



Community Risk Assessment

Site Name: Lakewood

Date: 06/2025



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1.0 Introduction

A Community Risk Assessment (CRA) is a localized, neighborhood level analysis of a specific neighborhood or designated area. A CRA takes in advanced vulnerability analysis that impacts the lives, homes, and the surrounding environment of a neighborhood.

Wildland fires in the U.S. have been increasing in size and severity since regular records have been kept. Understanding central Texas fire ecology, historical and current fire occurrence, and the factors that influence fire behavior on the landscape provides a basis for determining a community's wildfire risk and identifying and implementing effective wildfire prevention and mitigation strategies. An important component of the present-day fire environment is the wildland-urban interface (WUI). The WUI occurs in areas where urban and suburban development abuts wildland vegetation and presents a challenge in wildfire protection, preparation, and suppression efforts.

Wildfire mitigation is the implementation of various precautionary measures that work to minimize the destructive effects of wildfire. Some measures focus on altering the WUI to reduce the amount of fuels available, while other strategies concentrate on treating structures to improve their ability to withstand a wildfire.

1.1 Statement of Intent

The intent of a CRA is to evaluate and analyze the wildfire risk and vulnerabilities of a community and to act as a starting point for a Community Wildfire Protection Plan (CWPP). An effective CRA aims to identify the risk of wildfire, promote ecosystem health, reduce structural losses, and provide for the safety of residents and firefighters during wildfires.

1.2 Goals and Objectives

This CRA is a report summarization of localized, personal analysis as well as a living document and depends upon people and partnerships to succeed. Specific goals of this document are to:

- Assess localized wildfire risk and vulnerabilities from a holistic perspective.
- Provide for the safety of residents.
- Visualize complex localized wildfire risk.
- Protect homes, businesses, and local infrastructure from wildfire.
- Promote and maintain healthy ecosystems and natural resources.
- Educate citizens about wildfire preparedness, prevention, and mitigation.

1.3 Climate

The increased frequency and duration of droughts and rising temperatures are a major climatic issue in Central Texas. Rainfall is typically distributed evenly throughout the year; however, several months of drought tend to occur on a 5- to 7-year cycle broken by excessive rains that may cause severe flooding. These excessive rainfall events typically occur in late spring and fall and encourage the growth of foliage which, in turn, becomes wildfire fuel during periods of drought.

Weather is critical to predicting fire behavior and is also the most extreme variable. Fire behavior in Central Texas is recognized to be wind and fuel driven, and continuing drought conditions increase the risk for extreme fire seasons.

2.0 Community Profile

Understanding the landscape, where people live, and where they are likely to live in the future are critical components of a CRA. This information provides the basis for understanding how local wildfire behaves, where the greatest risks to life and property are currently located, and where future wildfire risk reduction efforts, such as home hardening, may need to be focused.

Name of Community	Lakewood Austin, Texas, Travis County
Size of Community	180 acres
Area Boundaries	360 to the S, Bull Ck to the E, BCP to the N, and Jester
	to the W
Land Use/ Zoning	Residential
Year Community Established	1979
Approximate # of Structures	445
Approximate Population #	11,125

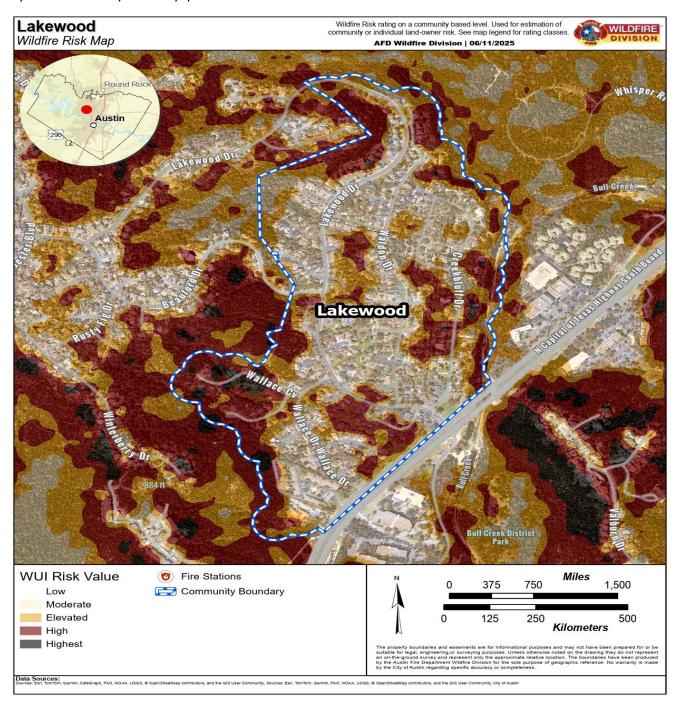


2.1 Critical Environmental Features (CEF's)

CEF's are important for public health, the environment, or both. Different communities may contain different CEF's such as easements, protected habitat, creek buffers, watersheds, etc. The Lakewood community is located within the Bull Ck watershed-a large wildfire would impact water quality in the area as subsequent mudslides/debris flows would be deposited into Bull Ck.

3.0 Wildfire Risk

Wildfire risk is based on fuels, weather, and topography. Understanding which factors affect your community can help prioritize risk reduction activities.



3.1 Demographics & Vulnerable Populations

Vulnerable populations include individuals with disabilities, older populations, homes without vehicles, etc. All of these vulnerabilities present different challenges in the event of emergency. As a neighborhood, it is imperative for community members to know who may need additional help in every stage of wildfire response: from mitigation and home hardening, to readying "Go Kits" and keeping an eye on local news reports, and especially in fleeing from the path of a wildfire. Communities should utilize social meetings (HOA, NA, etc.) to get a better understanding of vulnerable individuals within their community, and Firewise Committees should implement this data within their Action Plan.

4.0 Fuel Characteristics

Wildfires can occur when all three of the following conditions are met: the presence of fuel (vegetation *and* structures), suitable weather conditions (such as low humidity), and an ignition source whether it be natural, or human caused. These conditions are dynamic and have major effects on fire behavior.

This system of potential fuel, weather, and localized built conditions impacts the potential rate of spread (ROS). ROS is obtained by measuring the progression of a fire in feet per hour. Wildland firefighters often refer to this progression in "chains" (66ft). These factors also dictate the potential flame lengths, size, and intensity of a fire.

Western Travis County is composed primarily of Ashe Juniper and oak woodlands. Vegetation within the Lakewood community consists mainly of mixed juniper-hardwood forest both along the perimeter and within the interior of the development. There is also an abundance of ornamental vegetation within the community itself, with species like Nandina, Crepe Myrtle, and others present in individually owned parcels. When conditions allow for high fire danger (dry, hot, high winds, etc.), these fuel types can contribute to fast ROS and produce significant flame lengths in a wildfire.



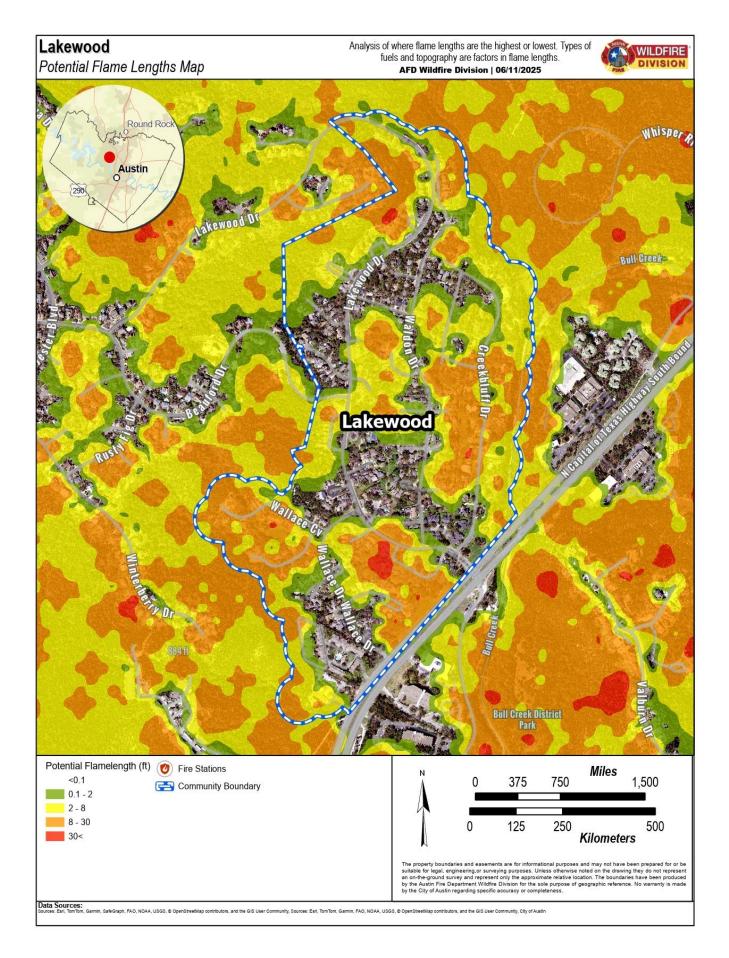


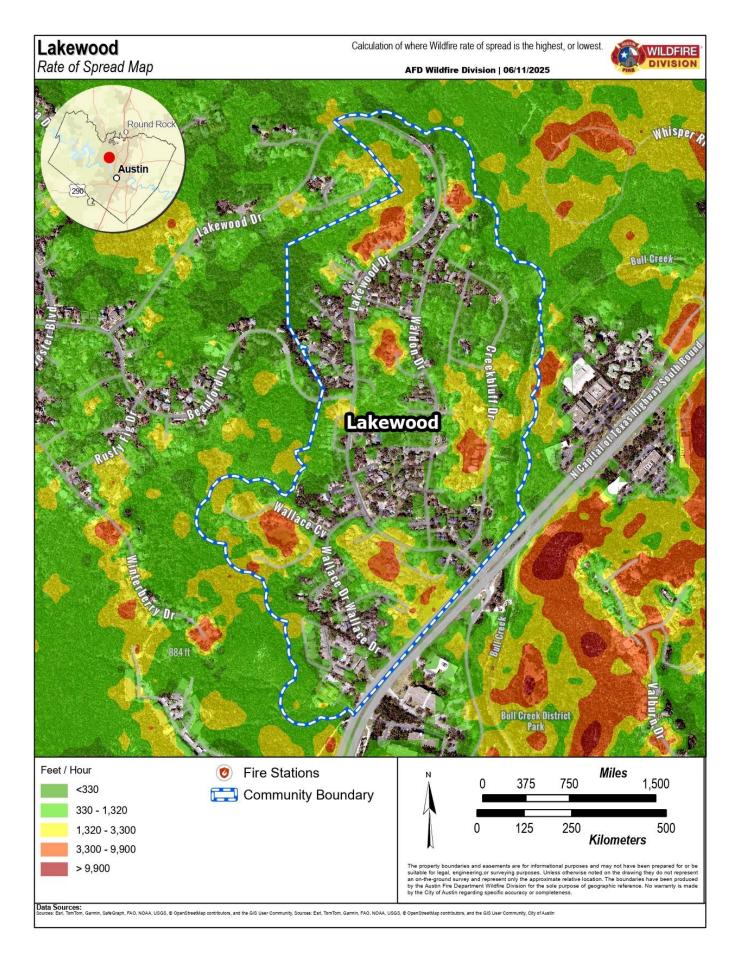


5.0 Topographical Characteristics

Analyzing the topography of a local area helps first responders predict wildfire behaviors. The slope of the area is a central topographic consideration that is used in the assessment of wildfire risk within a community. The greater the incline on a slope, the greater potential ROS of the fire. Understanding topographical characteristics of a given community allows for more robust planning of suppression strategies and informs first responders as to what resources can be utilized in initial attack efforts.

Western Travis County is located within the Edwards Plateau which is characterized by hilly and rugged topography with elevations ranging from approximately 860 to 1,423 feet. There is significant slope along the west, north, and east portions of the Lakewood community. Canyons run upslope from the Lakewood community west to the community of Jester Estates on the ridge above, while there is a considerable drop in elevation along the northeast/east portions of the community down to Bull Creek. Topographical features within Lakewood would likely contribute to fast ROS and high flame lengths in a wildfire; for every 10° increase in slope, a fire's rate of spread will roughly double!





6.0 History of Wildfire

Drought conditions, extreme weather conditions such as high winds, and human error/carelessness are known factors in past wildfires throughout Central Texas. In recent memory, there have been 2 structure fires within the Lakewood community which fortunately have not developed into conflagration fires.

7.0 Risk Reduction Projects

When guided by conservation-based principles, fuel-hazard reduction can facilitate long-term positive environmental outcomes and assist in the process of restoring health to woodlands, scrublands, grasslands, and watersheds while providing for community wildfire resilience. Fuels reduction can be achieved through a variety of methods including mechanical treatment, chemical treatment, prescribed fire, and grazing. Risk reduction projects can also take the form of structure hardening, property maintenance, educational outreach, and more.

Project Location	Primary Threat/ Risk	Recommended Action/ Mitigation
Lakewood HOA-owned greenspace	Dense vegetation, ladder fuels, steep topographical features	Remove "jackpots" of dead/downed vegetation, invasive species, and ladder fuels in HOA owned greenspace. Prioritize work in areas with steep slopes, as fire moves faster in areas with steep topography.
Homes within Lakewood community	Ember incursion and subsequent conflagration fire	Perform Structure Ignition Zone Evaluations on structures within the community and implement home hardening best practices. Prioritize addressing homes within community where both steep slopes and dense vegetation are present.
Lakewood Community	Flame impingement, radiant heat, ember shower, and smoke exposure from wildfire	Educate residents of the community to better protect themselves and their property from wildfire. Consider hosting volunteer days where residents can participate in mitigation efforts collectively.

8.0 Built Environment

The built environment within the Lakewood community consists of single-family residences, duplexes, and condos. Build materials throughout the neighborhood also vary, with some homes exhibiting more hardened construction features such as brick/stone and stucco, while older builds tend to be composed of combustible materials. There are many lengths of wooden fence throughout, a combustible construction feature which often lends itself to significant fire spread and structure damage. While most abodes are privately owned, a small percentage are leased; given the transient nature of residents occupying a leased property, it is important for the Lakewood Firewise committee to keep this demographic apprised of fire danger in the area and inform them of communal efforts towards wildfire mitigation.







8.1 Target Hazards

The definition of target hazards will vary between jurisdictions. Some examples are high occupancy sites and places of assembly which could result in significant loss of life or have a negative impact on the community if a fire were to occur. The Fo Guang Shan Xiang Yun Temple at the southernmost point of the community is a target hazard, but fortunately egress out to HWY 360 would be relatively quick as it is located just off the highway.

Common Areas or Adjacent Public/ Private Lands:

- Common Areas: Lakewood Communal Pool, Playground, and Tennis Courts
- Adjacent to wildlands with accumulated fuels
- Owners of Adjacent Lands: COA, Private





8.2 Defensible Space

Home design, construction materials, and immediate surroundings all contribute to the ease with which a home can ignite during a wildfire. Treatment of structural ignitability by homeowners in collaboration with fire professionals can help to reduce this risk. "Home hardening" is a phrase used to describe the use of non-combustible building materials.

Additionally, maintaining "defensible space" around the area immediately surrounding a structure is critical to its survival during a wildfire. Defensible space mitigation projects

should refer to the Structure Ignition Zone (SIZ) which extends in a 200-foot radius. Placement of vegetation, lawn care, and use of fire-resistant materials are all key components of mitigating the SIZ. If you have concerns about the effects of wildfire on your property, Wildfire Mitigation Specialists with the AFD Wildfire Division can provide a free evaluation of your property, known as a Structure Ignition Zone Evaluation (SIZE).

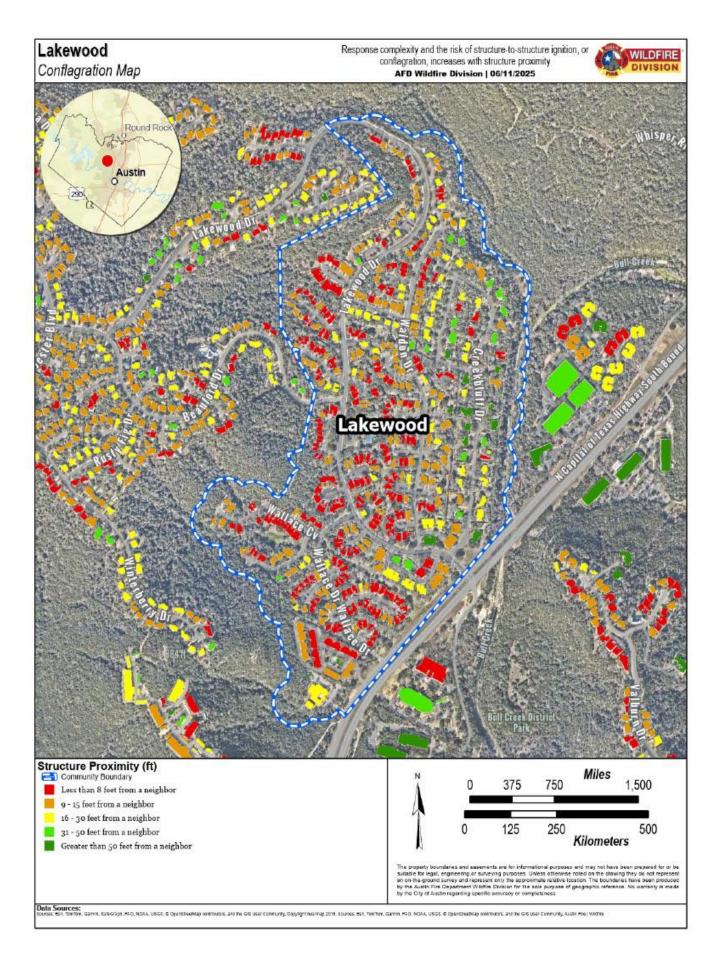
Immediate Zone:
0 to 5 feet from home
Intermediate Zone:
5 to 30 feet from home
Extended Zone:
30 to 200 feet from home



8.3 Conflagration Potential

Conflagration is a domino effect like phenomenon which occurs during wildfires when structure fires ignite adjacent buildings. Embers from fires, also known as firebrands, can travel up to 1.5 miles when extreme fire behavior and high winds are present. Structures within fifteen (15) feet of each other are at risk of succumbing to conflagration, while structures within nine (9) feet of each other are at greatest risk. The majority of homes within the Lakewood community are either 9-15' apart or less.





8.4 Infrastructure Considerations

- Utilities: COA
- Water Supply/ Hydrants
- Electrical Lines & Substations

8.5 Road Conditions

- Narrow/Dead End Roads: There are many cul-de-sacs within the Lakewood community
- Street Signs and Address Numbers Visible







9.0 Evacuation Awareness

Evacuation Route Description:

The community of Lakewood has numerous evacuation routes: egress south via Lakewood Dr or Creekbluff Dr to HWY 360, west up Beauford Dr to Jester Blvd and down SW to RM 2222, or north up Lakewood Dr then again connecting to Beauford and down to RM 2222.

- Ready, Set, Go Guide
- Warn Central Texas Info @ www.warncentraltexas.org
- Watch Duty Cell Phone App @ www.watchduty.org
- Temporary Assembly Points
 - o What is a Temporary Assembly Point (TAP)?

A TAP is an outdoor location where populations gather to check in after evacuating their area. **Take note that these sites are NOT designated long-term refugee shelters.** Evacuees are strongly encouraged to check in at TAPS via QR codes posted on signage at the site. By checking in, residents within a community greatly assist first responder efforts in ensuring that everyone within an affected community is accounted for. Additionally, residents who check in can be notified on the status of their neighborhood and their homes in the aftermath of a fire. For demographics with housing and/or medical needs, assistance can be provided.

- Potential Temporary Assembly Points:
- Great Hills Market, 9828 Great Hills Trl, Austin TX 78759 (3.3 mi, Capacity: 500)
- Arboretum Crossing, 9333 Research Blvd, Austin TX 78759 (3.4 mi, Cap: 350)
- Regal Gateway, 9700 Stonelake Blvd, Austin TX 78759 (3.7 mi, Cap: 500)

Fire Station Proximity:

NOTE: Fire Stations are NOT to be used as TAPs-this is solely for community awareness

Station 31, 5507 RM 2222 (1.3 mi), Station 21, 4201 Spicewood Spgs Rd (3.5 mi), Station 47, 4200 City Park Road (4.4 mi)

Resident Summary

This summary should help convey a bigger picture of your community's current wildfire safety status and suggest areas for successful focus. List areas where improvements can be made, with particular emphasis on home hardenina. immediate zones, and fuels mitiaation.

The community of Lakewood will focus primarily on home hardening in their efforts to mitigate wildfire risk. To help meet demand for SIZEs in the area, members of the community will attend Structure Ignition Zone Advisor courses hosted by the AFD Wildfire Division. Once initial SIZEs have been conducted with AFD assistance on site in the community, recognized local SIZ Advisors will continue outreach and education efforts for home hardening. Many lots within the community were observed to have firewood and other combustibles in close proximity to the main home, and wooden fences are ubiquitous as well; residents will be encouraged to move combustibles further into the intermediate/extended zones around their properties and transition portions of wooden fences connecting to homes with a noncombustible material (i.e. wrought iron, composite materials) when possible. To keep interest and investment in Firewise efforts high, Lakewood should organize events for community mitigation year-round (presentations, clean up after storms, movie screenings, etc.). Lastly, the Lakewood community should continue vegetation management efforts primarily in areas where dense vegetation and steep slopes are in close proximity to dwelling units. Refer to the Wildfire Risk Map on pg. 5 of this CRA for a better understanding of where to focus initial vegetation management efforts, and remember to address regrowth and dead/down accumulation every 3-5 years and after severe storms.

Learn More

- For more information about the AFD Wildfire Division, visit the Austin Area Wildfire Hub @ www.atxwildfirehub.com
- To learn how to better protect your property from wildfire, visit
 https://tfsweb.tamu.edu/ProtectYourHome/ or register for a free 1-hour online course
 "Reducing Wildfire Risk to Property: Protecting Your Home or Business" @
 https://www.nfpa.org/wildfirepreparedness
- Sign up for emergency alerts @ www.warncentraltexas.org
- To learn more about the Firewise USA® program, visit www.nfpa.org/education-and-research/wildfire/firewise-usa
- To ensure compliance with Austin tree regulations, visit www.austintexas.gov/page/trees-residential-property
- To learn about conservation easements in your area, visit <u>www.traviscountytx.gov/tnr/nr/conservation-easement</u>

In the Event of a Wildfire:

- Act Early, evacuate! Do not wait to be advised to leave.
- Remember the 8 P's: People, Pets, Papers (important documents), Prescriptions (meds), Personal Devices/PC's, Passports/ ID's, Photo Albums, Plastics (debit/credit, insurance cards)
- If it can be done safely, place a ladder near the roof line, visible from the street for firefighters to use.
- Connect water hoses to put out spot fires and replenish any water supplies.
- Remove flammable objects (small propane tanks, door mats and lawn furniture) to avoid being ember traps.
- Move stored cars, RVs, lawnmowers, tractors, etc. that are parked near home on grass or brush.
- Do not launch drones around a wildfire. Drones interfere with firefighting efforts and are dangerous to aircraft assisting in containment.

Environmental Considerations:

This document is intended to provide only a general overview of the rules and recommendations related to environmental sensitivities regulated by the City of Austin, Travis County, and US Fish and Wildlife Service. To ensure compliance with these regulations, be sure to reference the documentation provided by the respective regulatory entities.

If vegetation modification project is located in the <u>Golden Cheeked Warbler Habitat Mitigation Zone</u>. All federal regulations for endangered species shall be followed. Clearing of woody vegetation should be completed during the months September through February. After March 1, such work must cease since the protected songbirds will have returned to the area for nesting. During the period from March through August, vegetation removal can be done only after a bird-monitoring program and permit using USFWS protocols demonstrates that no nesting birds are located within 300 feet of the project bounds. US Fish and Wildlife, Travis County BCCP, and City of Austin BCP provide best management practices for fuel modification in confirmed and potential habitat areas.

- No living, canopy-contributing, trees shall be removed.
- No living trees >5in DBH (diameter at breast height is 4.5ft) shall be removed.
- Any living tree <5in DBH that may soon contribute to opening in existing canopy shall remain
- No limbs above 6ft high shall be removed
- Proper ISA tree pruning best-management-practices shall be implemented
- To inhibit the spread of Oak Wilt fungus, avoid cutting Oak trees from February 1 to June 30. Any cuts on
 Oak species shall be done with pre-sanitized tools or equipment. Oak wounds shall be sealed with latex
 based paint or pruning spray

If tree removal of >5in DBH or any of the above criteria cannot be fulfilled in order to adequately mitigate, a permit must be filed with Travis County or USFWS and determination must be made if the removal will be considered a "take" of habitat. Fees may apply.

Travis County will calculate a mitigation fee for the proposed project to obtain a BCCP permit. This mitigation fee is calculated using the habitat map and corresponding mitigation fee zones; calculations are rounded to the nearest tenth of an acre. Mitigation fees are applicable to the entire legal tax parcel(s) in which the project will occur. Because the BCCP is a streamlined alternative to working with USFWS, the County is not able to assess mitigation quotes for only a portion of a legal tax parcel.

Incidental Take Fee Schedule:

- Golden-cheeked warbler Zone 1 (confirmed habitat) = \$5,500/acre
- Golden-cheeked warbler Zone 2 (unconfirmed habitat) = \$2,750/acre
- Black-capped vireo habitat = \$0/acre (species delisted in 2018)
- Karst Zone = \$1,000/ acre

Landowners with endangered species habitat on their property (indicated either by the BCCP habitat maps or by a professional survey) may comply with the endangered species act in one of two ways:

1. Consult directly with the USFWS to determine and mitigate the impacts your proposed project would have on endangered species. You may apply for an ESA 10(a)(1)(B) permit through the local USFWS office at: 10711 Burnet Road, Suite 200, Austin, Texas 78758, (512) 490-0057. Obtaining a USFWS permit can be a lengthy process. A permit from the USFWS entails developing a Habitat Conservation Plan that includes multiple-year species surveys, a mitigation proposal, a public involvement process, and meeting all permit issuance criteria. If you choose to work with the USFWS, you will not be eligible to use the BCCP permit process.

2. Alternatively, you may be eligible to mitigate impacts to endangered species with a <u>BCCP Incidental Take</u> <u>Permit</u>. This process is an alternative, streamlined option to comply with the federal Endangered Species Act administered by Travis County.

For more information surrounding Endangered species regulations in the Balcones Canyonland and GCWA habitat visit The Balcones Canyonlands Permit and Infrastructure Compliance Toolkit Maps or USFWS Biologist:Jade Florence at 512-490-0057 jade florence@fws.gov

Austin Tree Ordinance:

Within the City of Austin full and limited purpose jurisdiction, any tree 19in DBH or greater, must have an approved permit prior to removal. For more information about Austin's tree ordinance and tree permits, visit the City Arborist webpage. 13-7-38; Ord. 990225-70; Ord. 031211-11; Ord. 20100204-038

Wildfire Prevention Plan:

A Wildfire Prevention Plan is a pre-action plan used to help avoid accidental wildfire ignitions on Wildlands and to provide initial response when ignitions are encountered. The plans should include the following at a minimum:

- Project location including property description, address(es), and/or GPS coordinates as applicable.
- Activity description
- Preplanned measures to avoid ignitions. ie: park away from combustible fuels, clear hot work areas of vegetative matter (to bare soil), etc.
- Description of fire suppression equipment, such as fire extinguishers, that will be in place during work.
- Identification of a designated spotter charged with monitoring for ignitions. During high fire danger periods the spotter might not have other duties that interfere with this primary charge.
- Identification of the individual on-site who is capable of calling 911 and directing them to the location when an ignition occurs or is encountered.
- Identification and documentation of location (911 Address, driving directions, etc) and access information for the activities that are occurring.

Definitions:

High Fire Danger — The period of time during which there is imminent risk for ignition and spread of wildfires. This will be determined by the local <u>NFDRS</u> fire risk level and any county or municipal issued burn bans. It will remain in place until rescinded. High risk activities should not be conducted at times of high fire danger.

Spotter — an individual on a work team or crew who is responsible for observing and reporting ignitions of Wildland fuels. For routine operations, this person may be designated as spotter as an additional duty. During high risk activities, conducted during high fire danger periods, the spotter will be dedicated solely to that activity. The designated spotter must possess the ability to communicate effectively with their crew, and with emergency operators. The spotter must be able to communicate the address and field location of the work, and must be able to direct emergency crews to the ignitions and/or fire site.

High Risk Activities — These include welding and grinding, work with energized electrical equipment or facilities; operation of vehicles or power equipment in tall grass or other fine fuels, or any activities that will typically generate sparks, or conduct heat to fuels in a manner that might cause an ignition. High risk activities should not be conducted at times of high fire danger.

For contractors, consultants, infrastructure owners and their crews, researchers, and other formal visitors the Wildfire Prevention Plan shall be a written document prepared and provided by the entity receiving access privileges. They will be required to review it and make appropriate assignments for spotters and 911 callers before the beginning of each work day.

Appendices/ Definitions

Chain: unit of measurement (66ft) used in wildland firefighting to gauge a fire's rate of spread.

Climate: the weather conditions prevailing in an area in general or over a long period.

Community Risk Assessment (CRA): a participatory process for assessing hazards, vulnerabilities, risks, ability to cope, preparing coping strategies and finally preparing a risk reduction options implementation plan by the local community.

Community Wildfire Protection Plan (CWPP): a comprehensive plan developed by local citizens and state and federal agencies.

Conflagration: an extensive fire which destroys a great deal of land or property.

Defensible Space: is a natural and/or landscaped area around a structure that has been maintained and designed to reduce fire danger.

Drought: a prolonged period of abnormally low rainfall, leading to a shortage of water.

Environment: the surroundings or conditions in which a person, animal, or plant lives or operates.

Fire Behavior: describes the manner in which a fire reacts to the influences of fuel, topography and weather.

Fire Ecology: a scientific discipline concerned with the effects of fire on natural ecosystems.

Flame Length: is the distance measured from the average flame tip to the middle of the flaming zone at the base of the fire.

Fuel: substances that, when burned, release a significant amount of heat and energy.

Fuel Characteristics: factors that make up fuels such as compactness, loading, horizontal continuity, vertical arrangement, chemical content, size and shape, and moisture content.

Home Hardening: helps reduce fire risk by increasing your home's resistance to heat, flames, and embers using building materials and installation practices that help protect the vulnerable elements of your house.

Ignitability: capable of being burned.

Landscape: all the visible features of an area of countryside or land, often considered in terms of their aesthetic appeal.

Non-combustible: not able to burn easily.

Rate of Spread: the speed with which the fire is moving away from the site of origin.

Resiliency: the capacity to withstand or to recover quickly from difficulties; toughness.

Slope: a surface of which one end or side is at a higher level than another; a rising or falling surface.

Structure Ignition Zone (SIZ): the characteristics of a home and its immediate surroundings within 150 feet.

Topography: the arrangement of the natural and artificial physical features of an area.

Weather: the state of the atmosphere with respect to wind, temperature, cloudiness, moisture, pressure, etc.

Wildfire: a large, destructive fire that spreads quickly over woodland or brush.

Wildland Urban Interface (WUI): a zone of transition between wilderness and land developed by human activity – an area where a built environment meets or intermingles with a natural environment.



DISCLAIMER

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