

# STATE OF COLORADO

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## Colorado Water Conservation Board Department of Natural Resources

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TO: Colorado Water Conservation Board Members

John W. Hickenlooper  
Governor

FROM: Kevin Houck, P.E.  
Chief, Watershed and Flood Protection Section

Mike King  
DNR Executive Director

DATE: October 16, 2013

James Eklund  
CWCB Director

SUBJECT: **October 21, 2013 Special Board Meeting**  
**Agenda Item 3 – September 2013 Technical Flood Summary**

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### Staff Recommendation

This is an informational item and staff is not requesting board action.

### Introduction and Discussion

On September 11, 2013, a prolonged rain event started a disastrous flood event in eastern Colorado that lasted over a week. This weather pattern was characterized by only moderate short term intensity, but for medium and longer durations, rainfall experienced in a number of locations exceeded a 1,000 year rainfall event. A number of stream reaches resulted in flood events equaling or exceeding a 100-year streamflow event, which is the regulatory standard. In addition, the long duration of the event resulted in heavy erosion in a number of stream reaches that contributed to flooding in areas outside of the regulatory 100-year floodplain. The end result was the deadliest flood since 1976, the costliest flood since at least 1965 (damages are still being tallied), and the first presidentially declared flood disaster since 1999, the longest stretch of any state in the country.

The ongoing results of this event has led to a number of questions being asked, all of which will be addressed during this item's presentation as well as others that follow. These include:

- What is the extent of the damages from this flood?
- What does a 1,000 year rainfall event really mean? What does a 100-year streamflow event really mean? Why are they different?
- What was unique about the weather pattern that produced this event?
- Does this event indicate that floodplain regulations are not working?
- Why did so much erosion occur resulting in new alignments of streambeds?
- What do the communities and property owners do regarding the relocated streams?
- How did staff respond to the flood?
- Can the damage from this flood be prevented in a future event?

This item will summarize the event that produced the flood and summarize the results of the flood itself along with the tough decisions that the state is still faced with.