2008

The Village of Questa
Community Wildfire Protection Plan

Village of Questa/ Rio Colorado De San Antonio

The Village of Questa is one of the longest inhabited communities in America.

Prepared for the Village of Questa
Prepared By: Ron Gardiner
Dba. The *Land & Water Clinic*

Questa CWPP

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Village of Questa CWPP

Section # 1

Introduction

Questa CWPP Goals

A Community Wildfire Protection Plan is much more a continuing process as opposed to a single document. This Questa CWPP must be signed by Mayor Malaquias Rael, Chief Max Ortega and New Mexico Forester, Ernie Lopez to be legally adopted but the process of reducing the risk of wildfire in the community will take years if not decades.

The Questa CWPP is intended to help the community of Questa to address issues of wildfire prevention and preparation. The narratives and the photos that accompany the Questa CWPP are to help you as residents understand the concepts of developing or improving defensible space and how to reduce ignitability and protect homes and structures on your private property.

Local residents can review the CWPP WUI maps on Page #18A or go to the Vencindad web site to see how their property was rated in the risk assessment. To view the evaluation for your own neighborhood wild-lands fire risk, please see the Neighborhoods at Risk List. (Pgs 21-25) Questa is listed at moderate in the state wide communities at risk list. But, the CWPP CORE Team and community input have identified areas of high and very high risk of wild-lands fire throughout Questa.

The information developed in the Questa CWPP is to provide Questa residents with information necessary to understand the relationships between maintaining the scenic beauty of the community and your personal property as well as, the degree of acceptable risk from wildfire. It will identify the types of actions community members can take to reduce the risk of exposure to catastrophic wildfire through fuels reduction while maintaining the beauty and privacy of your property.

The most essential strategy of this CWPP is to facilitate the systematic and incremental disruption of hazardous fuel loads that create a high risk in and along the cottonwood “Bosque” riparian areas in the Village.

This Questa CWPP will also be a road map in the event of a community emergency created by a wildfire in your area. Emergency response protocols will be developed to assure that when the community does face wildfire it will benefit from all the local, state and federal resources necessary to protect health and safety. We will identify areas of access for evacuation and firefighting and the special needs of senior and medically handicapped.

The format and information developed in this CWPP were written in a presentation that a community member or a granting institution may easily understand work with and apply.

Vencindad CWPP maps and web link

http://www.questavecindad.org

http://whatstheplan.org

The Vencindad Chamber of Commerce in Questa maintains a web site for the community. The Village of Questa CWPP Community Wildfire Protection Plan will be posted at the web site: The CWPP base landownership map, Neighborhoods at Risk and the WUI Infrastructure map with be posted at the community web site. As a Questa resident you will be able to identify your neighborhood and the relative level a risk as assessed by the community and the CORE Team.

Definition of a CWPP

The ***minimum requirements*** for a **CWPP** as described in the **HFRA** are:

1. **Collaboration:** A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.
2. **Prioritized Fuel Reduction:** A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.
3. **Treatment of Structural Ignitability:** A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

Municipalities and counties have been giving an unprecedented opportunity to participate in community based forest planning and vegetation treatment project prioritization with the enactment of the Healthy Forest Restoration Act (HFRA) of 2003.

This landmark legislation includes the first meaningful statutory incentives for the US Forest Service (USFS) and the Bureau of Land Management (BLM) to give consideration to the priorities of local communities as they develop and implement forest management and hazardous fuels reduction projects.

In order for a community to take full advantage of this opportunity, it must first prepare a Community Wildfire Protection Plan (CWPP). While there are several possible approaches in developing a CWPP, this web-based project conforms to both the intent and the letter of HFRA as well as making the process user friendly and consistent for at- risk communities of catastrophic wildfire across the federal landscape.

The recommended actions or programs undertaken in this CWPP are for the purpose of protecting human lives, property, and infrastructure.

Brief History for the Village of Questa

The Questa area has been inhabited since 1100 AD., first by the Pueblo and then by Jicarilla Apache cultures on a hillside bench overlooking the confluence of the Rio Colorado De San Antonio (Red River) and the Cabresto Creek at the present site of the Questa VFW cemetery.

Beginning in the late 1700s the Spanish Settlers established the community of San Antonio Del Rio Colorado and it began to replace the native community. Water rights began to be established under Spanish jurisdiction in 1821. The Spanish traditional community of Questa has thrived on mostly local natural resource economies by being teamsters, farmers, merchants, woodworkers, cattle ranchers, sheep herders, hunters, fisherman, loggers and miners. Recreation and tourism on federal lands surrounding the Village of Questa has become a part of the current economy.

Brief History of Wildfire in Questa and surrounding watersheds

Generations of Spanish settlers in the area used “prescribed” or intentional wildfires throughout many of the surrounding watersheds on the original San Antonio Del Rio Colorado Land Grant tracts. The fires were generally set as shepherds and cattlemen left the high country in the fall with the understanding that the coming snows would end the fires. Ditches and pastures were also burned in

Questa. The regeneration of vegetation in these post burn areas provided increased forage for the following season for livestock and wildlife.

Increasingly infrequent logging and natural wildfire led to heavy fuel loaded forests in the Carson National Forest on the eastern and southern flanks of the Questa area. In 1996 the Hondo Wildfire, a rapidly moving crown and stand replacing wildfire burned and completely consumed more than 10,000 acres of mixed conifer in thirty six hours on the southern border of the Village of Questa.

Brief Location

At the intersection of State Highways # 522 & 38 in the Village of Questa, the latitude is 36 degrees 42' 12" and longitude is 105 degrees 35' 46".

The Village of Questa is predominately settled along two shallow valleys with broad floodplains that dissect the Taos Plateau and along State Highways # 522 & 38, the two highways that intersect at Questa. These valleys and floodplains are formed by the Red River and the Cabresto Creek. The two valleys are flanked by the Sangre De Cristos; Cabresto Peak, Elephant Ridge, Flag Mountain, the Lama Plateau and the Guadalupe Mountains on three sides with the Sunshine Valley bordering to the north.

Brief Description

At 7,600 feet of elevation, the Village of Questa CWPP planning area is largely formed by two large riparian "Bosques" that drain to the Rio Grande. The riparian "Bosques" are sustained by both the streams and the Spanish "acequia" local ditch systems. Within these riparian "Bosques" areas are mature broad and narrow leaf cottonwood stands. Often there are thick under stories of junipers, some willows, mountain mahogany and invasive vines.

Village of Questa

To the east and south the Village is bordered by the Carson National Forest and it is bordered by BLM Wild Rivers Area lands to the west. To the east, the Village is adjacent to pinon juniper stands with ponderosa at higher elevations. To the south the Village is bordered by ponderosa and mixed conifer and to the west there are expanses of pinion junipers stands.

Throughout the floodplain local ranchers and farmers maintain pasture lands predominately covered in alfalfa that are interspersed with large tracts of sage. Across the mesas above and in the valleys below, private properties are still in large part in the original Spanish settlement patterns running perpendicular to the stream and main acequia ditches.

Private properties in Questa are often identified and described by their relationship to their acequia ditches and the related water rights and uses, orchards, vegetable gardens, grains and livestock feeds such as alfalfa. Private properties are often defined by the path of the acequia ditches that also define the shape of the pastures and tree lined wind breaks.

Therefore, to conform to these features, driveways and property access right of ways are often closely aligned to these acequias. Driveways often have narrow entrances bordered by ditches limiting firefighting access and evacuation routes. Many access roads and driveways present firefighters with limited turn radius access for large firefighting equipment possibly limiting structure fire fighting response. These development patterns are not likely to change to neatly geometric subdivisions with easy access.

Many Questa residents depend on fuel wood for home heating needs. Wood piles near homes are common throughout the community. Many other homes are dependent on propane use thus there are many propane tanks in contact with hazardous fuel loads within the WUI. Designing defensible space models with these community values in consideration is important in the development of treatment methods and alternatives.

Climate

The climate of eastern Taos County is semiarid. Annual precipitation at Questa (altitude 7,665 feet) averages 12.81 inches, of which 32 percent occurs in July and August. Temperatures are likewise influenced by altitude; at Questa normal monthly temperatures range from 0.8° to 5.9° F above those recorded at Red River.

The maximum and minimum temperatures on record at Questa (1932 – 1955) are 98° F on August 2, 1937, and -33° F on February 8, 1933. Based on a 23-year record, a growing season of 121 days is average for the valley. However, six growing seasons of less than 110 days occurred during the period of record, and in 1945 there were only 77 frost-free days.

Current Climate and Wild-lands fire Conditions for Questa

As of March of 2008 little or nor precipitation was reported across the northern two-thirds of New Mexico during March as the storm track that had brought abundant mountain snow to the northwestern part of the state this past winter shifted further north.

Dry, hot, and windy weather increases the likelihood of a major wildfire. These conditions make ignition easier, allow fuels to burn more rapidly, and increase fire intensity. Keep in mind that high wind speeds can transform a small, easily controllable fire into a catastrophic event in a matter of minutes.

Historical Wildfire conditions trends in the Questa WUI

http://www.climas.arizona.edu

Climate Forecasts for the northern New Mexico Region

- **Temperature:** Forecasts for the Southwest are predicting increased chances of above-average temperatures for most of the region through October 2008.
- **Precipitation:** The precipitation outlook through July 2008 indicates an enhanced probability of below-average precipitation over much of the western United States, and over the southern and central Rio Grande Valley.
- **Drought:** Drought conditions are expected to improve across much of the Southeast U.S., while much of the Southwest will see persistent and expanding drought.
- **Streamflow:** Streamflow forecasts for most of New Mexico remain average to above-average for this time of year.
- **Fire:** Above-normal fire potential is expected across precipitation-starved southern New Mexico.
- **ENSO:** La Niña conditions have weakened considerably since last month raising expectations that ENSO-neutral conditions will return by mid-summer.

As of 2008 the National Weather Service generally predicts drier than normal weather for the Southwest due to La Nina, a condition where tropical Pacific sea surface temperatures are cooler than normal. (Describe, El Nino) La Nina weather patterns have developed and are expected to strengthen over the next few months. November through January is expected to be warmer than normal across most of the country.

According to National Interagency Fire Center Predictive Services, current and projected moisture deficits, continued drought conditions, and periods of low relative humidity are currently contributing to elevated fire danger.

The ignition of abundant grass fuel loads are critical risk in our surrounding areas. Also, the increased fire potential especially during Christmas tree and fire wood harvesting with increased traffic in our forested areas increases the risk of ignitions in the grasses. The heat from a vehicle catalytic converter or exhaust system in grassy areas has caused several fires in the last couple of years.

During the fall, raking leaves, trimming branches and other clean-up projects around homes are important however because of the recent lack of moisture we strongly recommend caution with any debris burning. Please make sure you have an approved burning permit, an available water source, check the weather, and don't burn on windy days. Debris burning is very hazardous when the weather is dry and windy, especially during a drought as a fire can easily escape your control.

Section # 2

Village of Questa Wild-lands Urban Interface

Wild-Lands Urban Interface, (WUI) Definition

The **Wild-land-Urban Interface (WUI)** can be defined as the area where homes and entire communities are built within or adjacent to wildfire-prone areas. When homes blend together with the grasses, shrubs, wood piles, overhanging trees and other fuels a tremendous wildfire danger can exist. This creates the Wild-Land/Urban Interface (WUI). It is the addition of homes and the related fire suppression in this area that interrupts the natural cycle of wildfires. Ultimately, this contributes to a dangerous build-up of old vegetation increasing the amount of fuel load which can contribute to an uncontrollable wildfire.

A major issue in the southwest WUI areas is the loss of homes and other structures to wild-land fire. Fire is an important and necessary ecological process in many areas of the southwestern United States. One ecological function of fire is the reduction of grasses, shrubs, vines and small branches that are the main vegetative fuels for fires.

Both living and dead plant materials burn, and in many southwestern forests, substantial amounts of such vegetation accumulate every five to six years. Periodic wildfires historically burned through many Southwestern landscapes more frequently than that and effectively reduced the vegetation accumulation.

Fuel reduction around structures will greatly reduce the risk of damage caused by wildfire and several options exist for reducing fuel buildups in natural areas. Prescribed fire, which mimics historic natural fires, is one option; however, in many situations its use is not acceptable to neighbors and local governments in the WUI due to the potential of the fire escaping or of smoke causing hazardous conditions for nearby airports, hospitals, homes, and roads.

Prescribed fires need to comply with the NMED Air Quality Bureau smoke management regulations or restrictions. (Prescribed fire limitations) Alternative methods for fuel reduction include herbicides, mechanical thinning, mowing and chipping, or livestock grazing, which may or may not be more acceptable to nearby homeowners.

Wild-Lands Urban Interface WUI Partnerships

Communities that have been or may be threatened by wild-land fire may need many types of assistance. Community participation is at the core of carrying out citizen-driven solutions to reduce the risks of fire in the wild-land/urban interface. Agencies provide support for educating citizens on the effects of fire, community fire protection planning, and training and equipping rural and volunteer firefighters. Through a variety of grant programs including Rural, State, and Volunteer Fire Assistance and Economic Action Programs, delivered by the Agencies and the State Foresters, communities can take action to live safely in fire-prone areas.

Village of Questa (WUI) Public/Private Partnerships

This Village of Questa CWPP has been funded through a grant provided by New Mexico Severance Tax funds which are being administered by the New Mexico Forestry Division. The NM Forestry provides technical and funding support through a variety of actions and programs. During the

development of this CWPP District Forester, Ernie Lopez and CWPP Grant administrator, Terrell Treat has been available for forestry consultations, CORE Team meetings and public CWPP meetings. Both individuals have provided assistance in developing this CWPP.

http://www.emnrd.state.nm.us

The Village of Questa already benefits from established partnerships with a variety of governmental and Non Governmental Organization (NGO). The Questa Ranger District and the Village have successfully collaborated in attaining a CFRP grant for WUI fuel reduction treatments. One of the local contractors involved in this CFRP is the Rocky Mountain Youth Corps (RMYC) a non profit mandated to experience based educational opportunities for local youth.

Rocky Mountain Youth Corps (RMYC) is a not-for-profit youth corps based in northern New Mexico. Rocky Mountain Youth Corps' mission is to recognize and engage the strengths and potentials of youth through team service in the communities, the schools and the landscapes of northern New Mexico. RMYC is a stepping stone to new opportunities. Following the tradition of the Civilian Conservation Corps from the 1930's, RMYC field crews that revitalize communities, preserve and restore the environment, prepare young people for responsible, productive lives and build civic spirit through service.

http://youthcorps.org

The Village has also proffered the Taos Soil and Water Conservation District (TSWCD) an MOU in anticipation of working collaboratively on fuel reduction projects on private lands. This CWPP has benefited from the participation and support of local community groups such as the Vencindad Chamber of Commerce, the Questa Independent School District and several church groups.

Mayor Rael, the Village Council and administration, the Questa Police Department and the Questa Fire Department have been key partners in the development of this CWPP. Further partnerships include the Taos County Office of Emergency Management, NM Forestry Division and the Enchanted Circle Fire Association.

In 2003 the Red River Watershed Group developed and adopted the Red River Watershed Restoration Action Strategy (RRWRAS). These planning documents are required for qualification in the EPA NMED 319 NPS funds. The RRWRAS already identifies dangerous and heavy fuel loads along the stream corridors as a high potential for non point source pollution and large scale soil loss and bank erosion as occurred in the post burn condition after the Hondo/Lama Wildfire.

http://www.nmenv.state.nm.us

An important partnership that the Village of Questa has developed is with the New Mexico Forestry and Watershed Restoration Institute, the regional SWERI Southwest Ecological Research Institute located at New Mexico Highlands University. The New Mexico Forestry and Watershed Restoration Institute has been supplying the Village GIS mapping and forestry consultations during the development of this CWPP. NM FWRI will be providing guidance and assistance for fuel reduction treatment monitoring as this CWPP is implemented.

http://www.nmhu.edu

Chevron Mining Inc. formerly Molycorp, a local molybdenum mine and a subsidiary of Chevron Oil have worked closely with the Village of Questa on a variety of community and environmental initiatives and mitigations. The Village has approached Chevron Mining Inc. in regards to reducing fuel loads at their community softball field and recreation park. Being one of the largest employers in Questa and the greater Taos County region match grant funding may be available through the public private partnership between the Village of Questa and Chevron Mining Inc.

Cabresto Creek Bosque WUI Area

Questa WUI Area Description

The Village of Questa is mostly populated in the bottom of two gently sloped valleys. Therefore, the terrain creates a basin where most structures are within this basin or on the adjacent mesa ridges. It is surrounded on three sides by federally managed lands both USFS and BLM. Due to terrain, ignitions are much more likely to occur in the populated areas and travel up slope into federal lands than a wildfire surging down slope.

Questa Private Lands WUI

The highest risk and threat of ignition from wild-lands fires exists predominately within the privates lands of the Village of Questa. Close to (4 ½) four and a half miles and 350 acres of dense cottonwood bosques or riparian areas surround, cover and compromise nearly 250 homes and structures throughout the Questa WUI area. Accumulations of dense brush combined with a juniper infestation create continuous fuel ladders in both vertical and horizontal directions. In many cases in the Questa WUI, homes and shops have no defensible space available.

Because human caused ignitions are more likely in the urban interface these fuel loads are at high risk of ignition. Theses conditions for ignition combined with the nature of a long (4 1/2 mile) and narrow (¼ mile wide) riparian corridor creates a path for wild-lands fire to run without containment. Both of these river corridors are along the axis of direction from the prevailing winds and both moderately slope uphill in the direction of the wind. This creates a wind funnel that produces a canyon winds generated wild-lands fire that can be easily driven up through these continuous fuel loads spreading fire to structures that may become a part of a cottonwood crown fire and lead to a catastrophic community wide fire consuming multiple homes and threatening lives.

Complicating these conditions of high risk of wild-lands fire is the fact a wild-lands fire in these WUI areas would be traveling across many fenced property lines. Much of Questa private properties are pasture lands that conform to the original Spanish Land grant patterns that allowed property access to stream corridors in long narrow land strips. This creates the potential for a wild-lands fire in these areas to quickly carry across or perpendicular to multiple property and fence lines making fire fighting both wild-lands and structure fires extremely difficult and dangerous for the Questa Fire Department.

Another contributing factor to the high risk along the bosque and throughout these neighborhoods is the conditions of the private properties. Many people in Questa depend on fuel wood for home heating thus many properties have large wood piles. Due to rural subsistence character of Questa many property owners often have wooden work shops and stables and corrals. This contributes to properties having poor defensible space from wild-lands fire.

Further complicating wild-lands fire fighting is the fact that many drive ways are either narrow or placed tightly along a narrow bosque road which in many cases is surrounded with these riparian fuel loads. This sharply diminishes the turning radius of many private property access points. The ability of the Questa Fire Department to fight a wild-lands and simultaneous fight individual or multiple structure fires may be jeopardized by their ability to access private properties with their firefighting equipment.

- **Cottonwood Bosque**

There are nearly 4 ½ miles of riparian "Cottonwood Bosque" along the Red River and Cabresto Creek in Questa. These stream corridors were once functioning riparian areas fed by free flowing streams. In the past two centuries the course of the Cabresto Creek has been displaced from its original location at the center of the flood plain to the eastern perimeter at the foothills of Elephant Ridge on the Sangre De Cristos.

During the two centuries of diversions for the Spanish irrigation through the acequias, a broad cottonwood gallery riparian area was formed along the base of Elephant Ridge. The relative age of these cottonwood stands in the riparian area is at or near full maturity with large areas of mortality. They probably once were composed of several types of cottonwoods, alder, willows and aquatic sedges that thrived in wet substrates.

In recent decades flows to the Cabresto Creek have ceased to run year round due to increased diversions to the local acequias. Combined with the recent five year period of drought conditions in northern New Mexico, water tables in these areas have dropped causing wide spread mortality in the cottonwoods and favoring more drought tolerant and invasive species such as juniper.

The Questa riparian Bosques are quite distinct from other northern riparian areas due to a variety of unique circumstances such as terrain, elevation, latitude and vegetative composition. In the last four decades both upland and invasive species have extensively encroached into these once properly "functioning" riparian areas. Changes in the flow regime and local water tables give the competitive advantage to invasive species that tolerate and thrive in dry soils.

The mature and dying Narrow Leaf Cottonwood canopies are now encroached by a heavy juniper under story and stands of ponderosa and Gambel's oak. The under story is further composed of other invasive tree species such as Chinese elms and Russian Olives. One condition greatly contributing to the highly volatile and dense fuel loads are junipers that had been grazed or cut as sprouts thus causing

thick spiked vertical growth from horizontal branches rather than single trunk trees which are often common to the Questa Bosque.

Thick underbrush and vertical spikes of the Juniper encroachment in the Bosque

A combination of heavy ground fuels composed of a thick infestation of Virgin Bower or Clematis, a climbing vine, local; Grama, Blue and Western Wheat grasses and drought tolerant invasive Rabbit Brush, Chamisa and Sage create a dangerous and continuous horizontal ground fuel ladder that can provide a high rate of spread to a Wild-lands Urban fire.

This is further complicated by the proximity of these ground fuels to the immediate vertical fuel ladders above and adjacent. The totality of these conditions creates a significantly high and dangerous risk of catastrophic community wide wildfire.

Therefore, one of the primary goals and priorities of the Village of Questa CWPP for WUI protection is to create fuel breaks on private lands with the cooperation of property owners and community members and to promote property owners to create defensible spaces around their homes and lands.

Questa Federal Lands WUI

The 1996 Hondo/Lama Wildfire carried to the southern boundary of Questa. It was fueled by an estimated 50 fifty tons per acre in mixed conifer. During the fire local Questa citizens bulldozed an estimated 9 miles of emergency fire line in response to the surging fire. Yet, the extreme nature of the 1996 Hondo/Lama Wildfire created a fire storm that pushed the fire down slope to the southern boundary of Questa.

After the 1996 Hondo/Lama Wildfire the Questa Ranger District of the Carson NF established the "Questa/Lama WUI Area" encompassing 4955 acres on the windward, south and southwest boundaries of Questa. To address the timber salvage after the wildfire the QRD USFS District has accomplished fuel reduction treatment planning and environmental and cultural clearances so that WUI thinning treatments may be initiated when funds are available. There are 590 acres of planned fuel thinning treatment with the goal of creating 12.1 miles of fuel breaks.

During the Questa CWPP development additional treatment areas have been identified in the Elephant Ridge, Cabresto Canyon and Pinabete Hills areas on federal forest service lands. All of these were rated as high risk and the Questa CWPP CORE Team recommended that local USFS district WUI priorities include these areas identified as GIS polygons (Identified in map # 2 hazardous fuel loads). While the BLM Wild Rivers Area is actively planning WUI treatments throughout the Guadalupe Mountains, the highest priority in the BLM WUI are the critical regional electric and gas utility pipelines. Kit Carson Electric conducts a corridor trimming.

USFS Questa/Lama WUI

- **Brief Questa/Lama WUI Location**

The Questa/Lama Wildland Urban Interface Project is located on the Questa Ranger District on the Carson National Forest, in Taos County, New Mexico. The project area is approximately 4,955 acres and is located between the communities of Questa, New Mexico, to the north, and Lama, New Mexico to the south and the Red River Fish Hatchery to the west (See Map 1 – Vicinity and Project Area Map). The project is located within T28N, R12E Sections 1, 2, 3, 10 – 15, 23, 24 and T28N, R13E Sections 5 – 8, 18 and 19. Elevations range from 7,300 to 8,600 feet. The vegetation types in the project area are primarily ponderosa pine and pinyon/juniper types. There is private land within the project area.

- **Vegetation Type Description**

The project area includes predominately ponderosa pine and pinyon/juniper forest types. Ponderosa pine makes up about 41 percent (2,050 acres) and pinyon/juniper about 47 percent (2,306 acres) of the project area (4,949 acres). The are approximately 520 acres now considered 'Grassland/Shrub' forest type that were previous to the Hondo Fire (1996) predominately ponderosa pine forest type within the project area boundary. Within the 520 acres burned, there exist remnant groups, clumps and scattered individual trees that survived the fire, particularly along the transition to unburned areas.

Because of the high number of trees per acre and the recent drought, the health of these stands has been slowly weakening. This is due to a number of reasons. There are more trees using the limited amounts of water, light and nutrients in the soils. There is dwarf mistletoe in some stands, and a significant increase in bark beetle activity since the recent drought conditions began.

Since the logging in the first half of the 20th century there have been minimal vegetative management treatments in the project area. In the early 1980's, there was fuel-wood thinning in the pinyon/juniper type to the west of NM State highway 522 and some pre-commercial thinning in the ponderosa pine type. With tree growth since pre-commercial thinning treatments were implemented canopies have closed in those areas creating interconnected crowns.

- **Ponderosa Pine**

Nearly all of the ponderosa pine type within the project area was logged in the early 1900's. The old cuts were heavy, leaving only a few ponderosa pine seed trees per acre. Nearly all of these intensively logged stands have regenerated very well and are now dense young forest stands with scattered yellow pines (old trees). Some stands or parts of stands previously dominated by ponderosa pine converted to pinon/juniper types due to an inadequate seed source or unsuitable conditions for ponderosa pine seedling development. The absence of frequent low intensity fires (every 2 to 15 years) that occurred before European settlement has caused the majority of the ponderosa pine type to become very densely stocked with trees.

Existing condition for the ponderosa pine forest type in the Questa/Lama WUI project area would include relatively high tree densities, with some stands dense throughout the stand, and other stands dense in groups of trees within the stand. Contributing to high tree densities are the under story trees including smaller ponderosa pine, pinyon pine, various juniper species, and Gambel oak. Due to high tree densities existing condition would include a high level of interconnected crowns and extensive ladder fuels due to dense under story conifer trees.

It is common for most ponderosa pine stands to have some component of pinyon, juniper and gambel oak. Many areas that were once small meadows or small openings within forested stands have regenerated in the recent past with pinyon pine, juniper and ponderosa pine reproduction. Ponderosa pine stands are generally even-aged due to amount of regeneration following harvest treatments in the early/mid 20th century combined with the lack of natural periodic fires and fire suppression efforts.

Desired conditions for the ponderosa pine forest type would include reduced vulnerability to crown fires through increased crown spacing and a reduction in ladder fuels and improvement to both vertical and horizontal diversity by establishing conditions that would promote a greater variety in tree age, tree size class, and canopy cover. Distribution of trees arranged to create and increase a more mosaic pattern that promotes diversity through enhancement to grass, forbs, and shrub species.

- **Piñon/Juniper**

Fire was the most important natural disturbance in the piñon/juniper woodland ecosystems prior to European settlement. Grass fires maintained some sites as juniper 'savannahs' and grassland inclusions because they tended to kill trees less than 3 feet tall. Spanish colonialist introduced cattle and other livestock into the woodlands during the 16th century. There were, for example, 1.25 million cattle and 5 million sheep in New Mexico by 1888. The loss of a continuous herbaceous cover had serious consequences. One impact was that fires did not have sufficient fuels to carry through stands and eliminate young trees (USDA Forest Service, 1993, Aldon, RM-236).

This forest type represents a large portion of the project area, making up approximately 50% of the total area. The pinon/juniper forest type is the most common of the land area within the project area. The most common species with this forest type is pinon pine, followed by Rocky Mountain juniper, which is typically well distributed throughout this forest type. To a lesser extent one-seed juniper and Utah juniper can be found mixed with pinon on steeper southern exposure sites and dryer sites at lower elevation within the project area.

Existing condition for the pinyon/juniper forest type in the Questa/Lama WUI project area would include relatively high tree densities, with some stands dense throughout the stand, and other stands dense in groups of trees within the stand. Many pinyon/juniper stands within the project area contain some component of ponderosa pine trees. Contributing to high tree densities are the understory trees including smaller ponderosa pine, pinyon pine, various juniper species, and gambel oak.

Due to high tree densities existing condition would include a high level of interconnected crowns and extensive ladder fuels due to dense under story conifer trees. Many areas that were once small meadows or small openings within forested stands have regenerated in the recent past with pinyon pine, juniper and ponderosa pine reproduction. Existing high tree densities in pinyon/juniper stands can be at least partially attributed to the lack of natural periodic fires and fire suppression efforts. Other stands would be considered uneven-aged (with at least three distinct age classes) or two storied.

Desired conditions for the pinon/juniper forest type would include reduced vulnerability to crown fires through increased crown spacing and a reduction in ladder fuels. The improvement to horizontal diversity by establishing conditions will promote a greater variety in tree age, tree size class, and canopy cover. Distribution of trees arranged to create and increase a more mosaic pattern that promotes diversity through enhancement to grass, forbs, and shrub species. Increased tree spacing is a desired condition in order to reduce susceptibility to insect (including bark beetles) and disease by decreasing tree stress related to high tree densities combined with drought conditions.

- **Mixed Conifer**

This forest type is incidental to the project area, making up 1% of the acres. There are currently two stands classified as mixed conifer in the project area, both located on north to east facing slopes. The mixed conifer cover type is comprised of white fir, Douglas-fir, ponderosa pine, and blue spruce trees. The predominant under story vegetation associated with mixed conifer trees is Gambel oak.

No treatments have been proposed within the project area for the two existing mixed conifer stands within the project area. The two existing mixed conifer stands have been designated as potential old growth and proposed for allocation as old growth. There had been two additional small mixed conifer stands within the project area prior to the Hondo fire, which converted to a grass/shrub vegetation type.

The mixed conifer type is considered 'restricted habitat' for the Mexican spotted owl, so treatments within mixed conifer must follow the 1996 Region-wide Amendment of Forest Plans [PR#].

The Desired Condition for the existing mixed conifer stands would be to protect from stand replacement fire, maintain or enhance those attributes that make the stands suitable for old growth allocation.

- **Grassland/Shrub**

Approximately 9% of the project area is considered a grassland and shrub combination. These acres were previous to the Hondo Fire classified as ponderosa pine, mixed conifer, or pinon/juniper forest vegetation type. The dominant shrub species within this type is Gambel Oak. Gambel oak sprouting and subsequent growth following the fire event has been extensive. Following the fire some portions have been planted with ponderosa pine seedlings. There are also remnant individual trees and small clumps of ponderosa pine, particularly at the perimeter of the fire or transition to unburned stands.

There is a wide variety of grass species that established following the fire, some from existing grass root systems that survived the fire and from artificial seeding. This grassland and shrub vegetation provides a very important foraging habitat for many wildlife species.

Desired conditions for this vegetation type would be to maintain and enhance the diversity of grass and shrub species that contribute to the high forage capability. Long term desired condition would include a gradual reestablishment of various forest tree species.

Current CFRP

In 2003 the Village of Questa successfully competed for an initial CFRP within this same Questa/Lama WUI. This treatment area parallels the fire breaks established during the fire beginning to create an effective wildfire buffer and fuel break on the windward side of the community. The

CFRP has been administered to provide the additional economic benefits by providing contracts to local foresters.

Currently the Village of Questa is pursuing a 2008-9 CFRP grant. This grant would extend the fuel reduction treatment area deeper into the USFS further extending fuel break benefits to the Village. Ultimately the CFRP treatment areas should extend south to the network of fire breaks roads created in the 1996 Hondo/Lama Wildfire to create a nearly half mile wildfire fuels break on Questa's windward side.

The Carson National Forest (Questa Ranger District) has identified 1000 acres adjacent to the Village of Questa for forest thinning and removal of small diameter trees. The Village proposes to enter into agreement with the United States Forest Service for the 2008 Collaborative Forest Restoration Program Grant to treat 200 acres adjacent to the Village for a total of four years.

Using grant funding the Village would hire a project coordinator to oversee the implementation of the grant and the monitoring plan of the grant. The Village proposes to treat 50 acres per year. The Village will either issue a request for proposal or invitation to bid for each 50-acre block to the local contractors to commercial treat the designated area by the Questa Ranger District.

Following the treatment guidelines of the Carson National Forest, through the stewardship blocks the contractor will cut small diameter trees, pile the slash and chip any material designated by the project coordinator or forest services representatives. The contractor will be responsible for removing available forest products to the Village staging area for further distribution to the elderly. The Village has designated a community wood lot at the Village Public Works Yard (in-kind service).

- **Largo Canyon CFRP**

One of the contractors is the Rocky Mountain Youth Corp who provides labor through youth foresters that benefit from experience based environmental education while working. In their portion of the CFRP treatment area they have initiated a community woodlot for the elderly, handicapped and disadvantaged community members. The treatment area is in the Largo Canyon watershed which was heavily impacted by the 1996 wildfire.

This 44 acre WUI fuel reduction treatment is predominately in ponderosa, aspen and mixed conifer. The area was heavily affected by massive sheet soil erosion during the post burn years. Large areas of bedrock deposits are perch above the former flood plain that was extremely down cut during this same period. The access to Largo Canyon is close to the Village and provides an excellent opportunity to use the treatment as a community WUI demonstration area.

Largo Canyon CFRP has the potential to serve as a great demonstration project area due to an easy access through a forest service road that has been blocked by post Hondo Wildfire burn conditions. It demonstrates the partnership between the Village of Questa, RMYC and the Carson National Forest.

The program has been successful at providing wood for local fuel use. RMYC has provided wood to a community wood lot that provides fuel wood to elders and handicapped community members. This also provides an opportunity for community members to be exposed an effective a fuel reduction treatment that also creates a fire break in the Ponderosa type adjacent to their community.

Section # 3

Questa Neighborhoods at Risk Assessment

High Narrow Leaf Cottonwood mortality in the Questa Bosque

Summary of the Questa Community/Neighborhoods at Risk Assessment

High Wild-Lands Fire Risk Conditions

The highest risk conditions identified during this CWPP Risk assessment process was clearly on private lands within the Village boundaries. Heavy accumulations of underbrush in the riparian "Bosques" create the greatest risk to homes and properties. Combined with the grasses and shrubs, an often heavy under story of mature juniper creates a vertical fuels ladder into a mature cottonwood canopy.

The Questa Fire Department highest concern is the threat of a high rate of spread ground fire that carries across many property lines and fences that can only be fought compartmentally along narrow long driveways. These same ground fuels have a high probability of climbing into the mid canopy fuels and contacting homes and structures.

The greatest concerns identified by both public and fire department are that these conditions severely compromise firefighters safety and effectiveness. Under quickly spreading wild-lands fire conditions firefighter will seek the most defensible spaces on private properties to stage resources and create fire breaks. It is more likely that a structure fire will be fought under wildfire conditions when their property has adequate access and defensible space on their properties

In the event of quickly spreading wild-lands fire in the Village of Questa "Bosque" the QFD will be seeking areas of "Survivable Space" in areas where the fuel loads are broken and there is suitable space for staging personnel and equipment to fight both wild-lands and possibly structure fires simultaneously.

Factors that may limit the access of firefighting resources

- long narrow drives
- continuous fuel loads that can carry from ground to crown
- proximity of homes to fuels
- fire can grow beyond the QFD ability to wild-lands fire (BTU vs. Gallons Per Minute) making some structures a safety risk to residents and firefighter
- High potential of structure fires igniting dry vegetation in "Bosque" leading wild-lands fire

Narrow access to properties could limit access to firefighters

<u>Private property configurations and wild-lands fire considerations</u>

CWPP Neighborhood Organization
Questa Land Use Patterns

The Village of Questa CWPP NAR Neighborhood at Risk Assessment has been developed by the CWPP CORE Team. While the base map began with GIS polygons that were oriented to fuel loads mostly along the riparian "Bosques", the CORE Team modified these areas to more closely conform to land settlement patterns and firefighting road access.

Therefore the Communities at Risk Assessment will be done on a "Neighborhood" basis so that risk and priorities can be established for the varying circumstances and conditions that exist in Questa. The Village of Questa CWPP CORE Team will review the draft descriptions and offer adjustments and additions as this CWPP develops.

Therefore the Questa CWPP is being established in a "neighborhood at risk" framework. Many Questa CAR ratings made by the VQ CWPP CORE Team parallel the ratings by the Taos County CWPP SEC FRCC Fire Regime Conditions Class Model of **(VH)** Very High. Many of the VH ratings reflect the concerns of the QFD for key issues of effective firefighting and public safety and evacuation. A key component of these ratings therefore has been based on QFD's access and ability to respond to wild-lands fire combined with fuel loads on private properties.

During public meetings with the Questa Fire Department, the Vencindad Chamber of Commerce, Police Chief Gallegos and the Initial CWPP public meeting it was established that there are several neighborhoods and areas within the Village of Questa WUI that have conditions that are at a high risk of wild-lands fire with significant threat to personal safety, homes and private properties.

WUI Firefighting Access

Private properties in Questa are often identified and described by their relationship to their acequia ditches and the related water rights and uses, orchards, vegetable gardens, grains and livestock feeds such as alfalfa. Private properties are often defined by the path of the acequia ditches that also define the shape of the pastures and tree lined wind breaks.

Therefore, to conform to these features, driveways and property access right of ways are closely aligned to these acequias. Driveways often have narrow entrances bordered by ditches making them prohibitive firefighting access and evacuation routes. Many access roads and driveways present firefighters with limited turn radius access for large firefighting equipment possible prohibiting structure fire fighting response. These development patterns are not likely to change to neatly geometric subdivisions.

Many Questa residents depend on fuel wood for home heating needs. Wood piles near homes are common throughout the community. Many other homes are dependent on propane use thus there are many propane tanks within the WUI and in contact with hazardous fuel loads. Designing defensible space models with these community values in consideration is important in the development of treat methods and alternatives.

All values and ratings for are represented in the ratings and descriptions in the NAR Neighborhood at Risk Assessment.

2007
Village of Questa CWPP WUI
Neighborhoods at Risk of Wild-lands Fire

Ratings Note: Many Questa NAR ratings made by the VQ CWPP CORE Team parallel the ratings by the Taos County CWPP SEC FRCC Model of **(VH)** Very High. Many of the VH ratings reflect the concerns of the QFD for key issues of effective firefighting and public safety and evacuation. A key component of these ratings therefore has been based on QFD's access and ability to respond to wild-lands fire combined with fuel loads on private properties.

	Village of Questa Neighborhoods at Risk **WUI Areas Description & Fuel Structure**	• **Community Values at Risk (QPD)** • **Firefighting and Evacuation Ingress/Egress Access (QFD)** • **CORE Team Input**	**Risk Model**	**Public Rating**	**CORE Team**
1.	**Highway # 522 and # 38, Questa Core Area WUI** ***Commercial and governmental infrastructure of Questa. From Highway #522 at the Red River to the Wild Rivers turn north of Questa and from the Light at Highway #38 & # 522 to Highway # 38 and Eagle Rock Lake*** **Lowlands Pasture Type:** Businesses and homes along the highway and the acequia ditches create a matrix of pasture and ditch vegetation most with a noticeable absence of mixed conifer	**Values at Risk:** Has approximately **200 homes** structures, barns, work shops **and 50 businesses at risk, three schools, gas stations, medical clinic, fire department** **Firefighting and Evacuation Access:** Ditch and pastures vegetations flash fuels exposed to prevailing winds across mesa lands, **CORE Team Notes**: Jerry Sanchez Retired USFS	**H**	**H**	**H**
2.	**Upper Cabresto Road WUI** ***From the mouth of the Cabresto Canyon to the North Kiowa by pass*** **Riparian/Bosque Type**: Mature cottonwoods with **70-90%** mortality, with woodland invasive species, juniper from adjacent hill side heavy under brush Continuous ground to canopy fuel structure. Continuous horizontal fuels in and around homes through bosque.	**Values at Risk:** Has approximately **40 homes** structures and barns and work shops **at risk** **Firefighting and Evacuation Access**: **Very Difficult** homes in the bosque are only be accessed by narrow single driveways perpendicular to the fuel loads. Individual evacuation routes	**VH**	**VH**	**VH**

3.	**Lower Cabresto Road WUI** ***From the Kiowa Road By Pass to the Junction with Hwy. # 38*** **Riparian/Bosque type**: Pasture and private properties. Businesses and homes along the road the acequia ditches create a matrix of pasture and ditch vegetation most with a noticeable absence of mixed conifer with occasional deciduous trees such as cottonwoods and Chinese elms	**Values at Risk** Has approximately 7**0 homes** structures and barns and work shops **at risk** **Firefighting and Evacuation Access:** One way ingress/egress along narrow road.	**VH**	**VH**	**VH**
4.	**Cabresto Canyon WUI** ***From the mouth of Cabresto Canyon to the Bonito Canyon Road*** **Riparian/Bosque Type:** Mature cottonwoods with **30-50%** mortality, with woodland invasive species, juniper from adjacent hill side heavy under brush Continuous ground to canopy fuel structure. Continuous horizontal fuels in and around homes through the cottonwood bosque	**Values at Risk** Has approximately **40 homes** structures and barns and work shops **at risk** **Firefighting and Evacuation Access:** One way ingress egress along narrow USFS road border by heavy vegetation and cottonwood canopy. Steep and deep canyon topography makes uphill wildfire progression likely. **CORE Team Notes** Aaron Rael Local resident BLM employee	**VH**	**VH**	**VH**
5.	**Upper North Kiowa Road WUI** ***From the North Kiowa Cabresto Lake By-pass to Calle Del Sol Road*** **Riparian/Bosque Type:** Mature cottonwoods with **50-70%** mortality, with woodland invasive species, juniper from adjacent hill side heavy under brush Continuous ground to canopy fuel structure. Continuous horizontal fuels in and around homes through bosque	**Firefighting and Evacuation Access: Most Difficult;** Calle Del Sol narrow access road with sharp turns restricted by junipers to very narrow passage **Values at Risk:** Has approximately **40 (Info to be supplied by QPD) homes** structures and barns and work shops **at risk**	**VH**	**VH**	**VH**
6.	**Lower North Kiowa Road WUI** ***From Calle Del Sol to State Highway # 38*** **Riparian/Bosque Type: :** Mature cottonwoods with **30-50%** mortality, with woodland invasive species, juniper from adjacent hill side heavy under brush Continuous ground to canopy fuel structure. Continuous horizontal fuels in and around homes	**Values at Risk:** Has approximately **40 homes** structures and barns and work shops **at risk** **Firefighting and Evacuation Access: Difficult:** Individual driveways perpendicular to bosque fuel loads. Driveways have narrow sharp turn entrances	**VH**	**VH**	**VH**

	through the cottonwood bosque	and exits.			
7.	**Upper South Kiowa Road WUI** ***From Highway #38 to the confluence of the Red River and the Cabresto creek*** **Riparian/Bosque Type**: Mature cottonwoods with 2**0-30%** mortality, with woodland invasive species, juniper from adjacent hill side heavy under brush Continuous ground to canopy fuel structure. Continuous horizontal fuels in and around homes through the cottonwood bosque	**Values at Risk.** Has approximately **40 homes** structures and barns and work shops **at risk** **Firefighting and Evacuation Access:** One way ingress/egress along very narrow river road bordered by heavy vegetation and cottonwood canopy over hanging homes and road. Driveways have narrow sharp turn entrances and exits.	**VH**	**VH**	**VH**
8.	**Upper Red River Road WUI** ***From the Junction of South Kiowa Road and the Old Red River Road near the confluence of the Red River and the Cabresto Creek to Hunts Pond*** **Riparian/Bosque type**: Mature cottonwoods with 20-30% mortality, with woodland invasive species, juniper from adjacent hill side heavy under brush Continuous ground to canopy fuel structure. Continuous horizontal fuels in and around homes through the cottonwood bosque	**Values at Risk** Has approximately **40 homes** structures and barns and work shops **at risk** **Firefighting and Evacuation Access:** One way ingress/egress along very narrow river road bordered by heavy vegetation and cottonwood canopy over hanging homes and road. Driveways have narrow sharp turn entrances and exits.	**VH**	**VH**	**VH**
9.	**Lower Red River Road WUI** **Riparian/Bosque Type**: Mature cottonwoods with 2**0-30%** mortality, with woodland invasive species, juniper from adjacent hill side heavy under brush Continuous ground to canopy fuel structure. Continuous horizontal fuels in and around homes through the cottonwood bosque	. **Values at Risk** Has approximately **40 homes** structures and barns and work shops **at risk** **Firefighting and Evacuation Access:** One way ingress/egress along very narrow river road bordered by heavy vegetation and cottonwood canopy over hanging homes and road. Driveways have narrow sharp turn entrances and exits.	**VH**	**VH**	**VH**
10.	**Lower Embargo Road** **Riparian/Bosque type**: Pasture and private properties. Businesses and homes along the road the () ditch create a matrix of pasture and ditch vegetation most with a noticeable absence of mixed conifer with	**Values at Risk** Has approximately **40 homes** structures and barns and work shops **at risk**	**H**	**H**	**H**

	occasional deciduous trees such as cottonwoods and Chinese elms				
11.	**CNF Questa/Lama WUI & CFRP Area** ***From the west of Highway # 522 south of Questa alon and south of the Molycorp's tailings pipes road to Largo Canyon*** **Mixed Conifer Type:** Ponderosa, Pinon, Juniper	**Values at Risk** Has approximately **40 homes** structures and barns and work shops **at risk** **CORE Team Notes**; Effective CFRP treatments implemented by RMYC. Reconsider ratings after treatment completion	**H**	**H**	**H**
12.	**Elephant Ridge Federal Lands WUI**				
13.	**Pinabete Hills WUI** ***From the (_____) road off of Buen pastor Road*** **Pinon Juniper Type**: Homes lots built deep into PJ stands on gentle up slope in the face of the wind direction	**Values at Risk** Has approximately **40homes** structures and barns and work shops **at risk** **Firefighting and Evacuation Access:** One way ingress egress along narrow road. **CORE Team Notes: Highest Risk Area** during extreme conditions USFS Ray Corral	**VH**	**VH**	**VH**
14.	**Wild Rivers Area Guadalupe Mountains** **Pinon Juniper Type**: BLM Recreation Area and local grazing allotments	**Values at Risk** **Firefighting and Evacuation Access:**	**L**	**M**	**M**
15.	**Guadalupe Mountain Power Lines** **Pinon Juniper Type**: BLM Recreation Area and local grazing allotments	**Values at Risk:** Tri State PNM transmission lines **Firefighting and Evacuation Access**: Forest roads from the Molycorp tailings ponds facilities. **CORE Team Notes:** PNM Tri State Trimming program?	**L**	**H**	**H**
16.	**Lama Road Gas Lines** ***From Lama north to Questa along the Gas utility right of way*** **Ponderosa, Pinon Juniper Mixed Conifer Type**	**Values at Risk** **Firefighting and Evacuation Access**: Forest Service road included in the NEPA Listed high priority in the QRD WUI work plan NEPA clearances have been completed.	**L**	**M**	**M**

- During public meetings with the **Questa Fire Department**, the **Vencindad Chamber of Commerce, Police Chief Gallegos** and the **Initial CWPP public meeting** it was established that there are several neighborhoods and areas within the Village of Questa WUI that have conditions that are at a high risk of wild-lands fire with significant threat to personal safety, homes and private properties.

- Therefore the **Draft Communities at Risk Assessment** will be done on a neighborhood basis so that risk and priorities can be established for the varying circumstances and conditions that exist in Questa. **The Village of Questa CWPP CORE Team will review the draft descriptions and offer adjustments and additions as this CWPP develops**.

- Private properties in Questa are often identified and described by their relationship to their acequia ditches and the related water rights and uses, orchards, vegetable gardens, grains and livestock feeds such as alfalfa. Private properties are often defined by the path of the acequia ditches that also define the shape of the pastures and tree lined wind breaks.

- Therefore to conform to these features driveways and property access right of ways are often closely aligned to these acequias. Driveways often have narrow entrances bordered by ditches making them prohibitive firefighting access and evacuation routes. Many access roads and driveways present firefighters with limited turn radius access for large firefighting equipment possible prohibiting structure fire fighting response. These development patterns are not likely to change to neatly geometric subdivisions.

- Many Questa residents depend on fuel wood for home heating needs. Wood piles near homes are common throughout the community. Many other homes are dependent on propane use thus there are many propane tanks within the WUI and in contact with hazardous fuel loads. Designing defensible space models with these community values in consideration is important in the development of treat methods and alternatives.

Section # 4

Hazardous Fuels Reduction Plan

Introduction

Summary of the VQ CWPP CORE Team Priorities

In the Village of Questa WUI there are many hazardous fuels load structures that have the potential of carrying wildfire in residential areas. While Questa has already been threatened and impacted by the catastrophic 1996 Hondo/Lama Wildfire, wildfire ignitions given the conditions identified in the NAR are most likely to spread from private lands to federal lands.

The ignition of the Hondo/Lama Wildfire on Cinco De Mayo (May 5th) 1996 began in a trash can on private lands in the Village of San Cristobol and spread 10 miles into 10,000 acres of fully consuming crown wildfire within 36 hours. It still holds the record for the highest rate of spread in the pinon juniper type nationally.

In the Neighborhoods at Risk Assessment (Pages 21-25) thick overgrown riparian areas present a significant threat of wildfire ignitions on private properties throughout the Cabresto Creek and Red river cottonwood "Bosques". The Questa CWPP CORE team has identified the highest risks to be in areas where these fuel structures exist. Many areas of the bosque have areas of high cottonwood mortality. While dead trees in the canopy are dramatic threat to the eye the substantial threat of wildfire exists mostly in the local ground fuels.

The most essential strategy of this CWPP is to facilitate the systematic and incremental disruption of hazardous fuel loads that create a high risk in and along the cottonwood "Bosque" riparian areas in the Village. (Horizontally and vertically)

Ground Fires in the bosque

Fire Chief Max Ortega and the Questa FD have substantiated concerns of heavy accumulations of brush, grasses and vine type ground fuels around many structures in the riparian bosque areas. Threat from a high rate of spread is greatest from the ground fuels that surround many homes, shops, and barns. Fuels throughout the Bosque are continuous often both horizontally and vertically. Considering fence lines and narrow driveway accesses many areas of the Bosque present a considerable structural firefighting challenge.

Access Ingress and Egress

During the CAR ratings process the CWPP CORE Team acknowledged high and very high risk rated Questa WUI areas identified in the Taos County CWPP FRCC model. A consensus opinion of the Questa CWPP CORE Team is that all of the model ratings are complicated by difficult access to private properties for firefighting. Chronically, turn radius angles along major neighborhood thoroughfares have sharp turning angles to the access of driveways.

Further complicating the access of many driveways is the fact that many drives serve pasture areas and have cattle guards at their entrance. Many of the cattle guards are quite old and narrow often not accommodating Type I firefighting vehicles. Another firefighting access issue is the small bridges and culverts on private properties. Once again circumstances may severely prohibit firefighting access to fight either structure or wild-lands fire.

Suggested Mitigation for Protecting Cultural Resources Village of Questa CWPP

- Conduct an inventory in heavily overgrown areas, to ensure no historic buildings or archaeological sites will be damaged by falling trees, prescribed burning, burn piles, or bulldozers.
- New archaeological sites and historic buildings should be properly documented prior to treatment, with the State of New Mexico.
- All Bulldozer work (push piles, fire lines, new roads) should only occur in areas inventoried for cultural resources, and should avoid (go around, lift blade) any discovered cultural resources like chipped stone scatters, ruins, or historic buildings.
- Fall all trees away from historic structures.
- Prep archaeology sites and create a 30 foot defensible space around perishable historic structures by removing hazard trees, pruning overhanging branches, trimming shrubs, raking surface grass and leaves, and black lining. Remove old wood piles and debris adjacent to buildings, remove collapsed structural materials AFTER they have been photographed and recorded. Be aware that any digging, grass raking, or burning around historic buildings might disturb artifacts on the ground.
- No burn piles or push piles within 100 feet of perishable historic structures.
- Hand thinning of trees is generally allowed within archaeological site boundaries, because it usually does not damage artifacts. However, trucks driving on artifacts can cause damage to artifacts and deep surface ruts, especially in muddy conditions.
- Historic buildings and cultural sites should be thoroughly photographed and recorded prior to their dismantling or destruction, to preserve their scientific and historic data, and to comply with State laws.

Beneficial Outcomes for Cultural Resources in Village of Questa CWPP

- Creating a defensible space around Historic properties will aid in their protection during a fire, and keep a fire start in an old structure from spreading to other areas.
- Archaeological sites recorded on private property are sometimes eligible for assistance from the New Mexico Department of Historic Preservation in the site stewardship program.
- Consider making a walking and/or bike trail along the Bosque and acequias that would showcase (on a map or brochure), some of the historic buildings and acequia that are now more visible because of the thinning. Incorporate trail into Questa development plan.

Post Burn Area Stabilization and Rehabilitation

While many wildfires cause minimal damage to the land and pose few threats to the land or people downstream, some fires cause damage that requires special efforts to prevent problems afterwards. Loss of vegetation exposes soil to erosion; water runoff may increase and cause flooding; sediments may move downstream and damage houses or fill reservoirs putting endangered species and community water supplies at risk.

After a fire the first priority is emergency stabilization in order to prevent further damage to life, property or natural resources. The stabilization work begins before the fire is out and may continue for up to a year. The longer-term rehabilitation effort to repair damage caused by the fire begins after the fire is out and continues for several years. Rehabilitation focuses on the lands unlikely to recover naturally from wild land fire damage.

BAER Rehabilitation on federal lands

The Burned Area Emergency Response (BAER) program is designed to address these emergency situations through its key goals of protecting life, property, and critical natural and cultural resources. The objective of the BAER program is to determine the need for and to prescribe and implement emergency treatments on Federal Lands to minimize threats to life or property resulting from the effects of a fire or to stabilize and prevent unacceptable degradation to natural and cultural resources.

There are a variety of emergency stabilization techniques that the BAER team might recommend. Reseeding of ground cover with quick-growing or native species, mulching with straw or chipped wood, construction of straw, rock or log dams in small tributaries, and placement of logs to catch sediment on hill slopes are the primary stabilization techniques used.

CWPP CORE Team Recommendations

These are the initial priorities and recommendations for treatments and actions identified by the Questa CORE Team for private land within the WUI are the following:

- Remove brush and debris ground fuels from private properties
- Break ground fuels from property to property
- Fragment hazardous fuel loads in the riparian cottonwood Bosque
- Inventory and assess accessibility to community properties
- Complete a structural triage inventory for the Questa FD Firefighters
- Remove selected riparian mature juniper with property owner cooperation
- Initiate private property brush removal crews
- Initiate private property Fire Wise defensible space demonstration projects on private lands
- Improve firefighting access in partnership with private property owners
- Continue to pursue state and federal fuel reduction funding.
- Seek to maintain and increase 12.1 miles of hazardous fuel breaks on the windward boundary on USFS lands.
- Continue to pursue CFRP funding in 2008-9 in partnership the QRD CNF and RMYC.
- Increase the Questa Fire Department wild-lands fire fighting capabilities and coordination with regional resources.
- Increase the Questa Fire Department wild-lands fire fighting capabilities through training and the acquisition of wild-lands fire fighting equipment.
- Pursue continued intergovernmental partnerships with USFS and BLM to secure fuel reduction treatment funding.
- Pursue continued Non Governmental partnerships with area NGOs such as RMYC, Red River Watershed Group and Amigos Bravos
- Seek fuel reduction treatment funding in coordination with NM Forestry through the NM Watershed Plan

Questa CWPP WUI
Hazardous Fuels Reduction Project List
&
Implementation Strategies

The following WUI areas listed are areas identified during the establishment of the Neighborhoods at Risk Assessment during meetings of the CWPP CORE Team, the Questa public and the Questa Fire Department. These neighborhood WUI areas are numbered as they have been assigned to the CWPP WUI risk map and the GIS polygons of Neighborhoods at Risk.

During public meetings with the **Questa Fire Department**, the **Vencindad Chamber of Commerce, Police Chief Gallegos** and the **Initial CWPP public meeting** it was established that there are several neighborhoods and areas within the Village of Questa WUI that have conditions that are at a high risk of wild-lands fire with significant threat to personal safety, homes and private properties.

Therefore the **Neighorborhood at Risk Assessment** will be done on a neighborhood basis so that risk and priorities can be established for the varying circumstances and conditions that exist in Questa.

	Village of Questa Neighborhoods at Risk WUI Areas Description & Fuel Structure		**Prioritized Fuel Reduction Projects & Implementation Strategies**
1.	**<u>Highway # 522 and # 38, Questa Core Area WUI</u>** ***Commercial and governmental infrastructure of Questa. From Highway #522 at the Red River to the Wild Rivers turn north of Questa and from the Light at Highway #38 & # 522 to Highway # 38 and Eagle Rock Lake***	**H**	**Private lands** • Maintaining defensible space on and around private pasture lands. • Annual ditch burning and cleaning.
2.	**<u>Upper Cabresto Road WUI</u>** ***From the mouth of the Cabresto Canyon to the North Kiowa by pass*** .	**VH**	**Private lands** • Create Defensible Space around home and properties. • Prepare properties and homes for Fire Wise standards. • Identify private property owners that will create fuel breaks through defensible space treatments • Brush and vine removal. • Lop and pile juniper encroachment • Remove selected junipers • Remove dead and standing cottonwoods • Improve and widen private property access
3.	**<u>Lower Cabresto Road WUI</u>**	**VH**	**Private lands** • Create Defensible Space around

	From the Kiowa Road By Pass to the Junction with Hwy. # 38		home and properties. • Prepare properties and homes for Fire Wise standards. • Identify private property owners that will create fuel breaks through defensible space treatments • Brush and vine removal. • Lop and pile juniper encroachment • Remove selected junipers • Remove dead and standing cottonwoods • Improve and widen private property access
4.	**<u>Cabresto Canyon WUI</u>** ***From the mouth of Cabresto Canyon to the Bonito Canyon Road***	**VH**	**USFS Federal Lands** • Possible fuel break in the canyon along the road
5.	**<u>Upper North Kiowa Road WUI</u>** ***From the North Kiowa Cabresto Lake By-pass to Calle Del Sol Road***	**VH**	**Private lands** • Create Defensible Space around home and properties. • Prepare properties and homes for Fire Wise standards. • Identify private property owners that will create fuel breaks through defensible space treatments • Brush and vine removal. • Lop and pile juniper encroachment • Remove selected junipers • Remove dead and standing cottonwoods • Improve and widen private property access
6.	**<u>Lower North Kiowa Road WUI</u>** ***From Calle Del Sol to State Highway # 38***	**VH**	**Private lands** • Create Defensible Space around home and properties. • Prepare properties and homes for Fire Wise standards. • Identify private property owners that will create fuel breaks through defensible space treatments • Brush and vine removal. • Lop and pile juniper encroachment • Remove selected junipers • Remove dead and standing cottonwoods • Improve and widen private property access

7.	**<u>Upper South Kiowa Road WUI</u>** ***From Highway #38 to the confluence of the Red River and the Cabresto creek***	**VH**	**Private lands** • Create Defensible Space around home and properties. • Prepare properties and homes for Fire Wise standards. • Identify private property owners that will create fuel breaks through defensible space treatments • Brush and vine removal. • Lop and pile juniper encroachment • Remove selected junipers • Remove dead and standing cottonwoods • Improve and widen private property access
8.	**<u>Upper Red River Road WUI</u>** ***From the Junction of South Kiowa Road and the Old Red River Road near the confluence of the Red River and the Cabresto Creek to Hunts Pond***	**VH**	**Private lands** • Create Defensible Space around home and properties. • Prepare properties and homes for Fire Wise standards. • Identify private property owners that will create fuel breaks through defensible space treatments • Brush and vine removal. • Lop and pile juniper encroachment • Remove selected junipers • Remove dead and standing cottonwoods • Improve and widen private property access
9.	**<u>Lower Red River Road WUI</u>**	**VH**	**Private lands** • Create Defensible Space around home and properties. • Prepare properties and homes for Fire Wise standards. • Identify private property owners that will create fuel breaks through defensible space treatments • Brush and vine removal. • Lop and pile juniper encroachment • Remove selected junipers • Remove dead and standing cottonwoods • Improve and widen private property access
10.	**<u>Lower Embargo Road</u>**	**H**	**Private lands** • Create Defensible Space around home and properties.

			• Prepare properties and homes for Fire Wise standards. • Identify private property owners that will create fuel breaks through defensible space treatments • Brush and vine removal. • Lop and pile juniper encroachment • Remove selected junipers • Remove dead and standing cottonwoods • Improve and widen private property access
11.	**CNF Questa/Lama WUI & CFRP Area**	**H**	**(See CFRP descriptions and treatments pg 37)**
12.	**Elephant Ridge Federal Lands WUI**		
13.	**Pinabete Hills WUI** ***From the (_____) road off of Buen Pastor Road***	**VH**	
14.	**Wild Rivers Area Guadalupe Mountains**	**L**	
15.	**Guadalupe Mountain Power Lines**	**L**	
16.	**Lama Road Gas Lines** ***From Lama north to Questa along the Gas utility right of way***	**L**	
17.	**North Questa Propane Area** ***From Buen Pastor Road to Wild Rivers Road turn off***		

ICC Codes

The Village of Questa and the Questa Fire department has chosen to adopt the National ICC Codes.

http://www.iccsafe.org/

This comprehensive code includes regulations governing the safeguarding of life and property from all types of fire and explosions hazards. Topics include general precautions against fire, emergency planning and preparedness, fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, hazardous materials storage and use, and fire safety requirements for new and existing buildings and premises.

Fuels Reduction Treatment Monitoring

Monitoring provides a quality control and adaptive management strategy. By monitoring the effects of treatments and then evaluating the results, we are able to make appropriate modifications in management practices, assess resource trends and apply new knowledge to similar projects in the future. Local communities need access to tools and training to address the challenge of assessing the results of restoration treatments, and to learn more effective ways to accomplish the task of returning healthy conditions to natural places.

CFRP Technical Assistance Project

The Collaborative Forest Restoration Program, sponsored by the U.S. Forest Service, requires its award recipients to develop a multi-party monitoring team that assesses the positive and negative impact of the restoration work on impacts on the ground and on local community capacity. To assist the nearly 60CFR projects, a partnership was developed, funded by the CFRP Program for three years, to assist communities fulfill their monitoring commitments.

Multiparty Monitoring Process

Identify:

- different stakeholders' goals for and
- concerns about project outcomes
- what should be monitored
- monitoring budget
- monitoring resources (people, organizations, equipment)

Describe:

- monitoring goals
- indicators to measure change in goals
- reliable data collection methods
- where data will be gathered
- when data will be gathered
- who will gather the data

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Collect:
- baseline (pre-treatment) measurements
- repeat measurements – usually after project is completed
- enough data for a reliable result
- carefully store your data in a safe place

Use:
- simple and useful calculations
- a multiparty team meeting to discuss and
- interpret results

Report:
- what you've learned
- how you did it
- what you would do differently next time

Federal lands WUI Description

The Village of Questa is bounded on three sides by federal lands managed by the USFS and BLM. The eastern and southern flanks of Questa are bordered by USFS and the western side of the Village is bordered by the BLM Wild Rivers Recreation Area. Fuel reduction is critical to risk reduction in and around this community. Prevailing winds create the greatest risk to the village on its southwestern boundary. Wildfire and hazardous fuel load presence and history are documented by the USFS as generational.

Much of the federal lands adjacent to Questa rise quickly onto slopes too steep to implement mechanical treatments. These stands are predominately mixed conifer, Doug fir, Ponderosa Pine, Aspen, Pinon and Juniper. The adjacent USFS terrain with slopes of less than 30 degrees close to the Village provides an opportunity for mechanical fuel reduction treatments that bound private property.

Although most of the BLM Wild Rivers Area and the Village are separated and buffered by a man made fire break created by the Chevron, Moly Corp's mine tailings ponds, critical regional electric and natural gas lines pass through this area and they have been identified as areas of concern in the "Neighborhoods at Risk Assessment". BLM lands are predominately pinon juniper stands that the area resource office has already attained clearances and begun mechanical and prescribed burn treatments.

Proposed Fuel Reduction Treatments Questa/Lama WUI

Web Link for the Questa Lama WUI:

http://www.fs.fed.us/r3/carson

Fuel breaks

Fuel breaks would create defendable spaces; provide areas of reduced fuels that increase the margin of safety for communities, homes and residents. Fuel breaks serve as the immediate buffer between the National Forest and the private lands. Treating the vegetation in these areas can influence the behavior of a fire moving from the National Forest towards the private land, or from the private land to the National Forest and adjacent neighbors. Interconnected and continuous fuel breaks provide safer access to fires or escape routes from a fire, enhancing the margin of safety for fire fighting personnel.

Fuel break location beginning in the northeast part of the project area connects to Hondo Fire burn area, and then connects to Largo Canyon and then to the south edge of the community of Questa, which has a common boundary with National Forest land. From Questa the fuel break goes west encompassing private land that is within National Forest boundaries, then follows existing road along gas line and Forest Road 493 to private land surrounded by National Forest to the north of the community of Lama and again connecting with Hondo Fire boundary at southeast corner of project area. From the Hondo Fire boundary the fuel break goes west from the community of Lama to Lama Canyon and NM State Highway 522, then follows NM State Highway 515 to the Red River Fish Hatchery boundary.

The total length of fuel-breaks would extend about 12.1 miles with treatments occurring on up to 590 acres. Fuel-breaks would average approximately 5 chains (330 feet) in width along most fuel break zones. The exception would be the fuel-break connecting from private land to the north of the Lama at Lama Canyon to NM State Highway 522, then to the Red River Fish Hatchery boundary along NM State Highway 515. Fuel-breaks for this section would average approximately 10 chains (660 feet).

Fuel-break treatment would focus on retaining most fire resistant trees. Typically larger trees, ponderosa pine would be favored over pinon and juniper, and all aspen trees would be retained. Selection of fire resistant trees would also be based on a greater ground to crown ratio or distance,

including pinon and juniper. Within fuel-breaks 20 to 40 BA (basal area (sq.ft./acre (area cross section of tree at base) would be retained, maintaining an approximate tree crown spacing of 30-50 feet that increases the effectiveness of fuel-breaks.

Tree crown spacing would be highly variable based on the number trees greater than the upper thinning diameter limit of 10 inches. In areas where there are a greater number of trees larger than 10 inches diameter, average tree crown spacing would be less than 30-50 feet. Thinning treatments will focus on trees from 2 feet tall to 10 inches in diameter. Within fuel-breaks only occasional trees greater than 10 inches in order to create a more effective fuel-break. Specifically, those occasional trees greater than 10 inches would be ponderosa pine and located within Largo Canyon.

Within fuel-breaks fuel loading would be reduced to 5 tons per acre or less through piling of slash generated from thinning treatments and the burning of those piles. Burning would only take place when conditions are appropriate (i.e., sufficient moisture, wind direction). Fuels of sufficient size and in accessible locations would be removed as wood products, reducing the amount of piling and burning on site.

On steeper slopes within fuel-break zones slash generated from treatments would be lopped and scattered to no greater than 2 feet above ground surface. On steeper slopes where soil movement may be a concern, the main stem of trees would be placed perpendicular to slope to reduce soil movement and assist in the establishment of new grass, forbs and shrub vegetation.

An area of (5-7 acres) within fuel-break zone along NM State Highway 515 was identified as sagebrush vegetation type and proposed for 'brush hogging'. The brush hogging treatment would reduce the flashy fuel component of this vegetation type. This treatment would also enhance the effectiveness of this fuel-break and restore the area to a grassland small meadow type condition.

Fuel-breaks would provide improved growing conditions for trees retained within fuel-breaks. There would be less competition for the limited resources of water, nutrients and sunlight within fuel-breaks allowing for more vigorous trees and healthier stands of trees.

General Thinning

General Thinning would reduce fuel loadings and increase tree crown spacing, greatly decreasing the potential for crown fire activity, improve fire control and suppression efforts. The areas of general thinning would provide a healthier ecosystem between the communities of Questa and Lama and minimize wild-land fire threats to those communities. General thinning would occur on approximately 1035 acres identified as having established accessibility and on relatively gentle slopes.

Tree crowns are typically interlocking or have little distance between tree crowns. Continuously interlocked crowns are common across the project area and conducive to maintaining a wind driven crown fire. Thinning treatments would create more space between tree crowns and establish small openings in forest. Within general thinning fuels reduction areas 30 to 50 BA would be retained, maintaining an approximate tree crown spacing of 15-40 feet. Tree crown spacing would be highly variable based on the number trees greater with the diameter limited of 10 inches. Thinning treatments will focus on trees from 2 feet tall to 10 inches in diameter. Within general thinning areas no trees greater than 10 inches in diameter would be thinned.

Increasing tree crown spacing would create scattered small openings within forested stands. Small openings are lacking throughout most of the project and would enhance forage capability and wildlife habitat. Ladder fuels are extensive throughout areas proposed for general thinning, consisting of pinyon and juniper trees growing directly under the taller ponderosa pine trees or smaller pinyon and

juniper under larger pinyon trees. These ladder fuels allow fires at ground level to easily move up into tree crowns with the potential to become a crown fire.

Thinning from below

Thinning from below gives remaining trees more space, thus reducing competition and allowing healthier growing conditions and more vigorous growth. In both fuel breaks and general thinning areas, the predominate Silvicultural method employed would be thinning from below to achieve desired conditions. In some areas where trees are generally of the same size and height the silvicultural method would be considered an intermediate thinning type. Thinning from below would focus on removing fuel ladders, reducing interlocking crowns; mistletoe infected trees and suppressed trees.

Trees to retain would be based on wildlife use, fire resistance, tree health, larger trees, and juxtaposition to other retained trees. By removing some trees, the remaining ones would have room to grow more vigorously, stay healthier and less susceptible to bark beetles or other insect attacks and tree diseases.

In addition, thinning from below would create a more open condition, releasing grasses, forbs, and shrubs, which would provide forage habitat for big game species, turkeys, and prey species. Densely stocked stands are also a potential fire hazard, supporting the ignition and the spread of fire. Thinning and removing trees from the under story would decrease the possibility of a fire quickly spreading through the project area.

Commercial thinning

Thinning will be achieved through commercial thinning personal use forest products sales (such as firewood, vigas, and wildlings) and pre-commercial thinning. Thinning treatments will focus on trees from 2 feet tall to 10 inches in diameter. Within fuel breaks only occasional trees greater than 10 inches in order to create a more effective fuel break. Specifically, those occasional trees greater than 10 inches would be ponderosa pine and located within Largo Canyon. Commercial thinning would typically address those trees between 3 inches diameter and 10 inches diameter and suitable for products such as fuel wood.

Pre-commercial thinning would primarily address the smaller trees between 2 feet tall and 3 inches diameter. Pre-commercial thinning would retain between from 50 to 120 small trees per acre. In some areas, particularly within fuel-breaks on steeper slopes and areas with poor accessibility, pre-commercial thinning treatments would address all sizes of material to be thinned from 2 feet in height to 10 inches in diameter. Leave tree spacing for pre-commercial thinning would be variable to create a mosaic pattern based on the leaving the healthiest trees.

Fuel breaks and general thinning would be implemented in blocks over a time period of 5 to 10 years. Final silvicultural prescriptions would vary based on a block by block or existing stand condition with similar characteristics, final prescriptions would vary based on the differences proposed by alternative, spacing of trees would vary greatly based on the number of trees in excess of the upper tree diameter limit, tree spacing would vary in some cases based on leaving small clumps of trees with wider spacing around clumps to create a mosaic arrangement of trees. Leaving clumps of trees may be prescribed to protect particular wildlife concerns such as nest trees. Clumps may be prescribed based on more fire resistant qualities when compared to other trees surrounding the clump. Final silvicultural prescriptions would be approved by a certified Silviculurist on a block by block basis.

Fuels Reduction treatments in addition to thinning treatments would include piling of slash (vegetative material generated from thinning), burning of slash piles, lopping of slash, and scattering of slash. Slash or

fuels generated from the vegetative treatment methods create a different form of unnatural fuels buildup. The additional fuels treatments would decrease the possibility of catastrophic crown fires in the project area.

Piling and burning of slash piles would occur on about 528 acres within fuel-breaks areas. The pile and burn method of fuels treatment would improve the effectiveness of fuel-breaks by eliminating most fuels generated from tree thinning treatments. An estimate of up to 20% of piles would not be burned due to proximity to drainages, leave trees, and to provide for prey base wildlife habitat. Lopping and scattering method of fuels treatment would occur on approximately 1089 acres. These acres include all general thinning areas and on an estimated 54 acres within fuel-break areas with slopes exceeding 30 per cent.

Lopping and scattering slash from thinning treatments to a maximum height of 2 feet would reduce ladders fuels and help keep fires at ground level and decrease crown fire risk. Lopping slash, bringing tree branches in contact with ground surface would reduce soil movement, enhance soil stabilization, increase habitat for certain wildlife species and reduce soil moisture evaporation stimulating the growth of grasses, forbs, and shrubs.

Description of current CFRP

(The CFRP areas can be viewed on the CWPP WUI map)

Date CFRP Grant acquired: October 17 2003
CFRP Grant Amount: $330,000
Number of Acres treated: 163
Number of local contractors: Five (5) local contractors were engaged
Local economic benefit: $195, 600 @ 1200 per /ac
Types of treatments: Lop and scatter, Lop and Pile

Added Community benefits:

- Community Fuel-wood lot for seniors and handicapped
- Forest Ecology Ranch program (Singing River Ranch 3 summers)
- Community Wood Chipper
- Community Wood Truck

Hazardous Fuel Load Treatment Alternatives for Private Lands

The information developed in the Questa CWPP is to provide Questa residents with information necessary to understand the relationships between maintaining the scenic beauty of the community and your personal property as well as, the degree of acceptable risk from wildfire.

During the CWPP public meeting residents expressed varying levels of concern and commitment to work individually and collectively to reduce the risk of wild-lands fire. The fuel load on private lands along the “Bosque” riparian areas often have dense continuous vertical fuel ladder structures. This condition creates a high risk during times of seasonal dry and windy periods or drought.

Another high priority concern of the Questa Fire department is the accumulation of grass and shrub ground fuels that virtually contact the heavy infestation of junipers in and around homes many that are under mature cottonwood canopies. Given that human activity is the greatest risk of ignition from

assorted backyard activities or structure fires, fuel removal and reduction on private lands is the highest priority for the Questa CWPP WUI area.

Many local land owners also have pasture lands and they expressed a need for help clearing ground fuels as a starting point in fuels reduction. Similarly many home owners are unaware of defensible space strategies. There is also an apprehension of intrusive thinning treatments that compromise either the esthetic or privacy values of their properties. An incremental approach for a program of assisted brush clearing may provide private property owners the initial comfort and trust required to engage them in a long term fuel reduction program.

Fuel reduction treatments on critical private lands that create effective fuel breaks depend on careful planning, public WUI education and the cooperation of the land owners. Some of the urban alternatives to providing reduced risk identified by the Questa CWPP CORE Team and local citizens are the following;

- Remove brush and debris for defensible spaces around structures
- Limb trees to 10 foot from ground level
- Lop and scatter brush and trees limbs
- Lop and pile brush and trees limbs
- Lop and chip, masticate or mulch brush and trees limbs
- Remove select juniper for defensible spaces around structures
- Remove select cottonwood lower branch for defensible spaces around structures
- Driveway widening to improve firefighting access
- Cattle guard replacements to improve firefighting access

Thinning Trees

Reduces live fuels effectively, but can increase downed trees or limbs unless they are harvested or burned.

- Thinning treatments remain effective for one to several years. However, problematic under story species may become established following cutting.
- Cost for contractor to thin: Private contractors $1,500-2,000 p/ac.
- Cost for State to thin: $250-400 per acre inmate crews, Cite 2008 CFRP. Fuel costs rise

Brush removal Mowing and Chopping under-story vegetation

- Reduces live and dead fuels effectively for one to several years. However, many problematic species re-sprout following mowing.
- Repeat every 1 to 3 years for long-term effectiveness.
- Cost for mowing and chopping: $100-$500 per acre.

Grazing

- Effective for reducing grasses and other herbaceous fuels, but does not reduce some shrubs or dead wood, such as branches and logs, effectively.
- Fuel reduction is short-term since many problematic species re-sprout following grazing. It is necessary to repeat every 1 to 2 years for long-term effectiveness.
- Cost to rent livestock: varies by area and type of animal (sheep, goats, or cattle).

- Cost for purchasing own herd: $200-$500 per head (not including maintenance, fencing, etc.). However, the costs can be offset by revenue gained from selling livestock such as cattle.

Prescribed Burn Alternatives for Private Lands

The Village of Questa has a history of traditional land use and prescribed burning for a variety of reasons. Before federal lands were established local cattlemen and sheep herders regularly set wildfires in high elevation upper watershed meadows in the fall to increase livestock forage in coming seasons. Generally fall snows would suppress these frees.

Ranches and farmers, acequia parcientes regularly clear fields and ditches in the spring with supervised prescribed fires. On the other hand, dry fall grasses could carry a wild-lands fire from pasture lands to homes and forest at a fast rate of spread.

Private property owners in the Village of Questa must acquire a burn permit from both the Village of Questa, QFD and Taos County. The QFD coordinates and schedules with local acequia ditch associations the spring burning of ditches so that QFD resources are on site.

Annual "Acequia" irrigation ditch burning supervised by the QFD

While these practices are inextricably a part of the traditional practices and the social fabric of Questa, ***prescribed burns are not considered an alternative to reducing fuel loads*** in and around the Bosque, riparian areas throughout private properties.

Cottonwoods are not a fire responsive species and can easily be damaged or killed with fire. Ladder fuels particularly juniper encroachment within the village Bosque area is continuous and creates a dangerously high fuel loads. Structures are in too close of proximity to risk ignition and wild-lands fire spread in these areas.

Village of Questa CWPP WUI Implementation Strategies

1. Current 2008 CFRP application

In 2003 the Village of Questa was awarded a Collaboration Forest Restoration Program grant to thin 150 acres in the Questa Ranger District. The project was successfully implemented creating 26 jobs over a three-year period, distributed wood products to approximately 100 needy households and conducted three forestry camps for local youth.

The 2008 proposal seeks to reduce the threat of high intensity wildfires and to promote healthy ecosystem and watersheds, provide education opportunities and create employment opportunities, which is in harmony with the Village of Questa Comprehensive Plan.

Objectives:

Thin 200 acres in the Questa/Lama WUI; including stewardship block, pile slash.

- To create fuel break.
- Create local employment opportunities.

How will the project address the purposes and objective of the program?

- Restore the vegetation conditions necessary to produce a healthy sustainable ecosystem.
- Reduce the risk of a catastrophic crown fire from moving from National Forest lands into the community of Questa or from the community onto National Forest lands.
- Reduce ladder fuels, making it more difficult for a ground fire to transition into a crown fire.
- Increase the abundance and diversity of native grasses, forbs, and shrubs.
- Provide forest products to the elderly for heating home.

What is the scientific basis for the proposed land treatment and/or prescription?

- A mixture of ponderosa pine and pinyon/juniper dominates the basis for the proposed treatment project area.
- An assortment of tree densities and tree sizes exists, creating areas of continuously interlocked tree crowns and an extensive amount of ladder fuels.
- The majority of trees are less than 10” diameter breast height

Where will the project be accomplished? Describe the community being affected. What County? What municipality? What public land management office manages the land?

- The project will be in the Carson National Forest (Questa Ranger District).
- The Questa community is made up of 1864 residents. Chevron Mining Inc. (formally Molycorp Inc.) is located 4 miles from community. There are limited job activities in the Village limits.
- The Village of Questa is located in Taos County
- The United States Forest Service, Carson National Forest manages the land.

How will the project encourage sustainable communities and sustainable partnerships through collaborative partnerships? Will this project be self-sufficient after the activities funded by this grant are completed?

- The project will help encourage a sustainable community by the creating a fuel break to protect Questa and the local employment created and by the youth education component.
- Sustainable partnerships have been established through the 2003 CFRP grant between the Questa Ranger District, the Village of Questa and Singing River Field Center.
- The project will not be self-sufficient after the grant is completed because there is no funding available to continue the treatment in the Questa/Lama WUI project area.

2. Village of Questa WUI Properties at High Risk Inventory and Public Outreach

The Questa Fire Department seeks to create a program of long term public outreach with the private property owners at high risk of wild-lands fire while serving the dual purpose of developing a data base assessment and inventory of properties at risk. The Questa Fire Department would like to secure training so that members can provide private property owners with "Defensible Space" evaluation from NM Forestry or other sources such as RMYC and local contractors.

There are approximately 300-400 private property owners in the areas of Questa identified at very high risk of wild-lands wild fire. The QFD would like to engage the RMYC, NMFWRI and other partners in an effort to extend property owner a defensible space free evaluation.

This would be achieved by the QFD visiting a small number of residences weekly by schedule with the property owners. Visits would be made with the QFD ladder and tender E-8 fire truck. The Fire Department can simultaneously assess ingress and egress unto these properties by making notes in a GPS data inventory.

With the Rocky Mountain Youth Corps attending these visits it is the hope of the QFD that the RMYC can administer and provide access to the data. This will also provide RMYC members the opportunity to outreach property owners by sharing information about "Defensible Space" awareness and how to secure local funding for fuel reduction and defensible space forestry treatments.

3. Village of Questa Fuel Reduction Demonstration

Heavy and dangerous hazardous fuel loads in the form of a ground level to full canopy fuel ladders exist along the 4 1/2 miles of riparian or cottonwood "Bosque" within the Village of Questa. These fuel loads present an extreme wild lands fire ignitability threat to more than 800 structures in the community of 2600 residents.

Any structure fire within this 4 1/2 mile corridor presents a constant threat of a full canopy wild-lands fire. The overall purpose of the **Village of Questa Fuel Reduction Demonstration** is to modify or break up the fuels in such a way as to lessen catastrophic fire and its threat to public and firefighter safety and damage to property.

This riparian cottonwood stands are directly adjacent and connected to similar fuel loads on federal lands in the Carson National Forest. In 1996 the Hondo Wildfire completely consumed 10,000 acres of mixed conifer on federal lands along Questa's immediate southern boundary. It destroyed homes in the neighboring community of Lama and threatened homes and infrastructure in the Village of Questa prompting a three day evacuation while causing massive post fire erosion on local watersheds.

Due to the extreme fuel loading on private properties within the Village, municipal government has set its' highest priorities as the reduction of these fuel loads. Its' primary goal is to create conditions in

and around individual structures that will limit the transmission of fire from wild-land to structures. The **Village of Questa Fuel Reduction Demonstration** is basic necessity to reducing the fire hazard in the WUI and is the responsibility of homeowners and communities.

The Village is currently developing a CWPP under a grant from New Mexico Division of Forestry. It has already established a phased community WUI map in partnership with the SWERI, the New Mexico Forestry and Watershed Institute at New Mexico Highlands University and the Questa Ranger district of the Carson national forest. This partnership is providing access to professional foresters and GIS technicians that are supporting the development of the Questa WUI map. The draft fuel reduction plan has been segregated into 10 phases over an estimated 5 to 10 year planning period.

The most immediate needs of the **Village of Questa Fuel Reduction Demonstration** is to achieve its first private property fuel wood reduction demonstration within the Phase I area where there is as much as 95% mortality in some of the cottonwood stands that stands in excess of 100 foot tall. The implementation strategy is to begin by establishing a community brush and under-story clearing initiative to break the fuel load at the ground level were human ignitions are most likely within this riparian canopy. As a component of the **Village of Questa Fuel Reduction Demonstration** the Village is seeking to reduce significantly dead and standing mature and climax stage cottonwoods stands on 10 -20 acres of private lands within the Village.

4. Village of Questa Wild-Lands Urban Interface Community Outreach Program

Therefore the Village of Questa seeks to establish a **Village of Questa Wild-Lands Urban Interface Community Outreach Program**. The purpose of this initiative will be to network together with the Carson National Forest, TSWCD and private property owners within the Village of Questa to raise the awareness for the hazardous fuel loads that represent a high risk of catastrophic canopy fire along the riparian cottonwood stands within the Village and initiate a pilot project to serve as a community forestry demonstration.

The **Village of Questa Wild-Lands Urban Interface Community Outreach Program** will reduce the risks of wild lands fire to private properties. Due to New Mexico's anti-donation statute and clause and because the hazardous fuel loads exist primarily on private lands in the Village of Questa, all implementation projects for hazardous fuels reductions must be administered and implemented through the Village of Questa or the Taos Soil and Water Conservation District. Currently the Taos Soil and Water Conservation District is providing in-kind forestry consultation services for assessments and when possible contract supervision.

The **Village of Questa Wild-Lands Urban Interface Community Outreach Program** will help provide protections to homes and private property through expanded outreach and education about wildfire prevention through the use of programs such as "Fire Wise" and "Defensible Space". While local homeowners and Village government bears much of the responsibility for improving the defensibility of homes in the interface, the Village needs support gaining information regarding what needs to be done and how to do it. The Village depends heavily on its partnership with The Taos Soil and Water Conservation District and this initiative.

During the development of this CWPP, the Village of Questa has established a long list of both public and private partnerships within Taos County to meet the goals of these plans according to the National fire plan. The Questa Volunteer Fire Department has participated in the development of both the Taos County CWPP and the Enchanted Circle Fire Association CWPP. During these two separate processes the Village of Questa began to prioritize fuels reduction and recommendations for treatment types.

Implementation Strategies in both plans recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed in the plan.

5. Rocky Mountain Youth Corps, Village of Questa, Carson National Forest CFRP Partnership

Largo Canyon
http://youthcorps.org/aboutrmyc.html

- **Senior Citizens, "Ancianos" and handicapped Wood Lot Program and Demonstration Area**

The Carson National Forest, Questa Ranger District received services from RMYC throughout 2007 through the Largo Canyon Collaborative Forest Restoration Program (CFRP) grant managed by RMYC. RMYC's crew was composed of local males and females, predominately Hispanic individuals living in Taos and Questa.

- **Largo Canyon Project Purpose**

The purpose of the Largo Canyon CFRP project is to restore the forest to healthier conditions that reduce the risk of high-intensity wildfires. Largo Canyon is located within the Questa Wild-land Urban Interface (WUI). Corps members are trained in proper chainsaw safety prior to working in restoration activities. Once in the forest, they thin small diameter timber, deliver cords of wood to the woodlot, and monitor the forest's pre and post treatment conditions. 2007 was the second year of a three year CFRP grant for Largo Canyon

- **Project Outcomes**

1. Hours served by RMYC Crew: 8,077
2. 44 acres of forest restored
3. Five scientific transects established and monitored
4. 23 cords of firewood distributed through the community woodlot

- **Corps member Development**

Along with project outcomes, RMYC also supports and encourages Corps member learning and professional training. The 63 Corps members recruited to complete full-time and summer community service projects spend a week in general program orientation and pre-service training.

- **2007 RMYC Statistics**

1. 64 % of participating youth returned to school upon program completion
2. 73 youth certified in Red Cross First Aid and CPR
3. 17 Corps members received US Forest Service Chain Saw Safety Training
4. 14 % of participating youth found employment upon program completion
5. Corps members earned Ameri Corps educational awards valued at $121,087.50 to be used for post-secondary education

6. Chevron Mining Inc. Molycorp Field Fuel Reduction Project

Chevron Mining Inc., formerly Molycorp holds several private properties within the Village of Questa. The most prominent is the Molycorp Community Field which is within the Upper Red River Road

WUI area. These areas are under very high risk from wild-lands fire and are good candidates for fuels reduction treatments.

Hazardous Fuels Reduction Funding Sources

Federal wildfire prevention and WUI funding sources

- **CFRP Community Forestry Restoration Projects**

The Community Forest Restoration Act of 2000 (Title VI, Public Law 106-393) established a cooperative forest restoration program in New Mexico to provide cost-share grants to stakeholders for forest restoration projects on public land to be designed through a collaborative process (the Collaborative Forest Restoration Program).

Projects must include a diversity of stakeholders in their design and implementation, and address specified objectives, including: wildfire threat reduction; ecosystem restoration, including non-native tree species reduction; reestablishment of historic fire regimes; reforestation; preservation of old and large trees; increased utilization of small diameter trees; and the creation of forest- related local employment.

The act limits projects to four years, and sets forth cost limits and provisions respecting: collaborative project review and selection; joint monitoring and evaluation; and reporting. The act authorizes appropriations of up to $5 million annually, and directs the Secretary to convene a technical advisory panel to evaluate proposals that may receive funding through the Collaborative Forest Restoration Program.

- **Rural Fire Assistance Program**

The Rural Fire Assistance program was authorized in the FY 2001 *Interior and Related Agencies Appropriation Act, P.L. 106-291*, as a pilot effort to augment rural fire department (RFD) firefighter safety and wild-land fire protection capabilities. From 2001 - 2005, the Department focused grants to provide training, personal protective equipment and essential firefighting equipment on a cost-shared basis to RFD s.

These departments are often the first line of defense against unwanted wild-land fire and they provide fire support that benefits resources on DOI-managed lands. Grants may only be used for basic wild-land fire safety equipment and tools, communication devices, wild-land fire training, and community wildfire prevention and education activities.

Fiscal Year 2006 focused efforts on both basic and advanced training for local firefighters by providing the "on-the-ground leadership" necessary to improve safety and maximize their effectiveness in wild-land fire suppression operations.

Currently, direct assistance to communities will be delivered through firefighter training and provided to rural fire departments in communities near DOI-managed land. The Department will continue the Ready Reserve program to develop local firefighters who will be trained to become qualified for initial and extended attack.

Aligning the goals of the RFA program to serve small communities through enhanced coordination with the Forest Service State and Volunteer Fire Assistance and the DHS Assistance to Firefighters grant programs can be achieved by developing a CWPP

- **Rural Community Fire Protection Program**

The VFA program, formerly known as the Rural Community Fire Protection program, is administered by state forestry agencies through 50-50 cost-sharing grants to local fire departments in rural communities. The program's main goal is to provide federal financial, technical, and other assistance in the organization, training, and equipping of fire departments in rural areas with a population of 10,000 or less. Contact you're the NM State Forester's office for grant application forms and deadlines.

The SFA program assists state forestry agencies in wildfire response coordination and delivery, compliance with the national safety and training standards that ensure state and local crew deployment to federal fires and other emergency situations, hazard assessments, fuels treatment projects, and public education efforts. Contact your NM State Forester's office for grant application forms and deadlines.

- **Fire Wise Communities**

http://www.firewise.org/

The **"Fire Wise Communities"** is part of the National Wild-land/Urban Interface Fire Program, which is directed and sponsored by the Wild-land/Urban Interface Working Team (WUIWT) of the National Wildfire Coordinating Group, a consortium of wild-land fire organizations and federal agencies responsible for wild-land fire management in the United States.

The **WUIWT** includes: **USDA** Forest Service, **USDI** Bureau of Indian Affairs, **USDI** Bureau of Land Management, **USDI** Fish and Wildlife Service, **USDI** National Park Service, Federal Emergency Management Agency, US Fire Administration, International Association of Fire Chiefs, National Association of State Fire Marshals, National Association of State Foresters, National Emergency Management Association, National Fire Protection Association.

- **Non-Point Source Management Program - Clean Water Section 319**

http://www.epa.gov

Congress amended the Clean Water Act (CWA) in 1987 to establish the section 319 Non-Point Source Management Program because it recognized the need for greater federal leadership to help focus State and local non-point source efforts. Under section 319, State, Territories, and Indian Tribes receive grant money which support a wide variety of activities including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess the success of specific non-point source implementation projects.

The Section 319 National Monitoring Program projects comprise a small subset of NPS pollution control projects funded under Section 319 of the Clean Water Act as amended in 1987. The goal of the program is to support 20 to 30 watershed projects nationwide that meet a minimum set of project planning, implementation, monitoring, and evaluation requirements designed to lead to successful documentation of project effectiveness with respect to water quality protection or improvement.

The Section 319 National Monitoring Program projects have quantified water quality improvements from Non-Point source controls and strengthened strategies for effective future watershed programs. Highlights are given from each of the 23 Section 319 National Monitoring Program projects.

State Wildfire Prevention Funding

- **New Mexico Forest and Watershed Health Plan**

http://www.emnrd.state.nm.us/fd/FWHPlan/ForestAndWaterShedHealth.htm

The Forest and Watershed Health Plan will:

- Promote improved forest and watershed health conditions in New Mexico through increased coordination of effort and resources
- Be based on the National Fire Plan, the 10-Year Comprehensive Strategy and the Implementation Plan of the Western Governors
- Utilize a collaborative process of input and decision-making between the state, federal agencies, tribes, local governments, research and non-governmental organizations, business, and the public

NM Watershed Plan Brief Summary

New Mexico's ecosystems are in an unhealthy state due to conditions of over density of fuels, including invasive species and noxious weeds. This unhealthy condition is exacerbated by drought, which results in the unwanted conditions of susceptibility to wildfire and insect infestation, compromised watersheds, and decreasing biodiversity. These conditions are common throughout the West and are of the highest priority, as indicated by the National Fire Plan and the 10-Year Comprehensive Strategy.

New Mexico's forest condition is being addressed by the federal land management agencies, tribal, state and local governments, private landowners, public interest groups, and research institutions. These efforts have grown and will continue to do so in the coming years. By necessity, some coordination of effort and resources has evolved. However, as the conditions become more acute, the resulting problems will have an even more devastating effect on the landscape and on public health and welfare unless swift, effective action is taken.

The need to coordinate the variety of efforts of all these entities is imperative to an expedient remedy of forest and watershed health condition. Effective coordination, resource allocation, project prioritization and integrated communication are all vital, and the New Mexico Forest and Watershed Health Plan is the way to bring this into action.

- **New Mexico Non Native Phreatophyte Restoration Plan**

http://nmdaweb.nmsu.edu/animal-and-plant-protection/tamarisk-salt-cedar

Riparian lands in New Mexico have been seriously impacted by the infestation of non-native phreatophytes. The two of most concern are tamarisk (a.k.a. saltcedar) and to a lesser extent Russian olive. The New Mexico Department of Agriculture provides the leadership, administrative oversight, and assistance for State funded non-native phreatophyte programs.

This Plan provides a path forward for management and implementation of future control practices and rehabilitation efforts in New Mexico's watersheds with special reference to riparian areas. This Plan was developed by the HB-2 Work Group comprised of senior representatives from the following New Mexico Agencies: Department of Agriculture; Energy, Minerals and Natural Resources Department; Environment Department; Indian Affairs Department; and Office of State Engineer, in consultation with the soil and water conservation districts, represented by the Chair of the New Mexico Soil and Water Conservation Commission.

New Mexico's riparian lands have been severely impacted by many of man's activities and actions, but perhaps the most dramatic are the hydrologic changes that have aided the rapid infestations of the non-native invasive plant tamarisk (Tamarix spp., also known as salt cedar). Tamarisk is a tenacious shrub/small tree with a deep root system (up to 100 feet) and leaves a salt residue on the soil surface. Under the right conditions, these characteristics enable it to quickly replace native cottonwoods, willows, grasses, and forbs.

The resulting tamarisk thickets invade the banks and floodplains of our rivers and streams; provide poor habitat for flora and fauna; increase fire hazards; limit human use of the waterways, and generally consume more water than native vegetation. Russian olive, juniper, Chinese elms are other non-native phreatophyte that has infested New Mexico's riparian lands and is beginning to cause similar impacts.

The New Mexico Legislature has taken positive steps to solve this problem. Over the past three years it has authorized more than $11,000,000 for non-native phreatophyte control on the Canadian, Rio Grande, and Pecos River systems. During the 2004 legislative session, the Legislature expanded the program in House Bill 2 (HB-2) to include a revegetation component and the development of a Statewide Non-native Phreatophyte/Watershed Strategic Plan.

This Plan relies heavily on the New Mexico Forest and Watershed Health Plan – an Integrated Collaborative Approach to Ecological Restoration, December 15, 2004 (FWHP); work performed by the New Mexico Interagency Weed Action Group (IWAG) in their Strategy for Long-Term Management of Exotic Trees in Riparian Areas for New Mexico, Five River Systems, 2005-2014; Section C.8 of the New Mexico Office of State Engineer/Interstate Stream Commission's State Water Plan, December 23, 2003 that "Promotes river riparian and watershed restoration . . ."; findings of the Saltcedar Task Force, Final Report, April 14, 2004; and the National Invasive Species Council.

The issues of forest and watershed health cross political and landownership boundaries making the scale for planning especially important. This Plan establishes complementary policy connections between the FWHP but concentrates on templates and protocols for control, re vegetation and rehabilitation, monitoring, and long-term management of non-native invasive plant species in New Mexico's watersheds.

Since non-native invasive plant species do not respect political boundaries, successful resolution of these problems necessitates extensive multi-agency and landowner coordination and cooperation. The HB-2 Interagency Work Group has developed this Plan and its recommended actions with full recognition of the importance of the cooperation required among the State's departments and offices, federal agencies, affected landowners, Tribal governments, soil and water conservation districts, and concerned environmental groups.

A benefit of this Plan is that it will provide the framework within which New Mexico will interact with its adjoining states, Mexico, and federal partners in the implementation of national policies and programs governing watershed and ecosystem health.

- **New Mexico Association of Counties: Wildfire Risk Reduction Program For Rural Communities Program Information**

http://www.nmcounties.org

The Wildfire Risk Reduction Program for Rural Communities was established in 2005 under the National Fire Plan to assist communities throughout New Mexico in reducing their risk from wild-land fire on non-federal lands. The New Mexico Association of Counties (NMAC), a nonprofit community foundation, has partnered with the Bureau of Land Management (BLM) to administer the program and distribute awards.

This grant program is only applicable to the Wild-land Urban Interface (WUI). WUI is defined as identified in an approved CWPP. The program targets at-risk communities by offering seed money to help defray the costs of reducing wild-land fire risk on non-federal lands in WUI areas throughout New Mexico. Funding for this grant program is intended to directly benefit communities that may be impacted by wild-land fire initiating from or spreading to BLM public land.

During the past three years, the Wildfire Risk Reduction Grant Program has primarily funded projects for the development of Community Wildfire Protection Plans (CWPP), a planning pre-requisite to all other activities. In 2008, priority will be given to applicants who request funding to implement CWPP identified projects that reduce hazardous fuels and can show a direct benefit to BLM lands. Multiple project proposals from a single applicant will be accepted with no more than one per category.

- Grants for **Hazardous Fuel Reduction** projects on non-federal lands are available for up to $50,000/project.

- Grants for **Wild-land Fire Education, Prevention and Outreach Activities** that support implementation of an applicable CWPP are available for up to $15,000/project.

- Grants for **CWPP Updates** to address broader WUI definitions or other modifications to previously approved CWPPs in order to address community specific actions, strategies, or treatments are available for up to $7,500/project. If you are considering updating your CWPP or WUI definition please reference the (Federal Register - Vol.66, No. 3) or review the resources provided on this page.

All project proposals require a minimum 10% cost share. Cost share can be in the form of cash or in-kind contributions. Funded projects must be completed within 12 months of award acceptance.

It is the responsibility of the grantee to assure that if their project is selected for funding through the Wildfire Risk Reduction Program that it complies with applicable local, state, and federal laws. Applicants who receive more than $500,000 annually from federal sources will be required to submit a copy of their audit to NMAC.

All funds must be expended within 12 months of award acceptance. Funds cannot be used to attempt to influence legislation or the outcome of any public election.

Prescribed burning of any type including, but not limited to, broadcast burns, pile burns, under story burns, etc. is explicitly excluded as an approved practice through this grant program.

Section #5

Questa Community Outreach

Information and Education

Summary of Community Input for WUI Outreach and Education

During Questa CWPP public meetings and meetings of the CWPP CORE Team there has been vigorous input by private property owners for the need to inform neighbors of the risk of wildfire and actions and alternatives that they may take to help reduce that risk. Members of the Questa Independent School District, teachers and the Vencindad Chamber of Commerce expressed a commitment to participate in any WUI Fire Wise defensible Space education.

Achieving the CWPP goals of fragmenting hazardous fuel loads on private lands requires the full cooperation of private property owners. The first step in public outreach is realizing the risk of wild-lands fire on your own property. The information developed in the Questa CWPP is to provide Questa residents with information necessary to understand the relationships between maintaining the scenic beauty of the community and your personal property as well as, the degree of acceptable risk from wildfire. It will identify the types of actions community members can take to reduce the risk of exposure to catastrophic wildfire through fuels reduction while maintaining the beauty and privacy of your property.

WUI landowners must assume all responsibility for reducing the vegetative fuels around their homes to reduce fire risk on their property. In order to lessen the fuel reduction burden on state and local governments and reduce the risk of catastrophic fires in WUI communities, it is necessary to educate landowners about fuel reduction and the options available for management of vegetative fuels.

The fuel reduction options report and research study provide this type of educational information and will contribute to reducing human and property casualties resulting from fires in the wild-land-urban interface.

Carson National Forest Defensible Space Outreach

http://www.nmfireinfo.com/

The Carson National Forest currently extends Fire Wise and defensible space outreach and education to the Questa Independent School District, Alta Vista Middle School. Doretea Martinez, 758-6200 conducts community outreach and education for the USFS.

- Regular “Fire Wise” community meetings
- Private property “Defensible Space” demonstration projects
- Questa Independent School District
- Questa Fire Department
- Carson National Forest Public Outreach Coordinator Dorotea Martinez
- Rocky Mountain Youth Corps

Actions to Reduce Structural Ignitability

What you can do as Questa resident and property owner?

- **Create a Survivable Space**

Do you have 30 to 100 ft of space surrounding your home that is Lean, Clean and Green?

1. **Lean:** Prune shrubs and cut back tree branches, especially within 15 ft of your chimney.
2. **Clean:** Remove all dead plant material from around your home; this includes dead leaves, dry vegetation and even stacked firewood. Prune large trees 6 to 10 ft high to prevent ground fires from spreading to tree tops.
3. **Green:** Plant **fire-resistant vegetation** that is healthy and green throughout the year.

- **Fire Resistant Construction**

Brick, cement, plaster, stucco and concrete masonry resist heat and flames. Tempered and double pane glass windows can also make a home more resistant to the heat and flames of a wildfire.

Class A asphalt shingles, metal, tile and concrete roofing is also good protection for your home. A fire-resistant sub-roof can add an extra layer of protection.

Attachments to your home such as decks, porches or fences that are not made of a fire resistant material can start on fire and spread to the rest of your home.

- **Emergency Access**

Identify your home and neighborhood with legible and clearly marked street names and numbers so response vehicles can rapidly find the location of the emergency. Include a driveway that is at least 14 ft wide with a vertical clearance of 13 ft 6 in *(per 1997 UFC, section 902.2.2.1)* to provide access for emergency apparatus.

- **Private Property Owner's "Fire Wise" Plan**

A personal **"Fire Wise Plan"** should include, at a minimum, the following information:

1. A copy of the site plan.
2. Methods and timetables for controlling, changing or modifying areas on the property. Elements of the plan shall include removal of slash, snags, dead and/or vegetation, vegetation that may grow into or provide a hazard to overhead electrical lines, removal of ground fuels including forest litter, ladder fuels and the thinning and arrangement of live trees and planting of fire-resistive vegetation.
3. A plan for maintaining these fuel reduction/management measures via the subdivision covenants throughout the existence of the subdivision.

The vegetation management plan shall also include the following values as they relate to the subdivision and shall consider the overriding requirement that the plan shall improve the overall health of the area ecosystem:

1. Fire risk reduction

2. Aesthetic consideration
3. Functional aspects of the vegetation/environment
4. Cultural/Spiritual aspects

- **Have a Family Disaster Plan**

The time to plan for an emergency is before the emergency happens. Take a few minutes to discuss with your family your personal evacuation plans. Places to meet critical medications, documents personal possessions and pets

- **Important Fire Wise concepts**

"Fire Wise" practices increase the likelihood that homes, office buildings, and other community resources (watersheds, infrastructure such as roads or communication lines, and other resources) will survive wild-land fire damage.

- **Three elements that are present in the WUI Wild-Land–Urban Interface zone are:**

(1) Wild-land fuels (trees and shrubs),
(2) Urban fuels (homes and landscape plants), and
(3) Limited fire protection resources.

In short, this zone is "where the leaves meet the eaves." The zone can be a house in the woodlands, a subdivision on the edge of a community, or a home with a combustible roof surrounded by large amounts of landscape vegetation. As people move into areas where fire plays a role, homes become a possible fuel source and the potential for human-caused ignitions increases.

- **Firefighters can't do it alone!** Communities need to balance the needs and values of both People and natural resources by taking action before fires start.

- **Fire Wise practices can provide a survivable space for homes and communities**.

(1) Residents should use fire-resistant building materials, especially on the roof;
(2) Residents should remove flammable materials from around homes;
(3) Residents should create fire breaks with lawns, driveways, and walkways;
(4) Residents should install screens on chimneys and burn barrels;
(5) Residents should stack firewood away from homes;
(6) Residents should provide appropriate space between plants and remove lower branches from trees; and
(7) Residents should make sure the home address is visible from the street.

Homes don't have to burn!

Work done around a home before a fire starts can save property and lives. Homeowners and communities, working as partners with firefighters, can effectively reduce losses caused by wild-land fires.

Section # 6

Questa Wild-lands Fire Protection Capability

Brief Village of Questa Wild-lands Fire Capability Overview

The Questa Fire Department is a 35 member department with (3) three full time members and (32) volunteer members. The Hondo/Lama Wildfire that occurred on May 5th 1996 was the cause of a community wide evacuation for the community of Questa. The overwhelming threat of that event caused a significant change of awareness of both the community and the fire department for the high risk of wild-lands fire that exists in Questa. The combination of dry windy conditions, heavy fuel loads on federal lands and a fast moving crown fire threatened entire portions of the community on the windward side of the fire.

Interagency Incident Command was established in Lama on the afternoon of the ignition to fight the fire. Due to quickly evolving circumstances coordination between local government and federal fire fighting resources was intermittent during the course of the day and the Village of Questa came to an independent decision to evacuate near sundown. With relatively little or no previous wild-lands fire planning the evacuation was successful, comprehensive and orderly.

Shelters were established at the Alta Vista Mid School and meals and safety was provided through a coordinated effort of Village of Questa Government, the Questa Police Department and the Questa Fire Department. A systematic search and evacuation of the neighborhoods at greatest risk in the WUI area was conducted with much cooperation of the local residents.

Questa FD Wild-Lands Fire Fighting Equipment

The Questa Fire Department has (5) structure fire engines; (1) Type # 6, (1) Rescue and (1) Tender. Their E-9 Engine is a Type # 6 wild-lands truck. At normal risk there are two engines and a water tender available in the region. Under high risk conditions there are (5) five engines and (2) tenders available. The QFD members have packs and web gear and PP uniforms for wild-lands fire fighting.

An important short fall in equipment is the availability of fire shelters for the full QFD membership

There are mutual response capabilities from the communities of Red River, Latir, Cerro, Taos and the USFS. Mutual response protocols are documented in the Enchanted Circle Mobilization and EMS Guide. All EMS and wild-lands firefighting resources are inventoried in the Enchanted Circle Mobilization and EMS Guide.

Questa FD Wild-Lands Fire Fighting Training

Currently (11) eleven of the (35) have completed the wild-lands firefighting courses required by the NWCG. A high priority need will be attaining full S-190 training for the balance (24) of the QFD members. QFD should pursue funding through the VFA and NM Forestry to provide S-130-S-190 I-100 and L-180. Training for volunteer fighters often prohibits their ability to attend training away from Questa. QFD will work through the partnership with NM Forestry to try to attain in house training for the members.

The National Wild-land Coordinating Group (NWCG) sets the standard for wild-land firefighting qualifications. Meeting NWCG qualifications means that a fire fighter has successfully completed

specific classes and passed the annual Work Capacity test (pack test). Once a fire fighter has met all the requirements for a certain level of wild-land fire fighting they are given a "red card" which shows their qualifications.

NWCG wild-land firefighter qualifications start with a firefighter type 2, advanced fire fighter type 1/squad boss, engine boss, strike team leader, and division supervisor, plus many others. NMSF, BLM, and the USFS utilize the "red card" qualifications and require those qualifications on certain fires. Additionally the QFD could participate in NMSF Resource Mobilization Plan where the department would be reimbursed for sending firefighters and equipment to assist other areas with wild-land fires.

The Questa Fire Department would like to secure training so that members can provide private property owners with defensible space evaluation from NM Forestry or other sources.

Questa FD Wild-Lands Fire Response Plan

In October of 2005 the Village of Questa adopted the Village of Questa Emergency Response Plan. Any emergency wild-lands fire evacuation situation should reference this document.

Incident Command Location

Under wild-lands fire conditions the Questa Fire Department will use the following resources;

- Primary Location Questa Fire Department
- Secondary location: Alta Vista High School
- Emergency Location: The Questa Police Department Mobile Command Vehicle

Evacuation routes:

Evacuation routes and staging areas should be established along the Bosque areas where high risk and heavy fuel loads and ladders exist.

Community Shelter

Village of Questa Food Bank

After the Hondo wildfire presented Questa with a community wide evacuation a food bank was established at a local church with the assistance of the Red Cross. The Questa Police Department has assumed administration for the community food bank through private donations. Food reserves are currently adequate to provide meals to community members and fire fighters for a reasonable amount of days under emergency evacuation conditions.

Water sources, hydrants, dip tanks, etc.

Eagle Rock Lake and the Cerro stock ponds are available dip tank locations. Hydrant location are on the WUI Infrastructure map.

Gas and propane tanks:

A grouping of propane tanks exists on the north end of Questa near the Pendleton Gas Station Defensible space on north and west boundaries Pendleton Gas & Propane and Kit Carson should be maintained with the cooperation of neighboring private property owners. A small propane tank near the road presents a risk due to traffic accidents.

Heli-spots

- The Questa High School is on the mesa a good distance from the high risk fuel loads of the "Bosque" It has both athletic field and parking lots to accommodate a safe "Helispot"

- Alta Vista Middle School Old high school is on the mesa a good distance from the high risk fuel loads of the "Bosque" It has both athletic field and parking lots to accommodate a safe "Helispot".

- The Questa Regional Airport in Buena Vista 5 miles north of the Village

Emergency Communications

It is anticipated that the Questa Fire Department will be the primary location of an Incident command given a community threatening wild-lands fire. Therefore onsite communication resources will be utilized.

Independent communication resources are a high priority of both the QFD and the QPD. Questa has experienced marginally dependable routes and methods of communications with both Red River and Taos County dispatches.

The QPD provides a critical back up system through the Mobile Communications Vehicle which was equipped through legislative funding. The Mobile Communications vehicle is a (20 ft.) twenty foot trailer equipped with various forms of communications that are valued at ($30,000)

Emergency Wildfire Information

KXMT and Top of the Circle Radio are primary local radio stations.

http://www.kxmt.com/

Gas and electric utility lines:

Gas and electric utilities lines run on both the west and south sides of Questa. Both pasture fires and wild-lands fires could affect these utility lines. Regular thinning along utility corridors should be done.

Section # 7

CWPP-WUI Glossary

Acequia

Spanish system of gravity feed ditches established by Spanish law. The ditch systems are earthen channels mostly designed to carry waters to the high perimeters of the flood plains. They are managed by common labor of water rights share holders known as Parcientes.

Adaptive management

Implementing policy decisions as an ongoing process that requires monitoring the results. It applies scientific principles and methods to improve resource management activities incrementally as the managers and scientists learn from experience and new scientific findings and adapt to social changes and demands.

Biodiversity (biological diversity)

The variety of life and its process, including the variety in genes, species, ecosystems, and the ecological processes that connect everything in the ecosystem.

Bosque

"Bosque" is the traditional name for cottonwood forest galleries. Many northern New Mexico stream corridors are composed of mature broad and narrow leafed cottonwoods. There are still remnant areas of willow along these stream courses with more frequent woodlands species invasions such as junipers and Chinese elms.

CFRP Community Forestry Restoration Program

The Community Forest Restoration Act of 2000 (Title VI, Public Law 106-393) established a cooperative forest restoration program in New Mexico to provide cost-share grants to stakeholders for forest restoration projects on public land to be designed through a collaborative process (the Collaborative Forest Restoration Program

CWPP

A community based wildfire protection plan includes hazardous fuels assessments, Communities at risk assessment and fuel reduction plan. The process is intended to rely heavily on local input as risk to communities and neighborhoods are assessed.

The ***minimum requirements*** for a **CWPP** as described in the **HFRA** are:

- **Collaboration:** A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.

- **Prioritized Fuel Reduction:** A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.

- **Treatment of Structural Ignitability:** A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

Critical habitat

According to Federal Law, the ecosystem upon which endangered and threatened species depend. Endangered Species Act

Crown fire

This is a fire that travels from one crown (or tree top) to another in dense stands of trees, killing most trees in its path. However, even in intense crown fires, unburned strips may be left due to powerful, downward air currents. A passive (or dependent) crown fire relies upon heat transfer from a surface fire burning below crowns. An active (or independent) crown fire does not require transfer of heat from below the crowns (See Surface fire).

Defensible space

This is the area around a structure where fuels and vegetation are treated, cleared or reduced to slow the spread of wildfire towards the structure. It also reduces the chance of a structure fire moving from the building to the surrounding forest. Defensible space provides room for the firefighters to do their jobs. Many communities are taking a more holistic approach of creating defensible neighborhoods rather than jus individual properties.

Disturbance

A discrete event, either natural or human induced, that causes a change in the existing condition of an ecological system.

Disturbance pattern

Arrangement of disturbances over space and time.

Ecology

The study of interactions between organisms and their environment, to include humans.

Eco-region

A continuous geographic area over which the macroclimate is sufficiently uniform to permit development of similar ecosystems on sites with similar properties. Eco-regions contain multiple landscapes with different spatial patterns of ecosystems.

Ecosystem

Living organisms interacting with each other and with their physical environment, usually described as an area for which it is meaningful to address these interrelationships.

Ecosystem function

The process through which the constituent living and nonliving elements of ecosystems change and interact, including biochemical processes and succession.

Ecosystem / ecological integrity

The completeness of an ecosystem that at a multiple geographic and temporal scales maintains its characteristic diversity of biological and physical components, spatial patterns, structure, and functional processes within its approximate range of historic variability.

Ecosystem process

The actions or events that link organisms and their environment, such as predation, mutualism, successional development, nutrient cycling, carbon sequestration, primary productivity, and decay. Natural disturbance processes occur with some periodicity.

ESA

ESA is the most wide-ranging of the dozens of United States environmental laws passed in the 1970s. As stated in section 2 of the act, it was designed to protect critically imperiled species from extinction as a "consequence of economic growth and development untendered by adequate concern and conservation.

Ecosystem sustainability

The ability to sustain diversity, productivity, resilience to stress health, renewability, and/or yields of desired values, resource uses, products, or services from an ecosystem while maintaining the integrity of the ecosystem over time.

Ecological restoration

The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed.

Exotic (non-native) species

A species introduced into an ecosystem through human activities.

Fire Environment

Fire Environment **is a**lso known as the surrounding conditions, influences, and modifying forces that determine wildfire behavior.

There are three components of the Fire Environment that Firefighters recognize: 1) weather; 2) topography; and 3) fuel.

Each of these components affect the possibility of a fire starting, the speed and direction a wildfire will travel, the intensity at which a wildfire burns and the ability to control and extinguish a wildfire. Although weather and topography cannot be changed, the fuels (vegetation) can be. Therefore, many of our opportunities to reduce wildfire threat lie in the proper management and manipulation of wild-land vegetation.

Fire frequency (fire return interval)

How often fire burns a given area; often expressed in terms of fire return intervals (e.g. fire returns to a site every 5-15 years).

Fire regime group

A generalized description of the role fire plays in an ecosystem. It is characterized by fire frequency, predictability, seasonality, intensity, duration, and scale (patch size), as well as regularity, or variability.

FRCC

Fire Regime Condition Class is a natural fire regime general classification of the role fire would play across a landscape in the absence of modern human mechanical intervention, but including the influence of aboriginal burning.

Ecosystem Resilience

Ecosystem Resilience is the ability of a system to respond to disturbances. Resiliency is one of the properties that enable the system to persist in many different states or success ional stages.

Fire Frequency (Fire Return Interval)

How often fire burns a given area; often expressed in terms of fire return intervals (e.g., fire returns to a site every 5-15 years). (see also Fire Regime Group).

Fire Regime Group

A generalized description of the role fire plays in an ecosystem. It is characterized by fire frequency, predictability, seasonality, intensity, duration, and scale (patch size), as well as regularity or variability. (See also Fire Frequency)

Fuel:

Fuel is required for any fire to burn. In relation to wildfires, fuels almost always consist of living vegetation (trees, grass, shrubs, and wildflowers) along with dead plant material. Houses, when involved in a wildfire, become a source of fuel. The amount, size, moisture content, arrangement and other fuel characteristics can influence ease of ignition, rate of fire spread, length of flames produced and other fire behaviors.

Fine filter analysis

An analysis of components of aggregates such as plant communities in a cover type or species in a plant community.

Forest ecosystem health

A condition where the parts and functions of an ecosystem are sustained over time and where the system's capacity for self-repair is maintained, allowing goals for uses, values, and services of the ecosystem to be met.

Forest Ecosystem Restoration

Holistic actions taken to modify an ecosystem to achieve desired, healthy, and functioning conditions and processes. Generally refers to the process of enabling the system to resume acting, or continue to act, following the effects of a disturbance. Restoration management activities can be active (such as control of invasive species, thinning of over-dense tree stands, or redistributing roads) or more passive (more restrictive, hands-off management direction that is primarily conservation oriented). Frequently, a combination or number of actions is used sequentially to achieve restoration goals.

Greater ecosystems

A regional complex of ecosystems with common landscape-level characteristics linked by wide ranging wildlife, landscape scale disturbance regimes, and, yes, human communities as keystone citizens among the community of organisms.

Healthy ecosystem

An ecosystem in which structure and functions allow the maintenance of the desired condition of biological diversity, biotic integrity, and ecological processes over time.

Hazardous fuel

Excessive live and dead trees and other vegetation and organic debris that increase the potential for uncharacteristically intense wild-land fire and decrease the capability to protect life, property, and natural resources.

Human impact or influence

A disturbance or change in ecosystem composition, structure, or functions caused by humans.

Invasive or Noxious weed

Any species of plant which is, or is liable to be, detrimental or destructive and difficult to control or eradicate and shall include a species and through investigation and hearing, shall be determined to be a noxious weed.

Landscape

An area composed of interacting ecosystems that are repeated because of geology, land form, soils, climate, biota, and human influences throughout the area. Landscapes are generally of a size, shape and pattern which are determined by interacting ecosystems.

Natural disturbance regime

A natural disturbance (e.g. fire, insect outbreak, flood) with a characteristic frequency, intensity, size, and type that has influence on an ecosystem over evolutionary time.

NEPA

The National Environmental Policy Act (NEPA) is a United States environmental law that was signed into law on January 1, 1970 by U.S. President Richard Nixon. The focus of the law was the establishment of a U.S. national policy promoting the enhancement of the environment, but its most significant effect was to establish the requirement for environmental impact statements (EISs) for major U.S. federal government actions.

Old growth tree

This is an old tree, one that exhibits the complex structural characteristics associated with the oldest age class of trees in a group, clump or stand. In today's forests, an old growth tree in one that has been present since before the onset of commercial logging and fire exclusion. These trees are sometimes referred to as pre-settlement trees. These trees typically have orange or yellow platy bark.

Prescribed fire

A management fire ignited to meet specific fuel reduction or other resource objectives. All prescribed fires are conducted in accordance with prescribed fire plans.

Range of natural variability

The spectrum of possible natural conditions in ecosystem composition, structure, and function considering both temporal and spatial factors that would have existed if the dominant Euro-American culture had never arrived.

Reference conditions

Conditions characterizing ecosystems composition, structure, and their variability.

Remote sensing

Any technique for analyzing landscape patterns and trends using low altitude aerial photography or satellite imagery. Any environmental measurement that is done at a distance.

Resilience

The ability of an ecosystem to maintain the desired condition of diversity, integrity, and ecological processes following disturbance.

Restoration

Actions taken to modify an ecosystem in whole or in part to achieve a desired condition.

Rio Colorado De San Antonio

Rio Colorado De San Antonio is the name of the original Questa Spanish settlement along the banks of the Rio Colorado, Red River and the Cabresto Creek

Risk to communities

The risk associated with adverse impacts to communities resulting from unwanted wildfire.

Scale

The degree of resolution at which ecological processes, structures, and changes across space and time are observed and measured.

Surface fire

A fire that burns over the forest floor, consuming litter, killing aboveground parts of herbaceous plants and shrubs, and typically scorching the bases and crowns of trees. (See Crown Fire).

Sustainability

The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

Topography

Steepness of a slope most influences fire behavior. As the steepness of a slope increases, the fire spreads more quickly. Other important topographic factors include: aspect and steep, narrow drainages.

Watershed

An area of land with a characteristic drainage network that contributes surface or ground water to the flow at that point: a basin or a major subdivision of a drainage basin.

Wildland fire use

The management of naturally ignited wild-land fires to accomplish specific pre-stated resource management objectives in pre-defined geographic areas outlined in Fire Management Plans.

Wildland-urban interface

The area or zone where structures and other human development meet to intermingle with undeveloped wildlands or vegetative fuel. When homes blend together with the wild-land, a tremendous wildfire danger can exist. This creates the Wild-land/Urban Interface (WUI). It is the addition of homes in this area that interrupts the natural cycle of wildfires. Ultimately, this contributes to a dangerous build-up of old vegetation which can contribute to an uncontrollable wildfire.