




MEMORANDUM

TO: Mayor and Council

FROM: Jorge L. Morales, P.E., CFM, Director
Watershed Protection Department 

DATE: January 24, 2022

SUBJECT: Response to Resolution No. 20211014-048 – Flood Memorial and Community Engagement

The purpose of this memorandum is to provide a response to City Council Resolution No. 20211014-048, relating to the City affirming its *“commitment to building a flood resilient community by addressing current risks, supporting safer regulations, encouraging robust community engagement efforts and emergency preparedness in collaboration with the 5-county regional partners.”*

As outlined in the categories addressed by the resolution, multiple city departments have current programs and projects in place addressing flood resilience. We continue to look for additional opportunities to partner and engage with the community on ways we can improve resilience.

Memorial in honor of the Halloween Floods of 2013 and 2015

After initial investigation into the possibilities for a memorial, Parks and Recreation Department (PARC) and Arts in Public Places (AIPP) staff recommend that the Onion Creek Mural Project is approached through a community process, facilitated by an artist trained in community engagement techniques.

The Onion Creek Mural Project would be facilitated by the Austin Parks and Recreation Department through its new Austin Civilian Conservation Corps program, providing funding for personnel. Materials would be funded by the Dougherty Arts Center who would also oversee the successful execution of the project. Artists would be trained in community engagement techniques by the Parks Community Engagement Unit. Other partnerships we would pursue would include Austin Public Library and GAVA. The artists and community members will propose the medium and placement of the mural, preferably on the northern side of Onion Creek Metropolitan Park.

Parks staff explored seven different options for placement of the mural (see attachment), and City staff agreed that the northern side of the park would be most relevant for the community. Because the mural will be a community driven project, it will not be accessioned by the Arts Commission. Applications for acceptance into the Austin Civilian Conservation Corps are due shortly and in anticipation of this project, an application will be submitted.

Financial Assistance Needs

In the resolution's request to address the financial assistance needs of the community, multiple areas were identified as potential opportunities.

First, the City's code compliance issues were referenced regarding financial assistance. The Austin Code Department (ACD) was tasked with responding after these floods and began an operational staffing readjustment to address the high number of impacted homes in the Upper and Lower Onion Creek flood area. There were over 900 properties impacted per the FEMA categories. During this time, ACD placarded over 1000 locations as unsafe. There were also 680 mobile homes inspected that were not affected by floods in the flood zone.

This major flooding event severely impacted residents of the Onion Creek neighborhoods, especially the southeast neighborhood, leading to the loss of multiple homes and properties. Some residents did not lose their homes or qualify for buyouts, but nonetheless suffered flooding and damage that required code repairs. This damage ranged from storm drainage issues, mainly structural integrity impacts, to damage to electrical systems, walls, and plumbing. The repairs required permits and were granted life safety permits by the Development Services Department (DSD) to return the property to minimum standards. City Council approved ordinances 20131107-08 and 20151108-002 waiving the residential permitting and development fees required for repairing existing structures damaged by the flood event.

Several fundamental applications implemented during this assignment identified both successes and areas of improvement to be reviewed for future emergency responses. For example, working with key departments to expedite the needs of homeowners whose repairs required permits, assisting with FEMA to identify priority properties with substandard conditions, identifying structures unsafe for occupancy, working with organizations that provide shelter for the displaced, assisting with resource distribution to impacted residents, and providing support staff for resource centers. In addition, a number of collaborative efforts with various entities occurred during this response. Lessons learned include the need to continue building collaborative relationships with other City departments to respond more systematically and efficiently to priorities at the moment of occurrence.

Second, the resolution requests financial assistance to be addressed by the following:

- 1. Identifying and summarizing state and federal funding opportunities that could be used for flood mitigation and risk reduction*

Multiple sources at the Federal level have been identified as potential funding opportunities. The Intergovernmental Relations Office (IGRO), Watershed Protection Department (WPD) and Homeland Security and Emergency Management Departments regularly investigate these sources to determine opportunity and feasibility. Challenges identified with some of the grant programs are that the dollar amounts available can be limited, the programs can be highly competitive, and the application periods and award timelines do not often align well with our project delivery timelines. Regardless, the City has applied for multiple grants within federal programs and will continue to do so as opportunities arise. Listed below are some of the current sources:

Federal Funding Opportunities

- [Flood Mitigation Assistance \(FMA\)](#)

The FMA grant program, under the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Assistance Grant Program, assists states and communities by providing federal funds for cost-effective measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program (NFIP).

- **PROTECT Resilience Grants**

The recently passed Infrastructure Investment and Jobs Act included a resilience program that could potentially be utilized for flood mitigation and natural disaster response. The bill creates a new Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) grant program, which provides formula funding to states and competitive grants to eligible entities to make our surface transportation infrastructure more resilient, including through the use of natural infrastructure, to the effects of extreme weather and natural disasters. Specifically, the bill provides \$7.3 billion in formula funding and \$1.4 billion in competitive grants over five years. A portion of PROTECT competitive grants would be set aside for at-risk coastal infrastructure and evacuation routes. Staff will research this new grant program further as more information is available and will update the Council and community on opportunities.

- [Building Resilient Infrastructure and Communities \(BRIC\)](#)

BRIC is administered by FEMA to States and then to sub-applicant cities. BRIC is a grant program with the goal of:

- incentivizing natural hazard risk reduction activities that mitigate risk to public infrastructure
- prioritizing benefits to disadvantaged communities
- mitigating risk to one or more community lifelines
- incorporating nature-based solutions
- enhancing climate resilience and adaptation
- increasing funding to applicants that facilitate the adoption and enforcement of the latest published editions of building codes

Eligible activities for the program include the following:

- capability and capacity building activities that enhance the knowledge, skills, and expertise of the current workforce to expand or improve the administration of mitigation assistance;
- mitigation projects designed to increase resilience and public safety and reduce injuries and loss of life, and reduce damage and destruction to property, critical service facilities, and infrastructure from natural hazards;
- and management costs to provide assistance to reimburse the recipient and subrecipient of eligible and reasonable indirect costs, administration costs, and other administrative expenses associated with a specific mitigation project or capability and capacity building activity.

Federal Information Resources regarding financial assistance

- [National Flood Insurance Program \(NFIP\)](#)

The NFIP is a flood insurance program managed by the Federal Emergency Management Agency (FEMA), which offers insurance to help reduce the impact of floods nationwide. The NFIP offers flood insurance to property owners, renters and businesses, and having

this coverage helps residents recover faster when floodwaters recede. The NFIP works with communities required to adopt and enforce floodplain management regulations that help mitigate flooding effects. The Watershed Protection Department does outreach to the community to insure that as many people are aware of this program as possible.

State Funding Opportunities

- **Texas Water Development:** [Flood Infrastructure Fund](#)
 - The FIF is a program managed by the Texas Water Development Board that was passed by the legislature and approved by Texas voters through a constitutional amendment that provides financial assistance in the form of loans and grants for flood control, flood mitigation, and drainage projects. Political subdivisions are eligible for application for funding. The TWDB awarded the City of Austin grant funds in the amount of approximately \$4.5 million to update floodplain studies in the city and surrounding communities. The City is working with the Region 10 Regional Flood Planning Group to identify future potential funding for flood risk reduction projects within the City.

State Information Resources regarding financial assistance

- [Flood Information Clearinghouse](#)

The Texas Water Development Board provides the Flood Information Clearinghouse, which is a “one-stop-shop” for information on flood mitigation opportunities for Texas communities. The website provides information on funding for repair, restoration, reconstruction, or replacement of facilities damaged or destroyed by a federally declared disaster and how to navigate public assistance from FEMA and the Texas Department of Emergency Management. The website includes information regarding project eligibility, what funding is currently available, events for information, and other resources.

2. *Providing a summary of existing funding accessible to homeowners and property owners, including tenants, for local flood mitigation and risk reduction in the Austin area:*

Watershed Protection Department staff have done public outreach to residents to inform them of their potential hazard within floodplains. Specific engagement is done through our requirements under the National Flood Insurance Program – Community Rating System. However, staff continue to explore additional efforts, like working with local flood insurance and title agents to inform realtors through trainings on the program. Staff will continue to work with the groups like Austin Tenants Council and apartment owners associations to keep them informed of requirements and changes. Watershed staff also continue to work with our partner departments to find additional engagement efforts as outlined below.

3. *Providing a summary of existing City programs and/or initiatives aimed at educating residents about available funding opportunities in addition to the various application processes and periods:*

To help residents be prepared and resilient in the face of potentially increased extreme weather events related to climate change, the Housing and Planning Department (HPD) recommends continued support, funding, and outreach efforts to connect homeowners with their existing

home repair services. In the event of natural disasters, when local, state, and federal funding is made available, HPD will proactively seek out funding in response to the need.

Using existing data and maps, HPD can affirmatively market existing programs to ensure that resources are directed to the most vulnerable populations in an effort to address the racial inequities that have negatively impacted certain communities. A campaign to affirmatively market existing services will help eligible low-income homeowners access funding to resolve code compliance issues and make the appropriate repairs and upgrades to their homes.

Austin Code is frequently called upon to respond to emergency conditions when these types of events occur, many times being the first point of contact with occupants of impacted homes. ACD's responsibilities focus on code violations that affect the health and safety of residents. Providing references during these stressful times contributes to identifying individuals most in need of assistance and support. This is the opportunity to deliver initial information for resources related to financial assistance, repairs and required permits, and next steps for recovery. Providing helpful guides and resources is critical for the safety and awareness of the community. It is essential to develop a solid educational outreach program to serve as the foundation to communicate with the public.

Community Engagement and Preparedness

City staff from several departments are working on ways to initiate engagement on identified funding opportunities. Public Information Offices in these departments are also currently very engaged with those communities most vulnerable to flood and have built relationships that will help continue these conversations. Since the 2013 and 2015 floods, we have continuously enhanced our community engagement efforts to help residents prepare before, during and after a flood occurs.

Climate Navigator Training

The need to develop a training to bring awareness to emergency preparedness issues was identified through meetings with GAVA. The Climate Navigator training was developed with GAVA, HSEM and WPD to bring awareness to local hazards, resources, tools, and basic preparedness information. Some in-person trainings were delivered at the local library branch and then transitioned online (via Zoom) during the pandemic. Training has been provided in both English and Spanish. Forty Dove Springs residents have been trained to date.

Neighborhood Preparedness Guide

A neighborhood preparedness guide was developed by HSEM, WPD, GAVA, and the University of Texas. The guide focuses on local hazards and has information on preparedness for different types of emergencies, along with helpful tools and resources. The guide is available in English and Spanish. It will be distributed to the community in physical format and made available digitally. Moving forward, our goal is to modify this plan to be used city-wide in multiple languages for our limited English proficient communities.

Flood Safety Awareness Campaign

The goal of WPD's comprehensive Flood Safety Awareness Campaign is to communicate with the public about the dangers of flooding and steps that can be taken to protect lives and property. The campaign emphasizes that devastating floods can occur even during periods of drought, and that living in a floodplain can be a significant risk. It also encourages personal responsibility for one's own safety. This campaign occurs throughout the year and includes paid radio, digital and television advertisements in English and Spanish, including emergency advertisements when heavy rainfall is expected; an annual [Flood Safety Poster Contest](#); Flood Safety Awareness

Week; digital resources and tools through [ATXFloodSafety.com](https://www.atxfloodsafety.com), along with numerous public outreach and engagement events throughout the year.

- [ATXFloodSafety.com](https://www.atxfloodsafety.com) is a website external from the City of Austin that houses links to multiple flood preparedness resources to help property owners understand their flood risk and prepare themselves and their families before a flood occurs. These links connect users with the following resources:
 - Information about the National Weather Service's [Atlas 14](#) study to help residents understand their flood risk and changing floodplains.
 - [ATXfloods.com](https://www.atxfloods.com) to show real-time road closures due to flooding. Residents are encouraged to visit this website *before* they get on the road. Information about this tool is also included in emergency advertising and in the advertising campaigns for flood safety. Note that when it is flooding or when flooding is imminent, we will direct people the [ATXfloods.com](https://www.atxfloods.com) rather than [ATXfloodsafety.com](https://www.atxfloodsafety.com)
 - [FloodPro](#) to allow property owners to find where their property is located within a floodplain.
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 - FEMA flood insurance information to help residents learn about flood insurance and why it's important.
 - The LCRA's [Hydromet](#) to show near-real-time data on streamflow, river stage, rainfall totals, temperature and humidity.
 - [Ready.gov](#) to help residents create a disaster preparedness plan.
 - [Floodplain Development Information](#) page to provide information about floodplain regulations.
 - WPD's [Flood Safety Information](#) page related to the Turn Around Don't Drown campaign.

Brassiewood Local Flood Risk Reduction Project

The [Brassiewood Flood Risk Reduction Capital Improvement Project](#) is will reduce the risk of flooding of homes, yards and streets through an upgraded storm drain system that includes detention pond improvements, upgraded storm drain pipe and new storm drain inlets. The short-term and long-term solutions to help with local flood issues in this area were developed with the help of input from GAVA and Brassiewood neighborhood residents.

Block Captain Program

HSEM is working with GAVA and the community to develop a system and training for block captains that are ready to assist neighbors during emergencies. This program will move the community toward building capacity to prepare, respond, and recover from emergencies. The Block Captain program will consist of a neighborhood emergency plan that includes communication, outline roles and responsibilities, and periodic practices to ensure success during emergencies.

Ready Central Texas Campaign

Staff attended several outreach events to provide information on resources, tools, and emergency preparedness. The four-step plan (*Make a Plan, Build a Kit, Know your Neighbors, and Stay Informed*) is shared and strongly encouraged. More information at [ReadyCentralTexas.org](https://www.ReadyCentralTexas.org). The Ready Central Texas app is also being promoted through outreach events to encourage residents to register for Warn Central Texas. This is the local emergency alert system to receive alerts by text, email, or phone. More information can be found at [WarnCentralTexas.org](https://www.WarnCentralTexas.org). Basic emergency supplies and preparedness information are also distributed during events and trainings.

Additional Preparedness Training

In addition to the Climate Navigator training, a more hands-on preparedness training to help people in emergencies is in development by HSEM. This new component would be more advanced than the previous offering and would include Stop the Bleed, Hands-Only CPR, First Aid, and heat/winter weather awareness and tips. The course will be 2-4 hours in length.

Federal Legislative Agenda

Finally, the resolution directs the City's Federal Legislative Agenda to be amended to seek additional support.

The City of Austin Federal Agenda currently includes the following:

The City of Austin also supports continued funding of federal programs to mitigate damages from flooding incurred by the increasing number of extreme weather events, including but not limited to additional funding to improve floodplain maps based on the best available information and the Disaster Recovery Reform Act of 2018.

In response to Resolution 202111014-048, the Intergovernmental Relations Office recommends amending the federal agenda item above to incorporate the items below:

The City of Austin further supports funding programs to assist residents with reducing and eliminating the risk of flood damage and making flood insurance more affordable to low income-residents.

Our continued work on the initiatives referenced will be reported out to Council regularly to communicate the progress and milestones reached. Should you have any questions or need additional information, please feel free to contact me at 512-974- 3438 or via email at Jorge.Morales@austintexas.gov.

cc: Spencer Cronk, City Manager
Rey Arellano, Assistant City Manager
Kimberly McNeely, Director, Parks and Recreation Department
Juan Ortiz, Director, Homeland Security and Emergency Management Department
Rosie Truelove, Director, Housing and Planning Department
José G. Roig, Director, Austin Code Department
Brie Franco, Intergovernmental Relations Officer
Denise Lucas, Director, Development Services Department
Beth Culver, Assistant Director, Development Services Department

Attachments:

Onion Creek Metropolitan Park Mural Commission PowerPoint
Dove Springs Preparedness Guide – English
Dove Springs Preparedness Guide – Spanish
[Flood Resilience Report – response to Council Resolution 20210127-056](#) (link to EDIMS)

Attachments:

Onion Creek Metropolitan Park Mural Commission PowerPoint

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[Flood Resilience Report – response to Council Resolution 20210127-056](#) (link to EDIMS)

RESOLUTION NO. 20211014-048

WHEREAS, Onion Creek crested just over 40 feet at US 183 on the morning of October 31, 2013, for a new record height for this location, which produced approximately 135,000 cubic feet per second; and

WHEREAS, across Travis County and the City of Austin, more than 700 homes were damaged by flooding, and hundreds were destroyed; and

WHEREAS, many of the affected homes were not protected by flood insurance and were within the 100-year floodplain of Onion Creek; and

WHEREAS, in response to the 2013 Halloween Flood in Onion Creek, the City Council passed Resolution No. 20140515-028 directing the City Manager to provide a report to Council regarding the needs associated with a study of feasible flood mitigation options within the Onion Creek floodplain outside of the William Cannon Drive and Pleasant Valley Road area; and

WHEREAS, in response to the 2015 Halloween Flood in Onion Creek, the City Council passed a resolution directing the City Manager to provide an accelerated conceptual evaluation of potential flood mitigation alternatives; and

WHEREAS, with a projected increase of extreme weather events with climate change, it remains crucial that the City of Austin continue to actively pursue flood risk mitigation as a step toward environmental, economic, and social resiliency, as described in the response to Resolution No. 20131121-060; and

WHEREAS, the City of Austin recognizes that there is still much work to be done, especially to address the challenges of climate change and racial inequity; and

WHEREAS, City Council’s adoption of the Austin Community Climate Plan in June of 2015 reconfirmed Austin’s climate leadership by recognizing the importance of adaptation to increase resilience in the face of extreme weather and climate change impacts; and

WHEREAS, per the City of Austin’s Federal Legislative Agenda for the 117th Congress, the City of Austin supports continued funding of federal programs to mitigate damages from flooding incurred by the increasing number of extreme weather events, including but not limited to additional funding to improve floodplain maps based on the best available information and the Disaster Recovery Reform Act of 2018; and

WHEREAS, the Legislature of the State of Texas, in Section 16.315, Texas Water Code, delegates the responsibility to local government units to adopt regulations designed to minimize flood losses; and

WHEREAS, it is the purpose of the City of Austin to continue to promote the public health, safety and general welfare by minimizing public and private losses due to flood conditions in specific areas; and

WHEREAS, the Imagine Austin Comprehensive Plan states, “The challenges of a growing population, finite natural and fiscal resources, and a changing climate will require Austinites and their local government to become ever more resilient. Resilience — the ability to adapt to challenges and change — will be a hallmark of successful communities in the 21st century”; and

WHEREAS, according to Austin Public Health’s Community Health Assessment, access to healthcare, healthy food, transportation, and affordability were identified by community members as major barriers to health and wellbeing

and these inequities also restrict the ability to adapt to changing climate conditions;
and

WHEREAS, the City of Austin's Hazard Mitigation Action Plan describes methods for achieving future hazard mitigation measures by expanding existing capabilities, including reviewing current floodplain ordinances for opportunities to increase resiliency, and providing access to resources; and

WHEREAS, many low-income homeowners may not have access to the resources needed to resolve code compliance issues or make adequate repairs and upgrades to their homes to become resilient during a natural disaster; and

WHEREAS, in 2018, voters approved the issuance of \$184,000,000 in general obligation bonds for flood mitigation, open space and water quality and quantity for planning, designing, acquiring, constructing, and installing improvements and facilities for flood control, erosion control, water quality, water quantity, and storm-water drainage, and acquiring land, open spaces, and interests in land and property necessary to do so; and

WHEREAS, the Climate Resilience Action Plan, adopted in April of 2018, provides an overview of climate projections for the City of Austin, an assessment of potential extreme weather impacts to City-owned assets and operations, and strategies to mitigate those impacts; and

WHEREAS, Resolution No. 20150604-044 directed the Flood Mitigation Task Force to review existing flood mitigation and preparedness strategies, which resulted in the recommendation to implement City policies, programs, training opportunities and interdepartmental collaboration to enhance flood mitigation and preparedness; **NOW, THEREFORE**,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

The City hereby affirms its commitment to building a flood resilient community by addressing current risks, supporting safer regulations, encouraging robust community engagement efforts and emergency preparedness in collaboration with the 5-county regional partners;

BE IT FURTHER RESOLVED:

The City Manager is directed to work with the Onion Creek Metropolitan Park District to identify a prominent location within Onion Creek Metropolitan Park and to work with Austin Art in Public Places to explore placing a mural, for a memorial in honor of the Halloween Floods of 2013 and 2015, including funding recommendations;

BE IT FURTHER RESOLVED:

The City Manager is directed to address the financial assistance needs associated with resolving code compliance issues, eliminating damage caused by flooding, and making adequate repairs and upgrades to homes, including but not limited to floodproofing, installing gutters, and constructing drainage swales by:

1. Identifying and summarizing state and federal funding opportunities that could be used for flood mitigation and risk reduction; and
2. Providing a summary of existing funding accessible to homeowners and property owners, including tenants, for local flood mitigation and risk reduction in the Austin area; and
3. Providing a summary of existing City programs and/or initiatives aimed at educating residents about available funding opportunities in addition to the various application processes and periods;

BE IT FURTHER RESOLVED:

The City Manager is directed to initiate community outreach to identify and contact eligible residents that qualify for the identified funding opportunities during the 2021-2022 funding periods, and report on the outcome of the outreach;

BE IT FURTHER RESOLVED:

The City Manager is directed to provide recommendations for existing contracts with vendors to deliver training and education to the community for emergency preparedness and response. The contract(s) should focus on extreme weather preparedness and disaster/evacuation planning, education on climate-related health risks, and introducing available resilience tools and resources;

BE IT FURTHER RESOLVED:


The City Manager is directed to amend the Federal Legislative agenda to seek additional support for funding programs to assist individuals with reducing and eliminating the risk of flood damage, and making flood insurance more affordable to low-income residents, and advocate for it at the federal level;

BE IT FURTHER RESOLVED:

The City Manager is directed to report back to Council no later than 90 days with the report in response to this Resolution.

ADOPTED: October 14, 2021

ATTEST:


Jannette S. Goodall
City Clerk

Summary of Community Engagement Work in Dove Springs Neighborhood

Climate Navigator Training

The need to develop a training to bring awareness to emergency preparedness issues was identified through meetings with GAVA. The Climate Navigator training was developed with GAVA, HSEM and WPD to bring awareness to local hazards, resources, tools, and basic preparedness information. Some in-person trainings were delivered at the local library branch and then transitioned online (via Zoom) during the pandemic. Training has been provided in both English and Spanish. Forty Dove Springs residents have been trained to date.

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ONION CREEK METROPOLITAN PARK
MURAL COMMISSION

RESPONSE TO CIUR 2420

PARK CONDITIONS

The accessible areas of the park are largely made up of a windy plain with few mature trees to break the wind.

It is in the 100 year flood plain with high likelihood of flooding.

SPECIFICATIONS

Mural should contribute to the park 's character relative to ecology, historic and cultural significance and its anticipated users.

Art installations should be ADA accessible.

Mural should anchor into the ground with reinforced steel in concrete piers. Murals embedded flush to the ground will be impacted by flood events.

Mural should be located in an area where pedestrians can easily view it, read it or study its details.

Objects in the flood plain will need to be approved by WPD and will likely require an engineer of record to provide the data and documentation to withstand flood events.

MURAL OPTIONS

Murals can be presented using a variety of structures and materials that can resist climate conditions such as:

- Obelisks
- Interpretive panels
- Concrete panels
- Mosaic
- Paint
- Metal



PROPOSED SITE ONE +/-

- + Accessible pathway
- + Good placemaking: between two customer amenities of garbage can and water fountain
- + Visible from highly used parking lot off Nuckols Crossing Road (south perimeter)
- - Windy plain
- - Flood plain, prone to flooding
- - Blocks view of terrain



PROPOSED SITE TWO +/-

- + Adjacent to entrance, creates a gateway to the park
- + ADA Walkway
- + Adjacent to two trees for shade
- + Adjacent to well used parking lot
- + Adjacent to Nuckols Crossing Road (south perimeter)
- - Windy area
- - Flood plain
- - Trees may grow to hide it



PROPOSED SITE THREE +/-

- + Adjacent to entrance, creates a gateway to the park
- + ADA Walkway
- + Adjacent to two trees for shade
- + Adjacent to well used parking lot
- + Closer to Nuckols Crossing Road (south perimeter)
- + Visible to apartment complex across the road
- - Windy area
- - Flood plain
- - Signage may partially obscure it





PROPOSED SITE FOUR +/-

- + Eastern perimeter, near a pedestrian entrance
- + Across the street from neighborhood
- + Highly trafficked area for pedestrians
- + Planting bed ready-made
- - Windy
- - Flood Plain
- -Ground granite walkway may erode making it less ADA accessible

PROPOSED SITE FIVE +/-

- + Southeast corner of the park, near customer amenity
- + ADA Walkway
- + Quieter, contemplative area
- - Windy
- - Flood Plain





PROPOSED SITE SIX +/-

- + Southern perimeter of the park faces busy Nuckols Crossing Road and apartment complex
- + Landscaping already in place
- + ADA walkway
- - Windy
- - Flood Plain
- - Street traffic may not encourage people to stop and examine the detail in mural.

PROPOSED SITE SEVEN +/-

- +North Onion Creek Park is more relevant to community members
- +Watershed Protection is willing to negotiate with Army Corps of Engineers to utilize a safe space.
- +Mural placement feasible on walls of restroom facility, on top of picnic shelters, or embedded in concrete on the ground.
- +High visibility for community members especially along sidewalks in main parking lot.
- +ADA Compliant
- 25 year flood plain, prone to deep flooding
- Fewer risk-free sites for mural placement



NOT SUGGESTED

- + Only wall in the park is on the drainage structure.
- + Located in the center west of the park.
- - No ADA pathway to reach it. Difficult to see from a distance.
- - Surface is not conducive to painting.
- - Flood waters will cover mural often and degrade it when it is covered.

SUBJECT MATTER OPTIONS

- Halloween floods of 2013; lives and homes lost in floods (community created murals)
- El Camino Real feeder trail and reknown 17th Century Spanish expedition to Onion Creek area which was impacted by an Onion Creek flood.
- Native peoples who occupied Onion Creek area.
- Onion Creek ecology.
- A combination of the above themes.

DOVE SPRINGS NEIGHBORHOOD PREPAREDNESS GUIDE



**PREPARED BY GO AUSTIN VAMOS AUSTIN (GAVA)
AUGUST 2021**

THANK YOU TO ALL THOSE WHO CONTRIBUTED TO THIS EMERGENCY PREPAREDNESS HANDBOOK

Carmen Llanes Pulido, Executive Director, GAVA

Frances Acuña, Climate Resilience Lead Organizer, GAVA

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Residents of the Dove Springs Neighborhood

**A special thank you to the numerous City of Austin
Departments who reviewed and provided key advice and
guidance for this handbook!**

Information provided in this handbook was taken from City of Austin Plans and the City of Austin Website, Ready Central Texas App, FEMA, Ready.gov, as well as Neighborhood Plans from around the U.S including: the Portland Police Bureau Emergency Preparedness Handbook, North Salt Lake Emergency Preparedness Plan, Personal & Neighborhood Emergency Preparedness Handbook



Image courtesy of GAVA.

A NOTE FROM GAVA

Dear Neighbor,

Residents of Dove Springs are no strangers to natural disasters. In 1998, and again in 2013 and 2015, Southeast Austin experienced major flooding. Many residents lost their homes, pets, possessions, and even their livelihoods from these traumatic events. Since these events, neighbors have come together to organize and prevent future tragedy with support from grassroots and community organizations.

Go Austin Vamos Austin (GAVA) is a coalition of neighbors and community partners breaking down barriers to healthy living and strengthening neighborhood stability in Austin's Eastern Crescent (Dove Springs, South Austin, the Rundberg area, and St. Johns neighborhood). GAVA mobilizes and organizes community power for health equity.

Flooding continues to be a threat to many of our communities. GAVA envisions a future in which residents and institutions are trained and have the tools to prepare and respond to climate shocks and stressors. GAVA also supports residents to advocate for better infrastructure and more resources to better respond to current and future challenges.

To aid this work, GAVA worked with Austin Free-Net, the City of Austin, and FEMA to train residents on how to be "Climate Resilience Navigators" for their communities. These training workshops connect residents to vital resources and transmit their valuable input and findings back to the City of Austin.

This handbook was created because of those initial training workshops. GAVA organizers partnered with residents from Dove Springs, researchers from the University of Texas, and city departments like the Watershed Protection Department and Homeland Security & Emergency Management to create this handbook for the Dove Springs community. Neighbors can use this handbook as a guide to prepare their families, households, and neighborhood for future natural disasters such as flooding, grass fires, or heat waves. We continue to train Climate Navigators and add content to this curriculum. The more we can prepare today, the better we will be able to respond to events and take care of our communities, tomorrow.

To find out more about GAVA, please visit our website at: www.goaustinvamosaustin.org

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CONTACTS & INFORMATION



EMERGENCY TELEPHONE NUMBERS

For emergencies: 9-1-1

Austin Police Department: 512-974-5000

City of Austin: 3-1-1 or 512-974-2000

311 is the non-emergency City of Austin contact center. They can help answer questions related to City of Austin departments and can connect you with the available resources or if you need to make a request for city services. You can report downed power lines, malfunction of city lights, blocked drainage pipes or inlets, and other issues that need to be addressed by the City of Austin. Open 24/7, 365 days per year.

Texas Department of Health and Human Services: 2-1-1

211 Texas is a database that can help you find resources in your community. Health, food, housing, and many other services can be found using this resource.

Power outages: 512-322-9100

Utility Call Center (Electric/Water): 512-494-9400

TTY for the hearing impaired: 512-972-9848

SIGN-UP FOR EMERGENCY ALERTS

Warn Central Texas

When you register with Warn Central Texas, you can receive emergency warnings by text, email, or phone. The messages are Bilingual (English/Spanish).

STEAR (State of Texas Emergency Asst. Registry)

If you know elderly or disabled community members, people with limited mobility, people with communication barriers, or people who require transportation assistance, they can sign up with STEAR.



Image courtesy of City of Austin.

INFORMATION SOURCES

PHONE APPS

READYCENTRALTX App

This resource app provides critical guidance and resources to support Central Texans in their efforts to prepare for and respond to emergencies and disasters. Interactive checklists, relevant videos, electronic guides and more ensure users stay informed and proactive about their safety and wellness. Available for iPhones and Androids.

FEMA App & FEMA App en Español

FEMA (Federal Emergency Management Agency) has an app with weather alerts and information on available resources for different kinds of disasters. The app can also help locate emergency shelters.

WEBSITES

Ready.gov

Provides sample emergency plans.

(TARG) Travis County Recovery Group

An organization that can help victims of disasters in the Travis County and the surrounding area.

U.S. Geological Survey (USGS) Water Dashboard

Information on water bodies, water quality, drought and rainfall as well as weather conditions and hazards.

LCRA Hydromet

Water-related information that is specific to the Austin area and areas upstream and downstream of Austin along the Colorado River.

Emergency Weather Radio Station

NOAA Weather Radio

SOCIAL NETWORKS

Nextdoor

A website and application where community members can keep informed of what is going on in their neighborhood and can share resources online with neighbors.

Buy Nothing Group

Offers people a way to give and receive, share, and lend items between neighbors.

Dove Springs Proud

A community Facebook page for Dove Springs residents.

GAVA Facebook page

A community Facebook page where GAVA posts information on community events, resources, and local news updates.



Image courtesy of GAVA.

Consider following these important Facebook pages:

City of Austin Facebook Page: www.facebook.com/austintexas.gov/

Austin Emergency Management: www.facebook.com/AustinHSEM/

Austin Public Health: www.facebook.com/austinpublichealth

Consider following these important Twitter Feeds:

City of Austin: www.twitter.com/austintexasgov

Austin Emergency Management: www.twitter.com/austinhsem

Austin Public Health: www.twitter.com/AusPublicHealth

PREPAREDNESS



PLAN FOR ANY DISASTER

Make a family emergency plan.

Pick a meeting spot outside your home

Know how to get ahold of each other.

Keep a list of emergency contacts.

Assemble emergency kits.

- Make a family emergency plan. Your plan should include what to do depending on your location and the locations of your loved ones during an event. A plan for family members at home may differ from the plan if they are at school or work. Make sure that everyone in the home knows the plan and practice those routines.
- Decide where you will reunite after a disaster. Choose two places, one outside your home and another outside your neighborhood, like a park or other open area.
- Prepare in advance for how you'll communicate, navigate and keep your data safe if you lose power or internet access during an emergency. How will you communicate if you don't have cell service or your cell phone dies?
- Assemble emergency contact phone numbers for family members (work, school, cell, etc.), as well as for local emergency management agencies. Keep a copy of this with you and in emergency kits. Gather neighbors phone numbers and their emergency contacts.
- Assemble emergency kits and "Go-Bags".
- Keep copies of important documents (passport, driver's license, social security card, marriage license, will, deeds, financial statements, medical records etc.) in an off-site location such as a safety deposit box.
- Learn how and when to shut off your utilities.
- Make sure that each person knows how to use a home fire extinguisher.
- Make sure that everyone has a flashlight and sturdy shoes near the bed.
- Discuss all possible exit routes from each room, building and neighborhood. Ensure that there are at least two exits from each.
- Draw a floor plan of your home, showing the location of exits (windows and doors), utility cutoffs, first aid kits, emergency supplies, tools, clothing, etc. Make sure that each person is familiar with the plan.
- Always keep your car's gas tank at least half full.



Image courtesy of City of Austin.

KEEPING IMPORTANT DOCUMENTS SAFE

Keep copies of important documents (passport, driver's license, social security card, marriage license, last will and testament, deeds, financial statements, medical records, etc.) in an off-site location such as a safety deposit box.

Scanning Documents

You can scan documents with your smart phone or at your local library branch. Scanning to a USB or via email is available at all Library locations using the copy machines. There is no charge for scanning. The library also offers mobile print services and internet access.

How to Store Documents

Now that you have scanned your materials, you need to decide where to keep your digital copies. You can store documents in the cloud or on external memory devices (USB, DVD).

Hard copies should be kept in water-proof containers, which can be purchased both online and at retail stores. Prices range from a few dollars and go up from there, depending on size and material. Some come with clamps, locks, or padlock capabilities.

- Academy water-proof stowaway utility box for \$10
- Amazon has some heavy duty storage containers
- Cheaper alternatives would be to combine the use of Ziplock bags with Tupperware, and then store it in a 5-gallon bucket with a lid.

KEEPING YOUR HOME SAFE

- Be sure your home's street number is visible from the street, so emergency vehicles can find you.
- Install a smoke and CO (Carbon Monoxide) detector on each level of your home and outside each bedroom. If hallways are longer than 40 feet between the sleeping and living areas, then use two smoke alarms.
 - Test every six months and replace 9-volt batteries annually.
 - Some smoke alarms use non-replaceable lithium 10-year batteries, these should be tested monthly and replaced per manufacturer's instructions.
 - Hardwired smoke alarms should be tested monthly, and the backup battery should be replaced annually. The entire hardwired smoke alarm unit should be replaced every 8-10 years.
- Keep at least one fire extinguisher on each level of your home. Learn how and when to use them. Check the pressure gauges annually to ensure they are fully charged. Take them in for inspection every 1-6 years.
- Keep hallways and exits clear for easy evacuation. Ensure that all window safety bars have emergency releases.
- Store hazardous chemicals (e.g., gasoline, bleach, paint thinners) away from open flames and secure them to prevent spills. Make sure aerosol cans are not stored in places that can reach more than 120 ° F (like a garage or shed). This can cause explosions.
- Post emergency telephone numbers by every phone and near the front door.
- Show responsible family members how and when to shut off water, gas, and electricity at main switches.

INSURANCE

To facilitate insurance recovery, include an inventory of your valuables with photographs or video.

It is important to get insurance if you live in an area that is at risk for flooding. Remember that some insurances can take up to 30 days for policies to go into effect, so review carefully what is covered when you purchase flood insurance policy.

For more information on flood insurance review [FEMA Insurance](#).

Contact your
local fire
department to
learn about
home fire
hazards.



Image courtesy of City of Austin.

EMERGENCY SUPPLIES

Consider having multiple Disaster Kits:

- A Household Emergency Kit
- A basic First Aid Kit
- An Emergency Car Kit
- “Go-Bags” for each family member and pet!

- Store your Household Emergency Kit in a place that will still be accessible if your home is damaged and unsafe to enter (e.g., a backyard shed). If this is not an option, put it in an easily accessible location inside your home.
- Store your Go-Bags in a location that is easily accessible in the event you must evacuate your home (e.g., each vehicle).
- Store your kits in a convenient place known to all family members.
- Keep a smaller version of a Disaster Supplies Kit in the trunk of your car.
- Keep items in air-tight plastic bags.
- Consult your physician or pharmacist about storing prescription medicines.
- Having 7 days worth of supplies is the general rule of thumb, but local feedback shows that a 14-day supply may be necessary.

WHAT SHOULD GO IN A HOUSEHOLD EMERGENCY KIT?

- Cellphone, charger
- 7 day supply of medications/medical items
- Sanitation supplies (e.g. towels, washcloths, disinfectant wipes, unscented bleach with an eyedropper, heavy-duty garbage bags)
- Flashlights and battery-operated lanterns (with extra batteries & bulbs)
- Plates, utensils, and paper towels, etc.
- Cooking supplies (manual can opener, camp stove, fuel, lighter, pots, etc.). Camping stoves should never be used indoors due to the possibility of poisoning.
- Items to protect you from the elements, (e.g., warm clothing, raincoats, sleeping bags, mats, blankets, sturdy shoes and a tent or heavy-duty sheet plastic)
- Work gloves, goggles, crowbar, hammer, staple gun, adjustable wrench
- Extra cash (suggested \$200 in small bills)
- Spare car/home key
- Family and emergency contact info (phone and email)
- Pet supplies (collar, leash, tags, food, bowl)
- Copies of personal documents in a water-tight bag
- 2 gallons of water per person, per day (6 day supply)
- 6 day supply of nonperishable canned food, can opener

Re-think and update your kit and family needs at least once a year. Replace dead batteries, update clothes, etc. Individual and family needs, along with the time of the year, will dictate what is really required. Consider your family's specific needs and potential "just in case" items.

WHAT SHOULD GO IN A FIRST AID KIT?

- 1 First aid handbook
- Assorted cloth bandaids
- 4" X 4" sterile gauze dressing
- 2" X 2" sterile dressing
- 4" X 5 yards Kling bandage
- 2" X 5 yards Kling bandage
- 5" X 9" sterile dressing
- 8" X 10" sterile dressing
- Rolls of Kerlix bandage
- Triangular bandages
- Elastic bandages
- Latex gloves
- Tongue Depressors
- Betadine Preps
- Iodine
- First Aid Spray
- Ipecac
- Activated Charcoal
- Bandage Scissors
- Paramedic Scissors
- Tweezers
- Scissors
- Safety pins
- Needles (sewing)
- Thermometer
- Adhesive, Transpore, or paper tape
- Ice and heat packs
- Neosporin
- Tylenol & baby Tylenol or aspirin
- Diarrhea medication, laxatives and Antacids
- Cleansing agent/soap
- Eye wash
- Sunscreen
- Protective mask

WHAT SHOULD GO IN AN EMERGENCY CAR KIT?

- Battery/Jumper cables
- Portable tire inflator
- First aid kit and manual
- Class ABC fire extinguisher
- Radio & batteries
- Flashlight & batteries
- Bottled water
- Non-perishable food stored in water resistant container
- Sundry kit (paper & pencil, maps, tissues, pre moistened towelettes, plastic bags, essential medications)
- Blankets or sleeping bags
- Reflectors & flares
- Short rubber hose for siphoning
- Always try to maintain at least 1/2 tank of gas in your vehicle



Image courtesy of City of Austin.

"GO-BAGS"

Each household member should have their own Go-bag as a part of the Household Disaster Kit. Go-bags are helpful for use at home to help you remain in place even without utilities, if you must evacuate your home, or if you cannot return home.

Items to put in each family member's Go-Bag:

- Food and water
- Small first aid kit
- At least 7-day supply of any medications and a copy of the prescriptions.
- Copies of important documents, including: health insurance card, driver's license or identification card, birth certificates, passport.
- List of emergency contact phone numbers
- Photos of family members for reunification purposes
- Whistle to alert rescuers of your location
- Personal hygiene supplies (including toilet paper/wipes)
- Emergency lighting (e.g., glow sticks, flashlight, headlamp) and extra batteries
- Large garbage bags and paper towels
- Change of clothing and a hat
- Sleeping bag or blankets
- Cash in small bills
- In children's go-bags, include medical consent forms, a family photo for reunification purposes, and a favorite toy, cards, or a book.

Remember to make a Go-Bag for your pet!

- Sturdy leashes and/or carriers for transport.
- A pillowcase is a good option for transporting cats and other small animals.
- Muzzles for dogs.
- Food, potable water, and medicine for at least two weeks.
- Non-spill bowls, manual can opener, and plastic lid.
- Plastic pet waste bags, litter box, and litter.
- Current photos of your pet, for reunification purposes.
- Names and phone numbers of your emergency contact, local emergency veterinary hospitals, and animal shelters.
- Immunization records and information on any medical conditions and/or behavior problems.



ADDITIONAL NOTES ON STORING FOOD

- Store enough food for everyone in your family to last for at least two weeks.
- Ideal foods do not require refrigeration or cooking (e.g., canned fruit, vegetables, peanut butter, jam, low-salt crackers, cookies, cereals, dried fruit, canned soup or meats, juices and non-fat dry milk).
- Mark a date on food and rotate your stored food every six months.
- Change your stored water supply every six months so that it stays fresh
- Include baby food, formula or other special diet items for infants, seniors and those with dietary restrictions.
- Store the food in airtight, pest-resistant containers and keep it in a cool, dark place.
- Most canned foods can safely be stored for at least 18 months. Low acid foods like meat products, fruits, or vegetables will normally last at least 2 years. Use dry products, like boxed cereal, crackers, cookies, dried milk, or dried fruit within six months.
- Do not consume food from cans that show any signs of deterioration (rust or bulging).

ADDITIONAL NOTES ON STORING WATER

- Store two gallons of water per person, per day. This amount will be adequate for general drinking purposes. Three gallons per person per day will give you enough to cook and for limited personal hygiene. Remember to plan for your pets.
- If you buy commercially bottled “spring” or “drinking” water: Keep water in its original container, and don’t re-store a bottle once it’s been opened. Label bottles with their replacement date, and store them in a cool, dark place. Replace water at least every six months if bottles are not marked with the manufacturer’s expiration date.

EMERGENCY CONTACT LIST

Keep a list of important personal and contact information for your family. Make sure to include information on medical facilities, doctors, schools or service providers. Use a form like this or something similar and keep a copy in each Go Bag.

FEMA has a template for a Family Emergency Communication card that can be found on the [ready.gov website](https://www.fema.gov/ready).

Personal Information (for each family member)	
Name	
Date of Birth	
Language(s) spoken	
Primary Care Doctor (name, address, and contact)	
Specialists or other medical professionals of importance (name, address, and contact)	
Medical Information (medications, allergies, equipment or supplies, conditions, anything else emergency personnel should know)	
Work/School/Daycare (address and contact name/number)	
Other important information, contacts, or notes	

Designated Out of Area Emergency Contact

Name:

Phone Number:

Local Emergency Contact

Name:

Phone Number:

Household Emergency Meeting Places

Near Home

Out of Neighborhood

Insurance Information

	Provider	Phone Number	Policy Number
Medical			
Dental			
Vision			
Prescriptions			
Homeowners or Renters			
Flood Insurance			

ADDITIONAL TIPS

TIPS FOR THOSE LIVING WITH DISABILITIES

Prepare and carry with you an emergency health information card:

Carrying health information with you will help to communicate to rescuers what they need to know about you if they find you unconscious or incoherent, or if they need to quickly help evacuate you. Include information about your medications, adaptive equipment, blood type, allergies and sensitivities, insurance numbers, immunization dates, communication difficulties and preferred treatment, as well as contact information for your health providers, personal support network and emergency contacts.

Personal care assistance:

If you receive assistance from a home healthcare agency or in-home support provider, find out how the provider will respond in an emergency. Designate backup or alternative providers that you can contact in an emergency. For persons using a wheelchair, plan for how you will evacuate in an emergency and discuss it with your Personal Support Network. If you use a motorized wheelchair, have a manual wheelchair as a backup.

For persons who are blind or visually impaired:

Keep an extra collapsible cane by your bed. Attach a whistle to the cane and use it if you need to attract attention. Use caution when moving around after an earthquake; items may fall and block paths that are normally unobstructed.

For persons who are hearing impaired:

Keep extra batteries for your hearing aids with emergency supplies. Consider storing your hearing aids in a container attached to your nightstand or bedpost, so you can locate them quickly after a disaster.

For persons with communication disabilities:

Determine how you will communicate with emergency personnel if you do not have your communication devices. Store paper, writing materials, copies of a word or letter board and preprinted key phrases specific to anticipated emergencies in all your emergency kits, your wallet, purse, etc.



Image courtesy of City of Austin.

TIPS FOR SENIORS

Prepare and carry with you an emergency health information card.

Carrying health information with you will help to communicate to rescuers what they need to know about you if they find you unconscious or incoherent, or if they need to quickly help evacuate you. Include information about your medications, adaptive equipment, blood type, allergies and sensitivities, insurance numbers, immunization dates, communication difficulties, and preferred treatment, as well as contact information for your health providers, personal support network, and emergency contacts.

Personal care assistance:

If you receive assistance from a home healthcare agency or in-home support provider, find out how the provider will respond in an emergency. Designate backup or alternative providers that you can contact in an emergency.

TIPS FOR PARENTS

- Provide your children with emergency contact numbers and teach them how to call 9-1-1.
- Warn your children never to touch wires that are hanging on poles or lying on the ground.
- Tell your children to leave the building if they smell gas.
- Practice skills by including your children in emergency drills and evacuation/reunification planning.
- Make arrangements to have your children picked up from school or daycare if you are unable to do so.
- Regularly update your child's school with current information regarding emergency contacts and persons authorized to pick up your child from school.
- Learn the emergency plans and policies at your child's school or daycare facility.
- You can register for alerts from multiple zip codes with Warn Central Texas - set alerts for the locations of your children's schools and daycares.

TIPS FOR PETS

- Keep a collar, current license, and up-to date ID tags on your pet at all times. Consider having your pet microchipped.
- Keep an updated list of trusted neighbors who could assist your animals in case of an emergency.
- If your pet is lost, contact the nearest animal shelter to report your pet missing as soon as possible. When it is safe, return to your neighborhood to search and distribute "Lost Pet" posters.



CITY OF AUSTIN EMERGENCY PLANNING

The City of Austin Emergency Operations Plan:

The Emergency Operations Plan (EOP) is considered an all-hazards plan that establishes the framework for how the City of Austin responds to disasters, regardless of initial cause or hazard. The EOP is not a detailed emergency checklist or "quick action" guide. It is meant to provide the guidance, framework, and insight into City-wide strategic decision making as it relates to emergency operations and disaster situations.

Link to plan: www.austintexas.gov/sites/default/files/files/hsem/Basic_Plan_09-28-2016.pdf

The City of Austin Hazard Mitigation Plan:

The purpose of the Plan is to protect people and structures, and to minimize the costs of disaster response and recovery. The goal of the Plan is to minimize or eliminate long-term risks to human life and property from known hazards by identifying and implementing cost-effective hazard mitigation actions.

Link to plan:

[www.austintexas.gov/sites/default/files/files/hsem/Public_Copy_Austin_Hazard Mitigation Plan Update 07-28-2016.pdf](http://www.austintexas.gov/sites/default/files/files/hsem/Public_Copy_Austin_Hazard_Mitigation_Plan_Update_07-28-2016.pdf)

PREPAREDNESS TRAINING

Want to get trained in emergency preparedness? Below are some options in the community:

Community Emergency Response Team training (CERT)

The Community Emergency Response Team (CERT) training provides an opportunity for people to help their neighborhoods prepare for emergencies and disasters. Training covers basic preparedness, first aid, fire suppression, team operation, and light search and rescue procedures. The CERT program is supported by the Federal Emergency Management Agency (FEMA). The training is provided free of charge.

Skywarn

Skywarn is sponsored by the National Weather Service and provides free trainings to residents on severe weather and information on how to prepare for these weather events. These trainings start in the Spring and have a primary focus on severe weather conditions in South Central Texas. To learn more about Skywarn, visit: www.weather.gov/ewx/skywarn

Learn first aid and CPR

Visit the Austin Travis County EMS website for information about CPR and first aid training. Available trainings focus on adult and pediatric CPR. See the American Red Cross website for training on first aid care for pets.



Image courtesy of GAVA.



MENTAL HEALTH RESOURCES

Mental health issues such as depression, anxiety, isolation, and panic attacks are some of the experiences that a traumatic natural disaster can bring to families and individuals. Experiencing a natural disaster such as flooding, or fire can make it hard to live everyday life and to recover.

We need to inspire ourselves and others to fight the stigma of mental illness to decrease the risk for chronic disease, like diabetes, cancer, stroke, and heart attacks.

You are not alone, please reach out!

Integral Care
5015 S IH 35 Frontage Rd Ste. 200, Austin, TX 78744
Dawn Handley, Crisis Services
Email: dawn.handley@integralcare.org
Phone #: 512.804.3492.

COMMON DISASTER EVENTS



FIRE

PREPARATION

- Make sure your home is free of combustible materials.
- Don't run wires under carpets or rugs.
- Know avenues of escape. HAVE A FAMILY PLAN and have frequent fire drills.
- PLAN FOR A PLACE TO MEET (so no one tries to go back into a burning building looking for someone.)
- Have fire extinguishers in the house and carry a fire extinguisher in your car.
- Have escape ladders for all windows higher than eight feet off the ground.
- Plan and practice a family drill at least once a year.

RECOVERY

- Do not return home until authorities say it is safe to do so.
- Avoid hot ash, charred trees, smoldering debris, and live embers. The ground may contain heat pockets that can burn you or spark another fire.
- Wear protective clothing, work gloves, face coverings or masks, and sturdy thick-soled shoes during clean-up efforts.
- Use appropriate masks or respirators.
- Document property damage with photographs. Conduct an inventory and contact your insurance company for assistance.

**For more information
about wildfire
preparedness in our
community, visit:**

www.wildlandfirersg.org
and
www.ready.gov/wildfires

IN CASE OF EMERGENCY

- Remain calm and get out of harms way.
- If you see smoke under the door, find another way out.
- Feel the door with the back of your hand before you open it. If it is hot, find another way out.
- Drop to the floor to avoid smoke and fumes, crawl to safety.
- Call 9-1-1 from a safe location.
- If you are trapped in a burning building, stay near a window and close to the floor. If possible, signal for help.
- Do not go back inside a building unless instructed that it is safe to do so.
- If you find someone on fire, use a blanket or similar to smother the flames, not your bare hands .
- Watch to see that children don't go back inside a building to rescue a pet or a prized possession.
- Turn off the gas and electricity from the outside of the house, if possible.

For more information about wildfire preparedness in our community, visit:
www.wildlandfirersg.org and www.ready.gov/wildfires

Find your local fire station:
www.austintexas.gov/departments/fire

FLOOD

Flooding is the most serious hazard for the Austin area and is a threat across the entire city year-round. Flooding can occur anywhere in Austin.

PREPARATION

- Know the elevations of your property in relation to flood plains, streams, and other waterways. Determine if your property may be flooded.
- Make advance plans of what to do and where to go.
- Store food and water and critical medical supplies.
- Fill your car with gas in case you must evacuate.

RECOVERY

- Listen to authorities for instructions, return to flooded areas or buildings only when told it is safe.
- When returning to a flooded area, be aware of wildlife - wear thick gloves and boots.
- Use an appropriate mask if cleaning mold or other debris. Children and people with certain medical conditions should not take part in disaster cleanup.
- Be aware of the risk of electrocution. Watch for wires and do not touch electrical equipment if it is wet or if you are standing in water. If possible, turn off the electricity.
- Avoid wading in floodwater, which can be contaminated, contain dangerous debris, and underground or downed power lines.
- Use a generator or other gas-powered machinery ONLY outdoors and away from windows.
- Check for structural damage before entering a building.
- Use flashlights. Beware of open flames and sparks where there may be broken gas lines.
- Do not eat food that has been contaminated by flood water.

IN CASE OF EMERGENCY

- Avoid driving except in emergencies.
- If you are asked to evacuate, shut off the main power, gas and water. Follow local evacuation plans and routes.
- If water has entered a garage, do not walk through it.
- Do not walk through moving water. If you must, walk where the water is moving slowest and use a stick to check the firmness of the ground in front of you.
- Stay clear of water that is in contact with downed power lines.
- Stay off bridges, which can collapse without warning,
- Do not allow children to play around high water, storm drains or any flooded areas.
- Do not drive into flooded areas.
- If floodwaters rise around your car, abandon the car and move to higher ground.
- If you are trapped in your vehicle in fast moving water, stay inside.
- If water is rising inside the vehicle, move to the roof of the vehicle and wait for help.

For more information:

www.atxfloodsafety.com

www.atxfloods.com

www.austintexas.gov/FloodPro

www.ready.gov/floods

[NOAA Weather Emergency Radio](#)

[Red Cross Emergency Radio](#)

TORNADO

A tornado appears as a rotating, funnel shaped cloud that extends from a thunderstorm to the ground with whirling winds that can reach 300 miles per hour. Damage paths can be more than one mile wide and 50 miles long.

PREPARATION

- Know the signs of a tornado, including a rotating, funnel-shaped cloud, an approaching cloud of debris, or a loud roar.
- Pay attention to weather reports.
- Sign up for Warn Central Texas Alerts.
- Identify and practice going to a safe shelter.

IN CASE OF EMERGENCY

- If under a tornado warning, find safe shelter right away. Safe shelter can include a sturdy building, safe room, basement, or storm cellar.
- Stay away from windows, doors, and outside walls.
- Do not get under an overpass or bridge. You are safer in a low, flat location.
- Use your arms to protect your head and neck. For additional cover shield your head and neck by putting materials such as furniture and blankets around you.

RECOVERY

- If exposed, cover your mouth with a cloth or mask to avoid breathing in dust.
- If you are trapped, try to send a text, bang on a pipe or wall, or use a whistle to make your location known.
- Stay clear of fallen power lines or broken utility lines.
- Do not enter damaged buildings until told that they are safe.
- Save your phone calls for emergencies. Phone systems are often down or busy after a disaster. Use text messaging or social media to communicate with family and friends.
- Be careful during clean-up. Wear thick-soled shoes, long pants, and work gloves. Use appropriate face coverings or masks if cleaning mold or other debris.

For more information about tornado safety and preparedness visit the Ready.gov Tornado Website: www.ready.gov/tornadoes

HEAT WAVE

Heat kills by pushing the human body beyond its limits. In extreme heat and high humidity, evaporation is slowed and the body must work extra hard to maintain a normal temperature. Older adults, young children, and those who are sick or overweight are more likely to succumb to extreme heat.

HEAT SAFETY TIPS

- If you are experiencing a medical emergency call 9-1-1.
- Look before you lock - ensure children and pets are not left in hot, vehicles.
- Stay hydrated - drink more water than usual and avoid sugary, caffeinated beverages.
- Dress for the weather - wear lightweight, light colored, loose-fitting clothing.
- Protect your skin - apply sunscreen with at least SPF 30.
- Stay out of the sun when possible- find shade and wear a wide-brimmed hat when outdoors.
- Work and play safely - avoid high-energy activities and exercise during extreme heat, especially during the afternoon.
- Protect your pets - provide your pets with plenty of water and shade.
- Check-in on elderly family members, friends and neighbors - make sure they have access to air conditioners and/or fans and clean water for hydration.

For more information on Heat- Related Illness check out the City of Austin's website on Heat Awareness:
www.austintexas.gov/page/heat-awareness

For more information on Heat Safety please visit FEMA's website on heat: www.ready.gov/heat

POWER OUTAGE

PREPARATION

- Learn the location of your fuse box and circuit breaker.
- Store flashlights and extra batteries in a handy place.
- Have food and water supplies on hand, as outages can last a while.
- Keep an adequate supply of fuel on hand. Propane, white gas, gasoline, and other fuels should not be stored or used in the house or garage. Only kerosene may be used in the house and stored in direct sunlight but is limited in quantity to one 55-gallon drum on a single property.
- Keep your refrigerator and freezer clear of ice build-up, as this works against the appliance's ability to function properly.

IN CASE OF EMERGENCY

- Turn off and unplug appliances and computers. Leave one light on to indicate when power has been restored.
- Avoid using candles, as they are fire hazards.
- Do not use a gas stove for heating or operate generators indoors (including the garage). Either action could cause carbon monoxide poisoning.
- A major problem during an outage is food thawing in the refrigerator or freezer. Open the door only to take food out and do so as quickly as possible. If you have access to dry ice, place it in a cardboard box and then on top of food.
- Report any downed power lines.
- Do not allow children to carry lanterns, candles, or fuel.
- If a traffic signal is not working, treat it as a stop sign.

RECOVERY

- When power is restored, plug in appliances one by one, waiting a few minutes in between each one. This can help prevent an overload on the system.
- Be patient, energy is restored based on priority, police and fire departments and hospitals are usually first.
- Examine your frozen food. If it still contains ice crystals, it can be re-frozen.
- If meat is off-color or has an odd odor, throw it away.

Report power outages:
512-322-9100



GUÍA DE PREPARACIÓN DEL VECINDARIO DOVE SPRINGS



REDACTADO POR GO AUSTIN VAMOS AUSTIN (GAVA)
AGOSTO DE 2021

Gracias a todos los que contribuyeron a este manual de preparación para emergencias

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Residents of the Dove Springs Neighborhood

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Information provided in this handbook was taken from City of Austin Plans and the City of Austin Website, Ready Central Texas App, FEMA, Ready.gov, as well as Neighborhood Plans from around the U.S including: the Portland Police Bureau Emergency Preparedness Handbook, North Salt Lake Emergency Preparedness Plan, Personal & Neighborhood Emergency Preparedness Handbook



UNA NOTA DE GAVA

Estimado vecino,

Lamentablemente, los residentes de Dove Springs no son ajenos a los desastres naturales. En 1998, y nuevamente en los años 2013 y 2015, el sureste de Austin sufrió grandes inundaciones. Muchos residentes perdieron sus casas, mascotas, posesiones e incluso sus modos de vida en estos eventos traumáticos. A partir de estos sucesos, los vecinos se han unido para organizar y prevenir tragedias futuras con el apoyo de organizaciones locales y comunitarias.

Go Austin Vamos Austin (GAVA) es una coalición de vecinos y socios comunitarios que derrumban las barreras hacia la vida saludable y fortalecen la estabilidad de los vecindarios en el área medialuna del este de Austin (Dove Springs, sur de Austin, el área de Rundberg y el vecindario St. Johns). GAVA moviliza y organiza el poder de la comunidad hacia la equidad de salud.

Las inundaciones continúan siendo una amenaza para muchas de nuestras comunidades. GAVA visualiza un futuro en el que los residentes e instituciones estén capacitados y tengan las herramientas para prepararse y responder a las conmociones y factores estresantes relacionados con el clima. GAVA también apoya a los residentes para que aboguen por una mejor infraestructura y más recursos para responder mejor a los retos actuales y futuros. Para ayudar con este propósito, GAVA trabajó con Austin-Free-Net, la Ciudad de Austin y FEMA para capacitar a los residentes sobre cómo ser "Navegadores de Resiliencia Climática" en sus comunidades. Estos talleres de capacitación conectan a los residentes con recursos vitales y transmiten a su vez las opiniones y hallazgos valiosos de los residentes a la Ciudad de Austin.



Image courtesy of GAVA

Este manual fue creado gracias a esos talleres iniciales de capacitación. Los organizadores de GAVA se asociaron con los residentes de Dove Springs, investigadores de la Universidad de Texas y departamentos de la Ciudad, como el Departamento de Protección de Cuencas y Seguridad Nacional y Manejo de Emergencias, para crear este manual para la comunidad de Dove Springs. Los vecinos pueden usar este manual como guía para preparar a sus familias, hogares y vecindario para desastres naturales futuros, tales como inundaciones, incendios forestales y olas de calor. Continuamos capacitando a los Navegadores Climáticos y añadiendo contenido a este currículo. Mientras más nos preparemos hoy, mejor podremos responder a desastres y cuidar a nuestras comunidades mañana.



Para obtener más información sobre GAVA, por favor visite nuestro sitio web: www.goaustinvamosaustin.org

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CONTACTOS E INFORMACIÓN



NÚMEROS DE TELÉFONO DE EMERGENCIA

Para emergencias: 9-1-1

Departamento de Policía de Austin: 512-974-5000

Ciudad de Austin: 3-1-1 o 512-974-2000

El 311 es el centro de contacto de la Ciudad de Austin para asuntos que no son emergencias. Allí pueden ayudarle a responder preguntas relacionadas con los departamentos de la Ciudad de Austin y ponerle en contacto con los recursos disponibles o hacer una solicitud de servicio de la ciudad. Puede reportar cables eléctricos caídos, falla del alumbrado de la calle, tuberías o alcantarillas de drenaje tapadas, y otros asuntos que deben tratar la Ciudad de Austin. Funciona las 24 horas del día, los 7 días de la semana, todo el año.

Departamento de Salud y Servicios Humanos de Texas: 2-1-1

211 Texas es una base de datos que le puede ayudar a encontrar recursos en su comunidad. Puede encontrar recursos de salud, alimentos, vivienda y muchos otros servicios.

Apagones eléctricos: 512-322-9100

Centro de Llamadas de Servicios Públicos (electricidad/agua): 512-494-9400

Para las personas con problemas auditivos: 512-972-9848

INSCRIPCIÓN PARA ALERTAS DE EMERGENCIA

Warn Central Texas

Cuando usted se suscribe a Warn Central Texas, puede recibir alertas de emergencia por mensaje de texto, correo electrónico, o teléfono. Los mensajes son bilingües (inglés/español).

STEAR (Registro de Asistencia en Emergencias del Estado de Texas)

Si usted conoce a adultos mayores o personas discapacitadas, personas con movilidad limitada, personas con barreras de comunicación, o personas que requieren asistencia de transporte en la comunidad, pueden inscribirse en STEAR.



Image courtesy of City of Austin.

FUENTES DE INFORMACIÓN

APLICACIONES PARA CELULARES

Aplicación READYCENTRALTX

Esta aplicación de recursos provee una guía esencial y recursos para apoyar a los residentes del centro de Texas en sus esfuerzos para prepararse y responder a emergencias y desastres. Las listas de verificación, videos relevantes, guías electrónicas, y más garantizan que los usuarios se mantengan informados y proactivos con respecto a su seguridad y bienestar. Disponible para iPhone y Android.

Aplicación de FEMA y aplicación de FEMA en español

FEMA (Agencia Federal para el Manejo de Emergencias) tiene una aplicación con alertas del clima e información sobre los recursos disponibles para los distintos tipos de desastres. La aplicación también puede ayudar a localizar refugios de emergencia.

SITIOS WEB

Ready.gov

Provee ejemplos de planes de emergencia.

(TARG) Travis County Recovery Group

Esta organización puede ayudar a las víctimas de desastres en el Condado de Travis y el área vecina.

Panel de estadísticas del agua del Servicio Geológico de EE.UU. (USGS)

Provee información sobre los cuerpos de agua, calidad del agua, sequías y lluvias, así como las condiciones y peligros relacionados con el clima.

LCRA Hydromet

Provee información relacionada con el agua específica para el área de Austin y las áreas aguas arriba y aguas abajo de Austin a lo largo del río Colorado.

Estación de radio para emergencias climáticas

Radio del Clima de NOAA

REDES SOCIALES

Nextdoor

Este es un sitio web y aplicación en los que los miembros de la comunidad se pueden mantener informados sobre lo que está pasando en su vecindario y pueden compartir recursos en línea con sus vecinos.

Grupo Buy Nothing

Les ofrece a las personas una manera de regalar y recibir, compartir y prestar artículos entre sus vecinos.

Dove Springs Proud

Esta es una página comunitaria de Facebook para los residentes de Dove Springs.

Página de Facebook de GAVA

Esta es una página comunitaria de Facebook en la que GAVA publica información sobre eventos comunitarios, recursos y noticias locales.



Image courtesy of GAVA.

Le recomendamos estas páginas importantes de Facebook:

Página de Facebook de la Ciudad de Austin: www.facebook.com/austintexas.gov/

Manejo de Emergencias de Austin: www.facebook.com/AustinHSEM/

Salud Pública de Austin: www.facebook.com/austinpublichealth

Le recomendamos estas páginas importantes de Twitter:

Ciudad de Austin: www.twitter.com/austintexasgov

Manejo de Emergencias de Austin: www.twitter.com/austinhsem

Salud Pública de Austin: www.twitter.com/AusPublicHealth

PREPARACIÓN



PLANIFICACIÓN PARA CUALQUIER DESASTRE

Cree un plan de emergencia para la familia.

- Cree un plan de desastre para la familia. Su plan debe incluir lo que debe hacer dependiendo de su ubicación y la ubicación de sus seres queridos durante el suceso. Un plan para los miembros de la familia que están en la casa pudiera ser distinto al plan si están en la escuela o el trabajo. Asegúrese de que todos en la casa conozcan el plan y practiquen esas rutinas.
- Decida dónde se reunirán después de un desastre. Escoja dos lugares -- uno fuera de su casa y otro fuera de su vecindario -- como un parque u otra área abierta.
- Prepare con anticipación la forma en que se comunicará, navegará y protegerá sus datos en caso de que no haya electricidad o acceso a internet durante una emergencia. ¿Cómo se comunicará si no tiene servicio de celular o si su celular se queda sin batería?
- Reúna una lista de teléfonos de contacto de emergencia de los miembros de la familia (trabajo, escuela, celular, etc.), así como las agencias locales de manejo de emergencias. Guarde una copia de esa lista con usted y su equipo de emergencia. Reúna los números de teléfono de los vecinos y sus contactos de emergencia.
- Arme equipos de emergencia y "bolsas para llevar".
- Guarde copias de los documentos importantes (pasaporte, licencia de conducir, tarjeta del seguro social, licencia de matrimonio, testamento, escrituras, estados de cuenta financieros, historias médicas, etc.) en un lugar fuera de su casa, por ejemplo una caja de depósito de seguridad.
- Aprenda cómo y cuando cerrar los servicios públicos.
- Asegúrese de que cada persona sepa usar un extintor de incendios en la casa.
- Asegúrese de que todos tengan una linterna y zapatos resistentes cerca de la cama.
- Discuta todas las rutas posibles de escape de cada habitación, edificio, y vecindario. Asegúrese de que haya al menos dos salidas desde cada uno.
- Dibuje un plano de su casa que muestre la ubicación de las salidas (ventanas y puertas), válvulas de cierre de los servicios públicos, botiquines de primeros auxilios, suministros de emergencia, herramientas, ropa, etc. Asegúrese de que cada persona esté familiarizada con el plan.
- Siempre mantenga el tanque de gasolina de su automóvil al menos a la mitad.

Escoja un lugar de reunión fuera de la casa.

Sepan comunicarse unos con otros.

Tenga una lista de los contactos de emergencia.

Arme equipos de emergencia.



PROTECCIÓN DE DOCUMENTOS IMPORTANTES

Guarde copias de los documentos importantes (pasaporte, licencia de conducir, tarjeta del seguro social, licencia de matrimonio, última voluntad y testamento, escrituras, estados de cuenta financieros, historias médicas, etc.) en un lugar fuera de su casa, por ejemplo una caja de depósito de seguridad.

Escaneo de documentos

Puede escanear los documentos importantes con su teléfono inteligente o en su biblioteca local. En todas las bibliotecas se pueden usar las máquinas fotocopadoras para escanear y grabar en una memoria USB o enviar por correo electrónico. No tiene que pagar por escanear. La biblioteca también ofrece servicios de impresión móvil y acceso al Internet.

Cómo guardar los documentos

Ahora que escaneó sus documentos, necesita decidir en dónde guardar las copias digitales. Puede guardar los documentos en la nube o en un dispositivo de memoria externa (USB, DVD).

Las copias en papel deben guardarse en contenedores a prueba de agua, los cuales se pueden comprar en línea o en las tiendas. Los precios varían de precio dependiendo del tamaño y el material. Algunos vienen con pinzas, seguros o candados.

- Caja de herramientas a prueba de agua de Academy \$10
- Amazon tiene algunos contenedores resistentes para almacenar
- Una alternativa más barata podría ser combinar el uso de bolsas Ziplock con envases de plástico (Tupperware), y luego guardarlos en un balde de 5 galones con tapa.

CÓMO PROTEGER SU CASA

- Asegúrese de que el número de su casa se pueda ver desde la calle para que los vehículos de emergencia puedan encontrarla.
- Instale un detector de humo y monóxido de carbono (CO) en cada nivel de su casa y afuera de cada habitación. Si los pasillos son más largos de 40 pies entre el área de dormir y la sala, use dos detectores de humo.
 - Pruébelos cada seis meses y cambie las baterías de 9 voltios todos los años.
 - Algunos detectores de humo usan baterías de litio de 10 años que no se pueden cambiar. Estas se deben probar todos los meses y cambiarse de acuerdo con las instrucciones del fabricante.
 - Los detectores de humo programados deben probarse todos los meses y la batería de emergencia debe cambiarse todos los años. Toda la unidad programada del detector de humo debe cambiarse cada 8 a 10 años.
- Mantenga al menos un extinguidor de incendio en cada nivel de su casa. Aprenda cómo y cuándo usarlos. Revise los medidores de presión todos los años para asegurarse de que estén completamente cargados. Haz que lo inspeccionen cada 1 a 6 años.
- Mantenga los pasillos y salidas libres de obstrucciones para una evacuación fácil. Asegúrese de que todas las barras de seguridad de las ventanas tengan desbloqueo de emergencia.
- Guarde los químicos peligrosos (por ejemplo, gasolina, cloro, disolventes de pintura) lejos de llamas expuestas y asegúrelos para evitar que se derramen. Asegúrese de que las latas de aerosol no se almacenen en lugares que puedan alcanzar más de 120 ° F (como un garaje o un cobertizo). Esto puede provocar explosiones.
- Coloque los números de teléfono de emergencia cerca de cada teléfono y de la puerta principal.
- Muéstreles a los miembros responsables de la familia cómo y cuándo cerrar las válvulas del agua, gas y electricidad en los interruptores principales.

ASEGURANZA DE INUNDACION

Para facilitar que el seguro le compense, incluya un inventario de sus artículos valiosos con fotografías y videos.

Es importante comprar seguro si usted vive en un área que está en riesgo de inundación. Recuerde que algunos seguros pueden tomarse hasta 30 días para que entren en vigencia sus pólizas, así que revise con atención lo que está cubierto cuando compre su póliza de seguro contra inundaciones.

Para más información sobre los seguros contra inundaciones, consulte el seguro de FEMA.

Comuníquese con su cuerpo de bomberos local para aprender sobre los peligros de incendio en el hogar.



Image courtesy of City of Austin.

PROVISIONES DE EMERGENCIA

Le recomendamos tener varios equipos en caso de desastre:

- Un equipo de emergencia para la casa
- Un botiquín básico de primeros auxilios
- Un equipo de emergencia para el automóvil
- "Bolsas para llevar" para cada miembro individual de la familia, ¡y las mascotas!

- Guarde su equipo de emergencia para la casa en un lugar que sea accesible si su casa resulta dañada o no sea seguro entrar en ella (por ejemplo, en un depósito o cobertizo en el patio). Si esta no es una opción, póngalo en un lugar que sea acceso fácil dentro de la casa.
- Guarde las bolsas para llevar en un lugar que sea acceso fácil en caso de que tenga que evacuar su casa (por ejemplo, en cada vehículo).
- Guarde los equipos en un lugar conveniente que todos los miembros de la familia conozcan.
- Mantenga una versión más pequeña de un equipo de suministros de emergencia en el baúl de su automóvil.
- Guarde los artículos en bolsas de plástico herméticas.
- Consulte a su médico o farmacéutico sobre cómo guardar los medicamentos de prescripción.
- La regla general es tener 7 días de suministros, pero la opinión local indica que quizás sea necesario tener un suministro de 14 días.

¿QUÉ DEBE INCLUIR EN UN EQUIPO DE EMERGENCIA PARA LA CASA?

- Celular, cargador
- Suministro de 7 días de medicamentos/artículos médicos
- Artículos de desinfección (por ejemplo, toallas, toallitas desinfectantes, cloro sin olor con cuentagotas, bolsas resistentes de basura)
- Linternas y lámparas operadas por batería (con baterías y bombillos adicionales)
- Platos, cubiertos, toallas de papel, etc.
- Artículos de cocina (abrelatas manual, estufa de campamento, combustible, encendedor, ollas, etc.). Estufa de camping nunca deben usarse en interiores debido a la posibilidad de intoxicación.
- Artículos para protegerse de los elementos (por ejemplo, ropa cálida, chamarras contra lluvia, bolsas de dormir, colchonetas, cobijas, zapatos resistentes y una tienda de campaña o cubierta de plástico resistente)
- Guantes de trabajo, anteojos de seguridad, palanca, martillo, pistola de grapas, llave inglesa ajustable
- Dinero en efectivo extra (recomendamos \$200 en billetes pequeños)
- Llave de repuesto del automóvil/casa
- Información de contacto de emergencia y de la familia (teléfono y correo electrónico)
- Provisiones para las mascotas (collar, correa, identificación, comida, plato)
- Copias de documentos personales en bolsa hermética resistente al agua
- 2 galones de agua por persona, por día (suministro de 6 días)
- Suministro de comida no perecedera para 6 días, abrelatas

Evalúe y actualice su equipo y necesidades de la familia al menos una vez al año. Cambie las baterías muertas, actualice la ropa, etc. Las necesidades individuales y de la familia, junto con la época del año, determinará lo que es realmente necesario. Evalúe las necesidades específicas de la familia y posibles artículos "en caso de".

¿QUÉ DEBE INCLUIR EN UN BOTIQUÍN DE PRIMEROS AUXILIOS?

- 1 manual de primeros auxilios
- Varias curitas o vendas de tela
- Venda estéril de gasa 4" X 4"
- Venda estéril 2" X 2"
- Venda tipo Kling 4" X 5 yardas
- Venda tipo Kling 2" X 5 yardas
- Venda estéril 5" X 9"
- Venda estéril 8" X 10"
- Rollos de venda Kerlix
- Vendas triangulares
- Vendas elásticas
- Guantes de látex
- Depresores para la lengua
- Preparados de betadine
- Yodo
- Rociador de primeros auxilios
- Ipecac -- Jarabe para náusea
- Carbón activado
- Tijeras para vendas
- Tijeras de paramédico
- Pinzas
- Tijeras
- Imperdibles
- Agujas (para coser)
- Termómetro
- Cinta adhesiva, cinta quirúrgica o para papel
- Compresas frías y de calor
- Neosporin
- Tylenol y Tylenol para bebé o aspirina
- Medicamento para la diarrea, laxante, y antiácidos
- Agente para limpiar/jabón
- Solución para el lavado de ojos
- Protector solar
- Mascarilla protectora

¿QUÉ DEBE INCLUIR EN UN EQUIPO DE EMERGENCIA PARA EL AUTOMÓVIL?

- Cables para batería/pasa corriente
- Bomba portátil para las llantas
- Botiquín y manual de primeros auxilios
- Extintor de incendio clase ABC
- Radio y baterías
- Linterna y baterías
- Agua embotellada
- Alimentos no perecederos guardados en contenedores resistentes al agua
- Artículos varios (papel y lápiz, mapas, pañuelos de papel, toallitas húmedas, bolsas de plástico, medicamentos esenciales)
- Cobijas o bolsas de dormir
- Reflectores y luces de emergencia
- Manguera de goma corta para usar en sifones
- Siempre trate de mantener al menos 1/2 tanque de gasolina en su vehículo



Image courtesy of City of Austin.

"BOLSAS PARA LLEVAR"

Cada miembro del hogar debe tener su propia bolsa para llevar como parte del equipo de emergencia para la casa. Las bolsas para llevar son útiles para usarlas en casa para ayudarlo a permanecer en el lugar incluso sin servicios públicos, si debe evacuar su casa o si no puede regresar a su casa.

Artículos a incluir en la bolsa para llevar de cada miembro de la familia:

- Comida y agua
- Botiquín pequeño de primeros auxilios
- Al menos 7 días de suministros de cualquier medicamento y una copia de la prescripción
- Copias de documentos importantes, incluyendo: tarjeta del seguro médico, licencia de conducir o tarjeta de identificación, certificados de nacimiento, pasaporte
- Lista de números de teléfono de contacto de emergencia
- Fotos de los miembros de la familia para propósitos de reunificación
- Silbato para alertar a los rescatistas sobre su ubicación
- Artículos de higiene personal (incluyendo papel higiénico/toallitas)
- Luces de emergencia (por ejemplo, varillas luminosas, linterna, linterna de cabeza) y baterías adicionales
- Bolsas grandes para la basura y toallas de papel
- Cambio de ropa y un sombrero
- Bolsa de dormir o cobijas
- Dinero en efectivo en denominaciones pequeñas
- En las bolsas para llevar de los niños, incluya los formularios de autorización médica, una foto de la familia para propósitos de reunificación y un juguete favorito, cartas, o libro

¡Recuerde preparar una bolsa para llevar para su mascota!

- Correas resistentes y/o portamascota para el transporte
- Una funda es una buena opción para el transporte de gatos y otros animales pequeños
- Bozal para los perros
- Comida, agua potable y medicamentos para al menos dos semanas
- Tazón a prueba de derrames, abrelatas manual, y tapa de plástico
- Bolsas de plástico para excrementos de mascotas, caja, y arena para gatos
- Fotos actuales de su mascota para propósitos de reunificación
- Nombres y teléfonos de su contacto de emergencia, hospitales veterinarios de emergencia, y refugios de animales locales
- Tarjetas de vacunación e información sobre cualquier condición médica y/o problema de comportamiento



NOTAS ADICIONALES PARA GUARDAR ALIMENTOS

- Guarde suficientes alimentos para todos en su familia que duren al menos dos semanas.
- Los alimentos ideales no requieren refrigeración ni cocción (por ejemplo, fruta y verduras enlatadas, crema de cacahuete, mermelada, galletas bajas en sal, galletas dulces, cereales, fruta seca, sopa y carne enlatada, jugos, y leche seca sin grasa).
- Escriba la fecha en los alimentos y cambie los alimentos guardados cada seis meses.
- Incluya comida para bebé, fórmula u otros artículos para la dieta especial de los bebés, adultos mayores y aquellos con restricciones alimentarias.
- Guarde los alimentos en envases herméticos a prueba de pestes y manténgalos en un lugar oscuro y fresco.
- La mayoría de los alimentos enlatados se pueden guardar de manera segura por al menos 18 meses. Los alimentos bajos en ácido como productos de carne, frutas y verduras normalmente duran al menos 2 años. Use los productos secos, como el cereal, galletas, leche seca, o fruta seca, en un periodo de seis meses.
- No consuma alimentos de una lata que muestre alguna señal de deterioro (óxido o abombada).

NOTAS ADICIONALES PARA GUARDAR AGUA

- Guarde 2 galón de agua por persona, por día. Esta cantidad es suficiente si es solo para tomarla. Para cocinar y para higiene personal limitada, tres galones por persona por día serían suficientes. No se olvide de hacer planes para sus mascotas.
- Si compra agua "potable" o "de manantial" embotellada comercialmente, guárdela en su envase original y no llene nuevamente una botella una vez se haya abierto. Etiquete las botellas con la fecha de reemplazo y guárdelas en un lugar oscuro y fresco. Cambie el suministro de agua guardada cada seis meses para que el agua se mantenga fresca.

LISTA DE CONTACTOS DE EMERGENCIA

Mantenga una lista con la información de contacto e información personal importante de su familia. Asegúrese de incluir la información de los centros médicos, doctores, escuelas o proveedores de servicios. Utilice un formulario como este o algo similar y guarde una copia en cada bolsa para llevar.

FEMA tiene una plantilla para una tarjeta de comunicación de emergencia para la familia que puede encontrar en el sitio [web ready.gov](http://web.ready.gov).

Información personal (para cada miembros de la familia)	
Nombre	
Fecha de nacimiento	
Idioma(s) hablado(s)	
Médico primario (nombre, dirección y contacto)	
Especialistas u otros profesionales médicos importantes (nombre, dirección y contacto)	
Información médica (medicamentos, alergias, equipos o suministros, condiciones, cualquier cosa que el personal de emergencias debe saber)	
Trabajo/escuela/guardería (dirección y nombre/número de contacto)	
Otra información, contactos o notas importantes	

Contacto de emergencia designado fuera del área

Nombre:

Número de teléfono:

Contacto de emergencia local

Nombre:

Número de teléfono:

Lugares de reunión de la familia en caso de emergencia

Cerca de casa:

Fuera del vecindario:

Información sobre el seguro

	Proveedor	Número de teléfono	Número de póliza
Médico			
Dental			
Vista			
Prescripciones			
Propietarios de vivienda o inquilino			
Seguro contra inundaciones			

CONSEJOS ADICIONALES

CONSEJOS PARA LAS PERSONAS QUE VIVEN CON DISCAPACIDADES

Prepare y lleve consigo una tarjeta de información médica de emergencia:

Llevar la información médica con usted ayudará a comunicarle al personal de emergencia lo que necesitan saber sobre usted si lo encuentran inconsciente o incoherente, o si necesitan evacuarle rápidamente. Incluya información sobre sus medicamentos, equipo adaptable, tipo de sangre, alergias y sensibilidades, números de los seguros, fechas de vacunación, dificultades de comunicación, y tratamiento preferido, así como la información de contacto de sus proveedores médicos, red de apoyo personal, y contactos de emergencia.

Asistencia de cuidado personal:

Si usted recibe asistencia de una agencia de atención médica a domicilio o de un proveedor de apoyo a domicilio, averigüe cómo responderá el proveedor en caso de emergencia. Designe proveedores de emergencia o proveedores alternos que usted pueda contactar en caso de emergencia.

Para personas que usan silla de ruedas:

Haga un plan de cómo va a evacuar en caso de emergencia y discútalo con su red de apoyo personal. Si usa una silla de ruedas con motor, tenga una silla de ruedas manual para usarla en emergencias.

Para personas ciegas o con impedimentos visuales:

Tenga un bastón retractable al lado de su cama. Sujete un silbato al bastón; úselo si necesita atraer atención. Tenga cuidado al moverse después de un terremoto; las cosas pueden caerse y bloquear el camino que normalmente no tuviera obstrucciones.

Para personas que usan silla de ruedas:

Haga un plan de cómo va a evacuar en caso de emergencia y discútalo con su red de apoyo personal. Si usa una silla de ruedas con motor, tenga una silla de ruedas manual para usarla en emergencias.

Para personas con impedimentos auditivos:

Tenga baterías adicionales para su equipo auditivo junto con las provisiones de emergencia. Le recomendamos guardar su equipo auditivo en un recipiente pegado a su mesa de noche o cama, así lo podrá ubicar rápidamente después de un desastre.

Para personas con discapacidades de comunicación:

Determine cómo se comunicará con el personal de emergencia si no tiene sus dispositivos de comunicación. En todos sus equipos de emergencia, billetera, cartera, etc., guarde papel, materiales para escribir, copias de una palabra o cartelera con letras y frases clave preimpresas específicas para las emergencias anticipadas.



Image courtesy of City of Austin.

CONSEJOS PARA ADULTOS MAYORES

Prepare y lleve consigo una tarjeta de información médica de emergencia.

Llevar la información médica con usted ayudará a comunicarle al personal de emergencia lo que necesitan saber sobre usted si lo encuentran inconsciente o incoherente, o si necesitan evacuarle rápidamente. Incluya información sobre sus medicamentos, equipo adaptable, tipo de sangre, alergias y sensibilidades, números de los seguros, fechas de vacunación, dificultades de comunicación y tratamiento preferido, así como la información de contacto de sus proveedores médicos, red de apoyo personal, y contactos de emergencia.

Asistencia de cuidado personal:

Si usted recibe asistencia de una agencia de atención médica a domicilio o de un proveedor de apoyo a domicilio, averigüe cómo responderá el proveedor en caso de emergencia. Designe proveedores de emergencia o proveedores alternos que usted pueda contactar en caso de emergencia.

CONSEJOS PARA PADRES

- Deles a sus hijos los números de contacto de emergencia y enséñeles cómo llamar al 9-1-1.
- Adviértales a sus hijos que nunca deben tocar cables que estén colgando de los postes o que estén en el piso.
- Dígales a los niños que salgan del edificio si huelen gas.
- Practiquen destrezas incluyendo a los niños en las simulaciones de emergencias y planificación de evacuación/reunificación.
- Haga planes para que recojan a sus hijos de la escuela o guardería si usted no puede hacerlo.
- Actualice regularmente a la escuela de sus hijos con información actual sobre los contactos de emergencia y personas autorizadas a recogerlos.
- Conozca los planes y políticas de emergencia de la escuela o guardería de sus hijos.
- Puede inscribirse para recibir alertas de varios códigos postales con Warn Central Texas. Ajuste las alertas para la ubicación de la escuela y guardería de sus hijos.

CONSEJOS PARA MASCOTAS

- Haga que su mascota lleve collar, licencia al día, e identificación actualizada todo el tiempo. Le recomendamos que le coloque un microchip a su mascota.
- Tenga una lista de vecinos de confianza que pueden asistir a sus animales en caso de emergencia.
- Si su mascota se pierde, comuníquese lo más pronto posible con el refugio de animales más cercano para reportar que su mascota está perdida. Cuando sea seguro, regrese a su vecindario para buscar y distribuir carteles de "mascota perdida".



Image courtesy of City of Austin.

PLANIFICACIÓN DE EMERGENCIA DE LA CIUDAD DE AUSTIN

Plan de Operaciones de Emergencia de la Ciudad de Austin

El Plan de Operaciones de Emergencia (EOP, por sus siglas en inglés) de la Ciudad de Austin se considera un plan para todo tipo de desastre y establece un marco de trabajo para la respuesta de la Ciudad de Austin a los desastres, independientemente de la causa o el peligro. El EOP no es una lista de cotejo detallada de emergencia ni una guía de "acción rápida". El propósito es proveer recomendaciones, un marco de trabajo y detalles sobre la toma de decisiones estratégicas para toda la Ciudad en relación con las operaciones de emergencia y situaciones de desastre.

Consulte el plan aquí:

www.austintexas.gov/sites/default/files/files/hsem/Basic_Plan_09-28-2016.pdf

Plan de Mitigación de Riesgos de la Ciudad de Austin

El propósito de este plan es proteger a las personas y estructuras, y minimizar los costos de la respuesta y recuperación luego de un desastre. La meta del plan es minimizar o eliminar los riesgos a largo plazo para la vida humana y las propiedades de los peligros conocidos identificando y poniendo en práctica acciones rentables de mitigación de riesgos.

Consulte el plan aquí:

www.austintexas.gov/sites/default/files/files/hsem/Public_Copy_Austin_Hazard_Mitigation_Plan_Update_07-28-2016.pdf

TALLERES DE CAPACITACIÓN PARA LA PREPARACIÓN

¿Desea recibir capacitación de preparación para emergencias? Estas son algunas opciones en la comunidad:

Capacitación del Equipo de Respuesta a Emergencias de la Comunidad (CERT)

La capacitación del Equipo de Respuesta a Emergencias de la Comunidad (CERT, por sus siglas en inglés) ofrece una oportunidad para que las personas ayuden a sus vecinos a prepararse para emergencias y desastres. La capacitación cubre la preparación básica, primeros auxilios, supresión de incendios, operación en equipo y procedimientos básicos de búsqueda y rescate. El programa de CERT cuenta con el apoyo de la Agencia Federal para el Manejo de Emergencias (FEMA). La capacitación se ofrece a ningún costo.

Skywarn

Skywarn está patrocinado por el Servicio Nacional de Meteorología y provee capacitaciones gratis para los residentes sobre las condiciones de clima severo e información sobre cómo prepararse para esos eventos climáticos. Estas capacitaciones comienzan en la primavera y se enfocan principalmente en las condiciones de clima severo en el centro-sur de Texas. Para aprender más sobre Skywarn, visite: www.weather.gov/ewx/skywarn.

Aprenda primeros auxilios y resucitación cardiopulmonar

Visite el sitio web de EMS de Austin/Condado de Travis para información sobre capacitación de primeros auxilios y resucitación cardiopulmonar (CPR). Las capacitaciones disponibles se enfocan en la resucitación cardiopulmonar de adultos y niños. Visite el sitio web de la Cruz Roja Americana para capacitación de primeros auxilios para mascotas.



Image courtesy of GAVA.



Image courtesy of GAVA

RECURSOS DE SALUD MENTAL

Los asuntos de salud mental como depresión, ansiedad, aislamiento, y ataques de pánico son algunas de las experiencias que un desastre natural traumático puede traer a las familias e individuos. Experimentar un desastre natural, como una inundación, o incendio puede hacer que la vida diaria y la recuperación sean más difíciles.

Debemos motivarnos a nosotros mismos y a otros a luchar contra el estigma de la salud mental para reducir el riesgo de enfermedades crónicas, como diabetes, cáncer, derrame cerebral, e infartos.

Usted no está solo, ¡por favor busque ayuda!

Integral Care

5015 S IH 35 Frontage Rd Ste. 200, Austin, TX 78744

Dawn Handley, Servicios en Crisis

Correo electrónico: : dawn.handley@integralcare.org

Teléfono #: 512.804.3492.

DESASTRES MÁS COMUNES



INCENDIOS

PREPARACIÓN

- Asegúrese de que no haya en su casa materiales combustibles.
- No pase cables debajo de alfombras.
- Conozca las vías de escape. TENGA UN PLAN FAMILIAR y hagan simulacros con frecuencia.
- PLANIFIQUE UN LUGAR PARA ENCONTRARSE (para que nadie trate de regresar a un edificio en llamas para buscar a alguien).
- Tenga extintores de incendio en la casa y lleve uno en su automóvil.
- Tenga escaleras de escape para todas las ventanas más altas de ocho pies desde el piso.
- Planifique y practice un simulacro familiar al menos una vez al año.

RECUPERACIÓN

- No regrese a casa hasta que las autoridades digan que es seguro hacerlo.
- Evite las cenizas calientes, árboles quemados, escombros ardiendo y brasas encendidas. El suelo pudiera tener focos de calor que pueden quemar o encender otro incendio.
- Durante los esfuerzos de limpieza, use ropa protectora, guantes de trabajo, cubiertas para la cara o mascarillas y zapatos resistentes con suela gruesa.
- Use mascarillas o respiradores apropiados.
- Documente los daños a la propiedad con fotografías. Haga un inventario y contacte a su compañía de seguros para asistencia.

**Para más información
sobre la preparación para
incendios forestales en
nuestra comunidad, visite**

www.wildlandfirersg.org
and
www.ready.gov/wildfires

EN CASO DE EMERGENCIA

- Permanezca calmado y alejado del peligro.
- Si ve humo debajo de la puerta, encuentre otra vía de escape.
- Toque la puerta con el dorso de la mano antes de abrirla. Si está caliente, encuentre otra manera de salir.
- Agáchese a nivel de suelo para evitar el humo y los gases, gatee hasta que esté seguro.
- Llame al 9-1-1 desde un lugar seguro.
- Si está atrapado en un edificio en llamas, quédese cerca de una ventana y cerca del suelo. Si es posible, haga señales para pedir ayuda.
- No regrese adentro del edificio a menos que se le diga que es seguro hacerlo.
- Si se encuentra con alguien en llamas, use una cobija o algo similar para apagarlas, no use sus manos.
- Vigile que los niños no regresen dentro del edificio para rescatar a una mascota o un artículo atesorado.
- Cierre el paso de gas y electricidad desde fuera de la casa, si es posible.

Encuentre su estación de bomberos local:
www.austintexas.gov/departament/fire

INUNDACIONES

Las inundaciones son el peligro más grande para el área de Austin y representan un riesgo para toda la ciudad durante todo el año. Las inundaciones pueden ocurrir en cualquier lugar en Austin.

PREPARACIÓN

- Conozca las elevaciones de su propiedad en relación con las llanuras de inundación, arroyos y otras vías de río. Determine si su propiedad se puede inundar.
- Haga planes con anticipación de lo que debe hacer y a dónde ir.
- Guarde comida y agua y suministros médicos críticos.
- Llene el tanque de gasolina de su automóvil en caso de que deba evacuar.

RECUPERACIÓN

- Escuche a las autoridades y siga sus instrucciones, regrese a las áreas o edificios inundados solo cuando le digan que es seguro.
- Cuando regrese a un área inundada, esté pendiente de los animales silvestres, use guantes gruesos y botas.
- Si está limpiando moho u otros escombros, use una mascarilla apropiada. Los niños y las personas con ciertas condiciones médicas no deben participar en la limpieza de desastres.
- Esté alerta a los riesgos de electrocución. Esté pendiente de los cables y no toque los equipos eléctricos si están mojados o si usted está parado en agua. Si es posible, cierre la conexión de electricidad.
- Evite caminar en el agua de la inundación, que pudiera estar contaminada, contener escombros peligrosos y cables eléctricos subterráneos o caídos.
- Use un generador u otra maquinaria propulsada por gas SOLO en espacios al aire libre y lejos de las ventanas.
- Revise que no haya daño estructural antes de entrar a un edificio.
- Use linternas. Esté pendiente de llamas expuestas y chispas en donde pudieran haber tuberías de gas rotas.
- No coma alimentos que pudieran estar contaminados por el agua de la inundación.

EN CASO DE EMERGENCIA

- Evite manejar excepto en emergencias.
- Si le piden que evacue, cierre la llave principal de la electricidad, gas, y agua. Siga los planes y rutas de evacuación local.
- Si el agua entra al garaje no camine por allí.
- No camine por agua en movimiento. Si debe hacerlo, camine en donde el agua se esté moviendo más lento y use un palo para verificar la firmeza del piso frente a usted.
- Manténgase alejado del agua que esté en contacto con cables caídos.
- Manténgase alejado de puentes, los cuales pueden colapsar de repente.
- No permita que los niños jueguen alrededor del agua alta, drenajes de agua de lluvia o cualquier área inundada.
- No maneje en áreas inundadas.
- Si el agua sube en su automóvil, abandone el automóvil y vaya a un lugar más alto.
- Si está atrapado en su vehículo en agua en rápido movimiento, quédese adentro.
- Si el agua está subiendo dentro del vehículo, súbase al techo del vehículo y espere ayuda.

Para más información:

www.atxfloodsafety.com

www.atxfloods.com

www.austintexas.gov/FloodPro

www.ready.gov/floods

[NOAA Weather Emergency Radio](#)

[Red Cross Emergency Radio](#)

TORNADO

Un tornado luce como una nube en forma de embudo en rotación que se extiende de una tormenta hacia el suelo con vientos que dan vuelta y pueden llegar a 300 millas por hora. La trayectoria puede causar daños en más de una milla de ancho y 50 millas de largo.

PREPARACIÓN

- Conozca las señales de tornado, incluyendo nubes en forma de embudo en rotación, nube de escombros que se aproxima o estruendo fuerte.
- Preste atención a los reportes del clima.
- Suscríbase a las alertas de Warn Central Texas.
- Identifique y practique ir a un refugio seguro.

EN CASO DE EMERGENCIA

- Si está bajo advertencia de tornado, encuentre un refugio seguro inmediatamente. Un refugio seguro puede incluir un edificio fuerte, habitación segura, sótano, o búnker contra tornados.
- Manténgase alejado de las ventanas, puertas y paredes externas.
- No se meta debajo de un elevado o puente. Está más seguro en un lugar bajo y plano.
- Use los brazos para protegerse la cabeza y el cuello. Para protección adicional de la cabeza y el cuello, coloque materiales como muebles y cobijas a su alrededor.

RECUPERACIÓN

- Si está expuesto, cúbrase la boca con un trozo de tela o mascarilla y evite respirar el polvo.
- Si está atrapado, intente enviar un mensaje de texto, golpee una tubería o pared o use un silbato para que encuentren su ubicación.
- Manténgase alejado de los cables eléctricos o tuberías de servicios públicos rotas.
- No entre a edificios dañados hasta que le digan que es seguro.
- Ahorre las llamadas para las emergencias. A menudo los sistemas telefónicos están caídos o muy ocupados después de un desastre. Use mensajes de texto o las redes sociales para comunicarse con sus familiares y amigos.
- Tenga cuidado durante la limpieza. Vista zapatos de suela gruesa, pantalones largos y guantes de trabajo. Use cubiertas para la cara o mascarillas apropiadas si está limpiando moho u otros escombros.

Para más información sobre la seguridad y preparación en caso de tornado, visite el sitio web:
www.ready.gov/tornadoes

OLAS DE CALOR

El calor mata si lleva al cuerpo humano más allá de sus límites. En calor extremo y humedad alta, la evaporación es más lenta y el cuerpo debe trabajar extra para mantener una temperatura normal. Los adultos mayores, niños pequeños y las personas enfermas o con sobrepeso no tienen muchas probabilidades de aguantar el calor extremo.

CONSEJOS DE SEGURIDAD EN EL CALOR

- Si tiene una emergencia médica, llame al 9-1-1.
- Mire antes de cerrar. Asegúrese de no dejar niños ni mascotas en los vehículos calientes.
- Manténgase hidratado. Tome más agua de lo normal y evite las bebidas azucaradas y con cafeína.
- Vista de acuerdo con el clima. Use ropa suelta, liviana y de colores claros.
- Proteja su piel. Aplique protector solar con al menos un factor de protección de al menos 30 SPF.
- Manténgase alejado del sol cuando sea posible. Encuentre una sombra y use un sombrero de ala ancha cuando esté al aire libre.
- Trabaje y juegue de manera segura. Evite las actividades de alta energía y hacer ejercicio durante el calor extremo, especialmente en las tardes.
- Proteja a sus mascotas. Provea a sus mascotas suficiente agua y sombra.
- Verifique que sus familiares, amigos y vecinos mayores tengan acceso a aire acondicionado y/o ventiladores y agua limpia para hidratarse.

Para más información sobre la enfermedad causada por el calor, visite el sitio web de la Ciudad de Austin con consejos relacionados con el calor: www.austintexas.gov/page/heat-awareness.

Para más información sobre la seguridad y el calor, por favor visite el sitio web de FEMA sobre el calor: www.ready.gov/heat.

APAGONES ELÉCTRICOS

PREPARACIÓN

- Conozca la ubicación de su caja de fusibles e interruptor de circuito.
- Guarde linternas y baterías adicionales en un lugar accesible.
- Tenga comida y agua a la mano, ya que los apagones pueden durar un buen tiempo.
- Mantenga un suministro adecuado de combustible a la mano. No se debe guardar ni usar propano, gas blanco, gasolina ni otros combustibles en la casa o garaje. Solo se debe usar queroseno en la casa y guardarlo bajo luz directa del sol pero en cantidades limitadas en un envase de 55 galones en una sola propiedad.
- Mantenga su refrigerador y congelador sin acumulación de hielo, ya que esto evita que el electrodoméstico funcione correctamente.

EN CASO DE EMERGENCIA

- Apague y desenchufe los electrodomésticos y computadoras. Deje una luz encendida para indicarle cuando regrese la electricidad.
- Evite usar velas, ya que pueden ser un riesgo de incendio.
- No use una estufa de gas para calentarse ni opere generadores en espacios cerrados (incluyendo el garaje). Cualquiera de estas acciones puede causar envenenamiento por monóxido de carbono.
- Un problema grande durante un apagón es que los alimentos en el refrigerador y congelador se pueden descongelar. Abra la puerta solo para sacar comida y hágalo lo más rápido posible. Si tiene acceso a hielo seco, colóquelo en una caja de cartón y luego encima de la comida.
- Reporte los cables caídos.
- No permita que los niños usen linternas, velas ni combustible.
- Si un semáforo no está funcionando, deténgase como si fuera una señal de alto.

RECUPERACIÓN

- Cuando regrese la electricidad, enchufe los electrodomésticos uno a uno, esperando unos minutos entre cada uno. Esto ayuda a evitar una sobrecarga en el sistema.
- Sea paciente, la energía se restaura por orden de prioridad, y los departamentos de policía y bomberos y los hospitales van generalmente primero.
- Examine sus alimentos congelados. Si todavía tienen cristales de hielo, se pueden congelar nuevamente.
- Si la carne tiene un color anormal o tiene un olor extraño, bótela.

Reporte los apagones eléctricos: 512-322-9100





MEMORANDUM

TO: Mayor and Council Members

FROM: Jorge L. Morales, P.E., CFM, Director
Watershed Protection Department

DATE: April 28, 2021

SUBJECT: Response to Resolution No. 20210127-056 - Flood Resilience

The purpose of this memo is to provide a response to City Council Resolution No. [20210127-056](#), relating to the development of recommendations to reduce flood risks; strategies related to safety, equity, and resiliency to increase flood protection and flood resiliency; a summary of the City's flood management approach; and a report on the Resilient Austin plan.

Please find attached an executive summary and a full report detailing each of these topics.

Should you have any questions or need additional information, please feel free to contact me at 512-974-3438 or via email at Jorge.Morales@austintexas.gov.

cc: Spencer Cronk, City Manager
Nuria Rivera-Vandermyde, Deputy City Manager
Rey Arellano, Assistant City Manager
Rodney Gonzales, Assistant City Manager
Shannon Jones, III, Interim Assistant City Manager
Denise Lucas, Director, Development Services Department
Rosie Truelove, Director, Housing and Planning Department
Alba Sereno, Chief Resiliency Officer

Attachment: Flood Resilience Report

Staff Response to Council Resolution No. 20210127-056 re: Flood Protection and Resilience

Executive Summary

On January 27, 2021, Austin's City Council passed Resolution No. [20210127-056](#). The resolution addresses: severe flooding in Austin; the need to reduce risks and costs of flooding, especially for vulnerable populations; the need to coordinate and prepare for extreme weather driven by climate change; the many benefits of resilient communities and infrastructure; the need to coordinate actions with the Resilient Austin Plan; and the work of the 2016 Flood Mitigation Task Force.

The resolution directed the City Manager to take steps to increase flood protection and flood resiliency. The following is a summary of staff's response to the Resolution.

1. Summary of current City of Austin flood management approach to reduce flood risks.

Austin's modern flood management program dates back to the 1970s. Watershed Protection Department (WPD) and other City of Austin staff perform the following flood management approaches:

- study existing problems and use protective regulations to prevent new issues from being created.
- reduce flood risk with capital projects, maintain drainage infrastructure, and educate the public about flood risks.
- track rain events and coordinate emergency services to respond to floods, assist those who have been flooded, and repair damaged infrastructure. Austin is much safer and more prepared today due to these combined efforts. For example, since 2001, the City has reduced flood risks on over 1,800 buildings and upgraded 26 low-water crossings using capital projects alone; and more work is in progress today. WPD staff recognize that there is still much work to be done, especially to address the challenges of climate change and racial inequity. The department is actively working to address these concerns in the Watershed Protection Strategic Plan, discussed in detail in section 4 below.

2. Near-term recommendations to further reduce flood risks, including but not limited to:

a. Drainage Management for Redevelopment

The 2020 Land Development Code (LDC) Revision proposed to reduce Austin's flood risk by requiring drainage management for redevelopment. This would address an important source of flooding: older commercial and other developments that lack adequate provisions for managing stormwater. Staff strongly support measures to manage drainage from redevelopment projects along the lines of those proposed in the LDC Revision. But rather than proceeding with a standalone code change, staff recommends deferring such requirements to a more comprehensive process for revising the LDC that balances flood risk reduction with other Council priorities relating to infrastructure costs, housing capacity, and other topics under consideration during the LDC Revision process.

b. Commercial Redevelopment Exception

Staff recommend a new commercial redevelopment exception to allow existing commercial buildings in 25- and 100-year floodplains to redevelop under safer circumstances. Under current code, such projects must seek Council approval, which can discourage some attempts to rebuild. This new proposal would: (1) reduce flood risk; (2) ensure that no additional occupants or building area are threatened; and (3) require no public expense. All buildings that rebuild would be constructed a minimum of two feet above the 100-year flood elevation, significantly reducing flood

risk. The proposal is a complement to the residential redevelopment exception approved by City Council in November 2019 as part of the Atlas 14 floodplain regulations.

c. Ensure Commercial & Residential Compliance with Impervious Cover Limits

This section details how the City of Austin ensures compliance with zoning and watershed impervious cover limits using permit application review, inspections, and enforcement. Permitting processes for residential and commercial impervious cover limits are described in detail in staff's response (below). WPD assesses impervious cover every two years based on aerial imagery for the purposes of calculating the drainage charge for all parcels within our jurisdiction. In coordination with Austin Code and the Development Services Department, WPD may evaluate opportunities for using this data to identify where development may be occurring without a permit, and thus where development may not be in compliance with zoning, flood risk reduction, and/or environmental protection requirements. Staff also recommend an engineer's concurrence letter for site plan projects to increase compliance with impervious cover limits. Section 2.e.3, Improve regulatory and programmatic response to lot-to-lot drainage problems, offers recommendations related to the impervious cover limit concern.

d. Analyze/Recommend Solutions for Potential Housing Capacity and Affordability Impacts

Housing and Planning Department (HPD) staff evaluated all recommendations included in this report to evaluate their potential impacts on housing capacity and affordability. HPD staff support WPD's recommendation to implement enhanced drainage management for redevelopment as part of a more comprehensive and holistic set of code improvements that address housing needs, such as design flexibility and the provision of affordable housing. HPD staff also support the potential creation of a home repair program to assist low- and moderate-income households in making small-scale site improvements such as installing gutters, drainage swales, and floodproofing solutions.

e. Additional, Staff-Recommended Approaches

In addition to the three approaches requested by Council, staff recommend the following four approaches to help increase flood protection and flood resiliency.

- 1) Map flood risks citywide, focusing on socially vulnerable areas.** This section describes Austin's ongoing efforts to further improve our mapping of known creek flood problems in larger drainage systems and known local flood problems in smaller storm drain and minor drainage channels. Staff is analyzing ways to prioritize areas of high social vulnerability.
- 2) Increase the pace of project delivery for drainage solutions.** WPD is working to (1) construct early-phase beneficial drainage solutions faster and (2) realign WPD personnel and resources to increase production. Both strategies are intended to deliver flood protection and resiliency benefits more quickly, a high priority of the Flood Mitigation Task Force.
- 3) Improve regulatory and programmatic response to lot-to-lot drainage problems.** Austin has strong drainage regulations that apply to larger-scale development (e.g., residential subdivisions and commercial or multifamily projects), but it has been challenging to implement processes to prevent and correct drainage problems in smaller-scale residential contexts. Staff recommends focusing on enforcement and correction of identified issues rather than creating new requirements for all building permits. Staff are considering four regulatory and process changes

to address negative drainage impacts in residential contexts and are studying options to assist low- and moderate-income homeowners to correct lot-to-lot drainage problems.

- 4) **Encourage communities upstream of Austin to adopt improved drainage and floodplain regulations.** Austin community members, including the Flood Mitigation Task Force, have called for the strengthening of drainage regulations in areas outside Austin’s jurisdiction to reduce impacts in our area. Austin is currently collaborating with Travis County and other regional partners to update floodplain studies in the Central Texas region. Austin is also participating in the recently initiated State Flood Plan to coordinate and improve the flood management of cities and counties in the entire Lower Colorado River basin, which includes the City of Austin and its upstream and downstream neighbors.

3. Resilient and Equitable Community Plan: Scope of Work

The Resilience Core Team explored the following to prepare a scope of work:

1. Potential scope of the requested planning activities, particularly taking into consideration past and ongoing planning processes and/or current programs that could already inform requested planning activities,
2. Potential staffing and costs for the requested planning activities, and
3. Conducted initial discovery of potential internal and external funding sources to support requested planning activities.

This section explores our recommendations for the requested planning activities to be supported by a “standby” contract with an entity of appropriate expertise.

4. Watershed Protection Strategic Planning Process: Managing Flood Risk for Safety, Resilience, and Equity

WPD staff are actively working to update our Watershed Protection Strategic Plan—our department’s guiding blueprint. It sets goals for our work, establishes the method to prioritize watershed problems, and establishes procedures to identify solutions. It provides a framework for evaluating future programs, projects, and regulations as well as measuring the success of our current portfolio.

Our three main goals for the plan are to: (1) reflect community values; (2) incorporate equity and climate resilience; and (3) be accessible and informative. Per the Flood Resilience Resolution, the update will include potential funding strategies, partnerships with stakeholders, and acquisition of open space. Focused attention will be given to reaching the following priority stakeholder groups:

1. Austin residents left out of past planning and decision-making processes or who are more likely to experience negative quality of life outcomes (people of color, low-income persons, et al.).
2. People who have experienced or are at an increased risk of negative watershed outcomes (flooding, erosion, water pollution) or who were affected by a recent watershed project.
3. Entities whose missions prioritize the environment and that bring environmental, technical, and/or policy expertise.

For the Strategic Planning process, staff plans to use a variety of community engagement strategies to reach stakeholders via diverse platforms and to minimize barriers to access and participation. WPD staff are currently in the pre-planning phase and hope to kick off the engagement process in the summer or early fall 2021. The community engagement is anticipated to run for about a year. Staff will launch the

process of plan development as soon as possible, but it will depend on what is learned from the community engagement. The preliminary goal is to finish the draft Strategic Plan document by fall 2022 and go through the review and adoption process in late 2022 and early 2023.

1. Summary of Austin's Current Flood Management Approach to Reduce Flood Risks

Resolution: The City Manager is directed to take the following steps to increase flood protection and flood resiliency:

1. *Develop a concise summary of Austin's current flood management approach to reduce flood risks in Onion Creek, Walnut Creek, Shoal Creek, Williamson Creek, Bull Creek, and other City watersheds no later than April 30, 2021.*

Austin's goal for flood management, stated in our Watershed Protection Strategic Plan, is to protect lives and property by reducing the impact of flood events. Heavy rains are a natural and expected occurrence in Central Texas, located in what is known as Flash Flood Alley. Our region's unique combination of intense rainstorms, steep slopes, and slow-draining soils make it especially prone to severe flood events.

Severe floods have been a part of Austin's history for more than 150 years. More recent floods in 1981, 1998, 2013, 2015, and 2016 are reminders of the public safety and property hazards associated with these events. Flooding can occur in both primary and secondary drainage systems. Creek flooding problems are associated with the primary system (major creeks and their tributaries) while local flooding problems are associated with the secondary drainage system (storm drains and minor channels). A third, smaller-scaled form of flooding occurs with "lot-to-lot" flooding where runoff from one property negatively affects a neighboring property before it enters the public drainage system.

Since the mid-1970s, the City of Austin has embraced a comprehensive and proactive approach to flood management to prepare for and respond to flood events. These actions represent a turning point in flood management, with sharp decreases in the creation of new creek and local flooding problems coming as flood regulations evolved and improved in the 1970s and 80s.

This section briefly describes our current flood management approach across all City of Austin departments to reduce flood risks for our community. This work addresses flooding and drainage in all city watersheds, large and small. In basins with large catchment areas, such as Onion, Walnut, Shoal, Williamson, and Bull Creeks, the flood risks are typically larger and can require more complex solutions. The major components of Austin's current flood management approach are as follows:

- A. **Strategic Planning.** Austin's flood program begins with strategic frameworks for flood management and drainage infrastructure management. We establish goals and objectives, identify and prioritize problem areas, and create protocols to develop and implement solutions. This approach uses a "worst problems first" philosophy such that we first look at the areas at the highest risk flood and attempt to resolve these first before continuing down the list to less severe problems. (Some problems are so difficult and complex that we cannot identify a feasible, cost-effective solution.) We are currently updating our Watershed Protection Strategic Plan with greatly expanded public engagement and a focus on community equity. This strategic planning organizes and focuses our actions. Watershed Protection Department (WPD) staff lead these planning efforts with input from other key departments and the public.
- B. **Problem Prevention.** Prevention of new flood problems greatly reduces public costs compared to correcting problems once created. Austin's protective floodplain regulations and drainage design criteria are the backbone of preventing future flood hazards. We identify floodplain limits with engineering studies and restrict development in these areas. We also require robust storm drainage and detention infrastructure. And we review and inspect new developments for compliance with these standards. Figure 1 below shows the beneficial effects of preventative floodplain regulations-- and the hazards of not fully understanding future flood risks. The dark blue bars show the number of

buildings constructed per decade within the area that, until very recently, was thought to be the 100-year floodplain. The City began to map these original floodplains in the mid-to-late 1970s and continued to add to and refine the mapped floodplains over time. Austin's rapid growth from the 1940s to 70s therefore lacked floodplain information, and an increasing number of buildings were inadvertently constructed in floodplains. But, with new information and regulations prohibiting construction in these hazard areas, the number of buildings dropped off noticeably in the 1980s and 90s, dwindling to near zero by the 2010s, a great success story. Unfortunately, the true extent of the 100-year floodplains during this period was not yet known. In 2019, Council adopted even more protective floodplain regulations--based on a statewide update of rainfall data--and all structures shown in the light blue bars were added to the 100-year floodplain. The graph shows both the importance of understanding flood risk (once the risk was first mapped and regulations passed in the 1970s and 80s, the number of new structures introduced into floodplains dropped sharply) and the importance of continually improving our understanding of flood risk (Council action in 2019 will avoid yet more construction in the floodplain in the years to come).

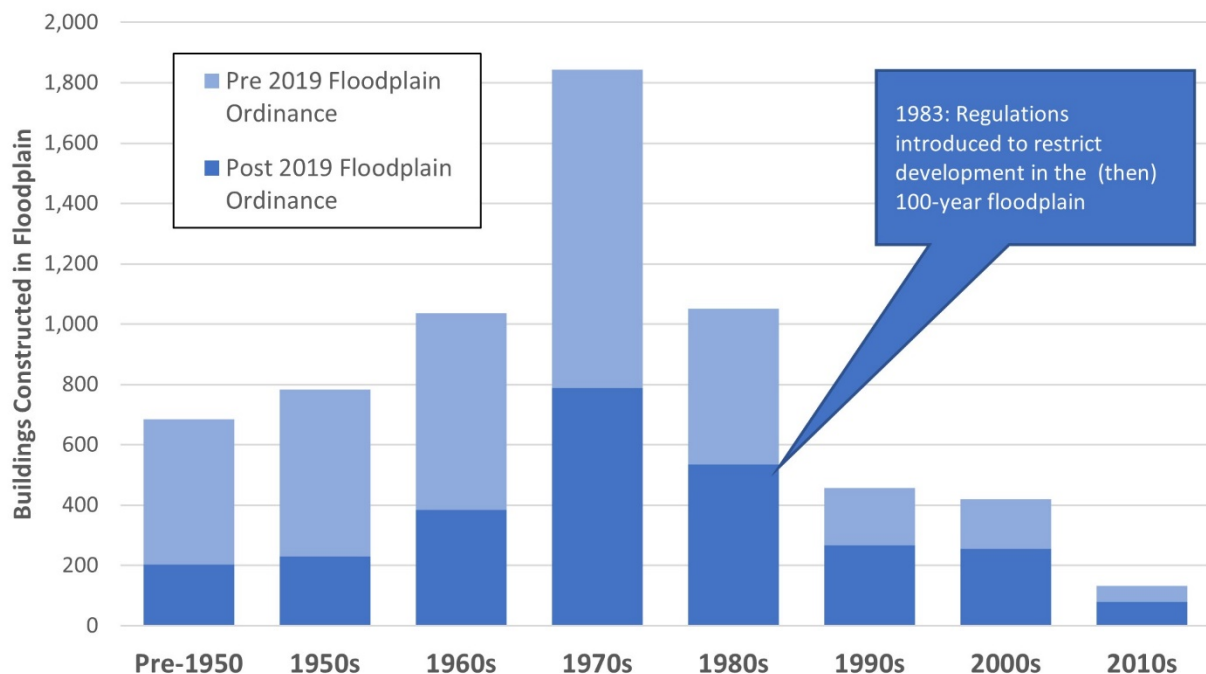


Figure 1: Count of structures built in the 100-year floodplain by decade, pre- (approximately 4,000) vs. post-2019 Floodplain Ordinance (approximately 3,000)

Our regulations and criteria only work to limit the creation of flood new hazards if they are properly enforced. Development Services Department (DSD) and WPD staff conduct the bulk of the development review and enforcement responsibilities.

- C. **Problem Identification.** Much of Austin was developed prior to the implementation of our modern drainage and floodplain regulations. This has resulted in the construction of many buildings and roadways that are at risk of flooding and drainage systems that are unable to adequately convey stormwater runoff. To solve these problems, we first identify where they are and prioritize their severity. We use flood models, field investigations, and community reports (via 3-1-1 calls) to identify buildings, roadways, and properties within floodplains and local drainage problem areas. For this report, we evaluated available flooding data for the Onion, Walnut, Shoal, Williamson, and Bull Creek watersheds referenced in the Council Resolution.

Figure 2 below presents data for the watershed area and number of buildings affected by creek flooding and local flooding in the five subject watersheds and for the remaining watersheds. All statistics are for the land area within Austin's full-purpose jurisdiction (city limits). The five watersheds in focus collectively comprise about 41% of this land area; they account for about the same percentage (42%) of the total buildings reported to have local flooding and a slightly higher percentage (50%) of total buildings in the floodplain. Since watersheds with a larger land area have more buildings, we would expect the percentage of land area and number of buildings with flooding concerns to be similar, which is approximately the case. But the patterns are somewhat different for each of the five watersheds.

Bull Creek's percentage of total buildings reported to have local flooding (2.9%) is less than half of its share of the total city land area (7.4%) and it has an even lower percentage of total buildings in the floodplain (0.7%). The lack of severe flooding problems (relative to the other four subject watersheds and the City Limits area as a whole) can be credited to the watershed's steep topography and the fact that much of Bull Creek's development was built with the benefit of Austin's modern drainage design criteria and floodplain mapping.

Onion Creek also has a lower percentage of buildings reported to have local flooding (2.2%) than its land area (7.4%) but almost its proportionate share of buildings in the floodplain (6.4%). One key note is that the City of Austin, with strong Council support and working with other partners, bought more than 930 very high flood risk homes within the Onion Creek floodplain.

Shoal Creek has almost three times the proportion of buildings reported to have local flooding (13.2%) and total buildings in the floodplain (12.3%) compared to its share of the city's land area (4.6%). This is expected due to the age of development in this watershed, which in many cases dates back to decades before the City's first drainage design criteria and floodplain mapping.

Walnut Creek has roughly the same, or slightly less, of its proportion of buildings reported to have local flooding (10.4%) and total buildings in the floodplain (9.3%) compared to its share of the city's land area (11.6%). This is expected in that Walnut Creek's development patterns are roughly between those of Bull (benefitting from topography and modern regulations) and Shoal (much development prior to such regulations).

Williamson Creek has slightly higher than its proportionate share of buildings reported to have local flooding (13.0%) and over two times its proportionate share of total buildings in the floodplain (21.5%) compared to its share of the city's land area (9.8%). Like Shoal Creek, much of Williamson Creek's development dates back prior to Austin's first drainage design criteria and floodplain mapping. And, like Onion Creek, the City has reduced flood risk recently through more than 50 home buyouts, without which the numbers would be higher.

	Watershed Area in City Limits (square miles)	Local Flooding: No. of Building Flooding Reports	Creek Flooding: No. of Buildings in 100-year Floodplain	Percent of Total City Limits Area	Percent of Total Citywide Local Flooding Building Reports	Percent of Total Citywide Buildings in 100-year Floodplain
5 Selected Watersheds	114.4	936	3,646	40.8%	41.7%	50.3%
Bull	20.8	64	54	7.4%	2.9%	0.7%
Onion	20.7	50	463	7.4%	2.2%	6.4%
Shoal	12.9	296	893	4.6%	13.2%	12.3%
Walnut	32.5	234	678	11.6%	10.4%	9.3%
Williamson	27.4	292	1,558	9.8%	13.0%	21.5%
All Other Watersheds	166.3	1,307	3,609	59.2%	58.3%	49.7%
Citywide	280.7	2,243	7,255	100.0%	100.0%	100.0%

Figure 2: Watershed area and number of structures affected by creek flooding and local flooding for the five subject and remaining watersheds within Austin's full purpose jurisdiction

The Master (Strategic) Plan [Problem Score Viewer](#) website (see Figure 3 below) provides a way for the community to view the most salient problem areas for creek and local flooding, along with erosion control and water quality protection. WPD staff oversee this problem identification process.

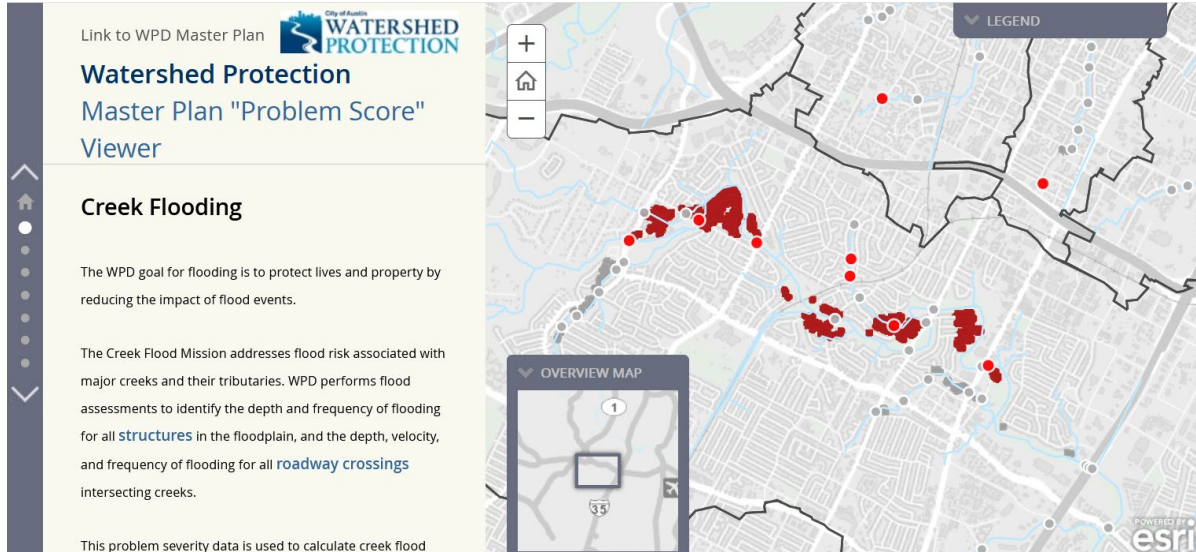


Figure 3: Screenshot of the Master Plan "Problem Score" Viewer, showing creek flooding details

- D. **Capital Solutions.** We directly address existing flood risk areas through the design and construction of flood risk reduction projects. Solution types differ greatly with flood risk, geographic conditions, and watershed scale. They include: upgraded storm drain systems, property acquisitions, elevated roadway crossings, detention ponds, floodwalls, and modified channels. These are constructed by in-house crews, contractors, and through public and private partnerships. The [Flood Risk Reduction Capital Project Web Map](#) (see Figure 4 below) provides a way for the community to view the name

and location of past and future planned flood risk reduction capital improvement program (CIP) projects. WPD and Public Works Department (PWD) staff work with technical consultants and other City partners (e.g., Austin Water and the Parks and Recreation Department [PAR]) to implement our CIP solutions, with input from impacted residents. Since 2001, WPD has reduced flood risks on over 1,800 buildings and upgraded 26 low-water crossings using capital projects alone; and more work is in progress today.

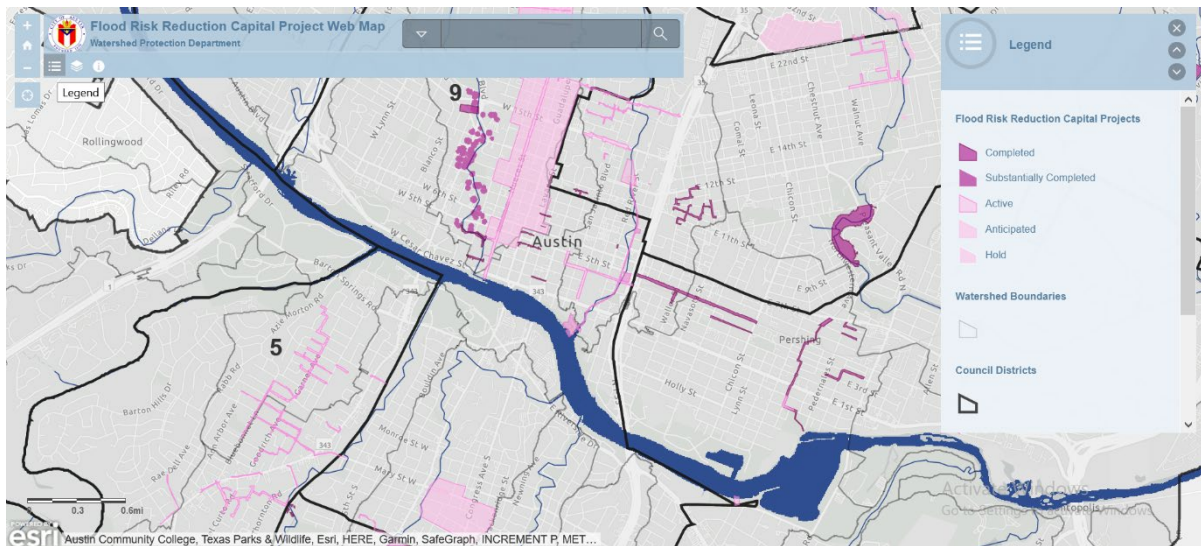


Figure 4: Screenshot of the [Flood Risk Reduction Capital Project Web Map](#), showing past and planned capital projects

- E. **Infrastructure Maintenance.** We must operate, inspect, maintain, and repair our drainage infrastructure to keep it in operational condition. Components of our drainage infrastructure include: channels, pipes, inlets, tunnels, bridges, detention ponds, dams, drainage easements, rainfall and flow gauges, flashing lights, software, and telemetry systems. WPD staff carry out the bulk of these maintenance actions with assistance from the PWD Street and Bridge Operations.
- F. **Public Education and Community Engagement.** A well-educated public is a safer public. We reach out to the community in a variety of ways: provide youth flood education through an annual flood poster contest; meet and engage with public audiences of all types through project-related meetings; inform residents and owners of properties in the floodplain and provide them with flood risk reduction information; and provide flood safety messages on the radio during times of inclement weather. We also rely upon the public for an additional and invaluable source of information about conditions, threats, and potential solutions. WPD staff carry out the bulk of these educational activities, working with affected City departments, other public entities, and the general public.
- G. **Flood Early Warning System and Emergency Response Coordination.** Austin proactively monitors weather, waterway, and roadway conditions, using radar, precipitation and stream gauges, and predictive flood models. We communicate activities between City departments and with external partners, including Travis County, National Weather Service, Lower Colorado River Authority (LCRA), and US Geological Survey (USGS). For significant rainfall events, the City activates the Austin/Travis County Emergency Operation Center (EOC) to coordinate emergency responses. Before and during the events, we inform and alert the public about flood hazards using ATXfloods.com, emergency notification systems, social media, and mass media. We directly barricade roads at threatened low-

water crossings. We provide emergency response actions such as water rescues and evacuations. We also continuously train and equip our staff and partners for these responses. Multiple City of Austin departments are involved and closely coordinate: WPD, Homeland Security & Emergency Management (HSEM), Austin Fire Department (AFD), Austin Police Department (APD), Austin Emergency Management Services (EMS), PWD, PARD, and others.

- H. **Post-Flood Community Assistance.** In our response to major flood events, we coordinate and communicate post-flood response activities internally and with external partners, such as Travis County, National Weather Service, LCRA, USGS, Red Cross, Austin Disaster Really Network (ADRN), Voluntary Organizations Active in Disasters (VOAD), the Federal Emergency Management Agency (FEMA), and community organizations. We and our partners provide food, potable water, clothing, temporary and intermediate shelter, and flood damage recovery information (e.g., cleanup, rebuilding, and security). Multiple City of Austin departments are involved and closely coordinate: WPD, HSEM, AFD, APD, PWD, PARD, Austin Resource Recovery (ARR), and others.
 - I. **Post-Flood Public Asset Recovery.** Floods can cause great damage to public infrastructure. To repair this damage, we conduct cleanup activities and debris removal; evaluate and repair public infrastructure flood damage to roads, bridges, and utilities; conduct damage assessments; collect high-water mark data; and produce after-action reports for future reference and to communicate lessons learned. Multiple City of Austin departments are involved and closely coordinate: WPD, HSEM, PWD, PARD, ARR, and others.
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2. Near-Term Recommendations

Resolution: The City Manager is directed to take the following steps to increase flood protection and flood resiliency:

- 2. *Develop near-term recommendations based on sound scientific data to further reduce flood risks in Onion Creek, Walnut Creek, Shoal Creek, Williamson Creek, Bull Creek, and other City areas where there is localized flooding no later than April 30, 2021, including whether the City Council should initiate amendments to the Land Development Code, including but not be limited to:*
 - a. *drainage management for redevelopment;*
 - b. *a redevelopment exception to reduce flood risk for commercial properties in the floodplain;*
 - c. *provisions to ensure that commercial and residential development comply with zoning impervious cover limits, including residential additions and accessory dwelling units; and*
 - d. *Analysis of projected impacts of any recommended and development code amendments related to flood mitigation on housing capacity and affordability and recommendations on how to address any of those impacts.*

a. Drainage Management for Redevelopment

One of the principal watershed recommendations in the 2020 Land Development Code (LDC) Revision proposal was to reduce Austin's flood risk by requiring drainage management for redevelopment of existing impervious cover. The proposed requirement would address an important source of existing flooding: older commercial, industrial, and multifamily developments that lack adequate provisions for managing stormwater. In today's code, when these places are redeveloped, they rarely have to provide flood detention ponds or upgrade drainage systems. This is because redevelopment is required to prevent additional drainage problems but not to help fix any existing problems caused by the site's

impervious cover or conveyance systems. In contrast, new development on undeveloped land has long been held to higher drainage standards.

The proposed redevelopment requirement would directly address drainage problems from older properties. When redeveloped, sites would need to manage stormwater as if they were undeveloped “greenfield” sites – as if they had no existing impervious cover. In some cases, application of the new requirement would contribute to storm drainage upgrades. New development and redevelopment would thus be held to the same drainage standards. Under current drainage criteria, very small redeveloping sites (one-half acre or less) would likely be allowed to contribute to off-site drainage upgrades rather than constructing a small detention pond on-site.

Council Resolution No. 20210127-056 asks for a staff recommendation on whether City Council should initiate an LDC amendment to require drainage management for redevelopment in the near term, separately from the LDC Revision as a whole. Staff continues to strongly support this potential code change because requiring flood management for redevelopment remains an important step to reduce flood risk from existing older development. However, in consultation with LDC Revision Team leadership, staff recommends deferring this amendment to a more comprehensive process for revising the LDC that balances flood management with other policy priorities.

This recommendation reflects the fact that redevelopment sites can be more constrained and complex to develop than undeveloped greenfield sites of the same size. Managing stormwater would be a new cost for these sites to absorb, and some strategies – like above-ground detention ponds – may affect a site’s buildable footprint. Although drainage management typically represents a small percentage of a project’s total cost, the additional cost would be incorporated into the rent or sale price of residential units. Likewise, a project that chooses to provide an above-ground detention pond might need to reduce or reconfigure its buildable footprint, which could reduce the number or size of housing units possible to build.

The recommendations in the LDC Revision as a whole sought to balance new requirements to improve flood resilience with options to offset negative impacts to development feasibility. For example, sites redeveloping under the new drainage requirements would also have modified compatibility setbacks, reduced parking requirements, and access to increased entitlements through an affordable housing incentive program. This combination of regulations and incentives was intentionally developed to offset added infrastructure costs and enhance flexibility in design, project buildability, and housing capacity. Staff supports deferring any significant changes to drainage requirements for redevelopment to a more comprehensive and holistic code revision process.

b. Commercial Redevelopment Exception

Staff are proposing to revise Austin’s floodplain regulations to include a commercial redevelopment exception that would provide staff with the administrative authority to allow some commercial buildings proposed for redevelopment to encroach in the 25-year and 100-year floodplains.

A residential redevelopment exception was already included as part of the floodplain regulations approved by City Council in November 2019. At that time, the possibility of a commercial counterpart was discussed. Staff told Council that we would bring a commercial redevelopment exception code revision to them for future consideration.

The objective of the proposed commercial redevelopment exception is to create an administrative approval path to facilitate commercial redevelopment that reduces flood risk compared to the existing conditions. Presently, if an applicant proposes redevelopment of a commercial property that does not

meet the safe access regulation, the applicant is required to request a floodplain variance from the City Council regardless of the proposed building's height above the floodplain. From the applicant's viewpoint, the process takes time, incurs expense, and has an uncertain outcome: Council may or may not grant the variance.

This proposed administrative process would allow staff to waive the safe access regulation while reducing the cost and uncertainties that exist with the floodplain variance request process. The safe access regulation requires that a development provide an access path from the building to the right-of-way that is at least one foot above the 100-year floodplain. This is an important regulation for new developments to ensure safety for ingress and egress to the building by occupants and first responders. However, there are many existing buildings that are at flood risk that are on properties that cannot satisfy the safe access regulation. Having an exception in place to allow these properties to redevelop while minimizing flood risk to the building through elevation is an effective way to reduce flood risks.

The desired outcome of the proposed commercial redevelopment exception is to (1) reduce the flood risk for commercial buildings at high risk of flooding; (2) ensure that no additional occupants or building area are at threat in the proposed commercial building; and (3) to accomplish this without public expense. All buildings that rebuild using this exception would have to be constructed a minimum of two feet above the 100-year flood elevation, significantly reducing flood risk. The proposed exception requires that the elevated replacement building (a) not increase the building square footage on the property and (b) not increase the current occupant load. These provisions help prevent putting additional persons (building occupants) in harm's way. And such construction would be done at private expense.

If the commercial redevelopment exception is not created, the only paths to reducing risk would be to obtain a Council floodplain variance (see concerns and limitations above) or to use public funds to reduce risks via structural or nonstructural capital improvement solutions.

c. Ensure Commercial & Residential Compliance with Impervious Cover Limits

The Land Development Code (LDC) specifies impervious cover limits by two methods: impervious cover limits by zoning district and impervious cover limits by watershed regulation area. Zoning impervious cover limits are not specifically related to issues such as flooding, erosion, and water quality of creeks, but they are a planning tool by which the city outlines the amount of green space required for a certain zoning category. The LDC applies an additional impervious cover limit to groups of watersheds based on their classifications. Classifications include: Urban, Suburban, Barton Springs Zone, Water Supply Suburban, and Water Supply Rural. Each classification has different watershed impervious cover maximums, with Urban watersheds relying solely on zoning impervious cover maximums. For a given property, the more restrictive of the two impervious cover limits apply. For example, a commercial property in the Water Supply Rural area (maximum impervious cover 20%) with Community Commercial (GR) zoning (maximum impervious cover 90%) would have to restrict its developed footprint to the more restrictive 20% impervious cover.

These watershed limits apply at the site plan and subdivision level, but are not applied at the residential-lot scale for individual building permit projects. However, because watersheds that are classified as Urban have no watershed impervious cover limits, we recognize that there are environmental benefits to limiting zoning impervious cover in areas where watershed impervious cover limits are absent. Negative environmental consequences of high impervious cover limits can be seen in urbanized creeks that experience increased erosion, altered stream hydrology, degraded aquatic habitat and biodiversity, and poorer water quality.

However, when considering how to manage flooding, it is important to distinguish between additional runoff caused by impervious cover and the grading necessary to convey runoff away from the building and to an appropriate location. Construction activities can change drainage patterns to create or exacerbate drainage problems for adjacent properties. These lot-to-lot flooding issues can often be prevented through attention to appropriate site grading. A typical SF-3 zoned lot is allowed 45% zoning impervious cover, which theoretically leaves sufficient space for an appropriately planned lot to manage stormwater on site without causing additional flooding to neighbors, streets, or the receiving water body. Please see section 2.e.3 for further discussion of potential policy options to address these types of lot-to-lot flooding issues.

The City of Austin ensures compliance with zoning impervious cover limits through three processes: 1) Permit Application Review, 2) Inspections, and 3) Enforcement.

Development Services Department (DSD) staff review development applications for compliance with zoning impervious cover limits when permit applications are submitted for approval. Both Residential Review staff and Site Plan review staff are responsible for ensuring that a proposed project complies with the Land Development Code, including zoning impervious cover limits. Building and Environmental Inspections staff ensure that the finished project in the field complies with the approved set of plans. If complaints arise through the 3-1-1 system with suspected cases of non-compliance, inspectors within Austin Code Department are notified and will investigate complaints related to single family residential lots, and the inspectors within DSD's Environmental Enforcement Division investigate complaints related to commercial or multifamily projects.

Residential Zoning Impervious Cover Limits

Review process: With some exceptions, construction within subdivided lots or legal tracts with single-family homes, duplexes, or certain townhomes require building permits. Permit applications that require review from the zoning plans examiner staff within DSD's Residential Review Division ensure that plans comply with impervious cover limits per zoning category. For example, residential additions and Accessory Dwelling Units (ADUs) both require compliance with zoning impervious cover limits. SF-3 zoning, which allows ADUs, is allowed 45% impervious cover by gross site area. If an applicant wishes to exceed the site's zoning impervious cover limit, then they must seek a variance from the Board of Adjustment which will either approve or deny the request based on applicable criteria.

Inspection process: Building Inspections staff within DSD are responsible for ensuring that zoning impervious cover limits are met. Per the Local Amendment to the International Residential Code R104.4, inspections staff require an impervious cover survey or other additional construction documents prepared by a registered design professional when a site is within 5% of the maximum allowable impervious cover or when the maximum is exceeded. DSD Building Inspections staff also request such surveys, as required by the Building Criteria Manual 4.6.2.1 – "Layout Inspection", as well as other relevant development documents, such as finished floor elevations, for projects located within floodplains. If the as-built survey shows that zoning impervious cover has been exceeded, the project will not pass the final inspection until the applicant implements corrective actions and a compliant as-built survey is presented.

Violations/enforcement: The Austin Code Department responds to complaints submitted to 3-1-1 related to work without a permit or development in excess of the allowed impervious cover. A code inspector will visit the location, investigate any relevant permitting documents, and make a visual assessment from an approved public vantage point. If a violation can be verified, a Notice of Violation is sent to the property owner notifying them of the violation and providing a compliance deadline. The owner is required to either remove the violation, find a compromise onsite, or request the violation be

permitted. If the owner fails to comply with a Code Violation, an affidavit will be filed with the Municipal Court for legal escalation and a final remedy.

Commercial Zoning Impervious Cover Limits

Review process: Commercial, industrial, civic, and multifamily projects require site plan approval through DSD's Land Use Review Division. Site plan review staff verify that the project complies with zoning and watershed impervious cover limits prior to site plan approval. Environmental review staff in DSD verify that the project complies with watershed impervious cover limits.

Inspection process: Environmental Inspections staff within DSD ensure that the final built environment matches the approved elements within a site plan to ensure that the final condition meets zoning and watershed impervious cover requirements. Final drainage patterns are inspected by Environmental Inspections staff to ensure compliance with approved plans and Environmental Criteria Manual (ECM) section 1.2.2 to ensure that no concentrated flows occur above the receiving water body.

Violations/enforcement: Environmental Inspections staff respond to complaints related to work without a permit for site plan projects, including those related to impervious cover. Flooding violations are considered priorities and can result in an immediate Stop Work Order or citation. Staff works with the owner or agent until compliance has been achieved. Reinspection fees are assessed as applicable. After three non-compliant inspections, or if a citation is immediately issued, an affidavit is filed with Municipal Court that may include criminal charges and fines up to \$2,000 per violation per day.

Recommendations

In order to alleviate concern from residents about development in excess of zoning impervious cover limits, a multidepartment working group of staff from DSD, Austin Code Department, and Watershed Protection Department (WPD) have developed the following recommended procedural modifications for consideration.

1. Evaluation of Residential Construction without Permits: WPD assesses impervious cover every two years based on aerial imagery for the purposes of calculating the drainage charge for all parcels within our jurisdiction. In coordination with Austin Code and DSD, WPD will evaluate opportunities for using this data to identify where development may be occurring without a permit, and thus where development may not be in compliance with zoning, flood risk reduction, and/or environmental protection requirements.
2. Residential Review and Site Plan: Add a check box to applicable permit applications acknowledging that any changes in drainage patterns are subject to applicable state-law prohibitions on damaging adjacent property. (See more in section 2.e.3, Improve Regulatory and Programmatic Response to Lot-to-Lot Drainage Problems, below).
3. Site Plan: At the time of final inspection, the required engineer's concurrence letter does not specifically discuss adherence to impervious cover limits. Staff recommends that adherence to impervious cover limits be added to the required concurrence letter for seal prior to final inspection.

d. Analyze/Recommend Solutions for Potential Housing Capacity and Affordability Impacts

The Housing and Planning Department (HPD) reviewed and analyzed the recommendations in this resolution for their potential impacts on housing costs and housing capacity. HPD supports the recommendation of the Watershed Protection Department to include the drainage management for

redevelopment requirement as part of a more holistic approach to improving the LDC. Without other balancing measures in place that could offset these added requirements, the housing capacity of redeveloped sites could be negatively impacted by the drainage management for redevelopment requirement. Housing affordability is already a significant stressor for many low- and moderate-income households. Increased development costs will be included in the rents and sales prices of new housing created and can have ripple effects in vulnerable communities that increase displacement pressure. Inversely, code changes that can improve drainage conditions on redeveloped sites while also increasing housing capacity, creating stable and affordable housing, and improving design flexibility, can have positive benefits for all members of the community. Proposals in the most recent version of the LDC Revision that could directly impact development feasibility in such cases include modified compatibility standards, reduced parking requirements, and increased height, floor to area ratio, and density entitlements through an affordable housing incentive program.

The commercial redevelopment exception in the floodplain will moderately improve certainty for the limited number of commercial redevelopment projects that occur within the floodplain. Predictability is valuable and providing a pathway for these projects to proceed without discretionary approval will improve predictability.

The impervious cover limit enforcement strategies offered in the previous sections offer cost-effective ways to build in additional preventative provisions and further ensure that developments do not get build out that do not comply with existing policy. Related to the above measures, the staff recommendations in section 2.e.3. build upon existing enforcement and compliance measures. The addition of the nuisance violation in Title 9 to address lot-to-lot flooding presents an opportunity to remediate drainage issues after construction is complete; however, the damages incurred as well as the cost to reach compliance could represent a cost burden to vulnerable low- and moderate-income households. For that reason, HPD staff support the potential development of a home repair program that would assist low- and moderate-income homeowners to implement drainage solutions to remediate lot-to-lot flooding issues. Many low- and moderate-income homeowners may not have access to the resources needed to resolve code compliance issues or make adequate repairs and upgrades to their homes, such as floodproofing, gutters, or drainage swales. Such a program would complement the existing home repair programs administered by HPD that can help low- and moderate-income homeowners lessen displacement pressure. If funding was identified for such a program, the Housing and Planning department could administer the new program building off of other programs' infrastructure and utilizing existing relationships with the Home Repair Coalition.

e. Additional, Staff-Recommended Approaches

2.e.1. Map flood risks citywide, focusing on socially vulnerable areas.

A key component of flood resilience is a detailed understanding of the geographic location and severity of flood risk. By knowing that a property may be at risk, property owners and renters can make an informed decision about purchasing flood insurance—or whether to purchase or occupy a given property or building in the first place. This section describes the City of Austin's detailed mapping of known creek flood problems in larger drainage systems and of known local flood problems in smaller storm drain and minor drainage channels. Our current level of knowledge is very good by national standards, but we are actively working to improve both systems even further.

Mapping of Creek Flood Risks. At present, WPD has detailed floodplain information for our larger creek systems. We are currently working to update floodplain maps, which will benefit more of our community by accurately indicating flood risk. Austin applies its floodplain regulations to development

along creek systems that receive at least 64 acres of contributing area. This means that any new commercial or residential development that has a waterway with 64 or more acres of drainage (see Figure 5 below) must delineate the floodplain extent and abide by the regulatory requirements to provide adequate flood protection.



Figure 5: Drainage areas in the Hancock Branch of Shoal Creek starting at 64 acres for regulatory floodplains

64-acre creeks are a fine-grained measure of floodplain delineation. FEMA, for example, typically has a minimum threshold of 640 acres (one square mile) for the delineation of floodplains in communities that participate in the National Flood Insurance Program (NFIP). By extending floodplains upstream to the much smaller 64-acre threshold, Austin's regulations provide its residents with increased flood protection and give its residents along these waterways much improved information upon which to understand flood risk.

At present, the extent of this flood mapping varies: not all of Austin's creeks have floodplain information yet to the 64-acre level. Historically, like in most US communities, only the much larger creek systems were mapped. However, as part of our citywide floodplain study project, WPD is working to have all creeks mapped with updated flood risk information for all waterways to the 64-acre level. This will greatly increase the knowledge of flood risk for those living or working in close proximity to these floodplains. Such knowledge also increases WPD's ability to pinpoint those residents and property owners at risk of flooding to engage in public education about flood risks, best practices to respond before and during a flood, and to gain information from the public to increase our own understanding of risks and potential solutions.

Mapping of Local Flood Risks. Only about one-half of all of our known buildings with potential flooding problems are located in mapped floodplains—areas of creek flooding. The other one-half of buildings with known, potential flooding problems are associated with the secondary drainage system (storm drains and minor channels)—areas of local flooding. WPD maintains the infrastructure serving this system and endeavors to best understand the locations of any problems affecting residents and property along these systems.

Until the recent past, the City of Austin gathered information and built solutions for local flooding problems on a case-by-case basis in response to residents' complaints. While complaint information still plays a useful role in problem prioritization, WPD has moved towards an improved understanding of the magnitude and causes of local flooding, aided by the use of one-dimensional (1-D) and two-dimensional (2-D) engineering models. Currently, WPD is comprehensively modeling the capacity of storm drain systems in older areas, such as the Central Business District, and other areas with the highest number of recorded flood complaints. The long-term goal is to provide models for all storm drain systems in all watersheds. In addition to prioritizing engineering modeling based on resident complaints, we will be analyzing how to incorporate equity into our prioritization process to acknowledge that some communities have a more difficult time recovering from flooding.

WPD uses 1-D storm drain modeling software to simulate storm events and assess the ability of existing storm drain systems to capture and convey runoff. WPD has completed 1-D models for more than 952 miles of the City's drainage systems. This represents about 87% of the approximately 1,100 miles of storm drain pipe in the City.

However, one-dimensional models are not able to predict flow patterns of water above ground surface elevations. WPD is now analyzing storm drain systems using 2-D models to identify flooding impacts where drainage systems fail. Two-dimensional models estimate not only the capacity of the storm drain system pipes but also the spread of water on the surface, thereby showing which structures and roadways may be affected. This approach provides a more detailed estimation of the impacts on public and private property when the storm drain system is undersized. An example of a 2-D model is shown in Figure 6 below.

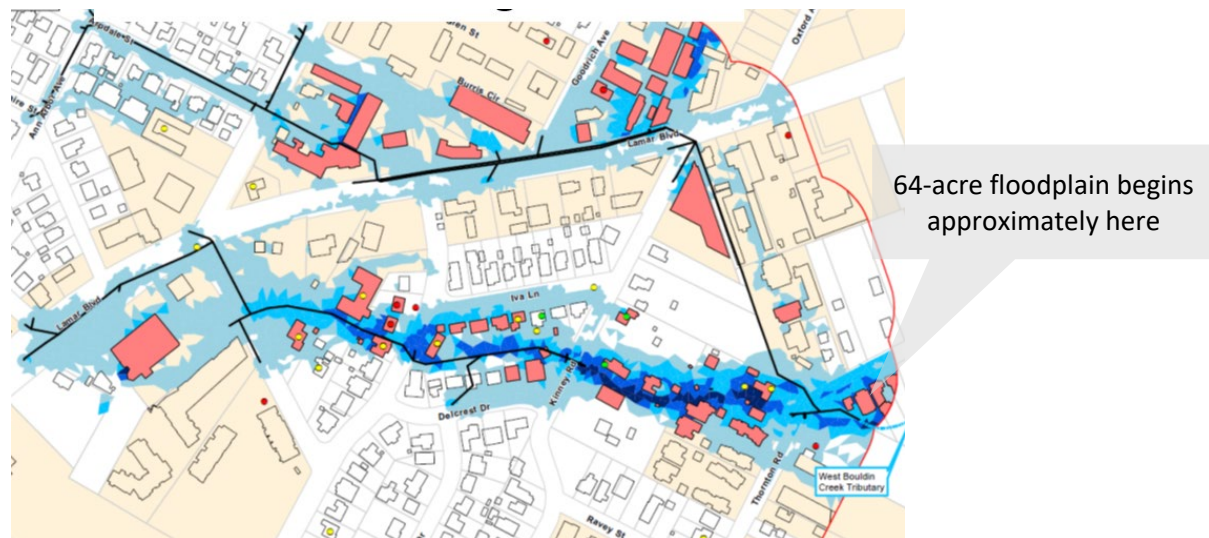


Figure 6: Example 2-D Local Flood risk mapping for the Del Curto storm drain in West Bouldin Creek in South Austin; provides risk information for all areas above the 64-acre drainage area threshold point indicated by the callout box

When available, the results of these 2-D models will greatly improve the understanding of problem areas and are useful in designing flood risk reduction projects to protect lives and property during flood conditions. As we complete additional 2-D models, we will build the inventory of local storm drainage system flood risk maps that will be used by staff to prioritize, design, and implement flood risk reduction projects and communicate the information to our residents so that they may be better prepared when a flood occurs.

2.e.2. Increase the pace of project delivery for drainage solutions.

Provide near-term solutions while long-term solutions are developed. WPD has recently created a new model for project delivery that allows us to implement short-term solutions within a portion of a larger solution on a longer timeframe. Large-scale drainage infrastructure projects are complex and take a long time to analyze, design, and construct. At the same time, there are often embedded within the larger problem, a number of small-to-medium drainage problems that can be addressed with less analysis, design, and costly construction. Our new model allows us to continue fixing large-scale problems that bring major relief to many people and also use more nimble techniques to tackle “low-hanging fruit” (like replacing undersized storm drain inlets or increasing the maintenance frequency of drainage infrastructure) in a short timeframe to bring at least a small level of immediate relief. An example of this new approach is the replacement of undersized and difficult-to-maintain curb inlets in the Brassiewood neighborhood of Dove Springs in southeast Austin. These inlets are part of a much larger drainage system that will require a longer-term solution to provide full benefits. But the construction of these improved inlets is already helping address street drainage while the larger project can be developed.

Realign WPD personnel and resources to increase production. WPD strives to be as dedicated and responsive to the needs of the community as possible. As the community has grown, so too have the number and complexity of drainage challenges. WPD too has grown and become more specialized to keep pace. We now recognize that some of these actions resulted in the assignment of multiple priorities to existing staff teams—assignments that competed for limited staff bandwidth. In order to be responsive, these teams often have to focus their attention on the most time-sensitive, high-visibility issues. For example, staff who have the responsibility of both reviewing development permit applications and designing new drainage infrastructure, have faced a choice on which to spend time on. As a result, our design projects have at times been delayed by the need to more immediately attend to requests from residents, other departments, or City Council.

Under our new organizational structure, we have deliberately created more focus for each of our service priorities. Now, all project delivery functions—to build solutions to drainage and other watershed problems—are consolidated under one Assistant Director. And the duties that previously competed with project design and delivery have been assigned to specialists in those other areas. We believe this will allow WPD to reduce the time it takes to deliver core infrastructure improvements and services to Austinites most in need, while maintaining or increasing quality.

2.e.3. Improve Regulatory and Programmatic Response to Lot-to-Lot Drainage Problems.

Flooding is caused by a combination of drivers that can vary based on local conditions—these factors include rainfall intensity, topography, the capacity of storm drain systems and channels, the location of structures in drainage paths, and unmanaged impervious cover. Austin has extreme rainfall intensities, steep terrain, and many areas that were developed prior to modern drainage design standards. In this context, property owners can inadvertently change drainage patterns to create or exacerbate drainage problems for adjacent properties. While the City has strong oversight processes for residential subdivisions and commercial and multifamily development, it has been challenging to implement processes to prevent and correct drainage problems in smaller-scaled residential contexts. This section describes potential code and process changes currently under consideration to improve outcomes for lot-level residential drainage.

Residential development must comply with impervious cover limits and all other applicable codes, including the Uniform Plumbing Code (UPC) and International Residential Code (IRC). Local amendments

to the UPC were adopted in 2017 to strengthen existing language regarding drainage. Prior to this amendment, the City did not actively become involved in residential lot-to-lot flooding cases as they were considered a private matter resolved via Texas law. While there has been some success enforcing this amendment during construction (i.e., projects with active permits), enforcement has been challenging because the UPC only regulates drainage as it pertains to building plumbing systems. It is not intended to address overland flows, nor are plumbers and Plumbing Inspectors trained to design and evaluate lot-level drainage. Furthermore, drainage issues may be created or discovered after construction is complete and enforcement via the UPC is no longer viable.

Given these enforcement challenges, staff recommends re-evaluating our approach to lot-to-lot drainage issues. At the same time, we are mindful of policy tradeoffs given the relative infrequency of their occurrence. For this reason, staff recommends focusing on enforcement and correction of identified issues rather than creating new requirements for all residential building permits. Staff has considered but does not recommend requiring drainage plans or detention for this scale of development due to the cost and review process impacts. However, staff is currently evaluating five potential changes to our approach intended to increase household flood resiliency:

1. **Add a check box to applicable permit applications acknowledging that any changes in drainage patterns are subject to applicable state-law prohibitions on damaging adjacent property.** This would inform applicants of their responsibilities regarding lot-to-lot drainage. Staff is considering including an acknowledgement on residential applications that the review of the project by the City of Austin will not include a review of site drainage.
2. **Consider using a revised section of the International Residential Code (IRC) rather than the Uniform Plumbing Code (UPC) for enforcement of lot-to-lot concerns that are reported during the development process.** This approach could include introducing a local amendment to the IRC and/or augmenting existing IRC drainage requirements (R401.3 and R801.3) with new criteria to specify approved points of collection and define a hazard to include concentrated discharge to an adjacent property. This would guide project designers and support more consistent enforcement. If a lot-to-lot drainage concern is reported for an active permit, Development Services Department Environmental Inspectors would work with the involved parties to achieve voluntary compliance or place an administrative hold on the permit until the issue is resolved.
3. **For active permits, consider training Environmental Inspection staff to observe visually apparent lot-to-lot drainage problems and notify the project owner of a potential issue.** Without a grading plan or detailed topographic information, this approach must necessarily be advisory. The potential benefits of this approach must be weighed against the resource and staffing implications. This approach would necessitate supporting criteria in the Drainage Criteria Manual.
4. **For post-construction violations, consider creating a separate nuisance violation in Title 9 (*Prohibited Activities*) to address harmful impacts caused by discharge to a neighboring property.** This would enable enforcement whenever the nuisance conditions occur, instead of only during the development process. If voluntary compliance cannot be achieved, the City or the adjacent property owner could initiate a case at Municipal Court to prove damages (up to \$2,000 per incident). This action would represent a major change in approach for the City—currently these issues are considered a private matter resolved via state law. The potential benefits of this approach must be weighed against the resource and staffing implications.
5. **Study options to provide assistance for lot-to-lot drainage solutions for low- and moderate-income residents.** Staff recognizes that the correction of lot-to-lot drainage issues can be complex and costly, especially for low- and moderate-income households. Thus, staff is currently exploring

legal constraints, funding sources, and potential mechanisms to provide technical and/or financial assistance to one or both property owners for cases in which the necessary property modifications would represent a cost burden. These solutions could include small-scale property modifications such as gutters, drainage swales, and floodproofing, potentially administered through an expansion of existing City home repair programs. There are limitations in state law on the use of the Drainage Utility Fund for certain types of projects on private property, although alternative funding options may be available. As staff explores this model, WPD will coordinate with the Housing and Planning Department and the Law Department regarding program design and compliance with all applicable legal requirements.

Actions Required. Staff will work with the Development Services Department, Law Department, and Austin Code Department to develop criteria, staff training materials, and internal processes to consistently enforce UPC and IRC provisions. After implementation of these criteria and process changes, staff will evaluate whether changes to the IRC are warranted and present any proposed changes in an out-of-cycle local amendment or during the 2024 code adoption cycle. Staff will continue to explore the legal and staffing implications of a new nuisance provision in Title 9, and if warranted, develop proposed changes for Council’s consideration. Council would consider adoption of new provision(s), if any.

2.e.4. Encourage communities upstream of Austin to adopt improved drainage and floodplain regulations

Austin community members, including a recommendation by the Flood Mitigation Task Force (FMTF), have called for the strengthening of drainage regulations in areas outside the City of Austin’s jurisdiction. Recommendation 6.5 in the FMTF Final Report was as follows:

“Encourage collaboration with surrounding communities to adopt floodplain and storm drainage policies comparable to the levels of City of Austin.”¹

The goal is to have areas that are upstream of Austin—and thus contribute flood flows through Austin—have robust, preventative regulations such that existing conditions are not worsened as these areas urbanize and change drainage patterns.

Austin has a collaborative, proactive relationship with Travis County to coordinate development review and regulation development for areas within Austin’s extraterritorial jurisdiction (ETJ) within Travis County. And Travis County typically extends these requirements beyond our ETJ into county areas as well. An example is the adoption by Travis County of code amendments that use the current 500-year floodplains as the regulatory 100-year floodplains on an interim basis until new floodplain maps can be developed using Atlas 14 rainfall data. Austin is working with many regional partners on updating floodplain studies in the Central Texas region, such as Travis County, Hays County, Bastrop County, and many other independent cities.

An additional, more recent opportunity has emerged with the initiation by the State of Texas of a new State Flood Plan, administered by the Texas Water Development Board (TWDB). For this planning process, which kicked off in October 2020, Austin is located in the Region 10 Lower Colorado-Lavaca River planning area. Austin has a representative on the 13-member Planning Team. The scope of work for this project already calls for use of forecasting to anticipate and plan for future growth, and the City’s representative will advocate for additional regulatory improvements consistent with the FMTF

¹ *Flood Mitigation Task Force: Final Report to Austin City Council*, <http://www.austintexas.gov/edims/document.cfm?id=254319>, May 16, 2016, p. 32.

recommendation. Region 10 and the other 14 state regions have an approximately two-year schedule, with a draft Regional Flood Plan for each region due to the TWDB in January 10, 2023. The Region 10 plan could help coordinate and improve the flood management of cities and counties in the entire basin, which would include the City of Austin and all of its upstream and downstream neighbors.

3. Resilient and Equitable Community Plan: Scope of Work

Resolution: The City Manager is directed to take the following steps to increase flood protection and flood resiliency:

Develop a scope of work around the implementation of a resilient and equitable community plan to address the economic and social recovery of individuals experiencing devastating impacts from flood events in Onion Creek, Walnut Creek, Shoal Creek, Williamson Creek, Bull Creek, and other City watersheds no later than April 30, 2021. This should include potential funding strategies while considering engagement with local businesses, community organizations, schools, hospitals/medical facilities, agriculture all and owners, and others who could be affected by floods within Onion Creek, Walnut Creek, Shoal Creek, Williamson Creek, Bull Creek, and other City watersheds.

Topline Recommendation. The recommendation of our Resilience Core Team is to support the requested planning activities by establishing a “standby” time and materials contract with a not-to-exceed amount with a contracted entity with expertise in the subject matter (equitable, economic, and social recovery planning). We recommend this type of contract for the following reasons:

- 1) This type of contract would allow a contracted entity to bill for reimbursement only for services completed up to the not-to-exceed amount.
- 2) The contracted entity itself would help secure external funding sources to support activities for reimbursement and act as grant manager for awards.
- 3) This type of entity could supplement current staffing for resilience (current internal staffing levels for resilience = 1 full-time position), which would not allow for such planning activities to be completed internally.

Scope. We recommend the following activities to be undertaken to meet the expressed need for an equitable economic and social recovery plan:

- *Reconciliation* of resulting data, reports and recommendations of past related engagement processes such as but not limited to: Climate Action Plan led by the Office of Sustainability, Resilient Dove Springs led by GO Austin!/VAMOS Austin (GAVA), the Economic Recovery Framework led by the Economic Development Department, as well as relevant existing programs or concepts being developed within the City that could assist in providing social and economic recovery such as the Austin Civilian Conservation Corps program (Office of Innovation), the Rain Catcher Program concept (Watershed Protection Department), Circular Economy Hub (Austin Resource Recovery/Economic Development Department).
- *Community Asset Map.* Creation of a community asset status map that is focused on social resilience and economic resilience - this map would take into consideration physical assets and social vulnerability.
- *Creation of a community panel or panels.* This may involve reconvening of past community panels and establishing new panels if further exploration of issues are necessary beyond work already completed.
- *Validation of the asset map* with the community panel(s).

- *Recovery Summit.* Convene with relevant communities a Recovery Summit to ID all current work that is in planning and cross walk with long term goals that the community has identified, ID what is in alignment or missing; provide access to stakeholders on the processes of recovery, recovery project examples from other regions that could be of use for the geographies of interest.
- *Preliminary Gap Analysis.* Develop a preliminary gap analysis on what is missing with regard to economic and social resilience, this would include individual economic resilience and geographically nuanced identification of strategies.
- *Agenda-setting Workshop.* Conduct an agenda setting workshop that is meant to be a place for community members and stakeholders to build out priorities, this would involve the community panel(s) but be more broadly available to the general public, its focus would be to establish a first year prioritization for strategies, and planning for periodic check ins on progress.
- In addition, we recommend that the scope of the recommended consulting contract include:
 - Ongoing assistance with funding discovery (includes external funding such as grants, and internal funding such as planning budgets, application processes, and grant management to support the above activities and reimbursement for work conducted by the contracted entity;
 - Management of cost recovery such that it is permissible and reimbursable under funding sources - so that it eventually becomes low cost to the City.
 - Wherever possible, alignment and coordination with the timeline and activities, with the Watershed Protection Department's (WPD) forthcoming departmental strategic planning activities.
 - Creation of appropriate inputs to be included in the City's forthcoming Comprehensive Resilience Plan.

The cost for the above activities is estimated to be able to be completed for a range of \$600,000-\$700,000; this, however, could be lower (down to an estimated \$200,000) if a municipality has already conducted or is otherwise conducting community engagement that could inform this planning process. (Examples of such contracts exist in our system, for instance, an existing contract with Hagerty Consulting, currently employed by Homeland Security and Emergency Management (HSEM).)

Costs may indeed fall below the maximum estimated cost amount for this work as both the City of Austin and the Austin community have already conducted some relevant planning and community engagement activities. We have included the first item above, to be respectful of our staff and community's past work, to guard for assessment and engagement fatigue, and to make sure that past identified solutions are moved forward.

Funding Sources. The Resilience Core Team has preliminarily explored existing City contracts with relevant entities, internal funding sources, and known relevant external funding sources to determine if these could support the requested planning, the Resilience Core Team found the following:

- *HSEM contract with Hagerty Consulting.* Although Hagerty Consulting is an entity with relevant expertise for the requested planning, the current existing contract scope is narrowly COVID related and could not support these activities.
- *Housing and Planning Department (HPD), existing FY '21 federal funding.* Although activities would be in scope as per funding rules, the current award has already been approved for other activities by the funding source and cannot be currently amended.
- *Drainage (Utility) Fee.* WPD's Drainage Fee is a possible source of funding to support these activities, further exploration of legal allowance is necessary to occur between City legal and WPD.

- *FEMA Building Resilient Infrastructure and Communities (BRIC)*. Preliminarily, planning activities requested could be of scope for this funding opportunity, this opportunity is expected to open for application in late August or September 2021.
- *National Oceanic and Atmospheric Administration*. This entity has released many resilience related grants over time, particularly related to climate change. A general grant may be available for the planning under the administration's long term mission goal of a "weather ready nation". This is a source that would be requested for discovery activities.

Next Steps. The Resilience Core Team and the WPD seek direction from Council on the latter recommendations for requested activities before proceeding. With further direction, the City Manager would determine staffing assignments relevant to Council direction.

4. Watershed Protection Strategic Planning Process: Managing Flood Risk for Safety, Resilience, and Equity

Resolution: The City Manager is directed to take the following steps to increase flood protection and flood resiliency:

1. *Refine and expand existing strategies to manage flood risk for safety, resilience, and equity as part of the planning process to revise the Watershed Protection Strategic Plan to be started in spring 2021. This should include funding strategies, potential partnerships with stakeholders affected by floods, and potential acquisition of open space.*

This section describes the planning process that will be used to revise the Watershed Protection Strategic Plan to expand strategies to manage flood (and erosion and water pollution) risks for safety, resilience, and equity.

Watershed Mission and Strategic Plan: The mission of the Watershed Protection Department (WPD) is to protect the lives, property, and environment of our community by reducing the impact of flooding, erosion, and water pollution. The Watershed Protection Strategic Plan (Strategic Plan) is the guiding blueprint for the department. It sets goals and objectives for WPD's work, establishes the method to prioritize watershed problems, and establishes procedures for how solutions are identified. It provides a framework for evaluating future programs, projects, and regulations as well as measuring the success of our current portfolio. The plan will, among other things, discuss potential funding strategies, partnerships, and open space acquisition, as directed in the resolution. The Strategic Plan also helps explain WPD's work and priorities to staff, City executives, Boards, Commissions, and Council, and the Austin community.

Goals: WPD has three main goals for the Strategic Plan update, subject to community input:

1. Reflect Community Values
2. Incorporate Equity and Climate Resilience
3. Be Accessible and Informative

Community Engagement: A robust community engagement process is an essential component of the Strategic Plan update. Every Austinite is impacted by the waterways flowing through our city, and any resident might possess knowledge and lived experience about flooding, erosion, or water pollution that could help WPD do its work in a better-informed and more effective way. As staff updates the Strategic Plan, we will look to the Austin community to help shape the core values, goals, and priorities that will form the foundation of the new plan, using the following community engagement goals:

1. Be Respectful to Participants
 - Make it easy and enjoyable to contribute input, particularly for those who have barriers to participation. Use an approach to engagement that is inclusive and culturally sensitive.
 - Be transparent about how feedback is being used. Respect participants by only seeking feedback that can and will be used to inform a decision. If a specific community recommendation cannot be incorporated into the plan, clearly explain the reason.
2. Create an Adaptive Process
 - Define success metrics for the engagement process, track our performance, and commit to continuing engagement until we have met our metrics for success.
 - Adapt to potential limitations on engagement strategies due to COVID-19 and be sensitive to the impacts on participants.
3. Focus on Relationships
 - Build relationships and trust with organizations, leaders, and individuals in historically underserved groups and groups disproportionately impacted by negative watershed outcomes.

Stakeholders: We want to hear from our entire community. Focused attention will be given to reaching the following priority groups:

1. Austin residents left out of past planning and decision-making processes or more likely to experience negative quality of life outcomes (people of color, low-income persons, and others).
2. People who have experienced or are at an increased risk of negative watershed outcomes (flooding, erosion, water pollution) or who were affected by a recent watershed project.
3. Entities whose missions prioritize the environment and that bring environmental, technical, and/or policy expertise.

Community Engagement Strategies: Staff plans to use a variety of strategies for this community engagement process. Where possible, we will employ both in-person and virtual methods, as appropriate based on audience, engagement objectives, and City guidance regarding the safety of in-person gatherings given the status of COVID-19. We will utilize more resource-intensive, focused strategies to engage priority stakeholders and broader strategies for the entire community. We will reach stakeholders via diverse platforms such as Quality of Life Commissions, religious organizations, advocacy groups, social service organizations, and standard and social media. We also anticipate enlisting community ambassadors to help us connect with priority stakeholders. We will minimize barriers to participation by facilitating language access, providing food and children's activities, offering engagement options for those without internet access, holding events at locations accessible via public transportation, and scheduling events at a variety of times of day and days of the week.

Staff and Consultant Resources: WPD staff will manage most of the planning process and will be responsible for drafting the revised plan. WPD will also engage staff from other City departments on an interdepartmental advisory group. Key internal stakeholders will include the City's Equity Office and Chief Resiliency Officer, to ensure that the Strategic Plan aligns with the citywide Resilient Austin initiative. WPD plans to request funding to hire consultants for specific community engagement tasks, including: a statistically valid survey, community ambassadors, focus group facilitation, and language access.

Draft Timeline: WPD staff are currently in the pre-planning phase for the Strategic Plan update. We hope to finalize a detailed Community Engagement Plan this spring and kick off the engagement process in the summer or early fall 2021. We envision two rounds of community engagement running for about a

year. We will start the process of plan development as soon as possible, but it will depend on what we're learning from community engagement. The preliminary goal is to finish the draft Strategic Plan document by fall 2022 and go through the review and adoption process in late 2022 and early 2023.

	FY2021				FY2022				FY2023	
Phase	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Pre-Planning										
Community Engagement Rounds #1 & #2										
Plan Development										
Community Engagement Round #3 / Document Adoption										

WPD staff look forward to engaging with the entire community in the essential conversations to understand community values, set goals and objectives for our work, re-examine methods to prioritize watershed problems, and evaluate how solutions are identified. By adding important new elements to address equity and climate resilience, we believe we will be in a better position to serve our community. We hope to partner with Council offices on engagement strategies and events to best serve your constituents. Staff is currently working on a detailed Community Engagement Plan; we will provide a follow-up memo with additional information and next steps in the early summer, 2021.