

Cascabel Community Wildfire Protection Plan

REVIEW DRAFT

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1 **ACRONYMS AND ABBREVIATIONS**

2	ASLD	Arizona State Land Department
3	ATV	All-terrain vehicle
4	BLM	Bureau of Land Management
5	CCC	Cascabel Community Center
6	CCFG	Cascabel Community Firewise Group
7	CVFD	Cascabel Volunteer Fire Department
8	CWPP	Community Wildfire Protection Plan
9	CCWPP	Cascabel Community Wildfire Protection Plan
10	ESA	Endangered Species Act
11	FONSI	Finding of No Significant Impact
12	FS	Forest Service
13	FWS	United States Fish and Wildlife Service
14	GIS	geographic information system
15	HFRA	Healthy Forests Restoration Act of 2003
16	NEPA	National Environmental Policy Act
17	NFP	National Fire Plan
18	NRCS	Natural Resources Conservation Service
19	RNRCD	Redington Natural Resource Conservation District
20	TFO	Tucson Field Office
21	TNC	The Nature Conservancy
22	USDA	United States Department of Agriculture
23	USDI	United States Department of Interior
24	WUI	wildland-urban interface

1 I. INTRODUCTION

2 The Cascabel Community Wildfire Protection Plan (CCWPP) was developed for the “at-risk” community
3 and private inholdings located in and around the community of Cascabel in response to the Healthy
4 Forests Restoration Act of 2003 (HFRA). This recent legislation established unprecedented incentives for
5 communities to develop comprehensive wildfire protection plans in a collaborative, inclusive process.
6 Furthermore, this legislation gives direction to the US Departments of Interior (USDI) and Agriculture
7 (USDA) to address local community priorities in fuel reduction treatments, even on nonfederal lands.

8 HFRA represents the legislative component of the Healthy Forests Initiative, introduced by President Bush
9 in 2003. Congress passed HFRA in November 2003 and the president signed it into law that December.
10 When certain conditions are met, Title I of HFRA authorizes the USDA and USDI Secretaries to expedite
11 the development and implementation of hazardous fuel reduction projects on lands managed by the Forest
12 Service (FS) and the Bureau of Land Management (BLM).

13 HFRA emphasizes the need for federal agencies to collaborate with communities in developing hazardous
14 fuel reduction projects and places priority on treatment areas identified by communities themselves through
15 the development of a Community Wildfire Protection Plan (CWPP). Priority areas include the wildland-
16 urban interface (WUI), municipal watersheds, areas impacted by windthrow or insect or disease epidemics,
17 and critical wildlife habitat that would be negatively impacted by a catastrophic wildfire.

18 In compliance with Title 1 of HFRA, the CWPP requires agreement among local governments, local fire
19 departments, and the state agency responsible for forest management (in Arizona, the State Forester). The
20 CWPP must also be developed in consultation with interested parties and the applicable federal agency
21 managing the land surrounding the at-risk communities.

22 The CCWPP was developed to assist local governments, fire departments, fire districts, and residents in
23 the identification of lands—including public lands—at-risk from severe wildfire threat. It also allows those
24 entities to identify strategies for reducing fuels on wildlands while improving forest and rangeland health,
25 supporting local industry and local economies, and improving public/firefighter safety and response
26 capabilities.

27 Guidance for development of the CCWPP is based on *Preparing a Community Wildfire Protection Plan: A*
28 *Handbook for Wildland-Urban Interface Communities* (Communities Committee et al. 2004) and was
29 collaboratively developed through consultation with the BLM Gila District using *The Healthy Forests*
30 *Initiative and Healthy Forests Restoration Act: Interim Field Guide* (USDA and USDI 2004).

31

32 A. Background

33 The Cascabel Community Firewise Group (CCFG) was formed to create a CWPP that captured local
34 interest and advanced understanding regarding the critical issues. The CCFG is composed of
35 representatives from the community of Cascabel and Cochise County, the Cascabel Fire Chief, the BLM
36 Gila District Fire Mitigation Specialist, the Arizona State Land Department (ASLD) Division of Forestry
37 District Forester, Redington Natural Resources Conservation District (RNRCD), USDA Natural Resources
38 Conservation Service (NRCS), local representatives from The Nature Conservancy (TNC), and other

1 interested individuals. The CCFG has been the core of the public involvement process for this CCWPP and
 2 meets all collaborative guidance criteria established by the Wildland Fire Leadership Council.

3 The majority of wildfire starts around the community of Cascabel have occurred in the heavily vegetated
 4 San Pedro River bottom. Although landscape-scale fires have not been prevalent in the lower elevation
 5 and desert vegetation zones of the WUI, natural and human fire starts do occur and are suppressed and
 6 contained each year. Continued extreme weather conditions, dry fuels, and increasing fuel loading on
 7 federal and nonfederal lands contribute to the potential for catastrophic wildland fires in and around the
 8 Cascabel community. As a result, the Cascabel Volunteer Fire Department (CVFD), a non-profit
 9 organization, and governmental agencies have initiated fire preparedness enhancements and land
 10 treatment efforts (see Section I.D.2 Local Policies) to deal with the types and densities of natural fuels that
 11 significantly threaten the community with potential catastrophic wildfire.

12 The CCFG developed this CWPP to increase preparedness, reduce hazardous wildland fuels, and
 13 increase communication with local, county, state and federal emergency response personnel by
 14 determining areas of high risk from catastrophic wildland fire, developing mitigation measures to reduce
 15 hazardous wildland fuels, improving emergency response to unplanned wildfire, and reducing structural
 16 ignitability. Several of these goals were achieved throughout the CCWPP area by implementing provisions
 17 from the BLM Tucson Field Office's (TFO) *Decision Memorandum on Action and for Application of*
 18 *Categorical Exclusion 1.12 and 1.7 G2 Cascabel Firebreaks and Road Maintenance* (2005).

19 To aid in the development of this plan and during the initial analysis for the proposed Cascabel fire breaks
 20 project, the CCFG reviewed the following additional documents:

- 21 • *Federal Register Vol. 66, No. 3* (2001)
- 22 • *Field Guidance Identifying and Prioritizing Communities at Risk* (National Association of State
 23 Foresters 2003)
- 24 • *Arizona Wildland Urban Interface Assessment* (2004)
- 25 • *Communities at Risk Matrix* (Arizona State Forester 2004)
- 26 • *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment:*
 27 *10-Year Comprehensive Strategy Implementation Plan* (2001)

28 The CCFG also reviewed Section 101.16.B.iii of HFRA to determine the area required adjacent to an
 29 evacuation route for hazardous fuel reduction measures in order to provide safer evacuation from the at-
 30 risk community. Using the information gathered from these supporting documents, the Cascabel Fire Chief,
 31 ASLD, and the BLM Gila District Manager agreed that the community of Cascabel qualifies as an intermix
 32 community (see *Federal Register*, January 4, 2001) at risk from wildland fire. The CCFG, therefore, will
 33 petition the Arizona State Forester to include the community of Cascabel within the *Arizona Communities*
 34 *At Risk Matrix* (Arizona State Forester 2004) when amended.

35 Figure 1.1 summarizes the process that the CCFG followed to produce the CCWPP. At the far right of each
 36 tier is the "product" resulting from the activities in that tier. These tiers correspond to the sections in the
 37 CCWPP and serve as a road map for the rest of this document.

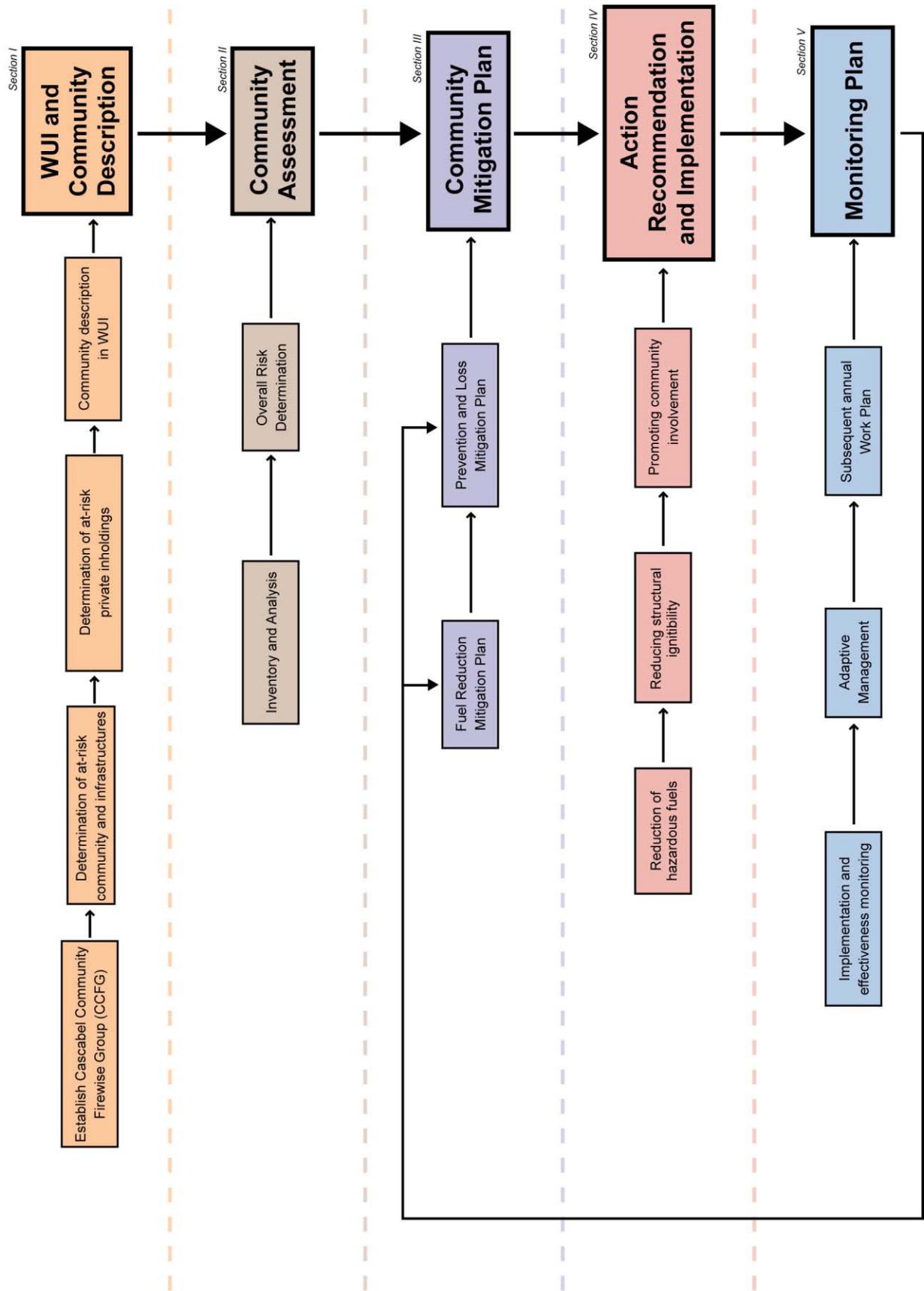


Figure 1.1. Process followed to produce the CCWPP

1 **B. Community Description**

2 The intermix community of Cascabel is located in Cochise County, approximately 23 miles northwest of
 3 Benson along the riparian corridor of the San Pedro River (Figure 1.2). Access to the community is from
 4 Cascabel Road, traveling north of Interstate 10 from Benson or southeast along Redington Road from San
 5 Manual. There are several secondary residential roads to the east and west of Cascabel Road within the
 6 WUI. The San Pedro River bisects the private lands within the community and provides irrigation and
 7 domestic water supplies to the community and habitat for threatened, endangered, and sensitive species.

8 The community consists of 10,853 acres of private lands, 678 acres of public lands administered by the
 9 BLM Gila District, and 4,819 acres of State Trust Land administered by the ASLD. The area analyzed
 10 within the WUI includes 16,350 acres of wildland by all ownerships. The community is composed of
 11 approximately 120 residential dwellings and associated unoccupied outbuildings, as well as dwellings and
 12 buildings under construction. Cascabel resident Mary Taylor has recorded the history and cultural heritage
 13 of Cascabel in her manuscript *Cascabel: A bare bones accounting of some significant happenings along*
 14 *the San Pedro River* (1995). Portions of her writings are incorporated here with the author's permission:

15 *Cascabel is a place and a community. The place is an area about 40 miles long and ten miles wide*
 16 *along the San Pedro River, beginning about 8 miles north of Benson. There is no post office, no*
 17 *school, no service station, no quick mart and just the beginning of a general store. There is only one*
 18 *road in, through and out of the area with some ranch access roads. The Community is mostly made*
 19 *up of special, different "characters," independent, but cooperative when needed. Through*
 20 *cooperation and good will they have built a fine Community Center (1989) without government or*
 21 *private loans. Quilt making and raffling, bake sales, donations and other fundraisers along with lots*
 22 *of time, sweat, physical effort and expertise have made the Center a very special place*

23 *Historically, the area has a long and interesting background. When early explorers first came,*
 24 *Coronado in 1540 and Father Kino in 1706, they found a lush valley of green grass, running water,*
 25 *cottonwoods, abundant game, fish, and peaceful, farming Indians. By 1865, both Mexican and*
 26 *Anglo settlers had begun to farm in the area, but were driven out by the Apaches who had, by that*
 27 *time, driven out the farming Indians. In 1868, the Leach Wagon Road was built through the area to*
 28 *join military posts to the North and South, and to provide a less hazardous way for travelers going*
 29 *west. The Redfield family settled at Redington in 1875 and were followed by others who found it a*
 30 *great farming and ranching area. Soon there were so many families that a need was felt for a post*
 31 *office, which was established and called Redington. A year later and seven miles south, the Souza*
 32 *family of Tucson settled, created a farm and ranch, built a chapel and school, hired a teacher, and*
 33 *raised 14 children. Life was hard and uncertain.*

34 *Shortly after the Souzas came, Frank Pool from Tucson moved to a choice spot six or seven miles south of*
 35 *the Souzas, near Hot Springs Wash. He wrote in his journal, "It is one of the most beautiful valleys I ever*
 36 *saw. When I arrived, a few farms were already under cultivation, grass everywhere. Fine cattle ranged from*
 37 *the Mexican line to where the San Pedro joins the Gila River. There was wild game in abundance and the*
 38 *river teemed with fish."*

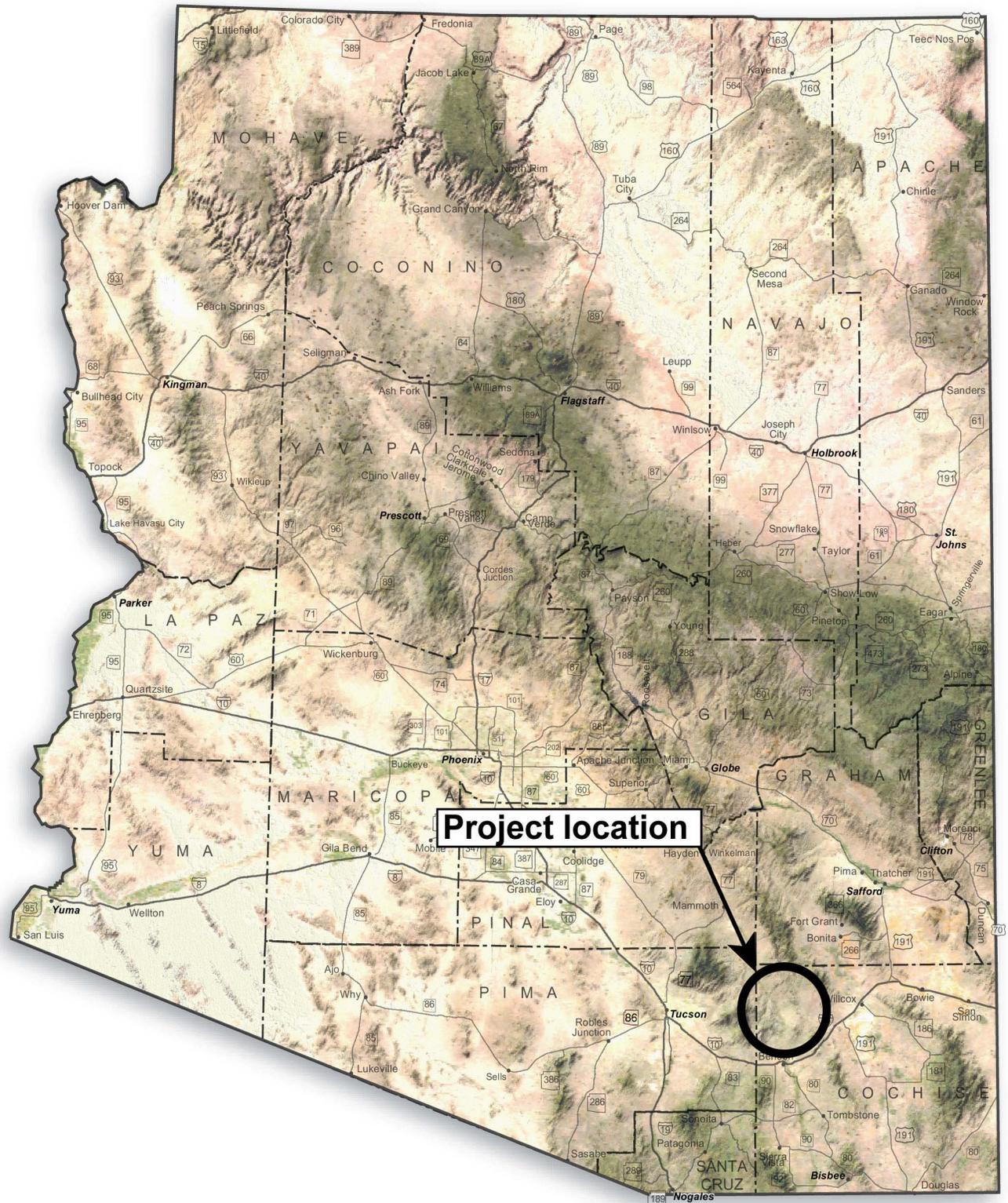


Figure 1.2. Analysis area

1 *The Bayless family of Tucson came to the Redington area in 1885. One of the descendants, Jack*
2 *Smallhouse, and his family operate the ranch at this time (1995). In 1887, the year the Apache*
3 *leader, Geronimo, was captured, a severe earthquake shook the entire area and part of Northern*
4 *Mexico, causing many changes in stream flow and natural springs. People came and went,*
5 *population fluctuated. In 1902 the Pool Post Office was established at Mr. Pool's ranch, but was*
6 *discontinued in 1913.*

7 *Alex Herron had a ranch and a small store a short distance north of Hot Springs Wash. In 1916,*
8 *when he applied for a post office, he wanted to call it Pool, after the former post office. The name*
9 *was turned down by the authorities. Later, on the way to Benson, Herron met a Mexican with a*
10 *rattlesnake the man had killed. Herron asked the man the name of the snake and the reply was*
11 *“Cascabel.” Herron decided to call his post office by that name.*

12 *The old school at the Soza ranch had been hauled down to a new location just north of the new*
13 *post office, and another room was added to accommodate the increasing enrollment. The school*
14 *also served as a community gathering place with box socials and “barn” dances. Many interesting*
15 *stories are told about those times; in recent years two Pool School reunions have been held at the*
16 *new Community Center. The school was disbanded and torn down in the 1970's. A bus comes from*
17 *Benson now to pick up and return students living in the area.*

18 *The 20's and 30's saw hard times in many places, and Cascabel was no exception. For a while,*
19 *people came to make a living along the river, with a garden, a few chickens, a goat or cow and wild*
20 *game. Eventually these folks lost heart and moved back to towns where living was a little easier. By*
21 *1936 the Cascabel Post Office was discontinued. World War II caused a further decline in the*
22 *population. All those work-hardened, ranch-raised boys joined up, saw the world, and decided when*
23 *they came back that they could do better financially by going to college or working in town. Things*
24 *were pretty quiet for a while until the late 50's when electric power was brought in, bringing with it*
25 *the convenience and luxury of coolers, refrigerators, better lighting and more convenient water*
26 *pumping equipment. Housewives could even have a washing machine. In the early 60's the City of*
27 *Tucson bought the old Pool place and some adjoining land along the river for water rights to the*
28 *land. Officials had planned to pump water from the San Pedro watershed to Tucson. This was*
29 *eventually pronounced illegal and the project was abandoned. In 1985 the acreage was sold at*
30 *auction to developers. This land was divided into irregularly shaped, near 40-acre parcels and put*
31 *up for sale. Choice lots went rather quickly and new faces were seen on the river, new marks on the*
32 *land, and more cars on the road.*

33 *In 1970 a new State road was proposed through the area from Benson to San Manuel, to replace*
34 *the old 1868 Leach Wagon Road. Surveys were made, some rights of way were purchased, four*
35 *bridges were built, money was appropriated to finish it, then through some political convulsion, the*
36 *project was abandoned and money diverted to another area. Thus is our condition determined. Our*
37 *road is called “ primitive” (actually, Cascabel Road).*

38 *Portions of the lower San Pedro River were designated as one of the Last Great Places in 1990.*
39 *The Bureau of Land Management purchased some of the local riparian river bottom acreage to*
40 *preserve the wildlife habitat and perennial stream. Those who appreciate the unique qualities of the*
41 *area are pleased that it will not be otherwise exploited. Phones, faxes, and more convenience*

1 *arrived in 1993, provided by the Midvale Telephone Co. It is a service taken for granted by many,*
 2 *but doubly appreciated by those who had done without for so long.*

3 *The really interesting history of the area is in the stories of the people. Tales of tragedy abound,*
 4 *along with stories of floods, droughts, illnesses, murders, accidents, feuds, scandals, romances,*
 5 *wild cows, wild rides, screw worms, everyday entertainment, humor, attitudes and ways of doing*
 6 *things. Even today the neighbors tell of the mountain lion that recently held the community hostage*
 7 *for ten days. It is hoped that folks who have lived here or heard these stories will write them down*
 8 *so they will be preserved, perhaps as an addendum to this manuscript.*

9 The emphasis of this CWPP is to improve community wildland fire protection and fire fighter and public
 10 safety through implementation of the *Decision Memorandum on Action and for Application of: Categorical*
 11 *Exclusion 1.12 and 1.7 G2 Cascabel Firebreaks and Road Maintenance* (2005). The community
 12 recognizes that firefighter and public safety are the first priority in all fire management events. The
 13 community further recognizes the value of re-establishing the natural fire regime to minimize the potential
 14 of catastrophic wildland fire. The CCWPP also assists in aligning wildland fire response with habitat
 15 component impacts to a level consistent with the resource values at risk, while striving for cost effective
 16 firefighter and public safety.

17 The Cascabel Volunteer Fire Department (CVFD) provides the primary response to wildland fire for the
 18 community. The CVFD is a nonprofit organization that does not constitute a Fire District. The response
 19 area of the CVFD begins at the 7-mile marker on Cascabel Road, extends approximately 30 miles north
 20 along Cascabel Road encompassing an area of 1 mile on either side of Cascabel Road. Twenty-two CVFD
 21 personnel have been trained in basic wildland firefighting. The CVFD conducts two firefighting training
 22 sessions per month. Several CVFD personnel have completed coursework as specified by the Wildland
 23 and Prescribed Fire Qualification System Guide to meet requirements of state and federal agencies and
 24 will be completing additional training necessary for compliance with the Federal National Incident
 25 Management System.

26 The CVFD maintains a type 6 brush engine carrying 300 gallons of water and a water tender truck that
 27 provides 2,000 gallons water for engine support. These two pieces of equipment are housed locally at
 28 Cascabel Ranch. The CFVD has both mobile and portable radio communication systems supported by a
 29 mountaintop radio repeater for better coverage throughout the response area. There are no fire hydrants
 30 within the CVFD response area; therefore they must rely on domestic or irrigation wells as a water source
 31 during fire response. The CVFD has located and mapped 10 water supply locations for well or surface
 32 water drafting. The water source locations and well operating instructions are carried on both the engine
 33 and tender. In addition to these water sources, the CVFD has located and mapped, and currently maintains
 34 six predetermined helicopter landing zones for emergency response (see Figure 1.3).

35 The CVFD recognizes its limited capability to respond to catastrophic wildland fire events. Additionally, the
 36 CVFD does not provide structural fire protection to community residents. The San Manuel or Mescal Fire
 37 Departments provide response to structural fires in the WUI. The CVFD and the ASLD, Division of
 38 Forestry, have signed a cooperative agreement for the “protection of forest, wild and agricultural lands, and
 39 rural structures as provided for within the Cooperative Forestry Assistance Act, 16 U.S.C. Section 2106.” In
 40 addition to the ASLD cooperative agreement, the BLM and the FS can also provide fire assistance.
 41 Through the existing Mutual Aid System as agreed on by local fire departments, the CVFD has received

1 assistance from the Mescal, St. David, and Tombstone Fire Departments. The CVFD has provided
2 firefighting assistance to the San Manuel, Wilcox Rural/Sunsites and Pomerene Fire Departments. In an
3 effort to provide faster initial attack to fire starts and because of the topographic nature of the CVFD
4 response area, firefighting tools have been placed with a number of CVFD personnel living throughout the
5 district. CVFD personnel responding from home or personal vehicles can provide the initial attack to an
6 incipient fire prior to engine support arriving.

7 **C. Wildland-Urban Interface (WUI)**

8 A WUI is commonly described as the zone where structures and other features of human development
9 meet and intermingle with undeveloped wildland or vegetative fuels. Communities in the WUI face
10 substantial risk to life, property, and infrastructure. Wildland fire in the WUI is one of the most dangerous
11 and complicated situations firefighters face. Both the *National Fire Plan* (NFP) 2004—a response to
12 catastrophic wildfires—and *A Collaborative Approach for Reducing Wildland Fire Risks to Communities
13 and the Environment: 10-Year Comprehensive Strategy Implementation Plan* (2001)—a plan for reducing
14 wildland fire risk—place a priority on working collaboratively with communities in the WUI to reduce their
15 risk from large-scale wildfire. HFRA builds on existing efforts to restore healthy forest conditions in the WUI
16 by empowering local communities and by authorizing expedited environmental assessments,
17 administrative appeals, and legal review for qualifying projects on federal land.

18 The CCWPP process of delineating the WUI boundary (Figure 1.3) involved collaboration between local,
19 state, and federal governments; the Cascabel Fire Chief, and the CCFG. The CCFG represents the public
20 interest through participating government officials, including the BLM Gila District Fire Mitigation Specialist
21 and Fuels Management Specialist, natural resource specialists, nongovernmental organizations, special
22 interest groups, and other interested parties throughout the analysis area. The identified WUI is the
23 minimum area needed to provide protection to the riparian corridor, to provide adequate evacuation, and to
24 protect the community from wildland fire. It includes 10,853 acres of private land, 4,819 acres of state land,
25 and 678 acres of public land for a total of 16,350 WUI acres. The lands that surround the community are in
26 such condition that they are conducive to a large-scale wildland fire, and such a wildfire could threaten
27 human life and property.

28 General elements used in creating the WUI for the communities included the following:

- 29 • Fuel hazards, consideration of local topography, fire history, vegetative fuels, natural fire breaks
- 30 • Historical fire occurrence
- 31 • Community development characteristics
- 32 • Local firefighting preparedness
- 33 • Infrastructure and evacuation routes

34 **D. Desired Future Condition and Relevant Fire Policies**

35 The desired future condition of federal land is a return to Condition Class I status. Federal lands in this
36 condition class can carry wildfire without significant impacts to habitat components. Once in this condition

1 class, natural processes such as fire can be incorporated into long-term management practices to sustain
 2 habitat health. The desired future condition of nonfederal lands in the WUI is to have private land owners
 3 comply with Firewise™ standards recommended by the CVFD. Residential and other structures that
 4 comply with these standards significantly reduce the risk of fire igniting in the community and spreading to
 5 the surrounding habitat. Additionally, structures that comply with Firewise™ recommendations are much
 6 more likely to survive wildland fires that spread into the community.

7 1. Federal Policies

8 Several existing federal wildfire policies have been developed in recent years; one of the more significant is
 9 the 1995 Federal Wildland Fire Management Policy. This was the first single comprehensive federal fire
 10 policy for the USDI and USDA and for the first time formally recognized the essential role of fire in
 11 maintaining natural systems. The 1995 Federal Wildland Fire Management Policy was reviewed and
 12 updated by the Interagency Federal Wildland Fire Policy Review Working Group in 2001. The Working
 13 Group found the 1995 Policy to be sound and appropriate; however, it recommended a few additions to
 14 address ecosystem sustainability, science, education, communication and to provide for adequate program
 15 evaluation.

16 Among the most prominent recent national policies is the NFP. The NFP incorporates
 17 *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment:
 18 10-Year Comprehensive Strategy Implementation Plan*, whose primary goals are to:

- 19 • improve prevention and suppression,
- 20 • reduce hazardous fuels,
- 21 • restore fire-adapted ecosystems,
- 22 • promote community assistance.

23 Federal wildfire reduction policy on public lands (i.e., BLM) is planned and administrated locally through the
 24 BLM Gila District, which is the governing agency for the federal land associated in the CCWPP planning
 25 area.

26 Under the Proposed Action described in the *Arizona Statewide Land Use Plan Amendment for Fire, Fuels,
 27 and Air Quality Management Finding of No Significant Impact (FONSI) and Environmental Assessment*
 28 (BLM 2004) BLM-administered public lands are assigned one of two land use allocations for fire
 29 management. Allocation 1 includes areas suitable for wildland fire use for resource management benefit.
 30 Allocation 2 includes areas not suitable for wildland fire use for resource benefit. With the exception of a
 31 small amount of semidesert grasslands, vegetation associations within the WUI fall into allocation 2.

32 Firewise™ is a national program that helps communities reduce the risk of wildfires and provides them with
 33 information about organizing to protect themselves against catastrophic wildfires and mitigating losses from
 34 such fires. Within Arizona the Firewise™ certification program is administered by the Arizona State
 35 Forester. CVFD personnel have made this information available to their citizens and encourage its
 36 application.

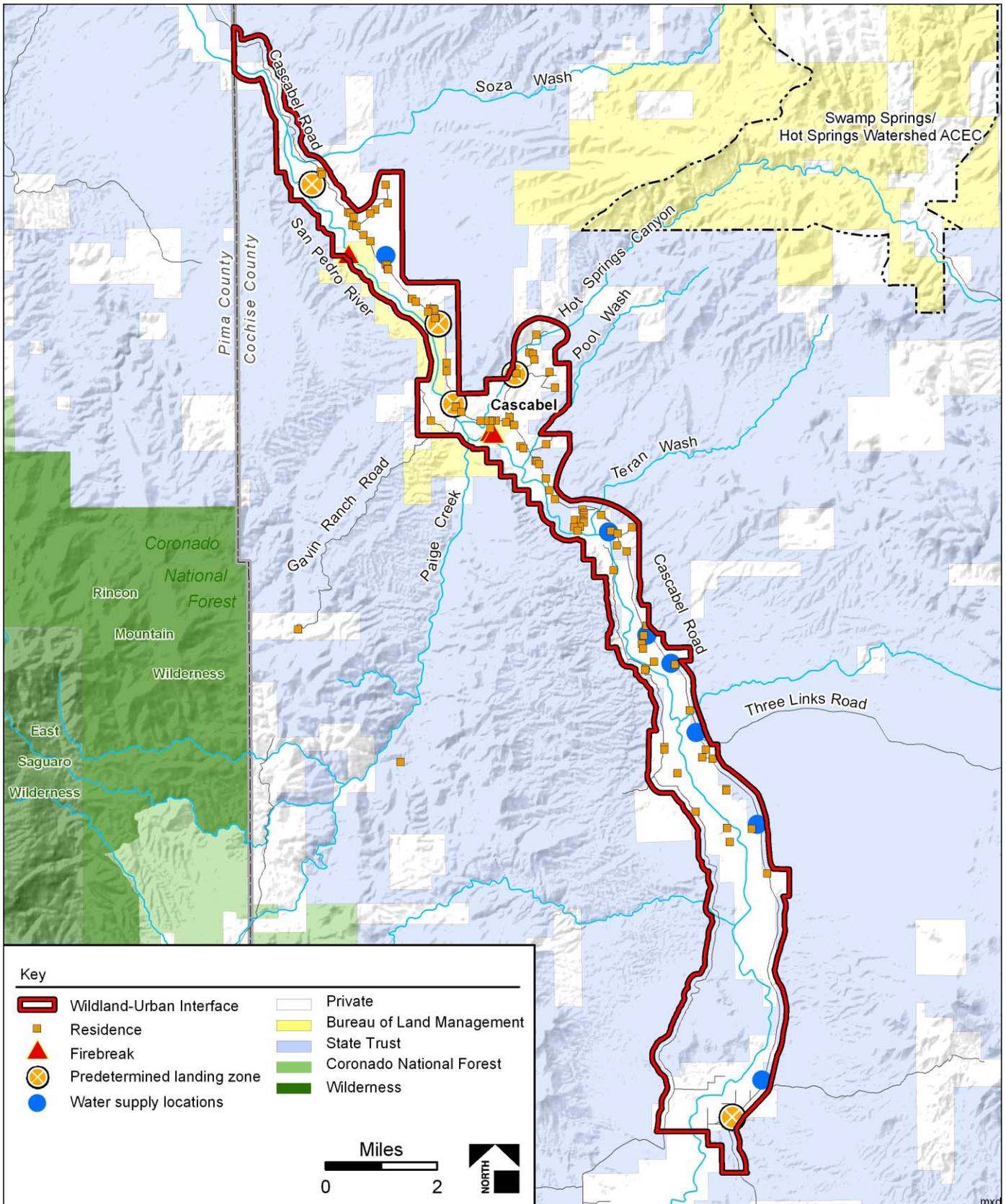


Figure 1.3. Wildland-urban interface

1 2. Local Policies

2 The Cascabel Community is aware that wildland fuel accumulations and community growth in the WUI
 3 have produced areas at high risk from catastrophic wildfire. The community aspires to achieve a restored,
 4 self-sustaining, biologically diverse area of mixed open space and developed areas, which contribute to a
 5 quality of life demanded by local citizens. Cascabel residents that developed the CCWPP recognize
 6 protection from catastrophic wildland fire requires collaboration and implementation through all levels of
 7 government and through an informed and motivated public. The community considered ecosystem
 8 restoration, community protection, and public and firefighter safety while developing this CWPP.

9 To date, Cochise County has not developed community-based emergency evacuation plans. Limited
 10 access routes to many rural communities within the county restrict planning options for residential
 11 evacuation. Plans outlining emergency procedures in case of evacuation, essential items to take when
 12 evacuating, registration/reception centers, transportation planning, home security, family communication,
 13 and animal and pet evacuation suggestions could be developed by individual communities in cooperation
 14 with Cochise County in the future if initiated by the local community.

15 **E. Specific Community Fuels Mitigation Projects**

16 Financial commitments required to reduce the risk of catastrophic wildfire can be extensive for the BLM, as
 17 well as for the small rural communities surrounded by public lands. The community of Cascabel and the
 18 BLM have implemented fuel mitigation projects for wildland fire suppression and are proposing to complete
 19 additional wildland fuel mitigation projects described in Table 1.1.

Table 1.1. Cascabel treatment projects

Project area location	Treatment name	Description	Acres treated
Fuels treatment projects in Cascabel	Site #1	Hazardous Fuels Reduction Firebreak around and inside BLM Mungia historic home	0.50
	Site #2	Crawford Ranch Firebreak west of homestead structures	0.60
	Site #3	Cascabel Ranch Firebreak west of homestead structures	1.00
	Site #4	Lot 37 North Firebreak	0.50
	Site #5	Lot 38 Central Firebreak	0.50
	Site #6	Lot 40 South Firebreak	0.50

Source: BLM Gila District 2005.

20 **F. Goals**

- 21 The CCFG agreed on eight primary goals of the CCWPP:
- 22 • Improve fire prevention and suppression
 - 23 • Reduce hazardous wildland fuels on both public and private lands
 - 24 • Restore riparian health

- 1 • Promote community involvement and education
- 2 • Recommend measures to reduce structural ignitability in the CCWPP area
- 3 • Encourage stability in the community through protection of the ecosystem
- 4 • Identify funding needs and opportunities
- 5 • Expedite project implementation

6 In addition to the primary goals of the CWPP, both Short Range and Long Range goals for community
7 wildfire protection have been developed.

8 Short Range Goals:

- 9 • Continue to raise the awareness of wildfire dangers within the community and assist
10 in changing landowner apathy.
- 11 • Continue to raise the level of preparedness
 - 12 ○ home inspections (stored on computer software),
 - 13 ○ dispatching and alerting capability within the present radio system (911 tie-in
14 pagers),
 - 15 ○ service to the community (equipping wells for CVFD use, helicopter sites, fuel
16 reduction/chipper, update mapping).

17 Long Range Goals:

- 18 • Obtain funding/grants to secure the following:
 - 19 ○ chipper/shredder
 - 20 ○ permanent quarters for vehicles
 - 21 ○ new type 6 engine (severity patrols and mutual aid).
- 22 • Assist RNRCD, NRCS, and TNC where possible with watershed enhancement
23 projects such as the Canyon Road Erosion Elimination Project and the removal of
24 old tires.

25 Although the goals of this CWPP, as determined by the CCFG, are mostly strategic in a planning sense,
26 the action recommendations designed to reach these goals are more prescriptive. In developing this
27 CWPP it is not intended for each and every action recommendation to meet each and every goal; some
28 action recommendations are specific to a single or few goals. For instance, wildland fuel-reducing
29 treatments in designated fuel break areas of the WUI will assist in meeting fire prevention and suppression
30 goals but may not be designed to directly “restore riparian health.” However, the CCFG believes that the
31 synergistic effects of implementing all action recommendations will eventually achieve the stated goals of
32 the CCWPP.

33 The CCWPP meets all criteria of HFRA. It has been collaboratively developed and agreed on by the
34 applicable local government, the CVFD, the state agency responsible for forest management, the BLM Gila
35 District (the primary relevant federal entity), and other interested parties. The CCWPP establishes a
36 coordinated, collaborative, performance-based framework of recommendations to meet its outlined goals.

1 **G. Planning Process**

2 Several County and BLM Gila District, including both the Safford Field Office (SFO) and the TFO, planning
3 documents and studies have incorporated wildfire management guidelines and standards for the CCWPP
4 planning area. The goals, policies, and guidelines outlined in these documents, in addition to the above-
5 mentioned public involvement process, were all critical inputs into the development of the CCWPP. The
6 studies, plans, and documents reviewed include:

- 7 • *Cascabel Community Plan* (2002)
- 8 • *Cascabel BLM Ecosystem Management Plan* (1996)
- 9 • *Governors Forest Health Guiding Principles* (2003)
- 10 • *Cochise County Comprehensive Plan* (2003)
- 11 • *Cochise County Hazard Abatement Ordinance* (XXXX)
- 12 • *Governor's Forest Health Guiding Principles* (2004)
- 13 • *Gila District Resource Management Plan* (BLM 1991)
- 14 • *Proposed Arizona Statewide Land Use Plan Amendment for Fire, Fuels and Air Quality*
15 *Management Finding of No Significant Impact (FONSI) and Environmental Assessment* (BLM 2004)
- 16 • *Decision Memorandum on Action and for Application of: Categorical Exclusion 1.12 and 1.7 G2*
17 *Cascabel Firebreaks and Road Maintenance* (BLM 2005)

18 Successful implementation of the CCWPP will require a collaborative effort among multiple layers of
19 government and the local community. The CCFG must develop processes and systems that ensure
20 recommended treatments and actions of the CCWPP comply with HFRA, the National Environmental
21 Policy Act, the Endangered Species Act, the National Historic Preservation Act, and other applicable
22 federal, state, and local environmental regulations.

23 Upon approval of this CCWPP by the Cascabel Fire Chief and Cochise County Board of Supervisors and
24 upon concurrence from the BLM Gila District Manager and the Arizona State Forester, action
25 recommendations of the CCWPP will be forwarded to the Arizona State Forester and the BLM Gila District
26 Manager for implementation of the priority action recommendations.

1 II. COMMUNITY ASSESSMENT

2 The community assessment is a risk analysis of the potential for catastrophic wildfire to the community of
 3 Cascabel as identified by the CCFG. This risk analysis incorporates the current condition class, wildfire fuel
 4 hazards, risk of ignition, wildfire occurrence, and at-risk community values. Local preparedness and
 5 protection capabilities are also factors that contribute to delineation of areas of concern. The areas of
 6 concern for wildland fuel hazards, risk of ignition and wildfire occurrence, and community values are
 7 evaluated to determine areas of high wildland fire risk. Specific hazardous wildland fuel reduction projects
 8 are recommended to reduce the risk of wildfire spreading from areas of high risk into or within the
 9 community.

10 A. Fire Regime and Condition Class

11 Prior to European settlement of North America, fire played a natural (historical) role on the landscape. Five
 12 historical fire regimes have been identified based on the average number of years between fires (fire
 13 frequency) combined with the severity (amount of overstory replacement) of the fire on the dominant
 14 overstory vegetation. These five regimes include:

	<i>Frequency</i>	<i>Severity</i>
Regime I	0–35 years	low ^a
Regime II	0–35 years	high ^b
Regime III	35–100 years	low
Regime IV	35–100 years	high
Regime V	200+ years	high

15 ^a<75% of the dominant overstory vegetation replaced

16 ^b>75% of the dominant overstory vegetation replaced (stand replacement)

17 All of the lands analyzed within the WUI are consistent with Fire Regime III as described in *Development of*
 18 *Coarse-Scale Spatial Data for Wildland Fire and Fuel Management* (Schmidt et al. 2002). The Condition
 19 Class of wildland habitats describes the degree to which the current fire regime has been altered from its
 20 historic range, the risk of losing key ecosystem components, and the vegetative attribute changes from
 21 historical conditions. For example, a habitat in Condition Class 1 is a habitat system in its natural fire range
 22 and at low risk for losing ecosystems components from wildland fire. A Condition Class 2 habitat has
 23 moderately departed from its historic fire-occurrence range and has a moderate risk of losing habitat
 24 components. Condition Class 3 habitats have significantly departed from their historic fire-regime ranges,
 25 and their risk of losing key habitat components is high.

26 According to Schmidt et al. (2002) the lands within the WUI are categorized as Fire Regime III and in
 27 Condition Class 1. Because Condition Class categories are based on coarse-scale data that is intended to
 28 support national-level planning, any interpolation of this data for localized conditions may not be valid.
 29 Therefore, local agencies are asked to provide data for localized conditions. The amount of salt cedar

1 invasion within the WUI riparian areas, proliferation of nonnative grasses, and increasing woody species
 2 invasion, indicate the riparian and mesquite bosque areas no longer conform to components of Condition
 3 Class 1 lands. In addition to the vegetative changes, past land management practices have also
 4 substantially altered the hydrologic function of the San Pedro River from a historic condition of a small,
 5 shallow floodplain dominated by sacaton grass to an eroding channel with a lowering water table (RNRCD
 6 2003). As a result, local conditions indicate that the riparian area of the WUI actually fall within Condition
 7 Class 2 and 3.

8 The CCFG has recommended that the desired future condition for federal and nonfederal lands within the
 9 WUI should follow those developed by the BLM as follows:

10 Semidesert grassland and desert scrub communities desired future condition as described in the *Proposed*
 11 *Arizona Statewide Land Use Plan Amendment for Fire, Fuels and Air Quality Management Finding of No*
 12 *Significant Impact (FONSI) and Environmental Assessment* (BLM 2004):

13 *Perennial grasses to cover its historic range of variability, annual grass cover is reduced, an*
 14 *adequate cover and mix of natural plant species that have good vigor are dominant. In terms of fire*
 15 *management and fire ecology, the desired future conditions are for fire to control or reduce exotic*
 16 *annual weeds such as red brome and to limit woody vegetation such as juniper, tarbush, whitethorn*
 17 *and creosote bush to non-hazardous levels.*

18 Riparian vegetation community desired future condition as described in the *Proposed Arizona Statewide*
 19 *Land Use Plan Amendment for Fire, Fuels and Air Quality Management Finding of No Significant Impact*
 20 *(FONSI) and Environmental Assessment* (BLM 2004).

21 *Annual weed cover and density is controlled and ladder fuels and downed woody debris are limited*
 22 *or not present. Disturbances such as livestock grazing and mining and off road vehicle travel, that*
 23 *can potentially reduce natural vegetation cover and vigor, are managed to maintain adequate cover*
 24 *and mix of natural plant species.*

25 **B. Fuel Hazards**

26 The arrangement of fuel, relative flammability, and fire potential of vegetation varies in the WUI. Wildland
 27 fuel hazards consist of the composition, type, arrangement, and/or condition of vegetation such that if the
 28 fuel were ignited, an at-risk community or its community infrastructure could be threatened. Table 2.1
 29 identifies the total amount of land in the WUI that was evaluated for overall wildland fire risk because of
 30 increased wildland vegetative fuel hazards.

Table 2.1. Vegetation communities with associated fuel-model and fire-risk rating

CCWPP vegetative communities	Total land area (acres)	Fuel Model	Wildfire Risk Rating¹		
Agriculture	1,983	1–2	L		
Apacherian-Chihuahuan Mesquite Upland Scrub	1,535	4	M		
Apacherian-Chihuahuan Piedmont Semi-desert Grassland and Steppe	4,498	1	L		
Chihuahuan Creosotebush, Mixed Desert and Thorn Scrub	1,475	1–2	L		
Chihuahuan Mixed Salt Desert Scrub	434	1–2	L		
Chihuahuan Stabilized Coppice Dune and Sand Flat Scrub	137	1	L		
Chihuahuan Succulent Desert Scrub	122	1	L		
North American Warm Desert Bedrock Cliff and Outcrop	42	NA	L		
North American Warm Desert Riparian Mesquite Bosque	293	4–6	M		
Palustrine Emergent	4	NA	L		
Palustrine Unconsolidated Bottom	8	NA	L		
Palustrine Unconsolidated Shore	4	NA	L		
Riparian Alkali Sacaton	22	3	H		
Riparian Cottonwood	460	9	H		
Riparian Mesquite	2,520	8–9	H		
Riparian Mixed Deciduous	376	9	H		
Riparian Salt Cedar	402	4–9	H		
Riparian Willow	3	8–9	H		
Riverine intermittent (flows part of the year)	111	NA	L		
Riverine lower perennial (low gradient)	414	NA	L		
Sonoran Paloverde-Mixed Cacti Desert Scrub	1,507	1	L		
	Total	H	M	L	
	16,350	5,521	1,652	9,177	

¹ H = High potential for carrying wildland fire; M = Medium potential for carrying wildland fire; L = low potential for carrying wildland fire.

1 The vegetative associations found within the WUI were identified and mapped using BLM GAP analysis
2 data for upland areas and data obtained from the Lower San Pedro River Riparian Assessment (RNRCD
3 2003). When merged, these data sets provided the greatest level of vegetative detail necessary for aligning
4 flammability with existing vegetation. The existing arrangement and flammability of vegetation associations
5 largely determines wildland fire behavior. Evaluation of the vegetative fuels on federal and nonfederal land
6 in the WUI was conducted through spatial analysis using geographic information system (GIS) technology
7 in a series of overlays that helped the CCFG to identify areas at risk from wildland fire. For the WUI, the
8 vegetation density, type, and distribution were analyzed to help categorize areas of highest risk of fire
9 ignition and spread from wildland fuels. Vegetation in the community of Cascabel ranges from mixed
10 deciduous riparian associations of cottonwood, willow and salt cedar, intermixed with some alkali sacaton
11 grasslands, riparian mesquite bosque, and agriculture along the San Pedro River. Adjacent upland
12 vegetation includes mesquite and semidesert grasslands mix, desert scrub associations and scattered
13 dune and sand flat scrub. (Figure 2.1).

14 The existing arrangement and flammability of vegetation associations largely determines wildland fire
15 behavior. The use of vegetative data in predicting wildfire behavior has been quantified by developing
16 descriptions of associated fuel properties and have become known as fuel models. The fuel model (as
17 described by Anderson 1982) and vegetation fuel fire risk rating within the CCWPP are shown in Table 2.1.
18 Vegetative and physical characteristics of the WUI include 21 vegetation associations. Each associated
19 fuel model predicts the total fuel load, rate of spread, and flame length possible for each vegetation
20 association. Assigning a fuel model to each vegetation association within the WUI will assist in predicting
21 wildfire behavior and thus proper suppression response (see Anderson 1982 for detailed fuel model
22 descriptions).

23 The greatest wildland fuel hazard resides within the riparian vegetation associations of the WUI. In riparian
24 vegetation associations consisting of heavy salt cedar where dead fuels accumulate within the vertical
25 plant column and where there are mixed deciduous riparian tree species, total wildland fuels can exceed
26 12 tons per acre and produce flame lengths greater than 5 feet with a rate of spread of over 8 chains per
27 hour. In addition, some grasslands, such as sacaton grasses, can produce wildfires of high intensity and
28 high rates of spread, capable of igniting adjacent vegetation associations. Moderate wildland fuel risk is
29 associated with the ecotone of the riparian and desert upland vegetation associations. In areas where
30 mesquite canopy exceeds 35 percent, light fuels produced by the herbaceous understory are reduced due
31 to overstory shading and competition from overstory shrub species. Under extreme fire conditions, upland
32 mesquite communities can carry crown fires with moderate intensities and high rates of spread. Lower
33 wildland fire risk occurs in desert scrub and desert shrub communities in which total fuel loading is low with
34 no continuous arrangement of ground or aerial fuels. Desert upland vegetation associations are not fire
35 dependent communities and wildfires within desert vegetation associations will be suppressed. The
36 wildland fuel hazard component influence was compiled to depict areas of high, moderate, and low
37 wildland fire potential based on vegetation type, density, and arrangement and to show areas with higher
38 wildfire risk and therefore of greater concern to the CCFG (Figure 2.2).

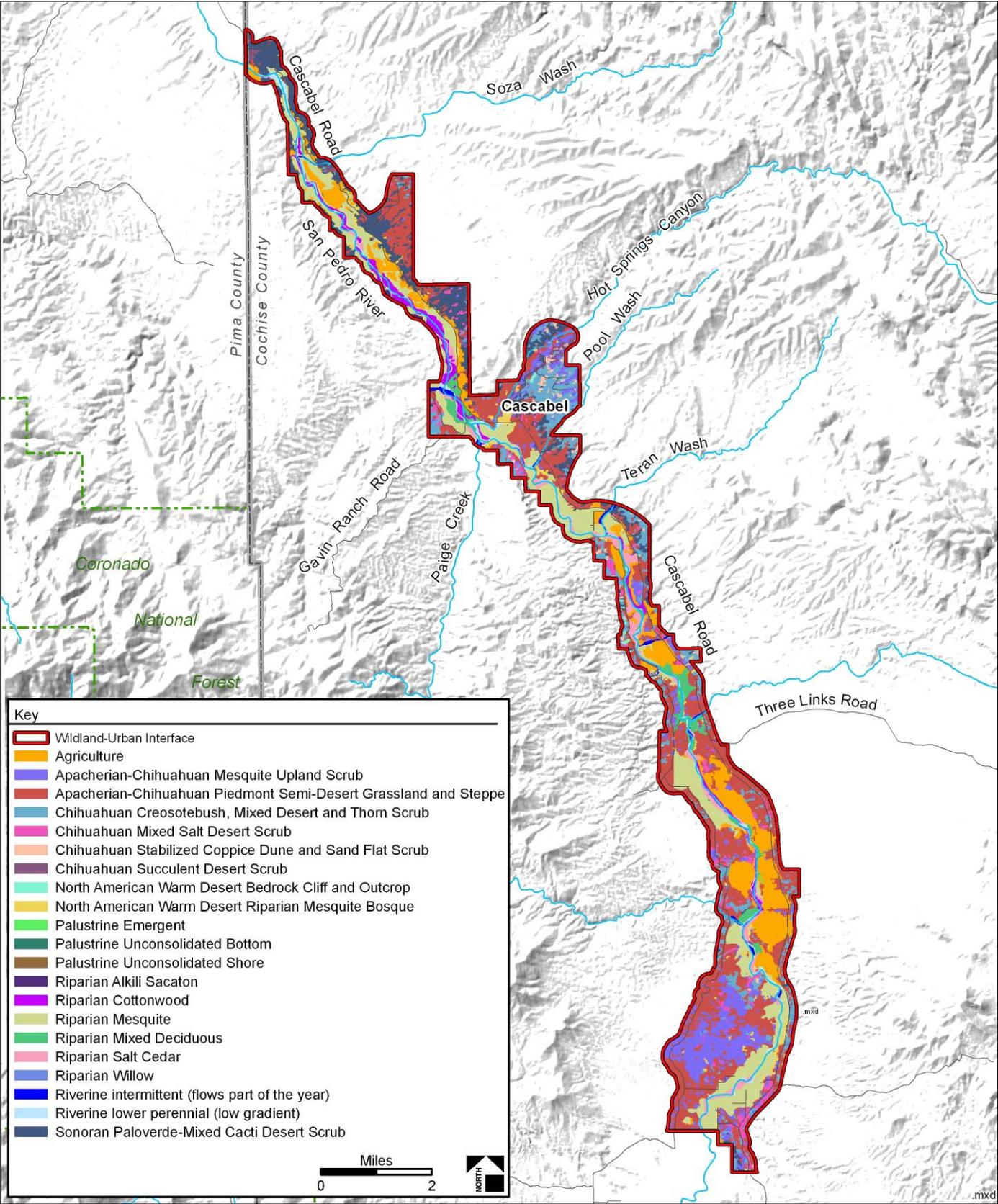


Figure 2.1. Vegetation types within the WUI

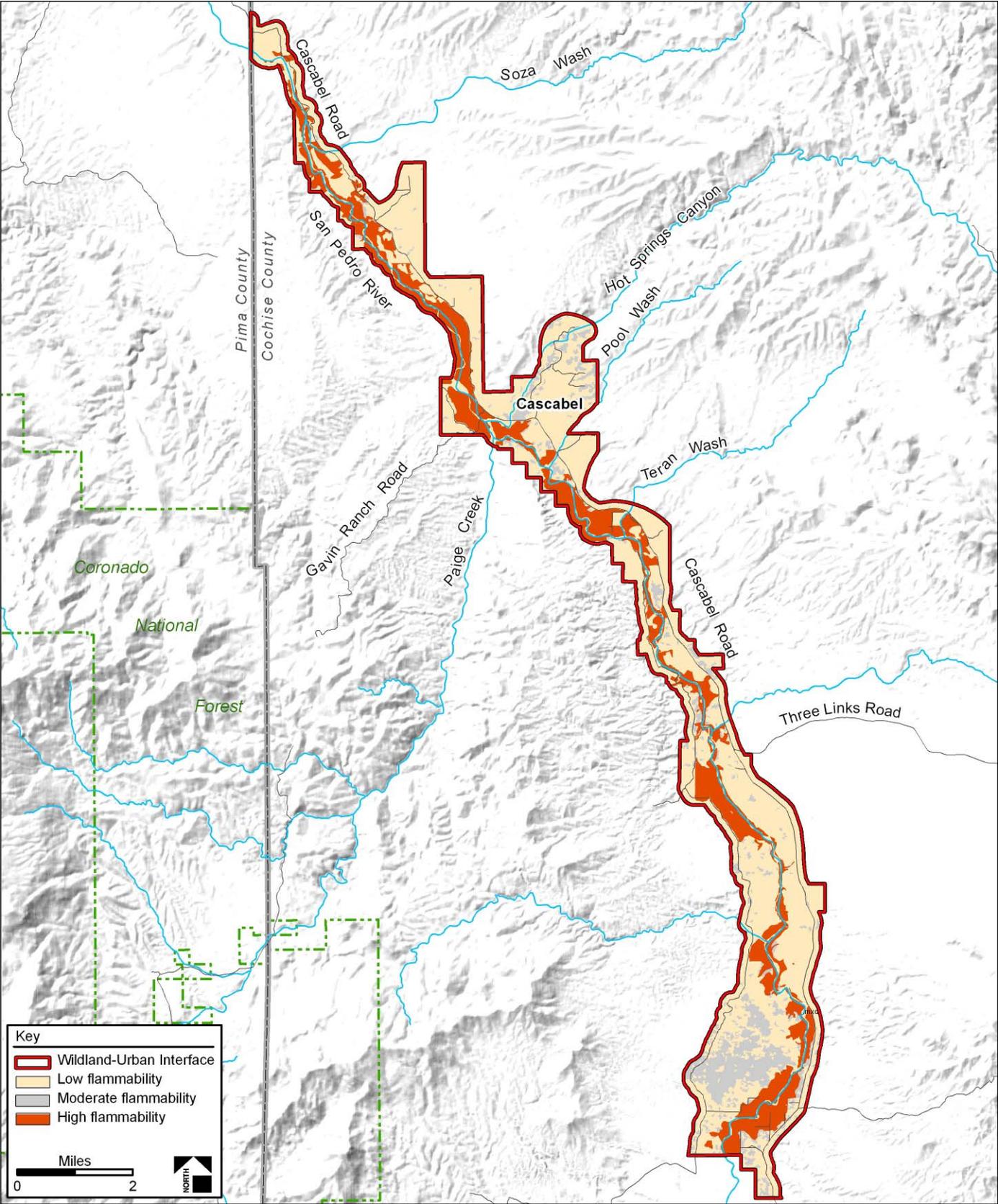


Figure 2.2. Flammability risk within the WUI

1 **C. Community Values at Risk**

2 Valued, at-risk community resources include private and community structures, communication facilities,
3 power lines, local recreation areas, cultural and historic areas, sensitive wildlife habitat, watersheds, natural
4 resources, and air quality. Community values were discussed by the CCFG and are shown in Figure 1.2.
5 Developed land, Cascabel Road (serving as both an evacuation and a responding resource travel route),
6 and other infrastructures within the area of highest flammability were given the highest priority for
7 protection by the CCFG. In areas where community values occur within or adjacent to areas of high risk
8 due to the fuel hazards of vegetative associations, a cumulative risk from catastrophic wildland fire is
9 created. These areas of cumulative risk are of greatest concern to the community and are depicted in
10 Figure 2.3.

11 According to the CCFG and the CVFD, wildlife habitat and watershed enhancing treatments that reduce
12 wildland fuel and lessen the threat of catastrophic wildland fire in the river corridor will assist in preserving
13 sensitive riparian habitat and wildlife species in accordance with Section 102.a.5.B. of HFRA and will also
14 protect the recreational values local residents associate with the San Pedro River. The proposed wildland
15 fuel reduction projects within the WUI were found to have no adverse effects on species listed by the
16 Endangered Species Act (ESA) as an endangered or threatened species, or no adverse effects on
17 designated critical habitat for these species (BLM 2005). As discussed previously, a long range goal of the
18 CVFD is to assist the RNRCD, NRCS, and TNC, where possible, with watershed enhancing projects such
19 as the Canyon Road Erosion Elimination Project.

20 The major concerns of the CVFD include (1) the delayed response time by available mutual aid fire
21 departments, (2) obtaining additional fire fighting equipment, such as a new type 6 engine, and (3)
22 insufficient dispatch and communication capabilities. Additionally, many residences in the identified WUI
23 were not designed with adequate ingress and egress or emergency vehicle access. Private structures
24 without adequate access and readily available water supplies increase the risk of greater habitat and
25 structural losses from large wildland fires.

26 A short range goal of the CVFD in conjunction with the CCFG is completing individual wildland fire home
27 assessments through use of the Redzone software, a commercially produced software package designed
28 for use on handheld personal data recorders. The software is used to collect locations and data about
29 structures, water sources, and other information (www.redzonesoftware.com). Recommendations to
30 landowners for wildfire risk mitigation are included in Section III of this CCWPP. Additional
31 recommendations for remote private lands include identifying properties by name on placards or road signs
32 along Cascabel Road and locating wells or surface water sources that could be accessed to replenish
33 water supplies for fire response equipment, both ground-based drafting and aerial bucketing, by also
34 placing identification placards or road signs along Cascabel Road.

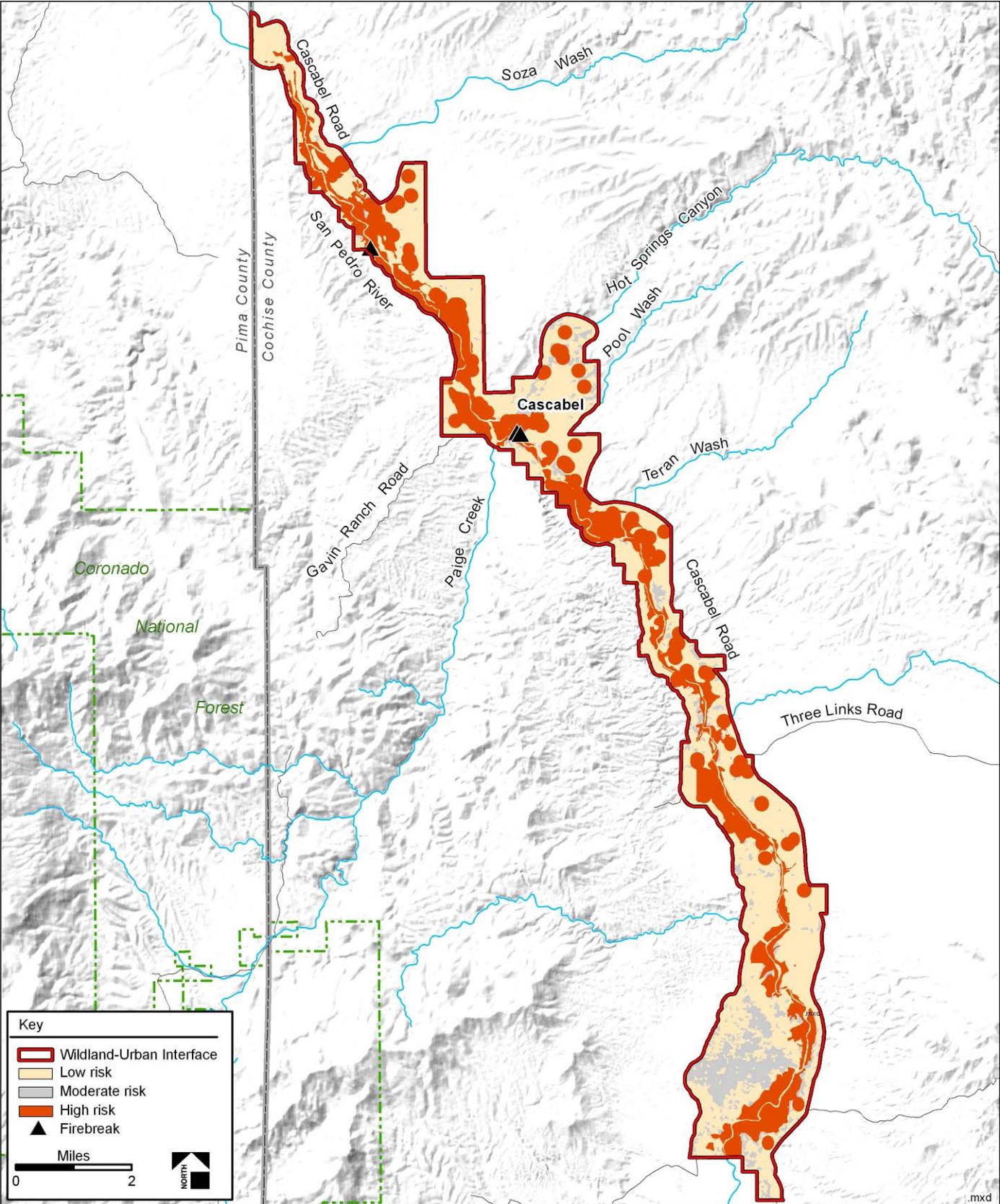


Figure 2.3. Cumulative risk analysis within the WUI

1 III. Community Mitigation Plan

2 Section III describes the area needing wildland fuel treatment and recommends methods of treatment and
 3 management strategies necessary to mitigate the potential spread of catastrophic wildland fire in the WUI.
 4 Also presented in this section is the community of Cascabel's recommendations for enhanced wildland fire
 5 protection capabilities, public education, information, and outreach.

6 A. Fuel Reduction Priorities

7 The proposed action is a fire mitigation project proposed by the BLM Gila District and CCFG for public
 8 lands or private lands, at risk from fire spread from BLM public lands. This project is focused on protection
 9 of life and property from wildland fire on BLM lands. Conversely, firebreaks will reduce the risk of fires
 10 spreading to BLM lands that originate on private property, by creating a defensible space for wildland
 11 firefighters. The area of these projects is considered intermixed wildland-urban interface. The projects will
 12 allow BLM fire managers to reduce the wildfire hazard on BLM land through the reduction of hazardous
 13 fuels. BLM crews or contractors are planning to remove live and dead fuel through thinning and pruning on
 14 BLM and private lands, so that firebreaks can be continuous across property boundaries, allowing for the
 15 most effective protection from wildfires. These firebreaks will complement fuel hazard reduction work that
 16 individual landowners have undertaken.

17 Hazardous fuels reduction on BLM administered land varies among six firebreaks averaging 50 feet wide
 18 and 435–800 feet long, or 0.5–1.0 acre each in size. Additional firebreaks or hazardous fuels reduction
 19 projects may be developed over time and will conform to the mitigation measures and stipulations listed
 20 below. Vegetation would be cut, removed, or chipped. This includes the cutting, mowing, and removal of
 21 hazardous, flammable fuels in accordance with the Permit Stipulations noted below. All operations would
 22 be conducted according to ASLD regulations and in a manner that minimizes risk for the ignition of wildfire,
 23 erosion of soil, destruction of residual live vegetation, or other environmentally degrading activity.

24 1. Mitigation Measures/Stipulations as included in the *Decision Memorandum on Action and for Application*
 25 *of Categorical Exclusion 1.12 and 1.7 G2 Cascabel Firebreaks and Road Maintenance* (BLM 2005):

- 26 a. Removal of hazardous, flammable fuels will only be permitted on BLM administered lands or private
 27 land identified in Figure 1.2.
- 28 b. The following hand tools could be used: weed eaters, hand saws, small chain saws, hand winches,
 29 and come-alongs are acceptable, or a mower, if it meets specifications listed below.
- 30 c. Dead vegetation less than eight inches in diameter may be removed, as per specific directions from
 31 authorized BLM officers. Removal of all dead vegetation in the firebreaks can be cut and removed.
- 32 d. Hazardous fuels reduction projects will stress tree spacing, by focusing on maintaining 15 foot
 33 spacing between leave trees.
- 34 e. Emphasis will be placed on maintaining the following species: Arizona Walnut, Arizona (Velvet)
 35 Ash, Net-leaf Hackberry, Buttonwillow, Cottonwood, Willows, and Mexican Elderberry. When
 36 possible, these species will not be removed: Graythorn, Condalia, Wolfberry, Sumac, Anisacanthus,
 37 Seepwillow, Willow-leafed Groundsel and Saltbush.

- 1 f. Emphasis will be placed at removing: Mesquite, Catclaw, Tamarisk, Snakeweed, Burroweed, Burro
2 Brush, Rabbitbrush and Three-leafed Groundsel.
- 3 g. Live vegetation with basal diameters (4" stump height) no greater than eight inches may be
4 removed, without authorization from the BLM TFO, Field Manager. Shrub and tree trunks will be
5 severed four inches or less from the ground. Ladder fuels (limbs or branches) will be removed by
6 pruning the lower third of trees and shrubs up to a maximum of eight (8) feet above the ground.
- 7 h. Live mesquites that are cut down will have their root balls removed within the project area.
- 8 i. Grasses and forbs may be cut with a mower, as long as stubble of at least four inches is remaining.
- 9 j. All severed material, except grasses and forbs, must be disposed of on the permittee's private
10 property by the permittee. Clearing of vegetation by mechanical vehicles or equipment is prohibited.
11 Wheelbarrows and small four wheelers (all terrain vehicles [ATV's] will only be used by federal
12 employees or federally contracted crews) with trailers, may be used if approved in advance by the
13 TFO, Field Manager, as long as the use is compatible with decisions in the Resource Management
14 Plan (e.g., sediment, erosion, root rot disease, aquatic conservation strategy, etc.). An effort to
15 minimize visual effects of ATV tracks will be made as crew pull out ATV equipment from the project
16 area. Fuels from these projects can not be sold as firewood.
- 17 k. Chain saws and ATV's will only be used by federal employees or contracted crews. All mechanized
18 equipment must meet ASLD standards, and applicant must have an ASLD operations permit for
19 approved spark arresters. The permittee must obtain an ASLD operations permit. Permittee must
20 comply with all ASLD fire restriction requirements. Fire suppression tools will be kept at hand during
21 all clearing operations, such as: ax, shovel, water, and bucket.
- 22 l. The uses of herbicides or pesticides are prohibited.
- 23 m. All survey monuments; witness corners, reference monuments, and bearing trees will be protected
24 against destruction, obliteration, modification, or damage during the operation.
- 25 n. If the permittee discovers, encounters, or becomes aware of any objects or sites of cultural,
26 historical, or paleontological value (grave markers, historical or prehistorical ruins, graves, old
27 dumps, etc.) on the project area, the land owner will stop all operations and notify the authorized
28 officer immediately. Prior to project work, archeologist will be notified, so that field review or
29 clearance to proceed is granted.
- 30 o. Permittee will undertake every reasonable measure to minimize erosion, soil disturbances, ground
31 disturbing activity, or the introduction of noxious weeds.
- 32 p. Permittee will undertake every reasonable measure to minimize disturbance to live vegetation not
33 removed for fuel hazard reduction.
- 34 q. Permittee will not block or close roads or trails used by the public. Existing telephone, television
35 cable, or electrical transmission structures and lines or existing fences, ditches, roads, trails, or
36 other improvements on the public lands will be protected.

- 1 r. Clearing or cutting of any material within 10 feet of any stream on BLM land is prohibited to prevent
2 the risk of accelerating erosion. Riparian areas are clearly defined on the attached maps, if
3 applicable.
- 4 s. Burning on BLM land is not authorized within the Categorical Exclusion for hazardous fuels
5 reduction.
- 6 t. Permittee may reduce fuels from October 15 through March 31 and as long as fire danger is low or
7 moderate.
- 8 u. This authorization is for reducing hazardous vegetation and dead organic material on BLM land that
9 compliments similar work completed on the permittee's property.

10 The wildland fire potential within the WUI has been identified, analyzed, and categorized according to
11 potential risk from wildfire. The analyses of community values and fuel hazards were compiled into a single
12 map depicting the WUI boundary and proposed fuel breaks described in Table 1.1, which are necessary for
13 private property protection (see Figure 2.3).

14 Private land treatments in the WUI typically occur on small land parcels near power lines, structures, and
15 other obstacles. In many cases, cut trees and slash cannot be piled and burned on small private land
16 parcels or it is not the preferred slash treatment by the owner of a small residential lot or of the CVFD.
17 Piling and burning cut trees and slash is not permitted on BLM lands under the Categorical Exclusion for
18 hazardous fuels reduction; therefore, vegetation will be cut, removed, or chipped and transported to a
19 disposal site.

20 HFRA was designed to expedite administrative procedures for conducting hazardous wildland fuel
21 reduction and restoration projects on federal lands. Regardless of priority treatments selected for federal
22 lands, an environmental assessment must be conducted for fuel reduction projects. Although HFRA
23 creates a streamlined and improved process for reviewing fuel reduction and restoration treatments, it still
24 requires appropriate environmental assessments be conducted and collaboration be maintained. To meet
25 conditions established by the Healthy Forest Initiative, the USDA and USDI adopted two new categorical
26 exclusions from the normal review steps of an environmental assessment or of an environmental impact
27 statement. These exclusions are for hazardous fuels reductions and for rehabilitation of resources and
28 infrastructure damaged by wildfire. For a hazardous fuels reduction project on public lands to be
29 categorically excluded from documentation of the results of an environmental assessment, the project must
30 meet specific requirements:

- 31 • It must have less than 4,500 acres to be treated, with mechanical slash treatment restricted to no
32 more than 1,000 acres.
- 33 • Its lands must be within current Condition Class 2 or 3.
- 34 • It must not be in a Wilderness or Wilderness Study Area.
- 35 • It must not include use of pesticides, herbicides, or new road or infrastructure construction.
- 36 • It may include sale of vegetative products if the primary purpose is to reduce hazardous fuels.

37 The recommended treatment within the CCWPP has been evaluated and found to be compliant with
38 Categorical Exclusion 10, Fuel Reduction. The purpose of Categorical Exclusion 10, Fuel Reduction, is "to

1 facilitate efficient planning and decision concerning and rehab of areas so as to reduce risks to
2 communities caused by severe fires, and to restore fire-adapted ecosystems.” (USDA FS 2000)

3 **B. Prevention and Loss Mitigation**

4 The CCWPP will be used as a resource to assist in the coordination of long-term interagency mitigation of
5 catastrophic wildfire events in the community. The community’s goals of the CCWPP area are to:

- 6 • improve fire prevention and suppression to protect private property,
- 7 • construct a series fuel breaks disrupting continuous hazardous wildland fuels adjacent to private
8 lands,
- 9 • promote community involvement and education,
- 10 • recommend measures to reduce structural ignitability in the CCWPP area,
- 11 • preserve the aesthetics and wildlife values within the San Pedro Riparian area,
- 12 • identify funding needs and opportunities,
- 13 • expedite project planning through partnerships with the BLM and other private and public entities in
14 managing wildland fire risk within the WUI.

15 The CCWPP should be periodically reviewed and updated as needed. Successful implementation of this
16 plan will require a collaborative process among multiple layers of government entities as well as a broad
17 range of community interests. The community of Cascabel has made the following action
18 recommendations:

19 1. Improved Protection Capability and Reduction in Structural Ignitability

20 The community seriously considers the risks of wildland fire igniting and spreading in the WUI. The CVFD,
21 the BLM Gila District, and the CCFG believe actions to reduce fire risks and promote effective responses to
22 wildland fires must be undertaken. The following are recommendations to enhance protection capabilities
23 in the community of Cascabel:

- 24 a. Additional comprehensive and frequent training for firefighters should be jointly conducted by the
25 Southeast Zone, Arizona Sate Land Department, the Cochise County Fire Association, the BLM
26 Gila District, and the CVFD. A common training activity should be conducted once a year before the
27 fire season for the purpose of emphasizing tactics of WUI suppression and interagency
28 coordination. Continuing WUI fire suppression training must be made available to volunteer
29 firefighters of the CVFD.
- 30 b. Obtain a chipper/shredder for use by the CVFD for wildland fuel mitigation projects.
- 31 c. Obtain a new type 6 engine for wildland fire response by the CVFD.
- 32 d. Construct a permanent structure for housing CVFD firefighting equipment and engines.
- 33 e. Retrofit wells for CVFD use, maintain helicopter landing sites and update mapping capabilities of
34 the CVFD.

1 f. Improve dispatch and alerting capabilities by enhancing the existing radio system; this should be
2 jointly investigated by the County, community, and federal and state agencies.

3 2. Promote Community Involvement and Improved Public Education, Information, and Outreach

4 The County and community will develop and implement public outreach programs to help create an
5 informed citizenry. The goal is to have residents support concepts of FireWise™ landscaping and naturally
6 functioning riparian systems through restoration management and rapid response to wildland fire. The
7 CCWPP is intended to be a long-term strategic instrument containing prescriptive recommendations to
8 address hazardous fuels. A grassroots collaborative structure of individual citizens, supported by local
9 governments as full partners, will provide the most effective long-term means to achieve these goals and to
10 maintain community momentum. The components of such a structure include the following
11 recommendations:

- 12 a. Expand the use of current public information tools for FireWise™ residential treatments as an
13 immediate action step. This will be accomplished through information mailers to homeowners,
14 presentations by the CVFD, continued use of the BLM Fire Prevention Public Information Trailer at
15 community events, and the development of specific promotional materials. Use the resources of the
16 University of Arizona, which has contracted with FS Region 3 to provide forest health analysis and
17 evaluation for all nonfederal lands in Arizona. The University of Arizona is tasked with FireWise™
18 program outreach throughout the state by the Arizona State Forester's office and assists in
19 community outreach programs. Community bulletins and other public service announcements
20 concerning wildfire threat and preparedness should be developed with assistance from the
21 University of Arizona.
- 22 b. Complete the wildland fire home assessment through the use of existing Redzone software and
23 submit wildland fire hazard mitigation strategies for each private property to landowners.
- 24 c. Establish and maintain roadside Fire Danger signs along Cascabel Road.

1 **IV. CWPP Priorities: Action Recommendations and Implementation**

2 The CCWPP community has developed action recommendations (Section III) necessary to meet the plan's
3 objectives. A series of recommendations that will reduce structural ignitability and improve fire prevention
4 and suppression has also been developed by the CCFG. A unified effort to implement this collaborative
5 plan requires timely decision making at all levels of government.

6 To meet CCWPP objectives, the CCFG developed the following action recommendations. At the end of the
7 fiscal year, projects implemented from these action recommendations will be monitored for effectiveness of
8 meeting CCWPP objectives. For the life of the CCWPP, recommendations for additional projects will be
9 made for each coming fiscal year based on project performance from the previous fiscal year.

10 **A. Administrative Oversight**

11 Generally, the most efficient way to manage the mitigation of wildland fire threat in the WUI is through
12 delegating and ensuring responsible authorities for implementing and monitoring the action
13 recommendations of the CCWPP. Establishing a unified effort to collaboratively implement the CCWPP
14 embraces adaptive management principles that enhance decision making and reduce inconsistency at all
15 levels of government.

16 Therefore, the CCFG recommends that the Cascabel Fire Chief will be responsible for administering the
17 community recommendations for outreach and structural ignitability (fuel hazard removal on private lands
18 within the WUI), while the BLM will be responsible for fuel mitigation projects on public lands within the
19 WUI. The CVFD will submit requests for HFRA grant funds through the Arizona State Forester Fire
20 Assistance Grant process to implement the action recommendations for private land treatments, mitigation
21 features for reduced structural ignitability, and fire fighting response and public outreach. The BLM will
22 pursue funding to construct and maintain six firebreaks within the WUI. Annual monitoring and reporting will
23 provide information on additional measures necessary to meet CCWPP goals.

24 **B. Priorities for Construction of Firebreaks**

25 Table 4.1 displays the priority for construction of firebreaks within the WUI as recommended by the CCFG.
26 This action recommendation will reduce wildfire potential to the community. All six firebreaks have "high"
27 valuations for reducing risk.

Table 4.1. Action recommendations for construction of firebreaks

Firebreak area	Location and description	Project partners	Estimated treatment costs
Firebreak #1	BLM Mungia historic home	BLM and Cochise County	0.50 acres to be treated for \$2,400.00
Firebreak #2	Crawford Ranch west of homestead structure	BLM and private landowner	0.6 acres to be treated for \$4,200.00
Firebreak #3	Cascabel Ranch west of homestead structure	BLM and private landowner	1.0 acres to be treated for \$2,300.00
Firebreak #4	Lot 37	BLM and private landowner	0.50 acres to be treated for \$900.00
Firebreak #5	Lot 38	BLM and private landowner	0.50 acres to be treated for \$900.00
Firebreak #6	Lot 40	BLM and private landowner	0.50 acres to be treated for \$900.00

1 C. Priorities for Protection Capability and Reducing Structural Ignitability

2 The CCWPP communities will evaluate, maintain, and, where necessary, upgrade community wildfire
 3 preparation and response facilities, capabilities, and equipment. Table 4.2 lists the priority action
 4 recommendations.

Table 4.2. Action recommendations for wildland fire protection and reduced ignitability

Partners	Project	Equipment/expenses	Timeline
BLM, CVFD, and NRCD	Obtain one industrial-sized Chipper	Portable manual-feed chipper: \$25,000.00	Acquire in FY 2005/06 Implement use in 2007
AZ State Forester, Cochise County, and CVFD	Obtain one fully functional type 6 engine	Type 6 fire response brush engine: \$60,000.00	Acquire in FY 2005/06 Implement use in 2007
AZ State Forester, Cochise County, and CVFD	Construct garage and housing facility for fire engines and response equipment	Four bay metal bay concrete floor maintenance building: \$110,000.00	Construct in FY 2007/08
CVFD and private landowners	Retro fit existing wells for CVFD use and maintain well sites	Stand pipe installation and site maintenance: \$4,000.00 annually	Begin in FY 2006/07 and maintain annually
AZ State Forester, Cochise County, BLM, and CVFD	Enhance dispatch and alerting capabilities	Enhancement of existing radio repeater for alert paging capabilities	Assess costs in FY 2006 Install in FY 06/07
Southeast Zone ASLD, Cochise County, Fire Association, BLM, and CVFD	Enhanced and coordinated fire fighting training	Annual refresher and enhancement training and equipment for individual firefighters and annual multiagency training exercise: \$10,000.00 annually	Training for 10 fire fighters annually beginning in FY 2006/07

5

1 **D. Priorities for Promoting Community Involvement through Education, Information, and Outreach**

2 The Cascabel Fire Department will implement public outreach and education programs for residents to
 3 heighten awareness and understanding of the threat that wildland fire poses to the community.

4 Table 4.3 displays the CCWPP priority recommendations to promote community involvement. Additional
 5 programs that could be used or developed to enhance community outreach and education may be
 6 developed and implemented in the future.

- 7 • The University of Arizona is contracted with Region 3 to provide a lead role in the FireWise™
 8 communities outreach program. The CVFD will coordinate a community FireWise™ bulletin with the
 9 University of Arizona.

Table 4.3. Action recommendations for enhanced public education, information, and outreach

Partners	Project	Equipment/expenses	Timeline
	Create and distribute community bulletin	Development, printing and distribution costs: \$5,000.00	Develop in 2006 Distribute continually
CVFD, Cochise County, RNRCD, University of AZ, CCC, and BLM Gila District	Complete home fire assessment using Redzone software and implement fire-safe recommendations	Assessment completion: \$2,000.00	Complete assessments in 2005/06 Implement recommendations in 2006/07
	Establish and maintain roadside Fire Danger warning signs along Cascabel Rd	Construction and placement: \$5,000.00	Construct and implement in FY 2006/07

10 **E. Requested Funding for Implementation of the CCWPP**

11 Table 4.4 summarizes the total costs to implement the CCWPP action recommendations.

Table 4.4. CCWPP proposed budget

CCWPP objectives	Estimated costs
Wildland fuel mitigation	\$116,000.00
Wildland fire protection and reduced ignitability	\$209,000.00
Public education, information, and outreach	\$12,000.00
Total requested implementation funds	\$337,000.00

1 **V. Monitoring Plan**

2 Monitoring is essential to ensure that CCWPP goals are met. The CVFD and the BLM Gila District will
3 monitor the effectiveness of ongoing and completed projects in meeting CCWPP objectives and will
4 recommend future projects necessary to meet CCWPP goals.

5 This section details the performance measures that will be used to assess the effectiveness of CCWPP
6 projects. Monitoring will include assessing and evaluating the success of both individual CCWPP project
7 implementation and a given project's effectiveness in furthering CCWPP objectives.

8 **A. Administrative Oversight and Monitoring**

9 The CVFD Chief will be responsible for implementing and monitoring the CCWPP action recommendations
10 for private land fuel modification treatments and community outreach objectives. The CVFD Chief should
11 also assist federal and state agencies and private landowners in identifying appropriate grant and other
12 funding mechanisms necessary to implement the Action Recommendations of the CCWPP. Grant
13 information from federal sources (<www.fs.fed.us/r3/asnf>, <www.fs.fed.us/r3/partnership>, <www.fireplan.gov>,
14 <www.nrcs.usda.gov>), state sources (<www.land.state.az.us>, <www.azstatefire.org>), and nongovernmental
15 sources (<www.iwfv.org>, <www.azwildlife.org>, <www.sonoran.org>) should be routinely searched for updated
16 grant application cycles. Reporting by the CVFD Chief will include necessary requirements of successful
17 grant awards. Additionally, the BLM Gila District staff will monitor fuel hazard reduction work at least once a
18 year, following fuels treatment. The CVFD and BLM Gila District staff will review annual monitoring results
19 and will make recommendations to update the Community Mitigation Plan and the Prevention and Loss
20 Mitigation Plan portions of the CCWPP. This information will ensure timely decision making for all levels of
21 government and provide input necessary for the development of additional project recommendations. The
22 CVFD will present any updated CCWPP to the signatories for their agreement and submission to Cochise
23 County, the Arizona State Forester, and the BLM for their concurrence and will submit the action
24 recommendations of the updated CCWPP for funding through all appropriate funding sources.

25 **B. Effectiveness Monitoring**

26 Table 5.1 outlines the performance measures the CVFD Chief will use to assess CCWPP performance
27 against stated goals. To assist in tracking fuel treatments being planned and completed through Arizona
28 fire assistance grant programs, the CVFD will cooperate with the Arizona State Forester's State Fire
29 Mapping program by providing detailed mapping information as requested.

Table 5.1. Performance measures to assess CCWPP progress

Goal	Performance measure
Mitigate wildland fuel and improve fire prevention and suppression	<p data-bbox="678 296 1484 321">Reduced wildland fire occurrence and acres burned (unplanned) in the WUI:</p> <ul style="list-style-type: none"> <li data-bbox="678 327 1089 352">• Number of firebreaks constructed <li data-bbox="678 359 1442 474">• Effective monitoring of fire prevention and suppression will include: <ul style="list-style-type: none"> <li data-bbox="769 390 1289 415">- acres burned, degree of severity of wildland fire <li data-bbox="769 422 1341 447">- percentage of wildland fire controlled on initial attack <li data-bbox="769 453 1333 478">- number of homes and structures lost to wildland fire <li data-bbox="678 485 1036 510">• Type 6 Fire engine obtained <li data-bbox="678 516 1105 541">• Fire equipment garage constructed <li data-bbox="678 548 1146 573">• Water source enhancements complete <li data-bbox="678 579 1300 604">• Radio repeater upgraded to include fire fighting pager <li data-bbox="678 611 1157 636">• Number of firefighters trained each year
Promote community involvement	<p data-bbox="678 695 1101 720">Community outreach programs initiated:</p> <ul style="list-style-type: none"> <li data-bbox="678 726 1211 751">• Community bulletin developed and circulated <li data-bbox="678 758 1170 783">• Individual "home assessment" completed <li data-bbox="678 789 1312 814">• Roadside Fire Warning signs constructed and installed

VI. Declaration of Agreement and Concurrence

The following partners in the development of this Community Wildfire Protection Plan have reviewed and do mutually agree or concur with its contents:

Agreement

Chairman, Cochise County Board of Supervisors

Date

Chief, Cascabel Fire Department

Date

The Nature Conservancy

Date

USDA Natural Resources Conservation District

Date

CONCURRENCE

Kirk Rowdabaugh, Arizona State Forester

Date

Bill Civish, Bureau of Land Management, Gila District

Date

VII. References

- Anderson, H. E. 1982. *Aids to Determining Fuel Models for Estimating Fire Behavior*. INT-122. National Wildlife Coordinating Group, Washington, D.C.
- Arizona State Forester. 2004. Arizona Communities at Risk Matrix. www.azstatefire.org. 2004
- Arizona State Forester. 2004. Arizona Wildland Urban Interface Assessment. www.azstatefire.org.
- BLM (see US Department of the Interior Bureau of Land Management)
- The Report of the: Governor's Arizona Forest Health Oversight Council*. Executive order 2003-16 2005.
- Cascabel BLM Ecosystem Management Plan*. 1996.
- Cascabel Community Plan*. 2002.
- Cochise County Comprehensive Plan*. 2003. Cochise County, Arizona.
- Cochise County Hazard Abatement Ordinance*.
- A Collaborative Approach for Reducing Wildland Fire Risks to the Communities and the Environment: 10 Year Comprehensive Strategy Implementation Plan. May 2001. <www.fireplan.gov/reports/11-23-en.pdf>
- Communities Committee, Society of American Foresters, National Association of Counties, National Association of State Foresters. 2004. *Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities*.
- Federal Register*, vol. 66, no. 3, p. 753. January 4, 2001.
- Fire Regime Condition Class*. 2004.<www.frcc.gov/docs/FrccDefinitionsFinal.pdf> accessed April 13, 2004.
- Fire Regime Condition Class Guidebook*. Fire Regime Condition Class Version 1.0.5. 2004.
- FS (see US Department of Agriculture Forest Service)
- Governor's Forest Health Guiding Principles*. 2004.
- National Association of State Foresters. 2003. *Field Guidance Identifying and prioritizing Communities at Risk*.
- National Fire Plan*. 2004. <www.fireplan.gov> accessed March 30, 2004.
- Redington Natural Resources Conservation District. 2003. *Lower San Pedro River Riparian Assessment*. Water Protection Fund Grant #0019. 2003.
- Redzone Software. 2005. www.redzonesoftware.com.
- RNRCD (see Redington Natural Resources Conservation District)
- Schmidt, K. M., J. P. Menakis, C. C. Hardy, W. J. Hann, and D. L. Bunnell. 2002. *Development of Coarse-Scale Spatial Data for Wildland Fire and Fuel Management*. RMRS-87. USDA Forest Service, Washington, D.C.

- Taylor, M. 1995. Cascabel: A bare bones accounting of some significant happenings along the San Pedro River. Unpublished Manuscript.
- USDA (see US Department of Agriculture)
- US Department of Agriculture Forest Service. 2000. USDA Forest Service Handbook Number 1909. Washington, D.C.
- US Department of Agriculture Forest Service. 2003. *Fire Regime and Condition Class (FC) Field Procedures – Standard & Scorecard Methods*. FIREMON v1.1 – 10/30/03-1. Washington, D.C.
- US Department of Agriculture Forest Service and US Department of Interior Bureau of Land Management. 2004. *The Healthy Forests Initiative and Healthy Forests Restoration Act: Interim Field Guide*. FS-799. Washington, D.C.
- US Department of the Interior Bureau of Land Management. 1991. *Gila District Resource Management Plan*.
- US Department of the Interior Bureau of Land Management. 2004. *Proposed Arizona Statewide Land Use Plan Amendment for Fire, Fuels and Air Quality Management Finding of No Significant Impact (FONSI) and Environmental Assessment*.
- US Department of the Interior Bureau of Land Management Tucson Field Office. 2005. *Decision Memorandum on Action and for Application of Categorical Exclusion 1.12 and 1.7 G2 Cascabel Firebreaks and Road Maintenance*.
- US Department of the Interior, US Department of Agriculture, et al. 2001 *Review and Update of the 1995 Federal Wildland Fire Management Policy*.
- USDI (see US Department of the Interior)