

Brentwood Bound

The **Brentwood Bound Plan** is a comprehensive solution to overcome flooding and public safety challenges presented by the Deer Creek channel and to improve the Manchester Road corridor within the City of Brentwood.

Three transformative projects are bound together in building a brighter future for Brentwood:

Deer Creek Flood Mitigation, Manchester Road Improvements, and Deer Creek Greenway Connector.

Learn more about the Brentwood Bound projects at brentwoodbound.org.

Brentwood Bound and the Historic Flooding of July 26, 2022

We are still waiting for additional data to analyze from the recent historic rain events. So far, the indications are that the flood mitigation project is meeting our goals — and the project is not yet complete. Here's what we know as of August 8, 2022:

- The Brentwood Bound project area has experienced significant flooding for six storm events since 2008. Examples of impacts from these floods at the project area include closure of Manchester Road and boat rescues.
- The storm event on July 26, 2022, was historic. According to the National Weather Service, the St. Louis metropolitan area experienced the highest 24-hour rainfall on record at and received about 25% of our normal yearly rainfall in just 12 hours. St. Louis set a daily rainfall record that previously stood for over 100 years, and the National Weather Service in St. Louis issued its first-ever Flash Flood Emergency. The Emergency area included the Deer Creek Watershed and is a Flash Flood Warning that contains a "Catastrophic" impact tag within the warning. According to the National Weather service, these high-end warnings are reserved for rare instances where a significant threat to life and property exists.
 - Based on preliminary available localized meteorological data, eastern portions of the Deer Creek watershed along Black Creek experienced rainfall that has a 0.1% annual chance of occurring (also referred to as a "1,000-year rainfall event"). The remainder of the watershed also experienced heavy rainfall that has between a 0.2% to 0.5% annual chance of occurring (also known as the 200- and 500-year rainfall events).
- Since July 26, the project area has been impacted by three additional separate peak flow events.
 - The peak flow rates in Deer Creek for each of these three storms were notably higher than the peak flow rates for the five storm events that caused damage in the project area in 2005, 2015, 2016, 2019, and 2020.
 - **Despite experiencing more measured flow in the Deer Creek at the upstream Rock Hill USGS stream gage, Manchester Road in the Brentwood Bound area did not flood at the project area due to Deer Creek overtopping as a result of the July 28, August 3, or August 4 storm events. Without the project's mitigation measures, Manchester Road would likely have flooded from Deer Creek overflow three times since July 28 given the measured upstream peak flow rates in Deer Creek and how they compare to past damaging events.**
 - 60% more water flow was measured at the Rock Hill USGS stream gage and traveled through the Brentwood Bound project area without flooding Manchester Road at the project area than in the 2005 and 2015 storm events.
 - The National Weather service has stated that these recent storm events cap the wettest two-week period ever experienced in St. Louis and that the August 3 rainfall record was broken.
 - The St. Louis region experienced over 15" of rain from July 24 through 9 am on August 4.

- **It's important to note that the Deer Creek Flood Mitigation project is still not complete.** The lake is not complete, and construction has not yet started on the Phase II storage areas near the confluence of Black Creek. Even so, these rain events put this area to the test, and this is what resulted:
 - In the new Brentwood Park, the Pavilion and Event Lawn area did not flood.
 - The new Brentwood Park parking lot did not flood.
 - The area where the destination playground is scheduled to be installed did not flood.
 - The newly constructed flood mitigation area, which increases the available floodplain storage north of Deer Creek, contained more water than it was able to in previous flood events.



NWS St. Louis @NWSStLouis · Aug 4
Some absolutely insane climate statistics:

- Wettest two-week period in STL ever.
- Over 1/3 of our normal rain occurred between July 24th and today
- Another daily rainfall total (for August 3rd) was broken: 4.32" fell yesterday (old record - 1.45" in 1946)

#MOwx #ILwx #STLwx



NWS St. Louis @NWSStLouis · Jul 29
Here's radar estimated rainfall from the 72-hr period including multiple bouts of heavy rain July 26-28. The most significant came early Tuesday morning, but flash flooding occurred in the city again Thursday afternoon. Totals in excess of 10 inches occurred in the metro. #stlwx

