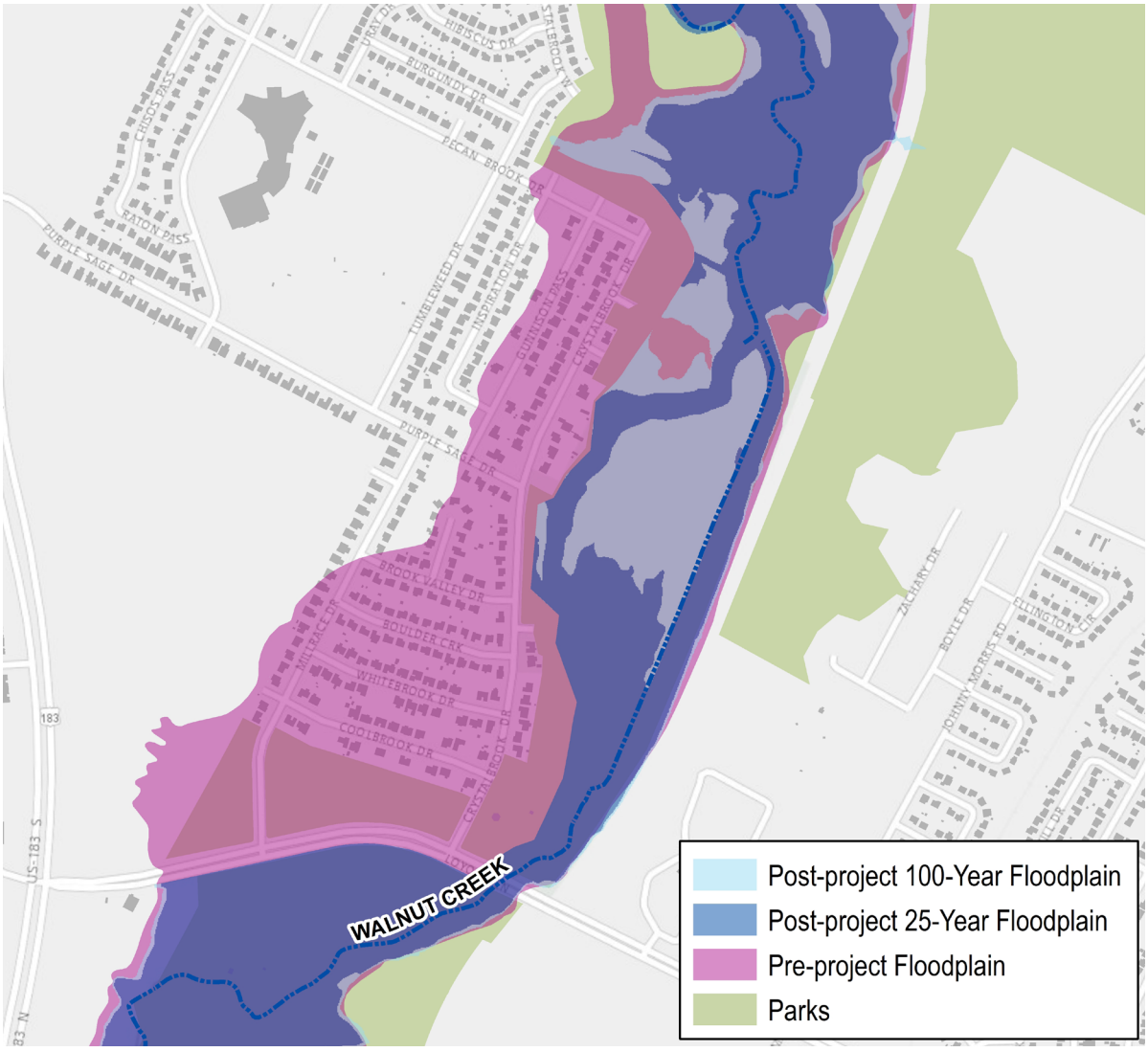
Crystalbrook

Flood Mitigation Project

WATERSHED PROTECTION
Capital Projects

The Crystalbrook subdivision, built in the 1970s, was identified by the 2001 Watershed Master Plan as the most serious residential flooding area in Austin. More than 175 homes in the subdivision were subject to direct flooding from Walnut Creek. Much of the area was within the five-year floodplain, with water depths potentially reaching seven feet in some homes. Because the subdivision was constructed before the establishment of modern drainage criteria, the storm drain system in the neighborhood was also inadequate. Thus, even small storms frequently resulted in serious flooding.



The solution consisted of a two-phase project. Phase I focused on improving the storm drain system, while Phase II involved the installation of a 5,700 foot long levee/floodwall system to protect the parts of the neighborhood adjacent to Walnut Creek. Phase I created a storm drain system with adequate capacity to reduce localized flooding during frequent smaller storms. A large box culvert system was installed, spanning three-quarters of a mile south of Loyola Lane.

Floodwall during normal (above) and flood (below) conditions

The levee/floodwall system incorporated improvements to Loyola Lane to create a flood barrier on the southern boundary of the neighborhood. Prior to the improvements, Loyola Lane was five feet below the base flood elevation and could not be reconstructed without the integration of a flood control project. The project was completed in October 2004.

PROJECT IMPROVEMENTS

- A levee and concrete floodwall system up to 8 feet high and 5,700 feet long surrounding the north, east, and south sides of the neighborhood adjacent to Walnut Creek.
- A large box culvert system stretching three-quarters of a mile south of Loyola Lane.
- Construction of a bypass channel north of Loyola Lane measuring 3,000 linear feet long and 100 feet in bottom width.
- Construction of 12,000 linear feet of storm drain systems, including 29 inlets and small channels.
- Slope stabilization, including rock and concrete riprap, geoweb system, and geogrid.

PROJECT BENEFITS

- 100-year flood protection for 175 homes.
- Provided adequate capacity in the storm drain system to reduce serious localized flooding.

PROJECT COST

- $14.5 million ($9.5 million Phase I, $5 million Phase II)

ENVIRONMENTAL BENEFITS

- Preservation of 3,500 linear feet of the natural stream channel of Walnut Creek;
- Preservation of Walnut Creek, which scored in the highest categories for Aquatic Life Support and Non-Contact Recreation on the Environmental Integrity Index scoring system
- Preservation of more than 1,000 protected trees greater than 19 inches in diameter.

LINKS

- **Road Closures Due to Flooding**
  Before you get behind the wheel, look up which roads are closed due to flooding in real time on ATXfloods. Available on your mobile or desktop computer.
  www.ATXfloods.com

- **ATXfloods Alerts**
  A free service to receive phone messages, texts, or emails about flooding. You can choose to be alerted for a specific creek or all of Austin's creeks.
  www.ATXfloods.com/Alerts or www.ATXfloods.com/alertas.php (en español).

- **Emergency Notifications**
  Register your cell phone with the Central Texas region's emergency notification system, which may be used to alert the public about many different types of emergencies.
  www.capcog.org/divisions/homeland-security/regional-notification-system-registration

- **Flood Safety and Preparedness**
  Austin is in Flash Flood Alley. Be alert to the dangers of flooding both at home and on the road.
  www.austinfloods.org

FOR MORE INFORMATION

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