



The Yuba Fire Wise Protection Plan

AN ACTION PLAN FOR WILDFIRE MITIGATION
April 2009

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The following report is a cooperative effort between various entities. The representatives listed below comprise the core decision-making team responsible for this report and mutually agree on the plan's contents.

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Local Fire Department Representative(s):

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Phone Number 580-285-2201
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Local Oklahoma Division of Forestry Representative(s):

Name	Kevin Keys
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Phone Number	580-223-3973
Other Contact Information	
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The following federal and other interested parties were consulted and involved in the preparation of this report.

Name	Organization
Tommy Sheppard	SODA
Dottie DeMeulenaere	SODA
Bo McIlvoy	SODA
James Dalton	Bryan County Emergency Management
Norman Campo	Emergency Management
Ivan Kelly	Bryan County Commissioner



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1) COMMUNITY BACKGROUND AND EXISTING SITUATION (see appendix A)

Bokchito is a community surrounded by hundreds of acres of Wildland interface. The vegetation throughout Bokchito provides enough fuel to make fire behavior erratic and extreme during dry conditions. The interface type is considered intermix, where structures are sporadically located throughout the vegetation.

Community Description:

County: Bryan Latitude/Longitude: N 33.831/W -96.211
 Frontage Road: HWY 78 Nearest Intersection: HWY 78 & Romia Rd.
 Nearest Fire Department (name/location): Yuba Volunteer Fire Department
 Interface Areas: 63 (+/-) square miles Year Established: 1998
 Map #: See appendix

Community Size:

Number of Lots: 400 (+/-) Number of Structures: 200 (+/-)
 Estimated Acres: 30,000 (=/-) Development Status: Active

Community Infrastructure:

Home Owners Association/Organization: Yes No *If yes, attach a copy of ordinances.*

Contacts:

Name N/A
 Address _____
 Phone Number _____
 Other Contact Information _____

Name _____
 Address _____
 Phone Number _____
 Other Contact Information _____

Resident Population:

Full Time
 Part-Time: 100-75% 75-50% 50-25% less than 25%

Wildfire Hazard Rating: (check one)

Low Moderate High Extreme

Date Evaluated: 9/17/2008 *Attach Community Assessment Form.*

Community Assessment Highlights (roads, water sources, primary fuel types, utilities and topography)

Southern Oklahoma Development Association (SODA) along with the Yuba Fire Department conducted the Community Wildfire Risk and Hazard Assessment in September 2008. The community of Yuba received a score of 149 placing it in the "Moderate Risk" hazard range.

Roads:

There is approximately 38 miles of roads in this Fire District. The road system consists of primary roads being gravel. The majority of these roads are narrow and overgrown in many places. There are several dead-end roads that are too narrow for wildfire suppression equipment and in some cases are the only escape routes.

Topography:

The topography of Yuba Fire District is basically flat with a slight slope to the south

Primary fuel types & Topography:

Vegetation consists of a mixture of hardwoods, red cedar, and native grasses. The heaviest concentrations of fuel can be found on undeveloped lots, near the railroads, and along low lying drainage areas. The topography is basically flat to rolling hills with rocky protrusions.

Water Sources in the community:

There are only 4 hydrants in the fire district, but there are 12 dry hydrants out in the county. All of the Yuba Volunteer Fire District is on rural water.

Utilities:

The electric lines are above ground and the right-of-ways are not regularly maintained. Red cedar grows in abundance and is heavily located along fence rows and under power lines.

Community Wildfire History: (include surrounding areas)

Over the past 10 years Bokchito has been threatened several times by a number of large wildfires. Major fires such as the ones in the winter of 2005 posed major threats to critical infrastructures and to human life. Due to the actions of brave volunteer firefighters, Bokchito has escaped several potentially catastrophic occurrences with only minor property damage.

Relative Frequency:	There are approximately 26 wildland fires annually.
Common Causes:	Common causes include Hwy 78 traffic/cigarettes, burning trash, agriculture equipment failure, and welders.
Areas of Future Concern:	Future pipelines that will be a part of the nations largest pipeline.
Additional Comments:	Two huge gravel pits that have a lot of big rig traffic coming and going. This causes concern for more fires.



2) COMMUNITY BASE MAP AND OTHER VISUALS (see appendix B)

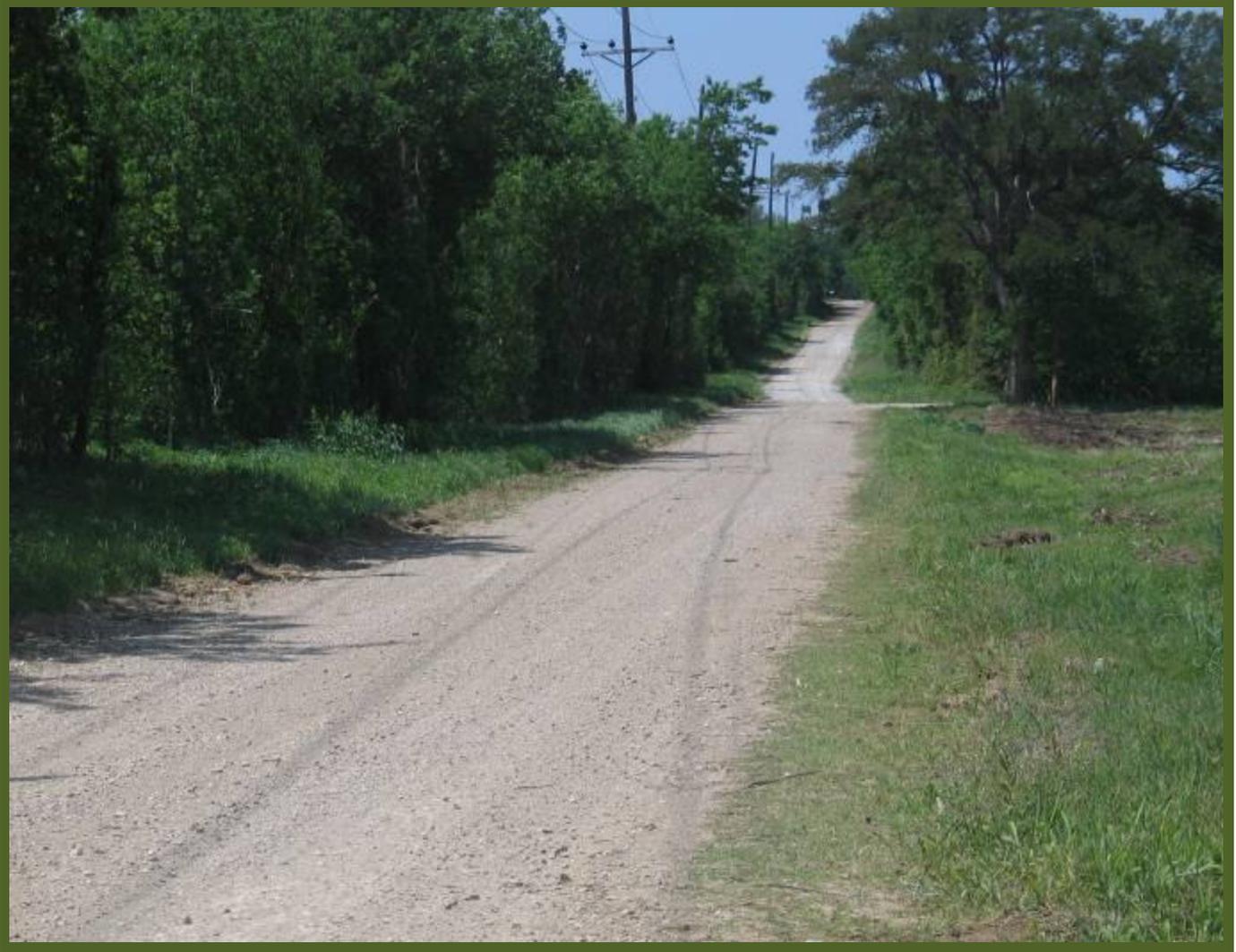
Community base maps with and without aerial photography are instrumental in preparing a Wildfire Protection Plan

3) OBJECTIVES / GOALS

Objectives:

The objectives of this plan are to set clear priorities for the implementation of wildfire mitigation in the community of Yuba, Oklahoma. This includes prioritized recommendations for the community as a whole and also for individual homeowners where appropriate.

1. Goals: Establish safety zones around all homes.
2. Reduce vegetative fuel loads along roadways, railroads, and other ignitable areas.
3. Replace poor performing fire hydrant and place additional fire hydrants to unprotected areas.
4. Increase accessibility for emergency vehicles.
5. Public Education
6. Yearly evaluation of plan to monitor progress.



4) PRIORTIZED MITIGATION RECOMMENDATIONS

The following recommendations were developed by the Yuba Community Firewise Board Members and as a result of the community wildfire risk assessment and follow-up meetings with local, state, federal and community stakeholders. A priority order was determined based on which mitigation projects would best reduce the hazard of wildfire in the assessment area.

Proposed Community Hazard Reduction Priorities:

1. Seek funding for training of firefighters that includes fire suppression associated with the oil and natural gas industry.
2. Clear vegetation along roadways.
3. Standardized and visible Address signage.
4. Encourage and assist with increasing driveway widths and standardized accessibility, particularly to pasture and oilfield sites, for responding fire fighters or emergency personnel.

Proposed Structural Ignitability Reduction Priorities:

1. Develop easily identifiable addressing for all community residents
2. Development of greater defensible space around living quarters
3. Encouraging development of increased driveway widths and standard method of accessibility for emergency vehicles
4. Installing Smoke Detectors in all houses.

Proposed Education and Outreach Priorities: (see appendix C)

1. Distribute FireWise Informational packets
2. Plan Community Clean-up week in conjunction with State Trash-off Week during April
3. Firefighters to present FireWise information during Fire Safety week in October
4. Booth or demonstration with FireWise Informational packets distributed during the Christmas Parade; Halloween.





5) ACTION PLAN

Funding Needs:

Outline each project (list highest priority projects first) including estimated cost and potential funding sources.

1. Seek funding for Fire Fighter 1 training, Hazardous Site training; and First Responder training for all firefighters. Funding will be requested through any available grants from FEMA, REAP and/or Oklahoma Forestry.
2. Seek funding for NFPA compliant vehicles; equipment; and PPE through any available grants from FEMA, REAP and/or Oklahoma Forestry.
3. Seek funding for road signage
4. Fuel and other miscellaneous expenses are needed to assist homeowners with improving the width of driveways using chainsaws and backhoes provided by local citizens. Funding for this project will depend upon fundraising efforts of the fire department and generous donations from oilfield companies and private landowners.

Timetables:

For each project (list highest priority projects first), provide an estimated duration, start date and targeted completion date.

1. Placement of dry hydrants will depend upon the timeframe of any received grant. FEMA is usually awarded during the summer and placement could be completed within a 60 day period. REAP is usually awarded in late fall and placement could have to be postponed for 6 months due to adverse weather conditions.
2. Money will probably not be forthcoming from Bryan County for any type of signage as the County is already strapped trying to meet unfunded mandates for the E911 program. Also, the community of Yuba is not a high priority in the larger picture of Bryan County. Should money become available for this priority, volunteers from the Yuba Volunteer Fire Department as well as from the community would place proper signage within 60 days of receiving the requested signs.
3. Sirens can be professional installed within 60 days after funds have been received for this project.
4. This project will take 90-120 days of good weather to complete as well as a 30 day timeframe to coordinate the efforts between the homeowners and the volunteers after assistance is provided for the necessary fuel and locks.

Assessment:

Describe the strategy used to assess the plans progress and effectiveness.

1. Meetings of the Yuba Volunteer Fire District FireWise Board
2. Before and after water flow reports.
3. Before and after pictures of community residential structures
4. Comparison of previous annual fire incident reports, to the State Fire Marshall's office, to post-project annual fire incident reports.



6) WILDFIRE PRE-SUPPRESSION PLAN

A. Wildfire Protection Responsibility

Structural Protection: Yuba Volunteer Fire Department

Wildland Protection: Yuba Volunteer Fire Department, 18 other Bryan County fire departments, Bryan County Volunteer Fire Departments along with the City of Durant have a mutual aid agreement with Yuba Volunteer Fire Department.

B. Alarm Response

First Alarm

Fire Department/Rescue Squad	Travel Distance	Response Time
Yuba Volunteer Fire Department		5-15 minutes
Kemp Volunteer Fire Department	Within 10 miles	10-30 minutes
Albany Volunteer Fire Department	Within 15 miles	20-40 minutes

Second Alarm (report to designated staging area)

Fire Department/Rescue Squad	Travel Distance	Response Time
Caddo Fire Department	Within 15 miles	20-40 minutes
Freney Valley	Within 15 miles	20-40 minutes
Albany	Within 15 miles	20-40 minutes

C. **Water Availability (see appendix D)**
Yuba only has 4 hydrants in their fire district. More hydrants are greatly needed to help prevent future losses.

D. Communications

Name	Phone Number	Radio Frequencies
Dispatch/Fire Departments		
Yuba Vol. Fire Department		155.0550
Durant Fire Department	911	
Bryan Co	911	153.8450
Local Department of Forestry Office		
Kevin Keys	580-223-3973	
Other		
Tommy Sheppard (Rural Fire Dir.)	580-920-1388	

E. Evacuation (see appendix E)

Evacuation map was determined by focusing on bringing the outermost residents living on gravel roads to paved roads and on to State Highways and then to destinations out of harm's way. Residents living within the community will be directed to State Highways and then to pre-determined safe destinations according to type of emergency incident. Evacuation map is attached.

F. Resource List

Name	Contact Information	Payment Information
Support Agencies		
SODA	Tommy Sheppard	Paid through State grant
OSU Extension Agency	Clay Jones	OSU
Bryan County Sheriff	Bill Sturch	Taxes
Bryan County EMS	Joe Barrett	911 Tax
Tractor Operators		
Bryan County Commissioners	Main Office 580-924-2201	
Monty Montgomery – District #1	Shop 580-924-5814	
Tony Simmons – District #2	Shop 580-283-3711	
Ivan Kelly – District #3	Shop 580-295-3737	
Crews		
District #1 Road Crew	580-924-5814	
District #2 Road Crew	580-283-3711	
District #3 Road Crew	580-295-3737	
Utilities		
Southeastern Electric Coop	580-924-1315	
Rural Water District # 6	580-367-9857	
Rural Water District #5	580-924-8235	
Fuel		

Food and Supplies		
Lodging		
Comfort Inn & Suites	2112 W Main Street, Durant 580-924-8881	
Days Inn Durant	2121 W Main Street, Durant 580-924-5432	
Holiday Inn Express	613 University Place, Durant 877-863-4780	
Best Western-Markita Inn	2401 W Main Street, Durant 580-924-7676	



7) ADDITIONAL COMMENTS – Critical Facilities (see appendix F)

Legend

Yuba Critical Facilities

Facility



Church



Dairy



Fire Department



Fire Hydrant



Yuba School

8) HIGH VULNERABILITY AREAS & RECOMMENDATIONS (see appendix G)

9) ATTACHMENTS



Appendix A

*Community Wildfire Hazard
&
Risk Assessment Worksheet*

OKLAHOMA FORESTRY DIVISION
COMMUNITY WILDFIRE RISK AND HAZARD ASSESSMENT

Forestry Office: _____

Community: Yuba County: Bryan
 Latitude: N 33.831 Longitude: W-96.211
 Fire Department: Yuba Volunteer Fire Department
 Date: 10/9/08
 Acres: 26000 (±) Lots: 360 Homes: 190 Future Homes 2/year

CALCULATING THE WILDFIRE HAZARD RATING

SUBDIVISION DESIGN HAZARD RATING	+ SITE HAZARD RATING	+ BUILDING CONSTRUCTION HAZARD RATING	+ ADDITIONAL FACTOR HAZARD RATING	= OVERALL WILDFIRE HAZARD RATING
<u>22</u>	<u>67</u>	<u>25</u>	<u>35</u>	<u>149</u>

SUBDIVISION DESIGN RATING	Rating	
ACCESS		
Two or more roads	0	3
One road, plus alternative	3	
One road in/out	7	
SUBDIVISION BRIDGES		
No bridges or bridges with no weight and or width restrictions	0	0
Low weight or narrow bridges restricting emergency access	5	
PRIMARY ROAD WIDTHS		
>24 ft	0	4
>20 ft and <24 ft	2	
<20 ft	4	
ACCESSIBILITY		
Surfaced road, grade < 5%	0	5
Surfaced road, grade > 5%	2	
Non-surface road, grade < 5%	2	
Non-surface road, grade > 5%	5	
Other than all-season road	7	
SECONDARY ROAD TERMINUS		
< 300 ft with turnaround	0	5
> 300 ft with turnaround	2	
< 300 ft without turnaround	4	
> 300 ft without turnaround	5	
UNSAFE ROADWAY		
No flammable vegetation threat	0	5
Highly flammable vegetation along road	5	
STREET SIGNS		
Present 4 inches in size and reflective	0	0
Not present	5	
TOTAL SUBDIVISION DESIGN		<u>22</u>

OKLAHOMA FORESTRY DIVISION
COMMUNITY WILDFIRE RISK AND HAZARD ASSESSMENT

SITE HAZARD RATING: (Within 30 feet of structure based on a majority of the properties in the community)	Rating	
DRIVEWAY CHARACTERISTICS		
Less than 150 feet long	0	
More than 150 ft with minimum 45 foot outside radius turnaround	3	
More than 150 ft with inadequate turnaround	5	5
Average driveway width more than 12 ft	0	
Average driveway width less than 12 ft	5	5
No obstructing overhead branches below 15 ft	0	
Obstructing overhead branches below 15 ft	5	5
No bridges or bridges with no weight or width restrictions	0	
Bridges restricting emergency vehicle access	5	5
Slopes level or less than 10 %	0	
Slopes over 10%	5	0
No gate/non-locking gate	0	
Locked gate	5	5
Address clearly visible from road	0	
Address not visible from road	5	5
DOMINANT TREES (within 100 ft of homes)		
Deciduous	1	
Mixed	5	5
Evergreen	10	
LADDER FUELS		
Evergreen branches close to ground	5	5
Evergreen branches pruned up at least 6 ft	0	
VEGETATION (predominant type throughout community)		
Light (e.g. grasses and forbs) NFDRS Fuel Models A, C, L, N, S and T	5	
Medium (e.g. light brush and small trees) NFDRS Fuel Models D, E, F, H, P, Q and U	10	10
Heavy (e.g. dense brush, timber and hardwoods) NFDRS Fuel Models B, G and O	20	
Slash (e.g. timber harvesting residue) NFDRS Fuel Models J, K and L	25	
SLOPE OF PROPERTY		
Flat (0-5%)	0	
Moderate (6-20%)	2	2
Steep (over 20%)	4	
DEFENSIBLE SPACE		
No trees, shrubs or tall grass within 30 ft	0	
Well spaced trees and shrubs within 30 ft	10	10
Touching crowns or tall grass within 30 ft	20	
No unthinned or unmanaged timber within 100 ft	0	
Unthinned or unmanaged timber within 100ft	5	5
TOTAL SITE HAZARD RATING		69

OKLAHOMA FORESTRY DIVISION
COMMUNITY WILDFIRE RISK AND HAZARD ASSESSMENT

BUILDING CONSTRUCTION HAZARD RATING		Rating
ROOFING MATERIALS		
Greater than 75% of homes have metal, tile or Class A shingles	0	10
50 to 75% of homes have a metal, tile or Class A shingles	10	
Less than 50% of homes have metal, tile or Class A shingles	15	
SIDING / SOFFETS		
Greater than 75% of homes have fire resistant siding and soffets	0	10
50 to 75% of homes have fire resistant siding and soffets	5	
Less than 50% of homes have fire resistant siding and soffets	10	
UNDERSKIRTING		
Greater than 75% of homes have the equivalent of fine mesh screening underneath	0	5
50 to 75% of the homes have the equivalent of fine mesh screening underneath	5	
Less than 50% of the homes have the equivalent of fine mesh screening underneath	10	
TOTAL BUILDING CONSTRUCTION HAZARD RATING		25
ADDITIONAL HAZARD FACTORS		Rating
FIRE CONTROL WATER SUPPLY		
Pressurized hydrants with minimum 500 gpm < 1,000 ft apart	0	5
Pressurized hydrants with < 500 gpm or spaced > 1,000 ft apart	2	
Dry hydrant(s) available year round within the community	2	
Other accessible sources within community	5	
Water sources located within 4 road miles of community	7	
No water sources within 4 miles of the community	15	
UTILITIES		
Both underground	0	5
One underground, one above ground	3	
Both aboveground	5	
SURROUNDING ENVIRONMENT		
Community is not surrounded by any large natural landscape	0	10
Large natural landscape adjoins one side of the community	5	
Large natural landscape adjoins two sides of the community	10	
Large natural landscape adjoins three sides of the community	15	
Community is completely surrounded by natural landscape	20	
UNDEVELOPED LOTS		
Less than 10% of lots have not been developed and pose no additional wildfire hazard due to lack of maintenance	0	5
10 to 50% of lots have not been developed	3	
51 to 75% of lots have not been developed	5	
Greater than 75% of lots have not been developed	10	
RISK LOCATION		
Community is located within the following designated Wildland Fire Suceptibility Index according to the Southern Wildfire Risk Assessment		
Low (Class Value 1 - 2)	0	10
Medium (Class Value 3 - 5)	10	
High (Class Value 6 - 9)	20	
TOTAL ADDITIONAL HAZARD FACTORS		35

OKLAHOMA FORESTRY DIVISION
COMMUNITY WILDFIRE RISK AND HAZARD ASSESSMENT

What does the Wildfire Hazard Rating mean?

Using the Wildfire Hazard Assessment, the highest possible rating is 247 points.

Communities can be divided into the following four risk categories:

- Low Risk:** **Total Wildfire Hazard Rating is 0 – 90 points**
The chances of a majority of homes in the community surviving a wildfire are **GOOD**. Little is needed to improve the community. Keep up the good work.
- Moderate Risk:** **Total Wildfire Hazard Rating is 91 – 155 points**
The chances of a majority of homes in the community surviving a wildfire are **FAIR**. Some minor improvements will make the community more fire resistant. Check the areas on the form in which you scored poorly.
- High Risk:** **Total Wildfire Hazard Rating is Over 155 points**
The chances of a majority of homes in the community surviving a wildfire are **NOT GOOD**. Some improvements in structure and site are necessary.
- Extreme Risk:** **Total Wildfire Hazard Rating is Over 170 points**
The community **MAY NOT SURVIVE** if a wildfire passes through the area. Take a serious look at your community and make improvements. If you don't, you may be facing disaster. You will find that even small changes could make the difference.

HAZARD is defined as the potential fire behavior based on physical fuel characteristics.

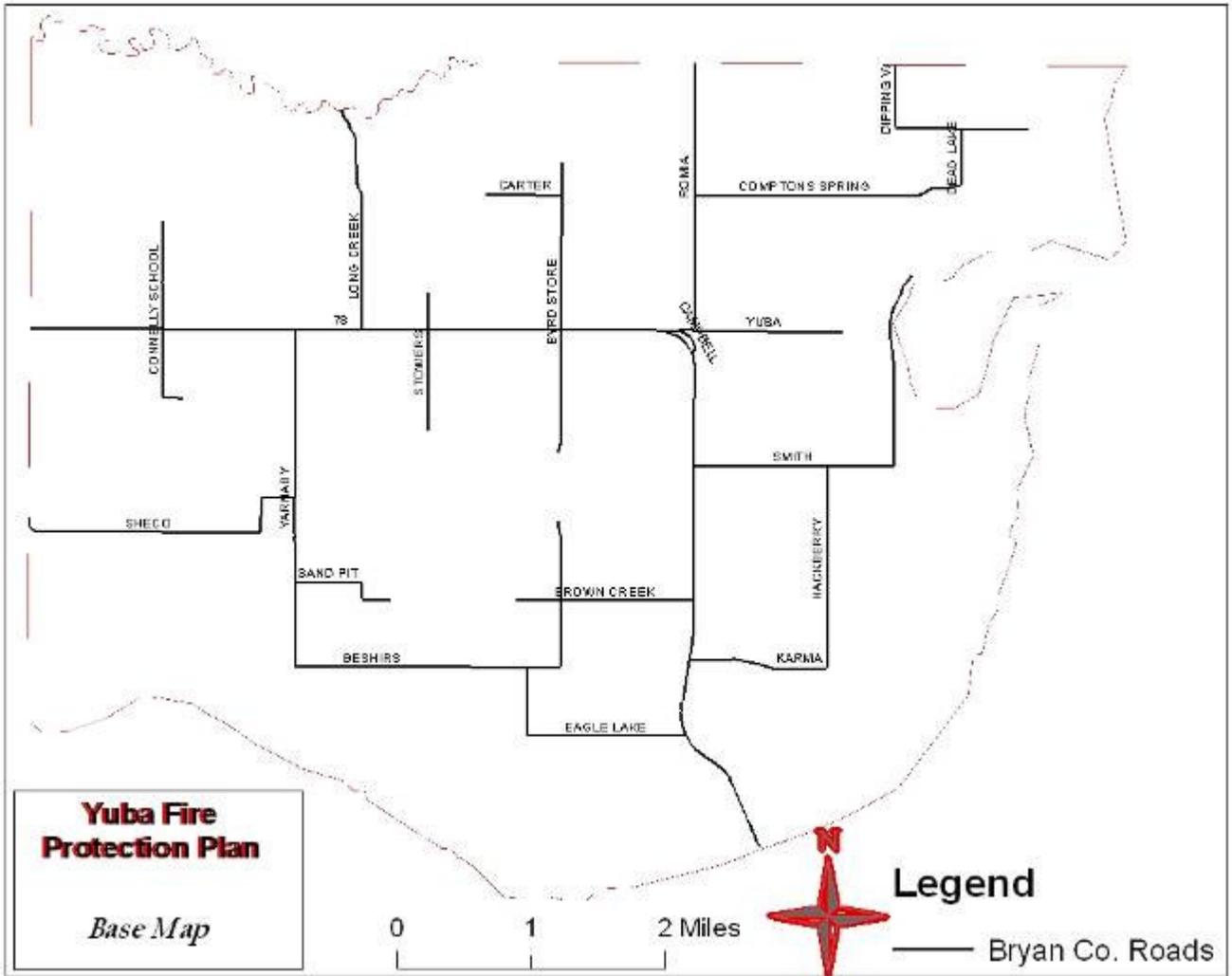
Risk is defined as the probability of fire occurrence determined by the number, presence and activity of potential ignition sources.

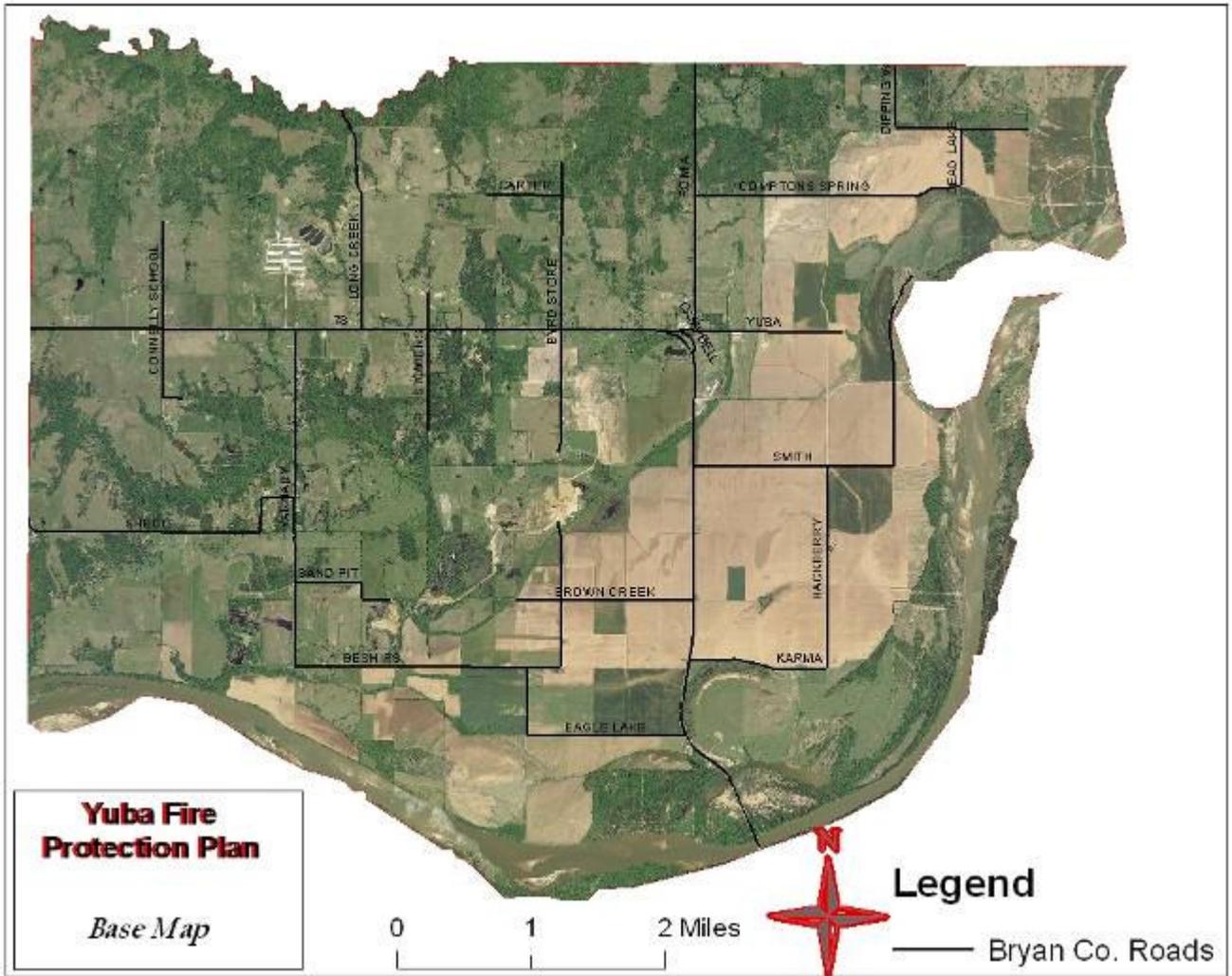
This form may be used to evaluate your community to determine the level of wildfire risk. It covers roughly one-half of the hazards normally taken into account in calculating fire risk, but does provide an approximate indication of true risk. For more information on your home's fire risk, or for more complete evaluation of your property, contact your local Oklahoma Department of Agriculture, Food and Forestry, Forestry Services office.

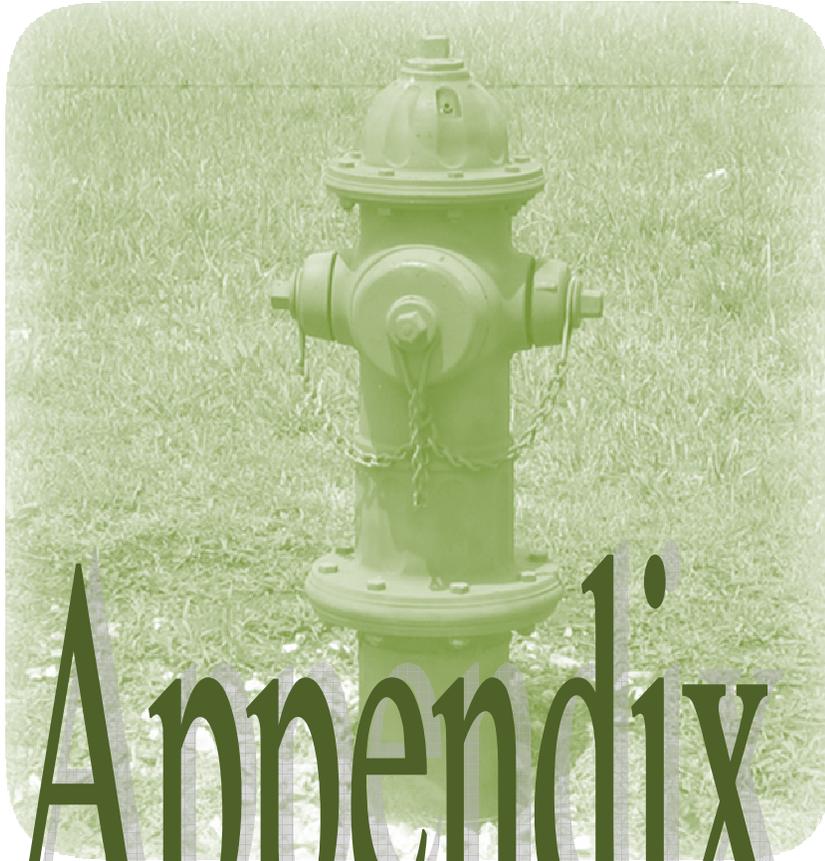


Appendix B

Community Base Maps







Appendix G

*High Vulnerability Areas
Education & Handouts*

Recommendations

