

Walnut Canyon Wildfire Risk Reduction Project

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MISSION STATEMENT

The City of New Braunfels will add value to our community by planning for the future, providing quality services, encouraging community involvement, and being responsive to those we serve.

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EXECUTIVE SUMMARY

The Walnut Canyon Wildfire Risk Reduction Project is part of an overall assessment program that is conducted yearly. It is designed to reduce the threat to the community posed by a wildland/urban interface (W.U.I.) fire. The completion of this project will reduce the threat of wildfire to 51 homes, which are conservatively valued at 10 million dollars, surrounding the canyon.

INTRODUCTION

Components of this project include: Participants, Project Description, Environmental Impact, Education and Public Relations.

New Braunfels is located at the start of the Texas Hill Country. Pockets of wildland fuels are interposed with homes and businesses throughout the city. These interface issues, the lack of any significant past fuel reduction projects, and frequent droughts can lead to a small fire becoming a conflagration in a minimal amount of time.

In the fall of 2010 the New Braunfels Fire Department started a proactive approach to reduce the risk posed by wildfire to our Community. This approach involved different local and state agencies - such as the New Braunfels Fire Department, Texas Forest Service, New Braunfels Parks Department and the Public Works Department - coming together and assessing the dangers a wildfire poses to our community. This assessment led to the development of a program that provides wildland fire prevention education to the public and a fuel reduction program designed to reduce the threat of wildland fires.

This wildfire threat was widely seen throughout the State of Texas in 2011 when the worst drought in decades led to the most devastating fire season in our history. Several lives were lost and over two million acres were scorched. One local community, Bastrop County, was hit very hard by wildfires this past September when two large fires merged, leading to the loss of two lives, destroying 1,700 homes and charring 34,000 acres. Drought conditions are not expected to improve until the fall of 2012.

PROJECT DESCRIPTION

The project encompasses approximately twelve acres of land that runs parallel to Walnut Avenue between Landa Street and Loop 337 (See Exhibit A.) The project area is bordered by Wood Road, Beverly Lane, Encino Drive, Kerlick Lane and Walker Drive. The streets surrounding this project are residential use thoroughfares. Walnut Ave is major thoroughfare that is scheduled to undergo widening in 2013. This widening project will further reduce the fuel loading to these twelve acres and further decrease the threat to the 51-adjacent structures.

Reducing the threat to surrounding homes will be accomplished by creating a shaded fuel break thirty feet up hill from a utility easement (two track road) extending the length of the property (See Exhibit B.) The section of land that is located between Walnut Avenue and the utility easement will have shaded fuel breaks every three to four hundred feet. This combination of fuel breaks will reduce the majority of hazards posed by a wildland/urban interface type of fire in this area (See Exhibit C.)

Others hazard reduction efforts include reducing fuel loads on smaller properties or residences that border the twelve acres in the project area. Some of these residences have fuels in close proximity to their homes, which adds to the fire danger. In order to reduce these dangers, we will utilize the "Ready, Set, Go!" program, which is sponsored by the International Association of Fire Chiefs.

PARTICIPANTS

Property Owner - The Walnut Canyon Project is being made possible by different people and groups. The first person who is contributing to this project is Dr. Fred Willard. Dr. Willard is the property owner and has agreed to allow a fuel reduction project to take place in this canyon. This in turns allows the following agencies or departments to mitigate the hazards associated with this property. These agencies are; New Braunfels Fire Department, Texas Forest Service, New Braunfels Parks, and Public Works Departments.

New Braunfels Fire Department will serve as the lead agency for this project and will be responsible for conducting assessments, coordinating resources, determining the environmental impact of the project, providing public education, and tracking the project from beginning to end. The New Braunfels Fire Department will use this project as a public education tool to inform the community on how environmentally friendly this type of mitigation effort can be.

New Braunfels Parks & Recreation Department will also provide assessments of the target property and determine what types of fuel are present, and to what extent they can safely be reduced. These assessments will be conducted by the City of New Braunfels' Urban Forester, Kelly Eby. Ms. Eby will also coordinate with the New Braunfels Parks Foundation, which is composed of volunteers, to work on limited fuel reduction projects throughout the New Braunfels parks system.

Texas Forest Service- This agency will have multiple roles in this project. The first role is to provide personnel to assist with assessments in the project. The second role is to

help develop the scope of the work to be done. The third role will be to supply personnel and equipment for fuel reduction and removal. Lastly, the Texas Forest Service and the New Braunfels Fire Department will join efforts to provide public education related to wildland/urban interface, fuel reduction projects and fire safety.

New Braunfels Public Works- Public works will assist the Texas Forest Service with disposal of the fuels after removal. This assistance will require the use specialized equipment and properly trained personnel. Fuels that cannot be recycled through the chipper will be transported to the Comal County Recycling Center by public works personnel.

ENVIRONMENTAL IMPACT

This project will target plants and trees that are high in oil content, most specifically the Ashe juniper. Removal will involve select trees that are smaller in diameter, thus preserving “legacy” trees, and will also include raising the canopies of other species such as Texas mountain laurel (important tree for wildlife.)

The remaining tree species may be pruned to a canopy height of eight to twelve feet based on the mature size of the tree, the slope and the amount of deadwood or greenery to be removed. Proper pruning cuts and tree removal procedures shall be followed to ensure the health and integrity of the trees that remain on the site. All wounds on oak trees shall be immediately painted to prevent the spread of oak wilt disease.

This thinning of the canopy may also result in a crop of young seedlings and require additional periodic maintenance to prevent the redevelopment of fuel ladders.

Invasive trees found on the Ladybird Johnson invasive species list will also be removed during this project. These trees are short lived and weaken quickly, adding to the fuel issues on this tract of land. Species that may be found on the site include: Chinese tallow, chinaberry, tree of heaven, *Ligustrum spp.*, vitex, and *Nadina domestica*. Tree parts exhibiting fruit shall be removed from the site without chipping in order to prevent seeding and further contamination of the site.

Work should be conducted when moist soil conditions are present, and the use of heavy machinery will be limited as much as is practical to help prevent damage to the highly erodible soils in the project area. Care will also be taken during the tree removal and extraction process so as not to damage vegetation, including low growing grasses and perennials that are needed to prevent soil loss from the site.

Increasing the space between mature vegetation will expose shade tolerant understory vegetation to sunnier conditions and may lead to a decline in those species. Due to limited sun exposure, the soils in those areas may not have a bank of sun-ready seed, which may require that sun-tolerant low growing native plant seed be obtained for reseeding portions of the project area.

The decrease in tree canopy will also expose bare soil and excessively sloped areas to more rain, causing severe erosion, thus these areas will be a priority to mulch.

Branches may be used along the contours of some sloped areas to slow the movement of water until understory growth can be reestablished.

Materials chipped on site will be used as mulch. The mulch will be spread in a layer three to four inches deep over bare soil, steep slopes and other natural areas. Care will be taken to prevent these materials from being placed in waterways or piled against remaining woody vegetation.

The use of chainsaws and chippers may be disruptive to nearby residential properties so the work on this project will be conducted during typical daytime business hours.

EDUCATION

The success of the program depends on our ability to increase awareness and reduce the fire hazards to this community by educating the public about the dangers of wildfire. Without the public's support, this program is unlikely to realize the maximum benefits possible. As previously mentioned, a tool that is frequently used across the country to bring awareness to this problem is the "Ready, Set, Go" program.

This program requires less than two hours to deliver and covers the following points:

- A. Wildland/Urban Interface Problems
- B. Defensible Space
- C. Making The Home Fire Resistant
- D. Wildfire Ready Home
- E. Prepare Your Family
- F. Fire Safety Check List

G. Wildfire Action Plan

H. Residential Safety Check List

PUBLIC RELATIONS

This project will serve as the foundation for all future fuel reduction projects throughout our community. It will demonstrate to the community that a fuel reduction project is not about stripping the land of trees and grasses, it is instead designed to reduce the risk for wildfires through the careful and considered removal of specific types of fuel packages. When properly conducted, this type of project can and will benefit the wildlife habitat and the environment, while reducing the overall threat posed by wildfires.