

# Upper Brushy Creek

WCID

A Dam District

Williamson County, Texas

If approved by the voters, the bond would fund flood safety projects that were identified in the District's 2016 Flood Protection Plan and 2020 Dam Assessment Study.

## THE BOND PROJECTS FALL INTO TWO CATEGORIES.

### Flood Mitigation Projects



The 2016 Flood Protection Plan was based on a "study to quantify relative flood risk level within the watershed" ... "to identify existing creek flooding concerns, prioritize those concerns, and propose potential alternatives for the mitigation of the highest priority concerns". Projects that would be funded by the bond will mitigate flooding in two of the most at-risk areas in the County. These projects will also protect infrastructure and improve emergency access to the area by reducing flood risk at multiple road crossings.

#### Block House Creek

The proposed multi-phase project, in partnership with the City of Cedar Park, plans for channel and other drainage improvements.

#### Dam Rehabilitation Projects



Like all aging infrastructure, dams require rehabilitation to keep them working safely and effectively. The 2020 Dam Assessment Study categorized breach risk using the Joint Federal Risk Category method – an approach developed by multiple federal dam agencies for use in portfolio risk management (FEMA 2015). The Study prioritized rehabilitation projects to evaluate and implement the most cost-effective ways to alleviate current issues and protect against future ones.

#### Embankments

As earthen dams age, their steep, sloping sides can become unstable as their soil settles or as animals or people compromise the soil and vegetation. The Study found that approximately 25% of the risk of the District's portfolio is associated with the embankments and parapet walls.

#### Lake Creek

The proposed multi-phase project, initiated in partnership with the City of Round Rock, includes the construction of the new Dam 101.

#### District-wide

As bond capacity allows, the District will work with local communities to address regional flood mitigation risks identified in other areas.

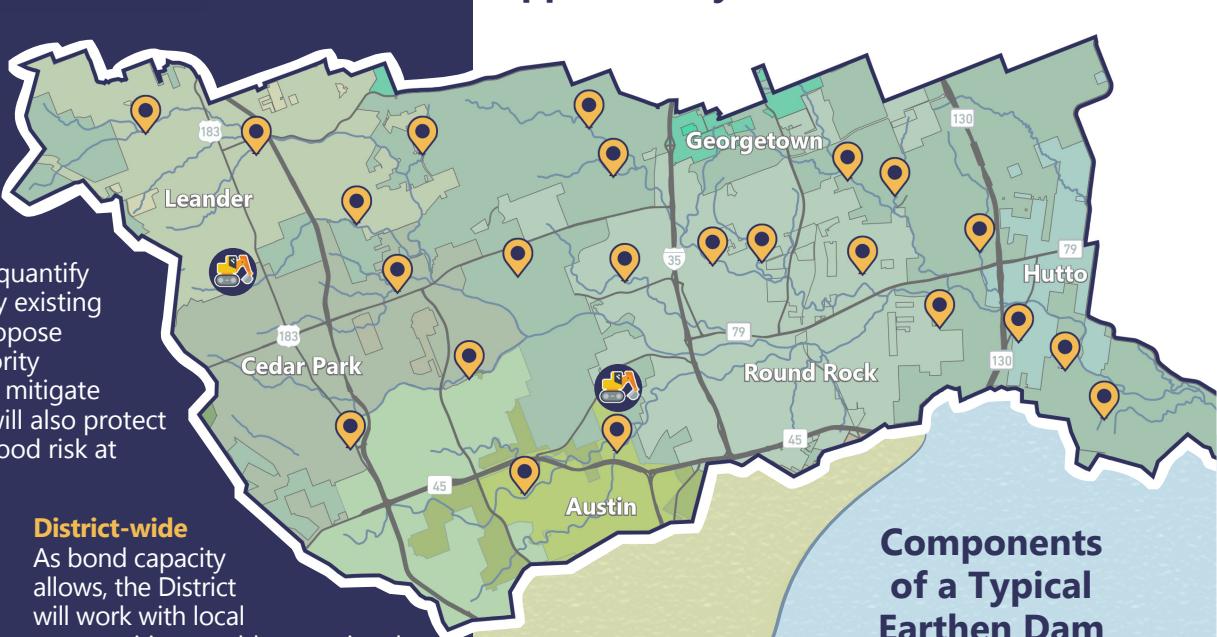
#### Principal Spillways

Water typically leaves a dam's reservoir through its principal spillway. The spillway's many elements can deteriorate over time and require repair. The Study found that only a small percentage of the District's portfolio had principal spillway issues. In addition to remediating existing issues the District will aim to optimize the spillway capacity.

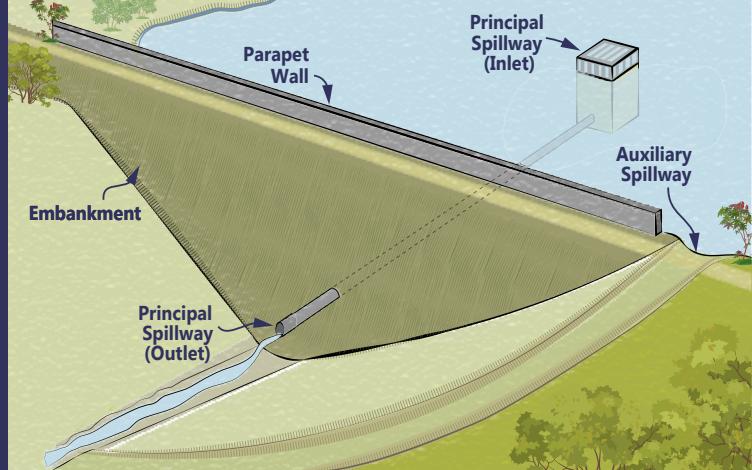
#### Auxiliary Spillways

Auxiliary spillways perform the critical function of safely passing floodwaters without compromising the dam's integrity. Erosion on an auxiliary spillway can result in damage and potential dam failure. The Study found that more than 60% of the risk of the District's portfolio is associated with the auxiliary spillways.

In November 2020, the District will ask voters to approve a bond to fund flood safety projects throughout the Upper Brushy Creek watershed.



### Components of a Typical Earthen Dam



**Rehabilitation projects help prevent dam failure.**

# WHERE DID THE PROJECTS COME FROM?



## COLLABORATIVE COMMUNITY DRIVEN PROCESS

The District worked hand-in-hand with local governments and the public to develop the Flood Protection Plan that identified the areas of greatest flood risk and potential solutions.



## PRIORITIZED MITIGATION SOLUTIONS

Since the Flood Protection Plan was developed, the District and local communities have continued to collaborate to develop solutions for the two greatest risk areas of Lake Creek and Block House Creek.



## FOCUSED REHABILITATION SOLUTIONS

The Dam Assessment Study identified and prioritized dam rehabilitation projects with thorough analysis and technical input from industry experts, regulators, and District staff.

# HOW DID WE GET HERE?

2010

### Tropical storm demonstrates ongoing flood risk.

In September 2010, Tropical Storm Hermine caused flooding across Central Texas, leading to millions of dollars of damage (*Tropical Cyclone Report Hermine, Nov. 2010, National Hurricane Center estimate*). The event demonstrated that current dams and programs do not address all hazards from major flood events.

2012

### District launches watershed study to identify areas of greatest flood risk.

From 2012 to 2016, the District worked together with Cities, the County, the Texas Water Development Board, and members of the public to develop the Flood Protection Plan. Stakeholders helped inform the plan by identifying locations of creek-related flooding and vetting proposed recommendations.

2018

### County completes Flood Protection Plan with similar findings.

In 2018, the Williamson County Office of Emergency Management completed its own Flood Protection Plan. The County's findings aligned with the District's—the District's areas of greatest risk were also identified as high risk by the County. (Williamson County FPP 8.4, 8.5).

SPRING 2020

### District completes comprehensive Dam Assessment Study.

The Dam Assessment Study provided a comprehensive evaluation of dam health, identifying where and how dam failure would most likely occur. A list of recommended rehabilitation projects was developed as part of this effort to strengthen the dams and strategically mitigate potential dam failure.

FALL 2020

### In November, the District will ask voters to consider the issuance of bonds to build flood safety projects.

# WHY BONDS?

Since 2001, the District has been budgeting the maximum voter-approved two-cent tax rate to slowly save funds for costly flood safety projects. While this system has allowed the District to implement projects over time, it takes years of saving to fund smaller rehabilitation projects and delays more costly projects.



## BOND FUNDING ALLOWS THE DISTRICT TO COMPLETE PROJECTS MORE QUICKLY.

In the same way that a mortgage allows homeowners to buy a home and pay over time, using bonds allows the District to fund flood safety projects now, paying off the debt with future tax revenue.

# BOND FUNDING FAQS.

### Why use bonds to fund the projects?

Bond funding would give the District the upfront money to begin work on these flood safety projects more quickly. Without bond funding, the District will have to wait until it has saved enough cash from tax revenues to pay for the projects one by one.



### How will the bonds affect my tax rate?

The District utilizes most of its current maximum two-cent tax rate to incrementally raise capital funds. Less than a third of the two-cent tax rate is required for ongoing Maintenance & Operations (M&O). The existing two-cent tax is currently projected to support debt payments for over \$100 million of bond debt. It is also currently projected that the bond debt payments coupled with the M&O costs would not require the full two-cent tax.



### How will bonds affect project costs?

There are some costs associated with selling bonds such as interest payments. However, with quicker construction periods, the projects are less likely to be subject to additional costs from deferred rehabilitation and inflation in construction and right-of-way costs.



### What happens if the bonds don't pass?

If the issuance of bonds are not approved by voters, revenue from the two-cent property tax can still be used to build flood safety projects. However, the lack of bond funds will affect the order and rate at which the projects can be completed.