers agreed that all of the programmatic components discussed at the workshop have merit, there are some that they are more comfortable implementing now and some they would like to explore developing further in the future. The following tables summarize the direction provided by the Board and the CAC members who participated in this workshop discussion.

Flood Prevention Recommendations:

<b>Programmatic Component</b>	<b>Existing or New</b>	<b>Recommended Change(s)</b>
Rules	Existing Program	Consider changes to the rule language after the Millers implement their flood mitigation project.
Cost Share Programs	Existing Program	Expand the program to include water quantity as well as water quality.
Flood Monitoring and Alert Systems	Existing and New Program	No modifications to existing program at this point in time. Continue water elevation monitoring of surface and groundwater. Do not create alert system at this time.
Capital Improvement Program	Existing Program	No modifications to existing program at this point in time. Future modifications would require adding capital projects to the CIP.
Regional Stormwater Management Program	Existing Program	Identify opportunities to collaborate with member communities on the design, implementation and management of regional stormwater management systems.
Education and Outreach	Existing Program	Develop outreach and guidance materials related to flood risk management.
Stormwater Banking	New Program	Do not proceed at this time. Low priority due to the level of effort required to develop and implement.
Flood Prevention Coordination	New Program	Explore roles with member communities to lay groundwork for a collaborative approach to stormwater and flood management (e.g., District will help solve flooding that crosses boundaries).

Flood Mitigation Recommendations:

<b>Programmatic Component</b>	<b>Existing or New</b>	<b>Recommended Change(s)</b>
Education and Outreach	Existing Program	Continue with the work already approved by the Board on Dec 8, 2021.
Technical Analysis	New Program	Continue with the work already approved by the Board on Dec 8, 2021.
Technical Assistance	New Program	Continue with the work already approved by the Board on Dec 8, 2021.
Cost Share	New Program	Develop a framework for what this program could look like and share it with member communities to gauge interest in implementing in partnership.
Property / Asset Acquisition	Existing Program	Modify the program to include criteria that would allow the District to determine whether to acquire properties or easements to alleviate existing or future flooding.