

**Barton Creek Property Owners Association  
The Estates of Barton Creek Property Owners Association  
Firewise Communities/USA  
Community Wildfire Risk Assessment Report  
May 3, 2005**

Throughout February, March and April 2005, a widespread wildfire risk assessment was conducted throughout several communities in the Barton Creek area of West Travis County, TX. This assessment was conducted by the Texas Forest Service at the request of members from the Barton Creek and The Estates POAs, and in cooperation with the Travis County ESD 3 - Oak Hill Fire Department. The goals of this project are to:

1. Locate and define the areas of wildfire risk throughout the Barton Creek POA and The Estates POA along Barton Creek Parkway and Lost Creek Drive,
2. Raise the awareness of wildfire concerns (to all property owners, residents, developers, property managers, etc.) in the area, and
3. Bring all of the participating communities together to mitigate the risk of wildfire in one collective and cooperative effort.

The communities included in the assessment are:  
(See Map Attached)

| <u>Community Name</u>       | <u>Acreege</u> | <u>#Lots</u> | <u>#Homes</u> | <u>#Vacant</u> |
|-----------------------------|----------------|--------------|---------------|----------------|
| Wimberly I                  | 67             | 47           | 42            | 5              |
| Wimberly II                 | 103            | 47           | 0             | 47             |
| Saint Gabriel's School      | 30             | School       | 0             | -              |
| St. Micheal's Academy       | 56             | School       | 0             | -              |
| Le Marquis Apartments       | 25             | 27 Buildings | 250 Units     | 0              |
| The Woods I                 | 113            | 94           | 88            | 6              |
| The Woods II                | 111            | 73           | 55            | 18             |
| The Woods III               | 49             | 72           | 69            | 3              |
| Governor's Hill             | 34             | 44           | 43            | 1              |
| North Rim                   | 61             | 18           | 16            | 2              |
| The Ridge                   | 40             | 65           | 37            | 28             |
| Watersmark                  | 51             | 47           | 46            | 1              |
| Barton Creek Country Club   | 407            | Country Club | Hotel         | 0              |
| The Owners' Club            | 29             | 33           | 27            | 6              |
| The Fairways                | 30             | 49           | 49            | 0              |
| The Foothills               | 129            | 55           | 49            | 6              |
| The Estates of Barton Creek | 352            | 214          | 200           | 0              |
| <b>Totals</b>               | <b>2118</b>    | <b>603</b>   | <b>528</b>    | <b>75</b>      |

Additional neighboring properties that may be included in this project in the future are:  
Querencia Retirement Community  
The Pod (behind Wimberly I)  
The Terraces (in the Travis County ESD 9 - Westlake Fire Department district)  
Escala

*There are some common strengths and concerns existing throughout all of the participating communities.*

### **COMMON STRENGTHS**

#### Fire resistant building materials

- ✓ Siding. All buildings in all neighborhoods are constructed out of masonry and/or cementitious products (stone, brick, stucco, concrete and Hardi products).
- ✓ Roofing. Roofing materials range from ceramic and concrete tiles (excellent) to metal (very good) to asphalt shingles (good). The only exception to adequate roofing is located in Watersmark, where one home has a wood shake roof, which will drastically compromise the survivability of that one home. This one home, if ignited, may threaten neighboring homes via radiant heat and also if the fire spreads through the surrounding vegetation. It will not have much impact from a regional perspective.



## Fire Department

- ✓ Location. All homes in all subdivisions are within a 15 minute response time from the new Travis County ESD 3 - Oak Hill Fire Department station. In many cases, homes are only a few minutes away.



- ✓ Fire Hydrants. All subdivisions and communities have adequate numbers of fire hydrants, which are well spaced, throughout the area.



- ✓ Street Signs. All communities have metal street signs at their entrances.

## COMMON CONCERNS

### Access & Egress

Most neighborhoods are set up in a one-way in/one-way out design, and all neighborhoods, with a few minor exceptions in The Estates and The Foothills, have gated entrances. While this may provide better security by having fewer points of entry for unwanted visitors, it may also inhibit the access to emergency responders (including law, fire and medical). If alternative points of entry can not be created, then gated entrances should be made to easily accommodate the largest emergency response vehicles, namely the structural fire engines. Entry keypads should be designed and located where they will provide the least amount of blockage and interference to these large emergency vehicles.



### Addressing

- \* Street Signs. Most neighborhoods (except apartments and condominiums) have metal signs throughout their streets; however, many of these may not be reflective, which makes them difficult or impossible to see after dark or in heavy smoke.



\* Address Signs for Individual Lots. Some neighborhoods have inconsistent locations and/or styles for individual properties. Emergency responders are often slowed down when they have to search for the address signs. Signs should be placed where they are easy to read from both directions down the street. They should also be reflective and placed uniformly throughout the subdivisions. Vegetation should be managed to keep signs visible at all times.



## Landscaping

Most of the common concerns pertaining to the landscaping plant selection and arrangement, but also with the native vegetation in the greenbelts and on the slopes intermixed with various communities. There is a preference...

- \* **Plant Selection.** Plants with high flammability properties are heavily used throughout all neighborhoods. The most commonly used plants which increase the wildfire risk to this area are:
  - Rosemary
  - Yaupon (regular and dwarf)
  - Pampas grass and other bunch grass species
  - Ashe Juniper (cedar)
  - Some algerita (a.k.a. agarita)
  - Most evergreen groundcovers and shrubbery
  
- \* **Plant Arrangement.** While highly flammable plants may still be used in most landscapes, they should be carefully located where their threat is minimized. If possible, they should not be next to structure walls, and certainly not below or next to any windows. They should be planted out in the yard, either as individual ornamentals or in “island” clusters. If grouped under trees, all mid-story limbs, branches, vines, and other vegetation should be removed to create a break in the “ladder fuels”, plants which help the fire move from the ground into the tree crowns. If highly flammable plants are concentrated around tree trunks, the heat could destroy the trees’ cambium layers; thereby killing the trees themselves. This could result in trees falling over into homes and other improvements.



- \* Native Vegetation (Juniper, Yaupon, Algerita). These plants are growing in their native ranges, but not in their historic distribution. Historical records indicate that “cedars” once covered 3 million acres across the entire state of Texas. These plants now occupy more than 30 million acres and are increasing in numbers each year. They are highly competitive for soil nutrients and soil moisture. Thus, they are successfully out-competing many other native species. These trees traditionally existed in shallow, rocky soils and on steep, rocky slopes where it was difficult for wild fire to damage and kill them. By suppressing wildfire aggressively for the past century, we have successfully removed the most effective natural control for this brush species, and allowed it to thrive almost everywhere.

These volatile trees now cover a majority of the slopes in the Barton Creek watershed, where they have matured into a post-climax stand of dense trees and brush. They are creating a continuous crown cover and steadily out-competing the various hardwoods, including the live oaks and post oaks that are trying to hang on. The adult hardwoods, along with native grasses and forbs, are competing with the junipers for nutrition and moisture from the soil. Any new and young seedlings are being consumed by the deer population, whose food source is continually reduced by the encroaching junipers.



These unmanaged mature trees contain a high percentage of dead material, often referred to as deadwood. At the very least, any mature trees within 50-100' of any structures and improvements should have all deadwood removed, and the trees should be limbed up to 6-10' from the ground. This will eliminate the majority of ladder fuels that would transport the fire from the ground into the tree canopies, transforming a “surface fire” into a “crown fire”.



If mature junipers are serving as vegetative screens between properties, neighbors should consider replacing these volatile plants with alternative species with lower flammability ratings.

## **SPECIFIC CONCERNS BY NEIGHBORHOOD**

### **Wimberly I**

Concern: Neighborhood is located in area with steep slopes with some heavy vegetation.

Recommendation: Thin and remove highly flammable vegetation at least 100 feet down-slope from any structures and improvements.

Concern: Some undeveloped lots with native vegetation present. Greenbelts throughout due to drainages are covered in dense vegetation. Stands of mature juniper create heavy fuel loading for a wildfire and increase fire intensity wherever present. Some tree and plant debris has been discarded in some vacant lots.

Recommendation: Thin stands of juniper in undeveloped lots and 50-100' down from the "ridgetops" to provide 20' + breaks between trees. Limb remaining trees 6-10' from the ground.

Concern: Some wood fencing and wooden decks present.

Recommendation: Decks should be completely enclosed underneath with metal screen so embers and yard debris can't get underneath. Wood fencing should not run directly to the structures. There should be 10' sections of non-flammable fencing between the house and wooden fences.

### **Wimberly II**

Concern: Streets have narrow cul-de-sacs with large grass-covered islands. Not enough room for emergency apparatus to turn around. One tree island present with minimal clearance on either side. Too narrow for fire apparatus to pass without jumping curbs.

Recommendation: Remove grass islands in cul-de-sacs and widen streets on either side of tree island.

Concern: The structures have not yet been constructed which leaves building materials unknown.

Recommendation: Plan to incorporate use of Firewise building materials into the design of the structures.

Concern: Landscaping is still unknown.

Recommendation: Plan to use plants with low flammability ratings in the landscapes and thin and remove all surrounding junipers that would threaten future homes and improvements.

Concern: Thick stands of continuous mature juniper trees are present in some of the upper development areas, and on the slopes below the platted lots.

Recommendation: Thin juniper stands to create 20' spacing between individual tree canopies. Limb remaining trees 6-10' from the ground.

### **Saint Gabriel's School**

Concerns: Address number not displayed?

Recommendations: Post number out by entrance - reflective and visible from both directions of traffic.

Concern: Wooden decks, ramps, staircases and walkways on the portable offices/classrooms were mostly enclosed underneath, but not entirely. Some nooks and crannies provide sufficient openings for embers to enter.

Recommendation: Completely enclose all wooden decks, ramps, walkways, etc. with metal screen backing to prevent embers from blowing underneath.

Concern: Wooden fencing between 2 of the portable buildings.

Recommendation: Replace with a non-flammable fencing alternative.

### **St. Michael's Academy**

Concern: Wooden staircases, ramps, and decks on portable buildings. Mostly open underneath.

Recommendation: Enclose these wooden features with solid non-flammable skirting to prevent embers from being trapped underneath.

Concern: Wooden privacy fence attached to 1 external building could "wick" fire directly to building. Also adjacent to flammable light brush which could contribute to fence igniting.

Recommendation: Remove brush from behind fenced area. Replace wooden fence with a non-flammable alternative (metal or masonry, etc.).

Concern: Portable buildings have points of access to the attic along the roofline/eaves.

Recommendation: Repair gaps to prevent embers from blowing into attic spaces. Protect any vent openings with screen vent covers, also to prevent embers from gaining access to the attic spaces.

### **Le Marquis Apartments**

Concerns: Heavy old-growth juniper vegetation along entire eastern perimeter with some vegetation coming within 30 feet of buildings.

Recommendations: Create a minimum 30-foot clearance (50+ feet preferred) between junipers.

Aggressively thin stand of junipers (leave the oaks and other hardwoods) and limb remaining trees 6-10' from the ground.



Concern: Building numbers aren't extremely visible and probably are non-reflective. Apartment numbers are small and also non-reflective.

Recommendation: At the very least, make the building numbers reflective by using a reflective paint or replacing with reflective signs. Add larger, reflective numbers for easier identification of the individual apartments.

Concern: Some moderately thick stands of junipers are in small green belts within the apartment compound. These are mostly limbed up (but not all), and some are obviously being used for vegetation screens. These plants could generate significant heat for the structures nearby.

Recommendation: Limb up any trees that haven't already been trimmed (from 6-10' from the ground). Thin stands to create 20' spacing between the crowns of the trees. Juniper trees closest to the buildings (within 20') should be removed.

Alternative plants/shrubs with lower flammability ratings could be substituted for vegetation screens.

### **The Woods I**

Concerns: Address numbers are uniformly placed and visible to traffic approaching from both directions. GOOD!!! However, since they are placed close to the ground near the street, there are often landscaping plants that threaten to hide the numbers from view.

Recommendations: Landscape plans should be respectful of the address numbers and not obscure them from view. Plants competing with numbers should be kept closely trimmed, removed or relocated.

Concern: Other landscaping concerns are the use and placement of highly volatile plants (rosemary, ornamental grasses, yaupon and other hollies) close to the homes and other improvements. Some trees are overhanging rooflines and leaving vegetative debris on rooftops.

Recommendation: Highly volatile plants should be removed or relocated further out in the yard, and possibly replaced with plants that are not a flammable. Trees with limbs overhanging rooflines should be trimmed back OR residents should make sure that adequate maintenance is performed to keep rooftops and gutters free of debris.

Concern: Drainage easement along SE side has some water retention ponds and heavy vegetation (juniper).

Some undeveloped lots are scattered throughout, and also have unmanaged wildland fuel present.

Recommendation: Thin juniper stands, especially within 30-50' of any structures. Limb any remaining trees 6-10' from the ground.

### **The Woods II**

Concerns: Street signs don't appear to be reflective.

Recommendations: Upgrade to reflective street signs or modify existing signs (with reflective paint, etc.) to make them easy to see at night.

Concern: Individual addresses aren't uniform in design or placement.

Recommendation: Implement additional address signs in a uniform location that can be easily seen from both directions on the street, and reflective at night.

Concern: Heavy use of highly flammable plants in the landscaping designs.

Recommendation: Consider relocating highly flammable vegetation further out in the yards and replacing with alternative plants that have lower flammability ratings.

Concern: Some vacant lots have not been maintained and have heavier fuel loading.

Recommendation: Thin and remove junipers within 30-50' of structures, and limb remaining trees 6-10' from the ground.

### **The Woods III**

Concern: Address numbers are hard to see.

Recommendation: All numbers should be reflective and easy to see from both directions down the streets.

Concern: Natural gas pipeline easement runs through neighborhood.

Recommendation: Alert all residents in the community to the presence of the pipeline and provide them with contact information to the pipeline company to report any leaks, problems, etc. Residents adjacent to pipeline should develop individual evacuation plans in the event of either wildfire or pipeline rupture.

Concern: Landscaping concerns due to placement of highly volatile plants near structures and improvements.

Recommendation: Remove or relocate flammable plants further into yards and away from structures. Consider substituting alternative plants into the landscapes with lower flammability ratings.

Concern: Adjacent greenbelts are thick with mature juniper stands. Heavy, continuous tree stands provide ideal conditions for intense fire behavior in periods of drought and extreme fire danger.

Recommendation: Reduce density and continuity of juniper stands in greenbelts by selectively thinning trees to create 20-30' spacing between trees. Limb remaining trees 6-10' from the ground to remove ladder fuels.

### **Governor's Hill**

Concern: Cedars threatening #32 and #28.

Recommendations: Remove 2 cedars from #32 and mitigate threat of cedars behind #28.

Concern: Heavy use of plants with high flammability ratings such as rosemary, yaupon, pampas grasses, and algerita.

Recommendations: Remove or relocate highly flammable plants away from structures and other flammable plants. Consider replacing these volatile species with less flammable options.

Concern: Junipers exist on slopes below homes, but somewhat thinned. Still present some threat to homes above them.

Recommendation: Remove trees within 50' down-slope from homes and limb up other trees within 200' from ridgeline 6-10' from the ground.



### **North Rim**

Concern: Neighborhood is located adjacent to a box canyon with steep slopes.

Recommendation: Reduce vegetation by thinning junipers at least 100 feet down-slope from structures.

Concern: Inadequate turn-around space for emergency vehicles. This limits feasibility for fire department to respond safely, and could cause congestion in the event of an evacuation.

Recommendation: Develop comprehensive evacuation plan to include elderly and disabled residents and pets.

Concern: Fire hydrant hidden from view.

Recommendation: Remove vegetation around fire hydrant to improve visibility and accessibility.

## **The Ridge**

Concern: Street signs are pale and slightly difficult to read at a distance. Possibly non-reflective?

Recommendation: Replace with signs that are easier to read and reflective.

Concern: 8317 Series homes are on a narrow, dead-end road with non-existent turn-around. Fire hydrants present, but only smaller fire apparatus could reasonably utilize them. Large engines could get trapped unless they back in. Any fire apparatus will severely limit traffic flow along that road and possibly prevent evacuations.

Recommendation: Create defensible space around these homes and develop a comprehensive evacuation plan to include elderly, disabled and pets. Residents should be able to safely leave their homes and the structures should have a good chance of surviving a wildfire without any fire department assistance.

Concern: Heavy use of flammable plants in landscaping.

Recommendation: Remove or relocate highly flammable plants away from structures and improvements. Consider alternative plants with lower flammability ratings.

## **Watersmark**

Concern: Narrow roads and inadequate cul-de-sacs, and locations for large vehicles to turn-around, will limit the capability of emergency response vehicles.

Recommendation: Develop comprehensive evacuation plan to include all elderly and disabled residents and pets.

Concern: Excessive use of clump grasses in landscaping will contribute to spread and intensity of fire in neighborhood.

Recommendation: Reduce amount of clump grasses, and position remaining grasses away from structure and other highly flammable vegetation.

Concern: Address numbers extremely hard to read (rusty, etc.) and non-reflective.

Recommendation: Alter current numbers to make them reflective or add reflective numbers to lots. Position all address numbers where they can be easily readable from both directions on the streets.

Concern: One house has a wood shake shingle roof. This house will probably not survive a major wildfire event, and the fire department will be forced to focus their efforts on more defensible homes.

Recommendation: Replace roof with a fire-resistant roofing material such as ceramic or concrete tile, or metal roofing. There are masonry products on the market that strongly resemble the appearance of wood shake roofs, but are much less flammable.

If "fake shakes" are installed to replace current roof, Oak Hill Fire Department should be made aware of the change.

### **Barton Creek Country Club**

Concerns: Address sign does not show 911 address numbers and does not appear to be reflective. First time to the club, I missed the turn. Not good.

Recommendations: Add reflective address sign to show both number and street name, if possible, or modify current sign to make it reflective and display clear address from both directions on the street.

Concern: Some native flammable vegetation near some buildings.

Recommendation: Break up the continuity of the plant fuel but reducing some of the vegetation between buildings and improvements and the surrounding vegetation. Select plants with low flammability ratings when planting near structures and improvements.

### **The Owners' Club**

Concern: Building addresses do not appear to be reflective and won't be easy to identify at night or in heavy smoke.

Recommendation: Add reflective address signs or modify existing signs to make them reflective and visible.

Concern: Narrow roads, tight turning radius and tree islands will limit accessibility of emergency response vehicles and congest streets in the event of an evacuation.

Recommendations: Consider modification of roads to widen them slightly. Develop an evacuation plan and distribute to all occupants, or perhaps post evacuation plan in each of the units. Provide off-street parking alternatives so that occupants' vehicles won't clutter the cul-de-sacs.

### **The Fairways**

Concern: Some thicker juniper growing on a slope across from unit #11.

Recommendations: Thin this stand of trees. Limb up remaining trees. Irrigate 2 hours, twice a week.

Concern: Congestion possible during emergency due to poorly marked streets and inadequate turn-around locations for emergency apparatus.

Recommendation: Develop comprehensive evacuation plan for all residents, pets, etc.

Concern: No street names within the neighborhood, and the numbering system ranges from confusing to non-existent.

Recommendation: Improve/upgrade address signs to make each structure identifiable from the street (coming from both directions), and make sure that the numbers are reflective and can also be easily visible at night.

Concern: Heavy use of plants with high flammability ratings such as rosemary, yaupon, pampas grasses, and algerita.

Recommendations: Remove or relocate highly flammable plants away from structures and other flammable plants. Consider replacing these volatile species with less flammable options.

### **The Foothills**

Concern: Address numbering is not reflective, and most numbers are only visible from the front of the mailbox.

Recommendations: Numbers should be easily visible from vehicles approaching from both directions. Modify numbers to make them reflective (reflective paint, etc.)

Concern: Heavy use of plants with high flammability ratings such as rosemary, yaupon, pampas grasses, and algerita.

Recommendations: Remove or relocate highly flammable plants away from structures and other flammable plants. Consider replacing these volatile species with less flammable options.

Concern: Entrance gate on Caribou Trail opens outward. Could contribute to vehicle damage.

Recommendation: Reverse gate control so that it opens away from entering vehicles.

Concern: POINT O WOODS - Very steep drop-off and back of lots has heavy growth down-slope from homes. Same situation on LOASA COVE.

Recommendation: Aggressively reduce vegetation on the first 100' down-slope from homes. Some trees can be left, but they need to be scattered and limbed up 6-10' from the ground. Hardwoods may be left, but should have 30-50' spacing from any junipers.

### **The Estates of Barton Creek**

Concern: Some of the gated entrances are more narrow than others. The larger fire apparatus will have to proceed cautiously through these gated entrances due to the "snug" fit.

Recommendations: Options: 1) Widen the overall gated entrances, 2) Reduce the size of the keypad kiosks, or 3) Relocate them to the far left of the entrances (as North Rim has done).

Concern: No consistency with the address signage. Size and styles are all different, but most are located on the front of monument-style mailboxes. Some exceptions. Most, if not all, appear to be non-reflective and are not visible from traffic approaching from both directions from a distance.

Recommendation: Develop a uniform sign system that will be both reflective and visible to approaching traffic from both directions.

Concern: Some undeveloped lots exist and contain areas of unmanaged mature juniper stands. Heavy vegetation exists on slopes and in creek areas, and also on cul-de-sac on Mission Creek. Lost Creek has stands of junipers acting as visual screens between properties. Some lots have poor VERTICAL clearance for emergency response vehicles to access driveways.

Recommendation: Thin stands, remove any juniper trees within 30-50' of any structures, and limb remaining trees 6-10' from the ground. Make sure that driveways provide adequate vertical and horizontal clearance for all emergency apparatus.

Concern: All lots are larger due to the presence of septic fields. If unmarked, emergency vehicles can become bogged down and stuck (or worse) in septic systems.

Recommendation: Clearly mark all septic fields that vehicles could access and drive across.

Possibly work with Oak Hill Fire Department to develop a uniform marking system that everyone is happy with.

Concerns: Winding Creek E had a wooden deck and wood fencing.  
Winding Creek W has wood decks (1 & 2 story) and wooden lattice fencing linking to the home.  
Golden Rain has wooden lattice on a house, and cedar plank siding on a home.  
Lost Creek has homes with wooden fencing.  
Hickory Creek has bamboo, wooden fencing and wooden decks with lattice skirting.  
Mission Creek W has wooden fencing.  
Misty Creek has a wooden deck with lattice skirting.

Recommendations: Where wooden fencing is present, create a break in the fence adjacent to any structures with a 10' section of metal (wrought iron) fence or replace entire fencelines with metal or low-flammability fencing material. Enclose undersides of wooden decks so that leaves, grass clippings and burning embers can't get underneath. Any lattice skirting should be reinforced with metal screening to keep out embers and vegetative debris. Consider replacing flammable cedar siding with alternative construction materials that are less flammable.

**Approved and submitted by:**

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Lexi Maxwell, Urban Wildland Interface Specialist, Texas Forest Service

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Date

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Ralph Rodriguez, Assistant Fire Chief, ESD #3 - Oak Hill Fire Department

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Date

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### Barton Creek POA

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### Residents

John Bryan, resident, The Woods I

Dennis Kearns, resident, The Estates

Dale Mischynski, resident, North Rim