Recent Questions from Delaware & Eagle Township

Will TR 187 (just west of the Blanchard River basin) need to be closed during the 1% event or will the road be elevated to remain open?
Based upon preliminary modeling for development of the recommended alternative, TR 187 may be closed for 4% ACE and larger events. Additional efforts to reduce the extent and duration of potential inundation resulting from the proposed solutions will be considered during the advancement of preliminary design concepts, if authorized.

Will CR 17 at the bridge north of TR 150 be closed during the 1% event?
Based upon preliminary modeling for the development of the recommended alternative, there may be flooding in the range of roughly 1 foot in depth at this location during the 1% ACE (100-year) flood event. However, for events equal to or less than the 2% ACE (50-year) event, this bridge should remain fully open. Additional efforts to reduce the extent and duration of potential inundation resulting from the proposed solutions, including potential adjustments to the structure, will be considered during the advancement of preliminary design concepts, if authorized.

Will the bridges on Potato Run at CR 153 and SR 37 be closed during the 1% event?
Based upon preliminary modeling, the bridge at CR 153 may be closed during the 1% ACE event. There may be flooding in the range of roughly 1.5 foot at the SR 37 bridge during the 1% ACE (100-year) flood event. However, for events equal to or less than the 4% ACE (25-year) event, this bridge should remain fully open. Additional efforts to reduce the extent and duration of potential inundation resulting from the proposed solutions, including potential adjustments to the structures, will be considered during the advancement of preliminary design concepts, if authorized.

Can the area of the proposed Blanchard River basin be reduced by using the embankment of the bridge approaches on TR 150 to create a second storage area upstream?
The area upstream of the TR 150 bridge on the Blanchard River could provide approximately 600-800 ac.-ft. of storage volume based on current estimations. For comparison, the proposed storage basin on the Blanchard River provides about 6,000 ac-ft. at elevation 851 ft. and up to 12,000 ac-ft. at elevation 858 ft. The area of the proposed Blanchard River dry storage basin would not likely be reduced in a significant way by creating the second storage area upstream.

How long will it take the basins to drain after a 1% event?
The basins will drain quicker further upstream, away from the embankment and store water for longer durations closer to each embankment. Based upon preliminary modeling, the following approximate durations of storage for the 1% ACE event were observed:

Eagle Creek (3-5 days), Blanchard River (1-2 days) & Potato Run (4-5 days).

The duration of storage will be less for storms less than the 1% ACE (100-year) flood event. Additional efforts to reduce the extent and duration of inundation resulting from the proposed solutions, including potential adjustments to allow for a more rapid drawdown of the stored floodwaters, will be considered during the advancement of preliminary design concepts, if authorized.

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How often would the basins have held water since 2007 and how much area within the basins would have been inundated during those events?

Based upon preliminary modeling and utilizing a comparison of data from local USGS gage stations along Eagle Creek and the Blanchard River and flow estimates for various recurrence intervals from the models utilized to generate the recommended alternatives, we estimate the dry storage areas would have provided storage and experienced varying depths of inundation for events since 2007 as follows:

Estimated Frequency of Theoretical Storage Events Since 2007		
Year	Eagle Creek Dry Storage	Blanchard Run & Potato Run Dry Storage
2008	2	3
2009	2	2
2010	0	0
2011	5	8
2012	0	0
2013	2	2
2014	1	1
2015	3	2
2016	0	0
TOTAL	**15**	**18**

The vast majority of the historical rainfall events that result in theoretical storage occur between November and April (fall-winter periods) and typically result in very short durations of storage related to 10% ACE (10-year) and smaller events. Events meeting or exceeding the 4% ACE (25-year) floods occurred at least once in 2008, 2011, 2013 and 2015.

Based upon this modeling, storage events within the Eagle Creek Dry Storage Basin smaller than the 10% ACE (10-year) will be retained within the existing 1% ACE (100-year) floodplain of Eagle Creek and flood storage events meeting or exceeding the 4% ACE (25-year) flood may cover the majority of the containment area. For the Blanchard River and Potato Run Dry Storage Basins, events smaller than the 4% (25-year) flood will remain within the existing 1% ACE (100-year) floodplain of the respective streams. Events meeting or exceeding the 2% ACE (50-year) will result in nominal areas of additional induced flooding upstream of the embankments. Additional efforts to reduce the extent and duration of potential inundation resulting from the proposed solutions will be considered during the advancement of preliminary design concepts, if authorized.

What will be the total and average heights of the proposed dams?

The proposed dams will vary greatly in overall height in comparison to the surrounding ground, but will retain a consistent top elevation at each location. The proposed dams will be the highest in comparison to the surrounding ground where they intersect the streams and will taper to only a few feet tall at the ends of the embankments. Based upon current modeling, the maximum height of the proposed dams within the respective streams would be:

Eagle Creek (32 feet), Blanchard River (33 feet) & Potato Run (23 feet)