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# Wildland Fire Mitigation Plan Boise County, Idaho



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**ADOPTION BY THE BOISE COUNTY COMMISSIONERS**

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Recommended by Boise County Wildfire Group

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## **EXECUTIVE SUMMARY**

### **Boise County Wildland Fire Mitigation Plan**

The proposal of the Boise County Wildland Fire Mitigation Plan is to provide Boise County residents, public and private organizations with assistance and recommendations to reduce risk and hazards presented by wildfires within Boise County. Action items are directed to wildfire mitigation and, as appropriate, mitigation of natural hazards.

### **Wildfire Plan Development and Organization**

The Boise County Wildland Fire Mitigation Plan will tier to the Idaho State Implementation Strategy for the National Fire Plan. The Federal Emergency Management Agency (FEMA) Local Hazard Mitigation Plan Worksheet was used for plan formulation, and timelines. Development and review of the plan was accomplished by the Boise County Wildfire Group (BCWG).

Participation in the BCWG included representatives from:

- Boise County Commissioners
- Boise County GIS
- Boise County Planning and Zoning
- Boise County Disaster Services
- Boise County Assessors
- Boise County Fire Fighters Association
- Boise County Volunteer Fire Department Chiefs
- Boise County Sheriff's Office
- Idaho Bureau of Disaster Services
- Idaho Department of Lands (IDL)
- Idaho Fish and Game
- Home Owners' Associations
- County Residents and Land owners
- USDI, Bureau of Land Management, Lower Snake River District (BLM)
- USDA-Forest Service, Boise National Forest (U.S. Forest Service)

Organizational structure of the BCWG was managed under a modified Incident Command System (ICS). The use of ICS provided optimal information exchange, hazard identification and mitigation recommendation development. Public participation was accomplished by distribution of questionnaires that address wildfire concerns and suggestions, participation by homeowners associations at the team leader level, and information from community hazard identification and mitigation reports conducted within Boise County by Dynamac Corporation for the Bureau of Land Management (BLM) in 2001.

## **Boise County Wildland Fire Plan Objective**

The objective of the Boise County Wildfire Plan is to mitigate wildfire risk and hazard vulnerability within Boise County. This objective is reached by public and official participation identifying and documenting areas of high and medium risk to wildfire hazards. Actions identified to decrease wildfire risk and hazards within Boise County are focused on public safety, emergency services, county infrastructure, natural resources, fish, wildlife and property protection.

## **Boise County Wildland Fire Plan Priorities**

The priorities of the plan were developed by the BCWG and are standard priorities for most risk assessments, hazard reduction activities and wildfire incidents.

1. **Protection of Life:** Identify and provide mitigation recommendations for areas of high wildfire risks that are in or adjacent to homes and communities, and improve critical county infrastructure facilities.
2. **Protection of Property:** Identify and provide mitigation recommendations for properties of moderate and high wildfire risk. Increase public awareness through education, training and information sharing addressing wildfire risks and mitigation measures.
3. **Protection of Resources:** Identify resources that are at risk to wildfires and implement natural resource planning to protect these resources. To include protection and mitigation of at risk watersheds, vegetation, fish, wildlife and maintain soil stability.
4. **Improve Wildfire Emergency Services:** Improve county infrastructure and wildfire emergency service planning, training, communications, and equipment.
5. **Increase Public Awareness of Wildfire Prevention:** Increase public awareness of firewise practices and wildfire prevention through education training and information sharing.
6. **Improve Partnerships for Implementation:** Utilize partnerships currently established and develop additional participation with State, Federal, and private organizations.

## **Boise County Wildland Fire Plan Recommendations**

The recommendations developed for Boise County's Wildfire Plan are listed by the two branches of the BCWG and the division of private, state and federal land within the county.

- Recommendations, Part I, includes: Mitigation actions developed by the VFD/Structure/Private Lands Branch.
- Recommendations, Part II, includes: Mitigation actions developed by the Wildfire Branch.

Part I and II recommendations have received input and review by all members of the BCWG. The recommendations are formulated as “**Action Items**” for this plan.

## Action Item Organization

The tabulated action items presented in Table 1 include a short explanation as to how each action item would meet the stated objectives. The table also arranges the timeline, hazard type, implementation suggestions, and organizational coordination recommendations for each item.

The action items primarily address wildfire hazards; however, numerous action items will also mitigate other natural hazards, as stated in the respective column. The mitigation action items' timeline for implementation are recommended as "Short Term" and "Long Term". **Short term action items** are wildfire hazard mitigation endeavors that can be implemented by the County using programs, resources, authorities, and cooperative agreements that already exist. *Estimated timelines for short term items are one to four years.* **Long term action items** will require additional coordination, collaboration, resources and authorities for initiation and completion. *Estimated timelines for long term action items are five to ten or more years.*

**Organizational coordination** for the Boise County Wildland Fire Mitigation Plan includes private land owners, communities, and the public County, State, or Federal agencies that have regulatory, programmatic, stewardship or oversight responsibilities and that can provide expertise, assistance, coordination, and organization for action item implementation.

**Implementation ideas** provide sources and resources for the implementation of the action item. These will include various potential grant or funding sources and organizations that could provide expertise or assistance for action item implementation. The referenced page numbers in this column contain the need for action and implementation ideas.

**Objectives** addressed by the action items can be viewed in the respective columns of the executive summary table.

**Improving partnerships** for action item implementation is addressed in the Boise County Wildfire Section, and is referenced with suggestions in numerous action items in Part II, Wildfire Branch Action Items.

Additional information about the formulation, need, hazard, and need for risk reduction for each action item is available on the page and appendix number referenced.

**TABLE 1 - Wildfire Mitigation Action Items VFD/Structure/Private Land Owners**

Natural Hazard	Action Item	Coordinating Organization	Timeline	Ideas for Implementation	Plan Goals Addressed				
					Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
Wildfire/ All Hazard  Short Term/ ongoing	7.1 Update County Emergency Services Communication and Computer Support	Boise County Commissioners, Boise County Sheriff, Boise County Fire Fighters Association	2003	Page 32	✓			✓	✓
Wildfire/ All Hazard  Short Term	7.2 Improve Boise County Fire and Dispatch Communications	Boise County Commissioners, Boise County Dispatch, Boise County Sheriff	1 year	Page 32	✓			✓	✓



**TABLE 1 - Wildfire Mitigation Action Items VFD/Structure/Private Land Owners**

Natural Hazard	Action Item	Coordinating Organization	Timeline	Ideas for Implementation	Plan Goals Addressed				
					Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
Wildfire/ All Hazard  Short Term	7.3 Develop County Dispatch Mobilization Communication Plan for cooperative assistance and for support and management of extended or multiple and complex incidents.	Boise County Dispatch, Sheriff, VFDs, U.S. Forest Service, BLM, IDL	2 years	Page 33	✓	✓		✓	✓
Wildfire/ All Hazard  Short Term	7.4 Establish MOU for emergency use of Forest Service radio repeater system.	Boise County Sheriff, Fire Departments, County Commissioners, Boise National Forest	1 year	Page 33	✓		✓	✓	✓
Wildfire  Short and Long term	7.5 Prioritize County-wide Idaho 2003 Fire Department needs Survey, training, PPE, communications, equipment/apparatus.	Boise County Fire Fighters Association	2003/ annual	Page 34	✓			✓	✓
Wildfire  Short Term/ Ongoing	7.6 Promote Firewise Education and Activities, coordinate activities county wide.	Incorporated and rural communities in Boise County	Annual July or August	Page 34		✓	✓	✓	

**TABLE 1 - Wildfire Mitigation Action Items VFD/Structure/Private Land Owners/ Wildfire agencies**

Natural Hazard	Action Item	Coordinating Organization	Timeline	Ideas for Implementation	Plan Goals Addressed				
					Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
Wildfire Short Term/ Ongoing	7.7 Implement Hazardous Fuels Reduction program in identified developments and communities on County-Wide scale.	Boise County, IDL, Home owners associations.	1 year	Page 35 Appendix A, Maps	✓	✓	✓	✓	✓
Wildfire Long term/ Ongoing	7.8 Establish Boise County Wildfire/Natural Disaster Council.	Boise County Commissioners, Boise County Fire Fighters, HOAs, Disaster Services.	1 year	Page 36		✓	✓	✓	
Wildfire Short Term	7.9 Implement planned 2003 fuels treatments on State and Federal lands.	BLM, IDL, U.S. Forest Service	Fall 2003	Page 36	✓	✓	✓	✓	
Wildfire Short term/ Long Term	7.10 Mitigate fuels hazards in identified high risk WUI watersheds on State and Federal lands.	U.S. Forest Service, IDL, BLM	2 - 10 years	Page 37 Appendix A Maps	✓	✓	✓	✓	
Wildfire Long Term	7.11 Mitigate fuels hazards in identified high risk non-WUI watersheds.	U.S. Forest Service, BLM, IDL	10 years	Page 37 Appendix A maps	✓	✓	✓	✓	

**TABLE 1 - Wildfire Mitigation Action Items VFD/Structure/Private Land Owners**

Natural Hazard	Action Item	Coordinating Organization	Timeline	Ideas for Implementation	Plan Goals Addressed				
					Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services
Wildfire/ All hazard Short term/ ongoing	7.12 Subdivisions/communities develop an Emergency Action Plan (EAP).	Incorporated and rural developments/ VFD Fire Chiefs, County or Municipal Law enforcement, Elected Officials, HOAs, County Commissioners	1-2 years	Page 37 Example EAP in appendix	✓	✓		✓	✓
Wildfire/ All hazard Short term/ ongoing	7.13 Promote creation of defensible space around residences.	HOAs, VFDs, private land owners	1 year	Page 38	✓	✓		✓	✓
Long and Short term	7.14 Promote County Fire Protection Guidelines.	Developers in Boise County, Boise County Fire fighters Assoc. Boise County Planning and Zoning Commission	Ongoing	Page 38	✓	✓		✓	✓

## **Boise County Wildfire Plan Adoption**

As the administrators of the Boise County Wildland Fire Mitigation Plan, the Boise County Board of Commissioners are the authority and have the responsibility to adopt the plan.

## **Plan Maintenance**

The plan maintenance section includes recommendations for annual plan review, and monitoring. A biennial re-evaluation of priorities for action items and progress is also recommended. A total plan revision should be conducted every five years. This plan maintenance will be directed by the Boise County Commissioners, and coordinated with the Boise County Disaster Services Specialist and the Boise County Fire Fighters Association. In addition, participation will be needed by various positions represented on the Boise County Wildfire Group, coupled with public input.

## **Economic Analysis**

An economic analysis template/direction examining potential loss as a result of wildfires in Boise County is provided in Appendix D. Though total potential loss to catastrophic wildfires is variable by year, the cost/effectiveness of fuel treatments, county infrastructure improvements, and emergency wildfire services improvements will provide benefits to the primary objectives: protection of life, and protection of property.

## 1.0 INTRODUCTION

Boise County is of historic significance in the State of Idaho. The County seat at Idaho City was once the largest population center in Idaho.

During the past 40 years, residents and visitors of Boise County have experienced numerous large wildfires, landslides, earthquakes, severe winter storms, and hurricane force wind storms.

- Wildfires as large as 100,000 acres struck Boise County in 1989 and in 1994.
- Wildfires from 100 to 10,000 acres have historically occurred in Boise County during most summers or falls.

The severe winter storm of 1996-97 caused extensive damage to Boise County and to the State highways within the County. Highway and private property damage, extended loss of electricity, road closure, and zero-visibility flight conditions, led Boise County to request and receive a Presidential Disaster Declaration.

The population of Boise County, which was over 3,500 in the 1990 census, had risen to over 6,700 in the 2000 census.

### 1.1 Plan Methodology

The Boise County Wildland Fire Mitigation Plan was initiated by the Boise County Commissioners, Boise County, Idaho in November 2002. The Commissioners required that the plan:

- Coordinate with the Idaho State Strategic Plan for the implementation of the National Fire Plan, and
- Utilize the format developed for all hazard mitigation plans provided by the Federal Emergency Management Agency (FEMA).

The Boise County plan is based on information, research, and data from numerous county, state, federal and private sources. Boise County contracted Dynamac Corporation as the coordinator of the Boise County Wildfire Group and plan developer.

The Boise County Wildland Fire Mitigation Plan was under the direction of the Boise County Wildfire Group (BCWG). This group consisted of numerous Boise County residents, Boise County Fire Fighters Association members, Fire Chiefs of all the County Volunteer Fire Departments, Home Owners' Association Representatives, private land owners, Boise County Planning and Zoning, Boise County Disaster Coordinator, Boise County Highway Department, State of Idaho Disaster Services, Foresters and Fire Managers of the Idaho Department of Lands, (IDL) Idaho Fish and Game, District Rangers, Land Managers and Fire/Fuels Managers of the U.S. Forest Service (U.S. Forest Service) and Bureau of Land Management (BLM).

Organizational structure was managed under a modified Incident Command System (ICS) for optimal information exchange and hazard identification throughout the County. (Appendix, C ii, "Boise County Wild Fire Group Table of Organization").

The Boise County Wildfire Group conducted monthly meetings from January to June 2003. Group Supervisors met with Team Leaders weekly or bi-monthly. Development of the Boise County Wildfire Mitigation Plan was achieved through input to and from the County Wildfire Group. (Appendix, C “Objectives of Monthly Meetings”). The Boise County newspaper, the “The Idaho World,” published progress reports and informative articles after each BCWG meeting, including phone numbers and e-mail addresses for public input, or participation.

Research data and public input addressing wildfire hazards and mitigation recommendations conducted by Dynamac Corporation in Boise County communities during 2001 has also been used in the plan formulation. The information and data gathered by Dynamac Corporation included six public meetings in three different areas of Boise County. Numerous wildfire hazard questionnaires were completed by residents of the County, including those mailed to over 80 questionnaires to residents of the Lowman area. An example of the questionnaire and collated responses are located in Appendix C. Numerous stakeholder interviews were conducted. A list of Boise County stakeholders interviewed is also in Appendix C. Evaluation of wildfire hazards on Federal and State lands utilized WUI and non-WUI watersheds at risk in Boise County relating to their fuels type, condition and density, combined with slope, aspect and soil stability. This rating system identified high risk watersheds and was developed by the Idaho Department of Lands fire managers and hydrologists, U.S. Forest Service fire/fuels managers and Bureau of Land Management fuels specialists. Defensible space and structure evaluation were conducted by Dynamac Corporation Fire Specialists using NFPA 299 and NFPA 1144 hazard severity formats.

Priorities for the Boise County Wildland Fire Mitigation plan are:

1. Protection of Life: Identify and provide mitigation recommendations for areas of high wildfire risks that are in or adjacent to homes and communities, and improve critical county infrastructure facilities.
2. Protection of Property: Identify and provide mitigation recommendations for properties of moderate and high wildfire risk. Increase public awareness through education, training and information sharing addressing wildfire risks and mitigation measures.
3. Protection of Resources: Identify resources that are at risk to wildfires and implement natural resource planning to protect these resources. To include protection and mitigation of at risk watersheds, vegetation, fish, wildlife and maintain soil stability.
4. Improve Wildfire Emergency Services: Improve county infrastructure and wildfire emergency service planning, training, communications, and equipment.
5. Increase Public Awareness of Wildfire Prevention: Increase public awareness of firewise practices and wildfire prevention through education training and information sharing.
6. Improve Partnerships for Implementation: Utilize partnerships currently established and develop additional participation with State, Federal, and private organizations.

## **2.0 BOISE COUNTY PROFILE**

### **2.1 Geography**

Boise County, Idaho consists of approximately 1,908 square miles, with elevations ranging from 2,700 feet to over 10,800 feet above mean sea level (amsl). The mountainous terrain of Boise County includes the Boise River Mountains, the southern end of the Salmon River Mountains, and part of the Sawtooth Mountains. Federal or State managed lands constitute approximately 84% of the County and border much of the remaining 16% land base that is privately owned. Counties that border Boise County include Ada, Gem, Elmore and Valley Counties. (Appendix, A, Map 1 County Land Ownership.)

### **2.2 Current Population and Population Trends**

The population of Boise County is approximately 6,670 (2000 census), which represents a 91% population increase since 1990. The county seat is located in Idaho City, Idaho. Other populated areas include the communities of Horseshoe Bend, Crouch, Garden Valley, Placerville, Centerville, Lowman, Gardena, and Grandjean. Population trends reviewed and identified in the Boise County Comprehensive Plan project another doubling of the County population by 2010, for a total expectation of over 13,000 Boise County residents. This increase in resident numbers will result in increased demand on County highways, emergency services and other County infrastructure assets.

Residential private land development in Boise County continues to increase. Some of the numerous subdivisions in Boise County include: Wilderness Ranch, Robie Creek, Duquette Pines, Star Ranch, Clear Creek, Terrace Lakes, Castle Mountain, Pine Tree Ranch, Rivers' Point, Clear Creek, Scriver Bluff, Payette River Hot Springs, Valley Hi, and Frazier Creek.

### **2.3 Climate**

Climate in Boise County is extremely variable due to the altitude differences. Annual precipitation in Idaho City is 21.29 inches with Garden Valley registering 24 inches. Precipitation during July averages .45 inches in Idaho City and .49 inches in Garden Valley, with most summer precipitation coming in the form of thunder storms. Climate records show that for the county, 43% of moisture is received during winter months, 25% in spring, 9% in summer and 23% in the fall. Snowfall provides 30% of the total moisture. Seasonal snowfall averages: 71 inches in Garden Valley, exceeding 300 inches above 6,500 feet (mean sea level) amsl.

Summers are generally warm with temperatures averaging a high of 88 degrees Fahrenheit (°F) and a low of 44 degrees during July at Idaho City, and a high-low average of 91 and 47 °F in Garden Valley during this same period. The three official Weather Stations in Boise County were established on August 1, 1948. These are located in Lowman, at an elevation of 3,920 feet; Garden Valley, at an elevation of 3,100 feet; and Idaho City, at an elevation of 3,965 feet.

The following average readings were recorded from each site from 1971 to 2000:

**High Temperature: Average of all Stations – 59.6 °F**

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	TOT
Lowman	32.7	39.5	48.2	57.8	66.6	75.4	84.9	84.7	75.1	61.8	41.3	31	58.3
G.Valley	34.3	41.4	51.2	61	70.3	79.2	88.4	88.3	78.1	64.7	43.8	33.6	61.2
Id City	34.9	41	48	57.3	66.8	76.1	85.8	85.6	75.4	62.8	43.8	34.8	59.4

**Low Temperature: Average of all Stations – 29.6 °F**

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	TOT
Lowman	14.4	17.8	24.1	30	36.3	41.5	44.1	42.2	35.3	28.7	24	14.4	29.4
G.Valley	17.4	20.3	26.3	31.4	37.4	43.4	47	45.2	37.8	30.3	25	18.1	31.6
Id City	12.2	15	21.9	27.6	34.6	40.2	44.4	43	34.8	26.6	20.4	12.6	27.8

**Precipitation: Average of all Stations – 25.07 inches**

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	TOT
Lowman	3.57	3.11	2.5	2.18	2.03	1.5	.68	.67	1.25	1.57	3.35	3.67	26.08
G Valley	3.82	2.77	2.45	1.77	1.74	1.4	.64	.49	1.18	1.46	3.44	3.87	25.03
Id City	3.44	2.77	2.44	1.87	1.88	1.33	.67	.51	1.16	1.45	3.08	3.51	24.11

## 2.4 Vegetation

Boise County is dominantly a forested area, exhibiting timber species of ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), subalpine fir (*Abies lasiocarpa*), grand fir (*Abies grandis*), lodgepole pine (*Pinus contorta*) and Englemann spruce (*Picea engelmannii*). Understory within the forested areas consists of arrowleaf balsam root (*Balsamoriza sagittata*), snowbrush (*Ceanothus velutinus*), pinegrass (*Calamagrostis rubescens*), elksedge (*Carex geyeri*), creeping Oregon grape (*Berberis repens*), serviceberry (*Amelanchier alnifolia*), snowberry (*Symphoricarpos alba*), ninebark (*Physocarpus malvaceus*), wild strawberry (*Fragaria sp.*), dogbane (*Apocynum sp.*), and syringa (*Philadelphus lewisii*). Sagebrush/Grass Communities are common at lower elevations or on south and southwest aspects. The lower elevation transitions to Ponderosa Pine Forests in most of the county with some mixed fir at higher elevations on north, west and east aspects. At higher elevations Spruce/Fir and Lodgepole Pine Forests are common. Most privately owned lands are within the Sagebrush/Grass or the Ponderosa Pine vegetative areas of Boise County.

Fire has played an important role in the development of the vegetation in the County. Exclusion of fire, or mechanical treatment of the Ponderosa Pine and other forests of the County, has resulted in increased wildfire fuels accumulation, with overabundant seedlings and saplings on areas of private and public lands. This accumulation, combined with development in, or adjacent to the Ponderosa Pine forests of the County, have increased risk of economic loss by wildfire to residents of these areas. Historic large wildfires that occurred in Boise County from 1910 to 1955 have produced regenerated stands of Ponderosa Pine. These areas have been protected from wildfires and represent a fire regime condition that can yield additional large wildfires.



Invasive plant species in Boise County that were not historically present will out compete native vegetation after a wildfire. These invasive species (such as cheatgrass) cure early providing available fuel to carry wildfires at high rates of spread in steep terrain or windy conditions. The restoration of areas burned by wildfires is critical to native plant species being able to compete with invasive species. Post wildfire restoration (seeding) combined with watershed protection and soils stabilization is a priority for lands in Boise County. Vegetative restoration after large wildfires in Boise County is an added expense to land owners or managers.

The vegetation regimes in Boise County and their condition can serve as a significant factor in predicting wildfire hazard (Appendix A Map 5). Boise County Fire Regimes and Conditions displays these conditions and is correlated to the Wildland Urban Interface Watersheds Map 6.

The grass and shrub vegetation in the lower elevations of the South Fork and Main Payette River near Lowman, Garden Valley and Banks is critical winter range for deer and elk. Lower elevation portions of the Boise River along Arrowrock and Lucky Peak Reservoirs and Mores Creek are also critical big game winter range. Vegetation in Boise County is instrumental in providing stability to and preventing soil erosion.

## **2.5 Geology**

Boise County is within the Idaho Batholith, which is a granitic intrusion of the late Cretaceous period. Only small portions of the County are level, with the predominant mountainous landscape brought about by historic uplifts, faults, fault blocks, alluvial deposits and stream cutting action that has created steep narrow canyons. About 70% of Boise County has slopes steeper than 40% (Appendix A Map 2, Boise County Topography)

## **2.6 Soils**

There are a wide variety of soils found throughout Boise County. Surface soils are typically moderate with coarse sands weathered from granite. These sandy loams have little adhesion or cohesion. Sedimentation monitoring and mitigation can assist in stabilizing soils, especially on steep slopes. Post wildfire soil stabilization is often a high priority rehabilitation objective for large fires within the county.

## **2.7 Wildlife**

Boise County has over 80 different species of mammals occupying the County's wide variety of habitats. The Idaho Department of Fish and Game manages wildlife populations and the USDA - Forest Service, Bureau of Land Management, U.S. Army Corps of Engineers, and Idaho Department of Lands are responsible for wildlife habitats on lands they manage. Large mammals that are found in Boise County include: mule deer (*Odocoileus hemionus*), whitetail deer (*Odocoileus virginianus*), elk (*Cervus elaphus*), mountain goat (*Oreamnos americanus*), black bear (*Ursus americanus*), moose (*Alces alces*), mountain lion (*Puma concolor*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), wolverine (*Gulo gulo*), and gray wolf (*Canis lupus*). Other mammals within the county are snowshoe hare (*Lepus americanus*), cottontail rabbit (*Lepus sylvaticus*), red fox (*Vulpes vulpes*), badger (*Taxidea taxus*), beaver (*Castor canadensis*), pine marten (*Martes americana*), North American porcupine (*Erethizon dorsatum*), striped skunk (*Mephitis mephitis*), and several species of bats.

Upland birds present in Boise County include: blue grouse (*Dendragapus obscurus*), spruce grouse (*Falci pennis canadensis*), chukar partridge (*Alectoris chukar*), gray partridge (*Perdix perdix*), California quail (*Callipepla californica*), mountain quail (*Oreortyx pictus*), ring-necked pheasant (*Phasianus colchicus*), wild turkey (*Meleagris gallopavo*). Raptor species found are: golden eagle (*Aquila chrysaetos*), osprey (*Pandion haliaetus*), prairie falcon (*Falco mexicanus*), red-tailed hawk (*Buteo jamaicensis*), wintering bald eagles (*Haliaeetus leucocephalus*). Portions of Boise County is a major raptor migration route from parts of northern North America to wintering areas in the southern United States, Mexico, and parts of Central and South America.

Over 70 species of birds associated with water are found in meadows, rivers, streams, lakes, reservoirs, and small ponds within the County. Waterfowl present include: Canada goose (*Branta canadensis*), wood duck (*Aix sponsa*), mallard (*Anas platyrhynchos*), gadwall duck (*Anas strepera*), common merganser (*Mergus merganser*), common goldeneye duck (*Bucephala clangula*), bufflehead duck (*Bucephala albeola*). Shore birds include: rails (Rallidae), killdeer (*Charadrius vociferus*), curlews (*Numenius sp.*), plovers (Charadriidae), sandpipers (Scolopacidae), yellowlegs (*Tringa sp.*), and phalaropes (*Phalaropus sp.*) common loon (*Gavia immer*) grebes (Podicipedidae), herons (Ardeidae) shearwaters (Procellariidae) cormorants (*Phalacrocorax sp.*), and American white pelican (*Pelecanus erythrorhynchos*) can also be found in the County.

Over 140 song birds are common to Boise County with more being identified each year through the Idaho Bird Observatory located adjacent to the Boise/Ada County lines. Common song birds seen in Boise County include: woodpeckers (Picidae), American robin (*Turdus migratorius*), crows and jays (Corvidae), dippers (*Cinclus sp.*) blue birds (*Sialia sp.*) hummingbirds (Trochilidae) sparrows (Hirundinidae and Emberizidae) finches (Fringillidae), grosbeaks (Cardinalidae), common raven (*Corvus corax*), waxwings (*Bombycilla sp.*), wrens (Troglodytidae), nuthatches (*Sitta sp.*), and warblers (Parulidae). Boise County also serves as a major migration route to songbird wintering areas.

## **2.8 Recreation**

Boise County is the closest mountain recreation area to Boise, Idaho's Capital City, and to Ada and Canyon Counties. Ada and Canyon Counties contain the largest populations in Idaho, and much of this population base recreates in Boise County. As the population in counties adjacent to Boise County has increased, the recreational use of Boise County's Federal and State lands has also increased. Summer and winter recreational activities available in Boise County are also enjoyed by outdoor enthusiasts on a national, as well as international basis.

Water based recreational activities in Boise County include: boating, water skiing, fishing, rafting, kayaking, swimming, and hot springs visitation. Land based activities include, but are not limited to: camping, hiking, mountain biking, birding, hunting, snowmobiling, gold panning, snowshoeing, downhill and cross county skiing.

Bogus Basin Ski Area is located in Boise County and hosts numerous skiers during winter months; although, winter vehicle access to the ski area is through the City of Boise and portions of Ada and Boise Counties.

## **2.9 Bodies of Water: Rivers, Creeks, Watersheds**

The main waterways in Boise County are the Main, North Fork, Middle Fork and South Fork of the Payette River, the Middle Fork and North Fork of the Boise River, the Deadwood River which enters the South Fork Payette west of Lowman, Idaho, Lucky Peak and Arrowrock Reservoir. The North Fork and South Fork of the Payette River are well known as white-water rivers. These bodies of water attract many visitors for recreation. Primary water recreational activities in Boise County are fishing, boating, whitewater rafting, kayaking, swimming, canoeing, and water skiing at Lucky Peak and Arrowrock Reservoir.

In addition to recreation, the rivers provide a water source for engines and helicopters during wildfire suppression operations. Some rivers in Boise County are easily accessible, with either a direct or adjacent road access. Other rivers or portions of rivers are located in roadless or wilderness areas. River flow rates generally peak in June with low flow rates in August and September.

Other important creeks and/or drainages in Boise County include: Grimes Creek, which drains Boise Basin; Clear Creek, a tributary to the South Fork Payette River at Lowman; Mores Creek, adjacent to State Highway 21 through and North of Idaho City. Harris Creek, adjacent to the Harris Creek county road, is a tributary to the Main Payette River at Horseshoe Bend, and Alder Creek a tributary to the South Fork Payette River at Garden Valley and is also adjacent to Alder Creek county road. Numerous other creeks and watersheds support developed areas throughout Boise County.

Watersheds in Boise County directly influence downstream water use for irrigated farm lands in Gem County and electrical power generation at Black Canyon Dam, also in Gem County. Watershed protection, stabilization, and water quality is a high priority for the County's Private, State, and Federal land managers or owners.

## **2.10 Transportation and Commuting**

For an area of over 1,900 square miles, Boise County has a very limited network of improved highways. Timing, location, and expansion of transportation networks are important issues affecting future access.

Major routes used by commuters to Boise are: Highway 21 from Idaho City, Centerville, Placerville and the developments of Wilderness Ranch, Duquette Pines, Clear Creek, Dunnigan Creek, and Clear Creek. Highway 55 is used by commuters from Garden Valley, Horseshoe Bend, Gardena, and the numerous developments associated with them. Residents of these areas generally commute to their places of employment in Ada or Canyon counties.

The majority of vehicle transportation in Boise County occurs on one of three paved State Highways or the County highway.

- State Highway 21 (Ponderosa Pine Scenic Byway), from Boise to Idaho City, beyond Idaho City to Lowman and continuing northeast to the Boise/Custer County line on Banner Summit.

This highway, maintained by the Idaho Department of Transportation, is a 2-4 lane road from Boise to Stanley, Idaho.

- State Highway 55 (Payette River Scenic Byway) is one of the two main north/south transportation corridors for Idaho. Highway 55 comes through Ada County and enters Boise County south of Horseshoe Bend, continues north through Horseshoe Bend, along the Main Payette River, beyond Banks along the North Fork of the Payette River to the Boise/Valley County line approximately 12 miles north of Banks. This highway, maintained by the Idaho Department of Transportation, is a 2-4 lane road from Boise to McCall, Idaho.
- The Banks/Lowman Road (formerly State Highway 17) (Wildlife Canyon Scenic Byway) runs generally east/west along the South Fork of the Payette River through Garden Valley and an additional 27 miles to Lowman where it ends, meeting Highway 21.
- The Middle Fork Road is also paved from its starting point at mile post 8 of the Banks-Lowman Road for approximately 11 miles though the town of Crouch and north, adjacent to the Middle Fork of the Payette River to the border of the Boise National Forest.
- State Highway 52, is a 2-lane highway from Horseshoe Bend to Emmett, Idaho, which also sees some commuter use.

The Boise County Road and Bridge Department is responsible for maintenance, and construction of 286 miles of road. Road funds come largely from state and federal sources, augmented by timber revenues paid by the Boise National Forest. A decrease in timber revenue funds in the year 2000 resulted in a county highway maintenance budget that was 40% less than in 1997.

There is extensive use of the road system in Boise County by out-of-county traffic. The existence of Federal and State forests draws high numbers of recreational users participating in various spring, summer, fall and winter activities. The paved road transportation system in Boise County connects Ada and Canyon County residents to major recreational activities in Boise County and counties north or northeast of Boise County. Weekend traffic flow on Highway 55 and Highway 21 increases dramatically. Additional traffic control is needed on holidays at the Highway 55 junction with the Banks/Lowman Road. Boise County receives no additional funds for added maintenance or road deterioration associated with this use. There are no highway districts in Boise County except for the Middlefork of the Boise River Road, which is maintained by the Atlanta Highway District in neighboring Elmore County. The County Road and Bridge Department maintains all county roads, including the Banks/Lowman Road (formerly old Highway 17).

## **2.11 USDA-Forest Service Roads**

The USDA-Forest Service, Boise National Forest, has built and maintained numerous two-lane gravel roads throughout the county for recreation, logging and mining. Some of these have been closed and many are currently gated with access allowed for seasonal use or during a wildfire. The Boise National Forest has recommendations and requirements for these roads, and a travel plan with requirements for the trail system and off road or trail travel.

## **2.12 Aviation Facilities**

Boise County has no regularly scheduled commercial (passenger carrying) flights. Airstrips in Boise County are either privately or U.S. Forest Service-owned, or considered back country airstrips with grass or gravel surfaces.

A grass airstrip is located in Garden Valley, and maintained by the Idaho Department of Transportation (Division of Aeronautics). No services are available. The airstrip is snow covered during winter months. A grass airstrip is located at Warm Springs Campground northeast of Lowman on the north side of Highway 21 and the Payette River. No services are available. It is not maintained during winter months. The Idaho City airstrip is operated and maintained by the U.S. Forest Service. This is a gravel airstrip approximately 5,000 feet long, with daylight only landing, and no services. A private airstrip is located in the Horseshoe Bend area.

Garden Valley and Lowman Forest Service Stations both have heliports. The Lowman heliport is for limited use. The Garden Valley heliport is in use throughout the summer by U.S. Forest Service helicopters assigned to wildfire missions.

Most of these airstrips also exhibit increased traffic during weekends and holidays. They are also used to support various fixed and rotor-wing aircraft during large or multiple wildfire incidents.

## **2.13 Emergency Services**

Law enforcement is provided by the Boise County Sheriff throughout the county. Law enforcement is also provided within and by the municipalities of Idaho City and Horseshoe Bend. Ambulance services are located in Idaho City, Horseshoe Bend, Mores Creek, Garden Valley, Lowman, and Placerville. Volunteer and Rural Fire Departments are located at and provide service to Idaho City, Garden Valley, Horseshoe Bend, Horseshoe Bend Rural, Lowman, Placerville, Robie Creek, Wilderness Ranch, Centerville, Clear Creek, Valley of the Pines, and Grandjean. The U.S. Forest Service, IDL and BLM provide wildfire protection in much of Boise County. (Appendix A Map 3, Protection Districts).

### **3.0 HAZARD IDENTIFICATION, VULNERABILITY, RISK**

#### **3.1 Boise County Wildfire: Fuel, Weather, Topography, and Wildland/Urban Interface (WUI)**

##### **Historic Occurrence**

Boise County has been the site of numerous large wildfires since 1910. The fuels, weather and topography in Boise County combine to make wildfire an annual hazard with associated risks. Recent large fires that have impacted Boise County and its residents include intense fires of over 100,000 acres, including:

**1989:** a fire that caused the evacuation and burning of part of Lowman and most of the surrounding area;

**1994:** a large complex of fires east of Idaho City burned for 2 months consuming over 100,000 acres, impacting County fire and law enforcement resources, visitation, and air quality while destroying timber and degrading water quality.

In addition, as recent as the year 2000, a human caused fire in the South Fork Canyon in Garden Valley burned over 1000 acres in two days.

Large or multiple large wildfires have occurred in Boise County every decade since 1910. Landscape scars from past intense large wildfires are obvious in much of the County. The vegetative recovery from many of these wildfires is ongoing.

The large wildfires in Boise County generally burn in a west to east pattern, but a southwest to northwest pattern has also occurred with some regularity. Though lightning historically ignites the highest percentage of the wildfires in Boise County, human ignition has been the cause of three large fires in recent years. These human-caused wildfires burned over 1,000 acres each and were in or near the communities of Garden Valley, Gardena, and Banks.

Large wildfires in Boise County have impacted most residents, reduced visitation, degraded air quality, increased soil erosion, and resulted in watershed contamination. Mitigation of soil erosion potential and vegetation rehabilitation after large fires in Boise County has been required, adding expense to County, State and Federal agencies. (Appendix A Map 4, Boise County Wildfire History).

### 3.2 Wildfire Fuels and Risk in Boise County

Fuels that contribute to wildfires in Boise County range from sagebrush/grass to Ponderosa Pine, with spruce/fir or lodgepole pine evident at higher elevations or on north aspects. The sagebrush with grass and Ponderosa Pine regimes are the major wildfire fuels near communities, homes or developments.

Changes in the vegetation within Boise County continue to occur, with these changes being most obvious in the Ponderosa Pine dominated areas. Fire exclusion and lack of mechanical treatment (thinning) have resulted in dense stands of small Ponderosa Pine in many areas, with Douglas or Grand Fir on north aspects. These small, densely packed trees provide available fuel for wildfire spread and increased intensity. Drought, combined with these dense stands, has increased tree mortality from insects since the 1990s, which provides additional dead vegetation to fuel future wildfires.

The hazard and risk associated with wildfire fuels in Boise County is dependent upon vegetation type (sage/grass, forest timber types), conditions, natural fire regimes and assigned condition classes. Map 5 in the appendix illustrates the natural fire regimes of Boise County (the historic, pre-settlement, natural occurrence of wildfires and the severity of these historic fires). Boise County Fire History (Appendix A) Map 4 shows where large fires occurred from 1900-1950. Most Boise County developments and communities are located in or adjacent to Natural Fire Regime I, in which frequently occurring, low severity fire would historically occur every 0 to 35 years. These areas are now in Class II or III described below. Conditions of the fuels in Fire Regime I change according to the alteration of historic range and frequency. These changes are identified as Condition Classes (Appendix A Map 5). Condition Classes for Fire Regime I in Boise County are:

- **Condition Class I:** Fire regimes are within or near historical range. The risk of losing key ecosystem components is low. Fire frequencies have departed from historical frequencies by no more than one return interval (35 years for Fire Regime I in Boise County) Vegetation attributes are intact and functioning within a historical range (species composition and structure). *Where appropriate, these areas can be maintained within the historical fire regime by treatments such as prescribe fire or fire use.*
- **Condition Class II:** Fire regimes have been moderately altered from their historical range. The risk of losing key ecosystem components has increased to moderate. Fire frequencies have departed from historical frequencies by more than one return interval. The results are moderate changes to one or more of the following: wildfire size, wildfire intensity, severity, and frequency. Vegetation attributes have been moderately altered from their historical range (species composition and structure). *These areas may need moderate levels of restoration treatments, such as prescribed fire, fire use, hand or mechanical treatments, or a combination of these, to be restored to the historical fire regime.*

- **Condition Class III:** Fire regimes have been significantly altered from their historical range. The risk of losing key ecosystem components is high. Fire frequencies have departed from historical frequencies by multiple return intervals. This will result in dramatic changes to one or more of the following: Wildfire size, intensity, severity, frequency and landscape patterns. Vegetation attributes have been significantly altered from their historical range. *These areas may need high levels of restoration treatments, such as hand or mechanical treatments. These treatments may often be necessary before fire is used to restore the historical fire regime.*

Areas in Boise County that experienced large wildland fires between 1900 and 1950 are currently classified as Class II or Class III.

**The fire regime condition class of this vegetation, county vulnerability, and watershed protection provide the basis for identifying hazards and assigning risks.**

The Boise County Wildfire Group has addressed three fire condition classes in relation to vegetation conditions: **Low Risk, Moderate Risk, and High Risk.**

**Low Risk:** Areas or watersheds have vegetation in a condition that will pose little risk of a large fire, but will need to stay in the current condition through maintenance such as continued cultivation, or use of prescribed fire, mechanical or biological treatments. *An example of low risk would be an open stand of Ponderosa Pine (no thickets of saplings), or an area that was recently treated with prescribed fire. Condition Class I.*

**Moderate Risk:** Areas and watersheds with excessive accumulation of understory fuel build ups that, if ignited, will result in a more intense wildfire, would be difficult to suppress, could spread to adjacent lands and could have a negative impact on watersheds and soil quality. *An example of a moderate risk is Ponderosa Pine with numerous saplings and openings with thickets of small trees, or sagebrush with cheatgrass as the major species. Condition Class II.*

**High Risk:** Areas and watersheds with excessive dead or dying vegetation with large quantities of small densely packed trees among large trees. A wildfire ignited in the high risk areas will be very difficult to suppress, can yield a fire of high intensity that can damage all the vegetation and lead to soil erosion and water contamination. *An example of high risk is Ponderosa Pine with dense thickets of understory trees that can carry the fire up into the larger trees, or areas totally dominated by cheatgrass. The described tree thickets are very moisture-dependant and drought prone; whereas, cheatgrass areas are characteristically prone to intense, fast moving wildfires. Condition Class III.*

The dynamics of biomass growth, vegetation condition, health and results of vegetation treatment within Boise County must be evaluated periodically and the associated risk or hazards modified as conditions change.



### 3.3 Boise County Weather

The wildfire season in Boise County is June through September. The highest fire danger usually occurs in July and August. Historic large fires in Boise County have also occurred during these months. It is common to have numerous consecutive days of “Very High” to “Extreme” fire danger in Boise County from July through September. Thunderstorms ignite most of the wildfires during the high fire danger periods, and can often start 20 wildfires from one storm, with over 60 wildfires started in the County by one storm in 2002. (Appendix A Map 8 Wildfire Starts in Boise County).

### 3.4 Boise County Topography

The mountainous terrain of Boise County contributes to the wildfire hazard. The major river drainages contain extreme slopes and much of the county is situated on slopes in excess of 40 percent (Appendix A, Map 2). This terrain enhances increased rates of spread by wildfires through radiant heat, which preheats fuels uphill from a fire. The rugged topography in most of the county also makes access to wildfire ignitions difficult or time consuming for ground wildfire suppression forces. Most human caused large fires in Boise County are ignited in river or canyon bottoms during high fire danger and have historically spread rapidly to several hundred acres (Appendix A Map 4).

### 3.5 Boise County Wildland/Urban Interface (WUI)

Boise County contains numerous developments that are in two of the three defined WUI categories. These categories are:

**Classic Interface:** An area where well-defined urban and suburban development press up against open expanses of wildland areas.

**Mixed Interface:** Isolated homes, subdivisions, and small communities situated predominantly in wildland settings

**Occluded Interface:** Characterized by islands of wildland vegetation occurring inside largely urbanized areas.

Most Boise County subdivisions are in the **mixed interface** category, with some incorporated towns fitting the **classic Interface** definition.

WUI areas of moderate and high risk were previously identified in Hazard Assessments and Mitigation Reports that were conducted by Dynamac Corporation in 2001 for the Bureau of Land Management. In these surveys, areas with Ponderosa Pine fuel type, HIGH RISK was assigned to 70% of the areas, with MODERATE RISK being assigned the remaining 30%.

Evaluation of these areas used a combination of fuel and structural surveys. Structural surveys used NFPA 1144 Wildfire Hazard Survey Checklists. Fuel surveys combined fuel types, densities, depth, aspect and elevation for ratings. Additional ratings of Boise County subdivisions were conducted in 2003 using NFPA 1144 (an updated version of NFPA 299). The Wildfire Hazard Mitigation reports done in Boise County during 2001 can be viewed at [www.dynamac.com/wildlandfire](http://www.dynamac.com/wildlandfire).

WUI watersheds that are identified as high or moderate hazards will be identified as priorities (Appendix A, Map 6 Boise County WUI Watershed Map, and Fire Regime Condition Class).

### **County Vulnerability/ Hazard Location**

Boise County infrastructure, homes, transportation corridors, watersheds, air quality and other natural resources are an important part of the welfare, quality of life, visitation and beauty of the county. The county currently has over 5,300 homes and other property valued at more than \$400 million, 12 Volunteer Fire Departments, two major state highway transportation corridors, critical watersheds vulnerable to wildfire, recreation, irrigation, and endangered species. Timber resources on private, state and public land are a critical vulnerable resource. Federal and State agencies are the major land owners and provide wildfire protection for most of Boise County, combined with protection areas of the Volunteer Fire Departments. Wildfire response-protection districts in Boise County are provided on Map 3 of the Appendix.

County emergency services communications are critical to life and safety in Boise County. Improvement, updating and planning for these communications is necessary for future fulfillment of emergency service response to residents, visitors, and those traveling through the county. County emergency services communication towers at risk are identified on Map 3 as are Volunteer Fire Department response areas and names correlated with both incorporated and major unincorporated communities within Boise County.

In addition to developments, communities and homes, Boise County vulnerability to wildfire also includes county structures located in Idaho City, the county courthouse, and county administrative building, and community primary and secondary schools located in Garden Valley, Lowman, and Idaho City.

The two state highway transportation corridors, Highway 55 and Highway 21 are vulnerable to wildfire and have been closed to traffic because of wildfires. Boise County and U.S. Forest Service roads have been closed on numerous occasions because of wildfires.

The provided WUI watershed risk map (Appendix A Map 6) depicts vulnerable areas of the county on Federal, State, and private lands. The map should assist the County, private land owners, State and Federal agencies in identification of risk areas, and prioritization of mitigation actions.

Values at risk to wildfire in Boise County includes privately owned homes and property, County assets (buildings, communication sites, road/highway stabilization or repair), millions of board feet of public, state and private timber, community dependant watersheds, soil stability concerns, critical wildlife winter ranges, recreational activities and tourism, and the safety of residents, visitors, and fire fighters in the fuel types, conditions and rugged terrain of Boise County.

#### **4.0 HAZARD LOCATION AND DESCRIPTION**

Hazards from wildfire are found throughout Boise County. Fuel types, condition, and location in WUI areas and high risk watershed are identified in the Appendix Map 6, the areas these watersheds that are at highest hazard from wildfire are identified by Map 5 in the appendix-Fire Regime 1 Condition Class 3 . Additional hazard areas near developments are identified in hazard assessments and mitigation plans for Garden Valley, Idaho City, and Horseshoe Bend. These assessments can be found on the Dynamac Corporation web page ([www.dynamac.com/wildlandfire](http://www.dynamac.com/wildlandfire)). Ingress/egress issues, safe areas, signing, and homeowner defensible space are addressed in the recommendations and the attached example of a development/community Emergency Action Plan.

County emergency services communications, wildland /WUI fuel loading and condition in high risk watersheds, need to create defensible space, wildfire closure of transportation corridors, lack of water tenders, limited ingress/egress, county fuel types, and topography synopsis the hazard descriptions in Boise County.

Private land or homeowners, wildfire specialists, VFDs, and Federal and State Agencies, have participated in the identification of various hazard locations through questionnaires, structural risk assessments, historic occurrence, and hazard identification, as well as ingress/egress surveys.

## 5.0 HAZARD POTENTIAL AND TRENDS

The interface areas within Boise County are characterized by a diverse mixture of varying housing structures, development patterns, ornamental and natural vegetation and natural fuels.

In the event of a wildfire, vegetation, structures and other flammables can merge with unpredictable results. Reviewing past WUI fires shows that most property is destroyed or damaged for one or more of the following reasons:

- Combustible roofing material;
- Wood construction;
- Structures with no defensible space;
- Fire departments with poor or limited road access to structures;
- Developments located in heavy natural fuel types;
- Structure/properties located on steep slopes covered with flammable vegetation;
- Limited water supply;
- Winds over 30 miles per hour; and
- Concentrations of dying, diseased, or fire dependant wildland vegetation.

Boise County exhibits all of these characteristics either throughout the county, or in some instances, within a very concentrated area.

**Limited Road Access** is a major issue for all emergency service providers within the County. As population trends and demands for housing increase, some developments exhibit less than adequate turn-around space for emergency vehicles. Some County communities and developments are challenged by steep narrow roadways, while others are served by bridges that have weight restrictions imposed, thereby eliminating various types of fire suppression resources as an option in protecting lives and properties.

**Limited Water Supply** in remote developments and communities within the County continue to hamper suppression operations in the interface. Wildland areas continue to rely on the natural water sources within the county, but those areas that are co-mingled with private ownership face characteristically inadequate water systems and lack of hydrants.

The diversity, location and amount of fire fighting equipment, as well as the number of personnel within each of the VFDs and RFDs are substantially different between the major communities and developments. Wildfire protection may need to rely more on each landowner's initiative to take preventative measures.

## 6.0 HAZARD PRIORITIZATION, MITIGATION GOALS

**Hazard prioritization and mitigation goals are in accordance with the stated objectives and priorities, specifically: Protection of Life, Property and Values at Risk.** The prioritization and goals were developed by both the Wildfire and VFD/Structure branch. An extensive list of mitigation goals has been developed by the VFD/Structure branch. These priorities and goals are addressed separately from the Wildfire Branch. It is important to use two sets of hazard priorities and mitigation goals to reflect the inherently different requirements, needs and hazards examined and identified by the VFD/Structure and Wildfire Branches. Wildfire does not recognize ownership, property boundaries, or management policies. WUI watersheds at risk were provided by the Wildfire Branch and reviewed by the VFD/Structure Branch. Non-WUI watersheds at risk are identified in appendix A Map 5, Fire Regimes. These are watersheds in Boise County that are in condition Class II or III depicted by color on the map, most notably the Deadwood River Drainage. Watershed risk includes and addresses hazards associated with vegetation type, health, condition, deviation from historic wildfire, and possible soil erosion/watershed contamination.

The Boise County Wildfire Group has provided the following prioritization **recommendations** and mitigation goals for the County Administrators.

### 6.1 VFD/Structure Branch

Hazard Prioritization addressed by the VFD/Structure Branch was developed according to the Plan Priorities, with protection of life and property as the top priority. Mitigation actions to address these priorities are:

1. **Hazard: County Emergency Services Communication Center Computer Support.** The server that supports dispatching of county wide emergency services is operating at maximum capacity. The software currently used for dispatching in the county is not supported (outdated). This potential hazard for dispatching emergency services for wildfires or other emergencies directly affects the priorities stated in the Boise County Wildland Fire Mitigation Plan.  
*Mitigation Goal:* Upgrade County Dispatch Server and update software.
2. **Hazard: Limited radio frequencies and repeaters for Fire Departments in Boise County.** Communications is vital to fire fighter and public safety on all wildfires.  
*Mitigation Goal:* Provide additional VHF-FM frequency and repeater for Boise County dispatchers and Fire departments.
3. **Hazard: Mobilization/Communications Plan does not include State or Federal Cooperators.** An interagency County/State/Federal mobilization/communications plan is needed for multiple or extended incidents for public and fire fighter safety.  
*Mitigation Goal:* Develop County Fire-Emergency Mobilization Plan, and County/Interagency Communications Plan with Landowners and Cooperators in Boise County.

4. **Hazard: County VFD fire fighters are unable to meet standards or requirements pertaining to: Training, PPE, Communications, Equipment, Apparatus and Facilities.**  
*Mitigation Goal:* Provide Boise County VFDs with current and future required training, communications, PPE, Apparatus, Facility improvements and equipment as identified in the State of Idaho Survey of Volunteer Fire Departments.
5. **Hazard: Numerous county roads, communication sites, developments and communities require hazardous fuels reduction.**  
*Mitigation Goal:* Reduce identified hazardous fuels buildup in high-risk areas on a county-wide scale.
6. **Hazard: Fire Departments and Law Enforcement missions are conducted in areas with limited or no County radio communication.**  
*Mitigation Goal:* Secure “Emergency Use Only” agreement with cooperator/other agency communications repeater system.
7. **Hazard: Lack of defensible space in developments and at private homes.**  
*Mitigation Goal:* Create and implement defensible space standards by homeowners and developments.
8. **Hazard: Developments/subdivisions/homeowners are without emergency wildfire plans or other emergency plans in place.**  
*Mitigation Goal:* Develop subdivision/homeowners wildfire and other emergency operations plan(s).
9. **Hazard: Wildfire risk continues for future developments/subdivisions in Boise County Wildland/Urban Interface areas.**  
*Mitigation Goal:* Utilize Boise County Fire Protection Guidelines for Residential Development In the Wildland/Urban Interface for subdivisions as identified in County Planning and Zone Requirements.
10. **Hazard: Additional Firewise Education, information and activities needed.**  
*Mitigation Goal:* Gain community or development participation in firewise education, information distribution and activities.
11. **Hazard: No current Wildfire County Wildfire Council has been appointed.**  
*Mitigation Goal:* Solicit wildfire liaison or experts to participate in County “All Hazards Group and Local Emergency Planning Council”.

## 6.2 Recommended Wildfire Branch Hazard Priorities and Mitigation Goals

1. **Hazard: Many areas within the County require immediate fuels treatment in 2003.**  
*Mitigation Goal:* Apply required fuels treatment – hand, mechanical, prescribed fire or combination of treatments to meet fuels reduction, resources and forestry practices objectives.

2. **Hazard: Wildland Urban Interface Watershed areas are at risk from wildfire due to vegetative condition, vegetative fuel build up, soil stability, watershed contamination or in condition classes that are susceptible to larger, more intense and severe wildfires (these watersheds include or are adjacent to developments, subdivisions or communities).**

*Mitigation Goal:* Provide wildfire protection to these watersheds as displayed in Protection Districts ,Appendix A, Map 3. Plan and execute fuel reductions actions and forestry practices for WUI watershed risk reduction.

3. **Hazard: Areas within watersheds in Boise County are at risk from wildfire due to vegetative condition, vegetative fuels build up, soil stability, watershed contamination, or are in condition class conducive to larger, more intense and severe wildfires.**

*Mitigation Goal:* Provide wildfire protection to these watersheds as displayed in Protection Districts, Appendix A, Map 3. Plan fuels reduction actions and forestry practices for risk reduction to watersheds within Boise County.

## 7.0 WILDFIRE MITIGATION STRATEGY AND IMPLEMENTATION

The wildfire mitigation action items provide direction on specific activities that organizations and residents in Boise County can undertake to reduce risk and prevent loss from wildfire events. Each action item is followed by ideas for implementation which can be used by local entities to pursue strategies for implementation. For the following action items, the recommended lead organization(s) is in bold font.

### 7.1 Update County Emergency Services Communication and Computer Support.

#### *Ideas for implementation:*

- Upgrade to a new server and computer to support county emergency services. Coordinate procurement through FEMA/Homeland security grants and/or the Western States Fire Plan. The current computer-supported county dispatch needs to be able to use updated software that will be supported. The server also needs to be updated.

Coordinating Organizations:

**Boise County Commissioners**

Boise County Sheriff

Boise County Fire Fighters Association  
2003

Timeline:

Plan Goals Addressed:

Protect Life and Property, Partnerships  
and Implementation, Emergency Services  
Cost Estimate: \$10-20,000

### 7.2 Improve Boise County Fire and Dispatch Communications.

#### *Ideas for implementation:*

- Provide VHF-FM frequency, with a repeater for dispatch of VFDs. Coordinate repeater procurement with Western States Fire Plan grants or FEMA/Homeland Security program. Will mitigate radio communications congestion that occurs during multiple fire or law enforcement incidents and allow dispatchers to support various incident types at the same time.

Coordinating Organizations:

**Boise County Commissioners**

Boise County Sheriff

**Boise County Dispatch**

Boise County Fire Fighter Asso.

Timeline:

1 year

Plan Goals Addressed:

Protect Life and Property, Partnerships  
and Implementation, Emergency Services  
Cost Estimate: Below \$5,000



**7.3 Develop County Dispatch Mobilization Communication Plan for cooperative assistance and for support and management of extended or multiple and complex incidents.**

***Ideas for implementation:***

- Use examples of other emergency operations and mobilization plans as models. Develop plan that will adapt and meet the current and future needs of Boise County to meet updated requirements for County Wide Emergency Operations and provide for planned mobilization of resources within Boise County and to or from outside Boise County with an interagency/Boise County communication plan identifying mutual aid frequencies, MOUs, and dispatch/logistic centers.

Coordinating Organizations:	<b>BLM, U.S. Forest Service, IDL interagency dispatch, Boise County Sheriff Boise County Dispatch Boise County Fire Chiefs Emergency Medical Services</b>
Timeline:	2 years
Plan Goals Addressed:	Protect Life and Property, Public Awareness, Partnerships and Implementation, Emergency Services Cost Estimate: No additional cost

**7.4 Establish Agreement for Emergency Use of USDA-Forest Service Radio Repeater System.**

***Ideas for implementation:***

- Review feasibility and develop Memorandum of Understanding (MOU) with Boise National Forest and Boise County. Utilization of the Boise National Forest as an emergency back up system will provide County emergency services communications should the County dispatch system go down or during emergencies in areas that County radios can only hit U.S. Forest Service repeaters.

Coordinating Organizations:	<b>Boise County Commissioners Boise County Sheriff Boise County Fire Departments Boise National Forest</b>
Timeline:	1 year
Plan Goals Addressed:	Protect Life and Property, Natural Systems, Partnerships and Implementation, Emergency Services Cost Estimate: No additional cost

**7.5 Prioritize County-wide Idaho 2003 Fire Department Survey regarding adequacy of training, PPE, communications, and equipment (refer to appendix H for Survey information).**

***Ideas for implementation:***

- Boise County Firefighters Association to review and prioritize needs, assess abilities. Coordinate assessments with Rural Fire Protection assistance programs, federal and State.
- Priorities: Training, communications, PPE, water tenders, engines, Facilities, portable pumps., SCBA, portable tanks.

Coordinating Organizations:	<b>Boise County Fire Fighters Association</b>
Timeline:	2003/annually thereafter
Plan Goals Addressed:	Protect Life and Property, Partnerships and Implementation, Emergency Services
	Cost estimates: Facilities- Fire Stations- 4000.Ft <sup>2</sup> \$125 per sq. ft= \$50,000 ea. for 5 Fire Stations
	PPE: Wildfire, Bunker, and SCBA- 10-20,000
	Engines 5 @ \$250,000each
	Brush Trucks 3 @ \$150,000 each
	Communication needs: Radios, base Stations: \$30,000
	Water Tender- 2000-3000 gallon \$95,000

**7.6 Promote Firewise Education and Activities, coordinate activities county wide.**

***Ideas for implementation:***

- Enlist community/development participation in firewise workshops and programs. Continue to host fire agency events (i.e., GVFD Fireman’s Fund Day, and Lowman Fire Prevention) to encourage education and cooperation. Schedule educational events at schools and communities prior to and during fire season. Use County-wide coordinated cooperative effort with homeowners, County Fire Fighters, Federal and State agencies for adoption and participation in firewise community activities.

Coordinating Organizations:	<b>Home Owners Associations</b> <b>USDA-Forest Service</b> <b>Idaho Department of Lands, Bureau of Land Management</b> <b>Boise County Fire Fighters Association</b>
Timeline:	Annually by July or August
Plan Goals Addressed:	Public Awareness, Partnerships and Implementation, Natural System
	Cost Estimate: No hard dollar costs

**7.7. Implement Hazardous Fuels Reduction Programs in Identified Developments and Communities on County-Wide Scale.**

***Ideas for implementation:***

- Communities and subdivisions that have hazardous fuels and are at high risk will be reviewed, totaled and grant submissions submitted on a county-wide basis. Prioritization, administration, direction and implementation will be accomplished by the County.
- Communities with high risk are identified as high risk WUI watersheds, fire condition class, and on the Boise County Developments map. Fuels treatments would include, but not limited to: creating defensible space, hazard tree removal, thinning, brush removal, tree limb removal, insect damaged tree removal.
- Identify County or Community areas for slash/brush disposal, chipping and burning.
- Communities, subdivisions and homeowner associations provide fuel treatment proposals for areas within developments, coordinate development of these proposals with adjacent landowners and land management agencies for possible cost savings. Access for equipment (chippers etc.) may need to be assessed and coordinated with multiple land owners.
- Utilize cost estimates from similar projects conducted in Boise County and other Counties or lands in Idaho.

Coordinating Organizations:

**Boise County**  
**Local Communities**  
**Homeowners' Associations**

Idaho Department of Lands

Timeline:

2 years

Plan Goals Addressed:

Life, Property, Public Awareness,  
Partnerships and Implementation, Natural  
Systems

Cost Estimate: County Wide-\$525-\$780,000

Example from fuels project in Boise  
County- equipment, personnel and disposal  
or chipping- \$2000 per day= 325 project  
days with \$650,000, combined or  
consecutive project will realize a cost  
savings. Administration cost incurred by  
County should be included in cost estimates.

**7.8 Establish Boise County Wildfire/Natural Disaster Council.**

***Ideas for implementation:***

- Convene this new council with the purpose of coordinating plan implementation, updates, accomplishments, public participation, information sharing and to promote prevention activities.

Coordinating Organizations:	<b>Boise County Disaster Services</b> Boise County Commissioners Idaho Department of Lands USDA-Forest Service BLM Homeowners' Associations Boise County Fire Fighters Association
Timeline:	1 year
Plan Goals Addressed:	Public Awareness, Partnerships and Implementation, Natural Systems Cost Estimate: No hard dollar costs

**7.9 Implement Planned 2003 Fuels Treatments on State and Federal Lands.**

***Implementation will be conducted by BLM, U.S. Forest Service, IDL.***

- Projects are identified and described in “Prescribed Fire in Southwest Idaho, Spring and Fall, 2003.” This document is available from the Bureau of Land Management, Lower Snake river District, Idaho Department of Lands, Southwest Idaho Forest Protection District, and the USDA-Forest Service, Boise National Forest.

Coordinating Agencies:	<b>IDL, BLM, U.S. Forest Service</b>
Timeline:	2003, weather conditions permitting, or 2004.
Plan Goals Addressed:	Natural Systems, Partnerships and Implementation, Public Awareness Cost Estimate: Cost incurred by State or Federal Agencies

**7.10. Mitigate Hazards and Provide Protection to Identified High Risk WUI Watersheds.**

***Ideas for Implementation:***

- State and Federal Land Managers provide priority planning efforts for fuels/wildfire hazard reduction treatments to identified high risk WUI watersheds. Treatment examples could be thinning and removal, prescribed fire, mechanical treatments, biological treatments or a combination of these treatments to mitigate hazards and decrease risks from wildfires and retaining a stable watershed.
- Priorities for these high risk WUI watersheds range from highest population in or near watersheds, to lower populations in or near the watershed. Municipal watersheds should receive highest priority. These projects will be implemented at State and Federal levels. Hazard mitigation projects must meet required environmental regulation requirements.

Coordinating Organizations: **BLM, U.S. Forest Service, IDL.**  
Timeline: Highest priority watersheds – 5 years  
Others – 10 years.  
Plan Goals Addressed: Property and Life, Natural Systems, Public Awareness, Partnerships.  
Cost Estimate: Costs incurred by Federal and State Agencies.

**7.11 Mitigate Hazards and Provide Protection to Identified High Risk Non-WUI Watersheds.**

This mitigation measure will receive consideration during plan maintenance, but the timeline for this plan is to start to address the extended timeline required to prioritize high risk, non WUI watersheds.

Timeline: Long Term, review during plan maintenance.

**7.12 Establish Community/Subdivision Emergency Operations Plans.**

***Ideas for Implementation:***

- Subdivisions, Home Owners Associations, or communities develop a Community or Subdivision “Emergency Operations Plan” for various types of emergencies, including wildfire. Emergency Operations Plan should be coordinated with Boise County Disaster Services and the Volunteer Fire Department that provides protection and County or City Law Enforcement. Local EOP should tier to the Boise County Emergency Operations Plan and be annexed by the County plan.

Coordinating Organizations: **HOAs, VFDs,  
Boise County Disaster Services  
County or City Law Enforcement**  
Timeline: 1-2 years  
Plan Goals Addressed: Life and Property, Public Awareness,  
Partnerships and Organization  
Cost Estimate: Printing plan

### 7.13 Promote Defensible Space Around Residences.

Homeowners create defensible space as described in “Fire Protection Guidelines For Residential Development in the Urban-Wildland Interface – For Boise County.” Coordinate defensible space with Firewise Community recommendation, with a goal of all homes having defensible space. This recommendation is directly related to successful accomplishment of creating defensible space in communities, subdivisions, or private homes.

Coordinating Organizations:	<b>HOAs, VFDs, private land owners</b>
Timeline:	1 year
Plan Goals Addressed:	Life and Property, Public Awareness, Partnerships
	Cost Estimate: Volunteers, or matching dollars with developments.

### 7.14 Promote County Fire Protection Guidelines.

Provide future developments with Boise County Fire Protection Guidelines for Residential Development for progression to firewise communities in Boise County. Continue with development road requirements. Developments that meet the Boise County Guidelines – Fire protection, road width, ingress/egress, available water, home construction, fire resistant vegetation and defensible space should have higher value, and lower respective insurance rates.

Coordinating Organizations:	<b>Boise County Planning and Zoning Commission</b>
Timeline:	Boise County Firefighters Assoc. Developers Short and Long Term, update and review during plan maintenance
Plan Goals Addressed:	Life and Property, Partnerships and Organization, Public Awareness
	Cost Estimate: Dependant upon development size.

## **8.0 MITIGATION PROGRAMS AND RESOURCES**

Existing mitigation activities include current mitigation programs and activities that are being implemented by county, state and federal agencies within Boise County. Prioritization of Hazards and Mitigation Goals are in accordance with the stated objectives, specifically protection of life, property and values at risk. Prioritized recommendations are provided to the Boise County Commissioners.

The mitigation proposals are also included in the Wildfire Mitigation Action Items Matrix (Table ES1) and explained in Section 7, Mitigation Strategy and Implementation.

### **8.1 Local Programs**

Boise County residents are served by a variety of local fire districts and departments as well as by IDL, U.S. Forest Service and BLM. The Boise County Fire Fighters Association is an organization that promotes partnerships and information sharing among the various fire service providers in the County. This association meets on a regular basis to ensure coordination of resources. A county-wide needs assessment of the various Volunteer and Rural Departments has been coordinated by the State of Idaho. Priorities for Boise County departments are: Training, Communications, Personnel Protective Equipment, and Apparatus (water tenders distributed at different areas of the county, engines).

Fire personnel throughout the county have taken the lead in providing many useful and educational services to Boise County residents, such as:

- Presenting fire safety education to school, church and civic groups;
- Coordinating educational programs with other agencies;
- Participating in or sponsoring local community events that focus on fire information and prevention.

### **8.2 County Codes**

- Boise County Planning and Zoning Ordinance No. 2001-2 established road standards, conditions of design and construction. This ordinance contains the table of design requirements for construction of various road service classes in Boise County.
- Boise County Planning and Zoning “Fire Protection Guidelines For Residential Development In The Urban-Wildland Interface.”

### **8.3 State (IDL) Programs**

- Provides education to property owners about fire hazards in forestland-urban interface areas.
- Manages the Hazardous Fuels Reduction Program to assist landowners or counties with grant funds for reduction of hazardous fuels.
- Manages the Forest Stewardship program, which assists landowners in forest and fire planning.
- Provides suppression training and resources as requested.
- Declares fire closures when wildfire danger ratings and conditions require.

## **8.4 Federal Programs**

The role of the federal land managing agencies in Boise County is focused on reducing fuel hazards on the lands they administer. They also provide prevention and education programs, provide technical and financial assistance and develop agreements and partnerships with other agencies and private stakeholders in an effort to provide for safer communities within the wildlands. Some of the programs provide grants to rural fire districts within the county, which has enhanced the current operations, and will continue to do so within the foreseeable future.

Fire Suppression Assistance Grants may be provided to a state with an approved hazard mitigation plan. These grants are provided to protect life and improved property. The grant may include funds for training, equipment, supplies, and personnel.

## **8.5 National Wildland/Urban Interface Fire Protection Program**

Federal agencies can use the National Wildland/Urban Interface Fire Protection Program to focus on wildland/urban interface fire protection issues and actions. The Western Governors' Association (WGA) uses this program to involve state agencies, as well as local and private stakeholders.

## **8.6 Prescribed Burning/Mechanical/Biological Treatment**

Within Boise County, the decline in the timber industry, coupled with historical fire exclusion has resulted in a backlog of fuel accumulation. As a result, new ignitions can move more quickly and intensely. Prescribed burning and/or mechanical treatment are the most efficient methods to mitigate these fuels. Biological treatment (ungulate grazing) of some fuels has also been utilized with success in Boise County and other areas of Idaho.

## **8.7 Firewise**

Firewise is a program developed within the National Wildland/Urban Interface Fire Protection Program. It is administered through the National Wildfire Coordinating Group (NWCG), with the intention of educating planners and decision makers at the local level. Firewise offers online wildfire protection information and checklists, as well as listings of other publications, videos, and conferences. Future developments in Boise County that would be planned and coordinated as a "firewise" community would likely be well received by potential home buyers.



## **9.0 WILDFIRE MITIGATION PLAN MAINTENANCE**

Proposed plan maintenance will be biennial, with a total review proposed every four years.

Biennial review of the plan and mitigation recommendations will be necessary as various projects or tasks are accomplished and areas at-risk decline. Biennial review will also be needed as County infrastructure needs change or are met. (Boise County Fire Fighters, Boise County Disaster Services, Boise County Sheriff).

A biennial review with the Wildfire Branch will allow State and Federal Land managers to initiate required planning procedures for Identified mitigation projects and to update or modify mitigation recommendations. IDL, U.S. Forest Service, BLM, Idaho Dept. of Fish and Game, Boise County Commissioners).

A total review every four years (2007) is recommended as Boise County infrastructure needs change, specifically: population increases, fuels reduction projects are completed, emergency services communication needs are met or increase, and priority watersheds' risk from wildfire is mitigated.

## 10.0 CONTINUED PUBLIC INVOLVEMENT

The continued involvement of the public for the Boise County Wildland Fire Mitigation plan is needed to accomplish many of the mitigation recommendations.

Publication of mitigation actions as they are addressed will occur in the Idaho World, which is viewed by most residents and visitors. This publication was the first newspaper published in Idaho.

Establishment of Emergency Action Plans for developments and communities will require continued involvement for the next two years. Incorporated areas of Boise County will require plan review prior to implementation. Though provided invitations and attendance requests, official representation of incorporated towns was very limited at meetings or for input to the plan. Representative fire chiefs did provide feed back and information to the incorporated areas.

Copies of the plan will be available at libraries within Boise County for public access and review. Biennial review, and mitigation priority assessment by Boise County Fire Fighters, Disaster Services and the County Sheriff will provide information to and create involvement of numerous residents of Boise County. The biennial review by federal and state agencies will provide updates and progression of plan priorities to the general public within Boise County, as federal and state land actions provide comment periods and are published in the Idaho World.

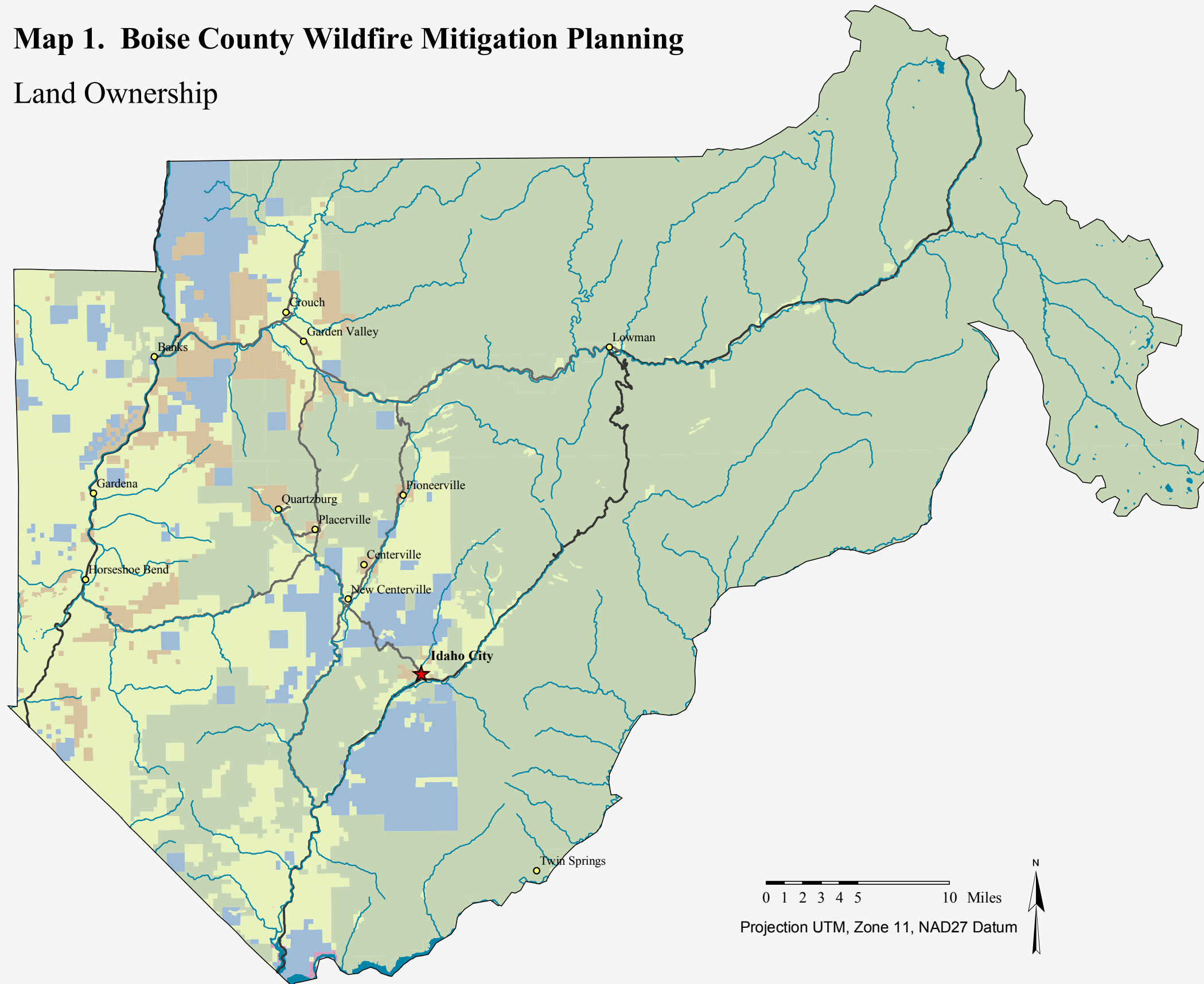
## **APPENDICES**

**APPENDIX A**

**MAPS**

# Map 1. Boise County Wildfire Mitigation Planning

## Land Ownership



## Legend

### Ownership

- BLM
- Forest Service
- Army Corps of Engineers
- Private
- State of Idaho

### Other Mapped Features

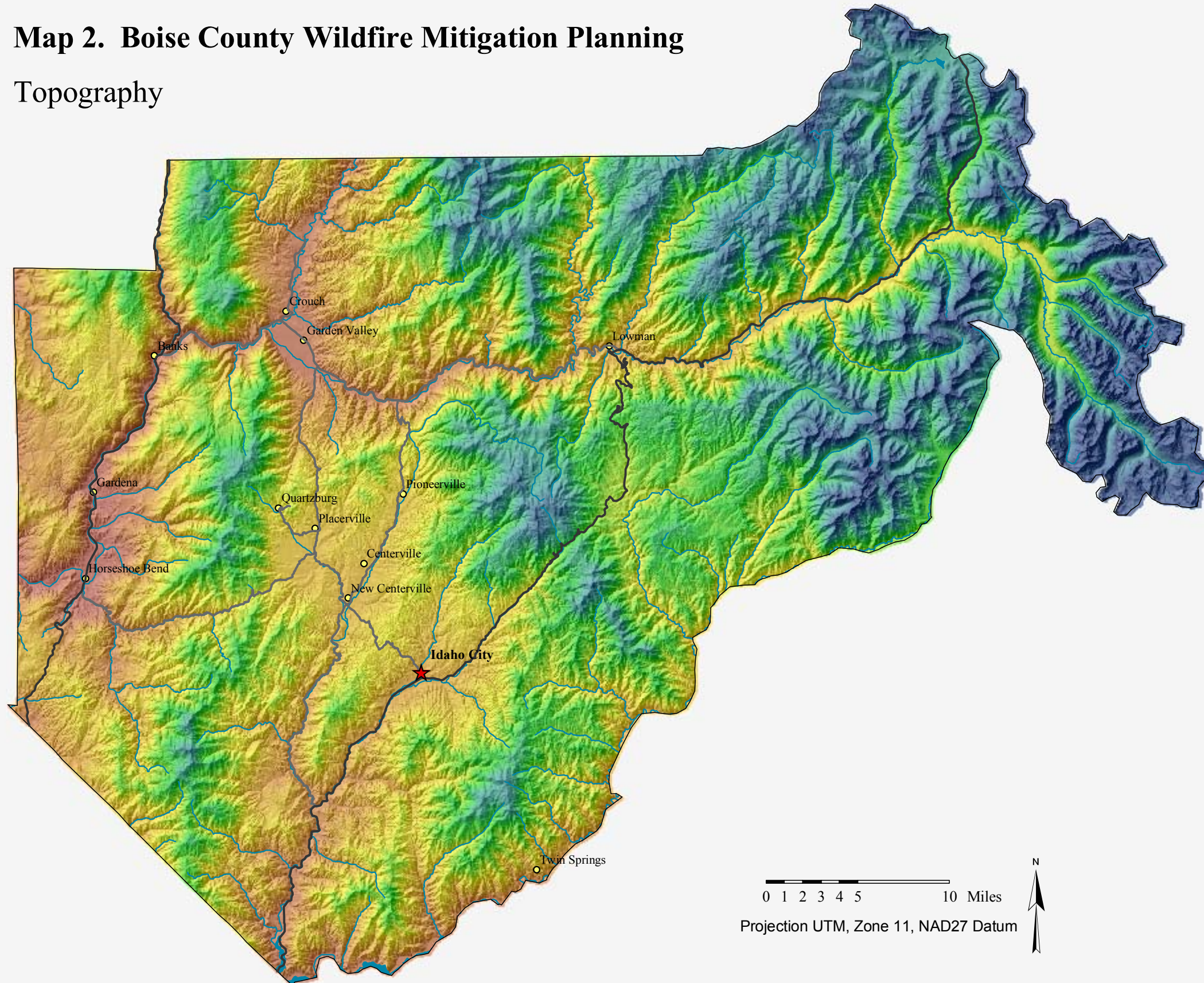
- County Seat
- City or Town
- State Highway
- County Road
- Major River
- Lake

Map prepared by **DYNAMAC CORPORATION** Environmental Services July 2003

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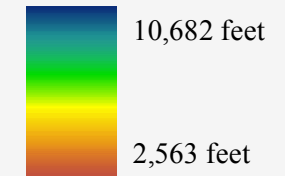
# Map 2. Boise County Wildfire Mitigation Planning

## Topography



## Legend

### Elevation



### Other Mapped Features

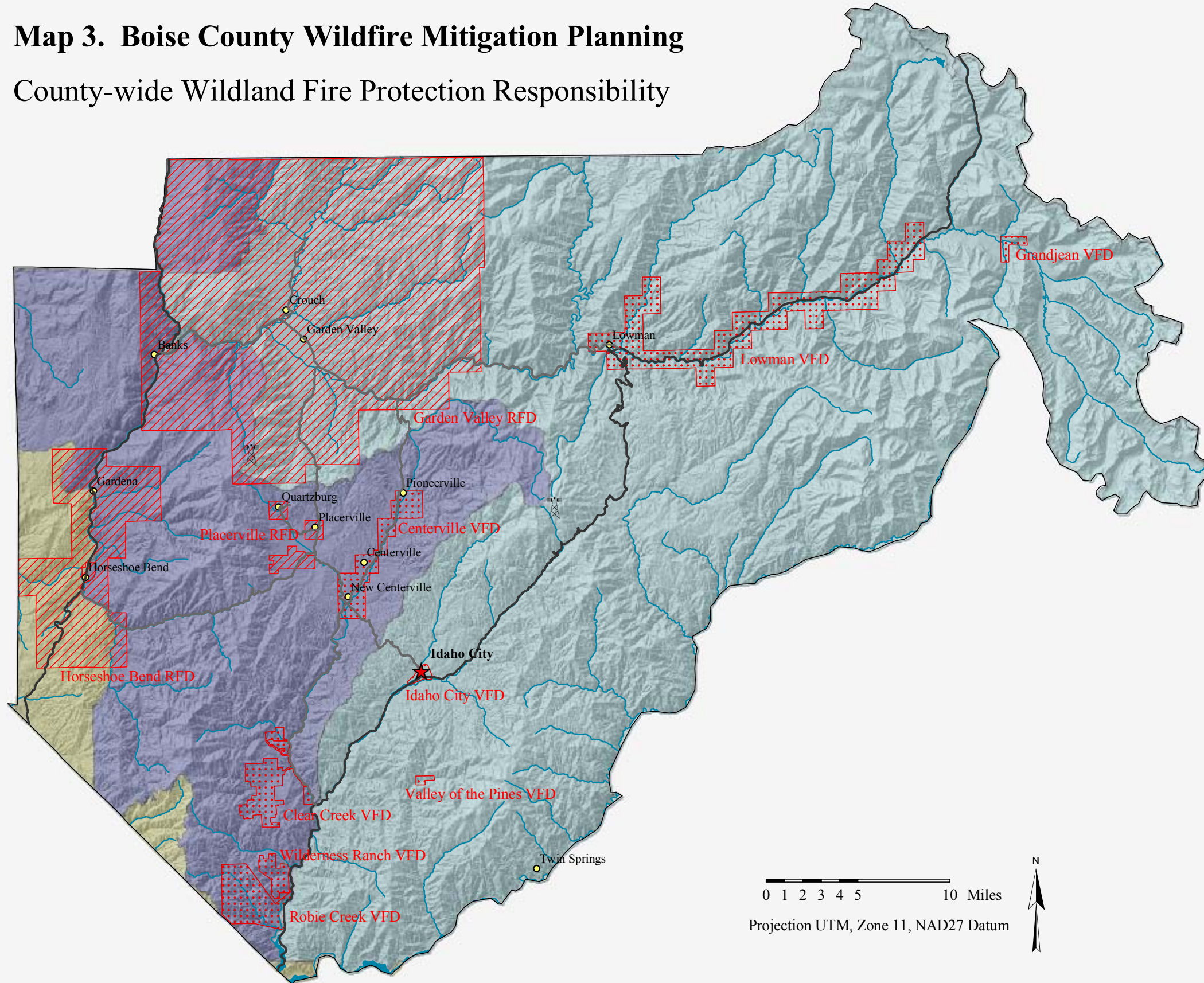
- ★ County Seat
- City or Town
- State Highway
- County Road
- Major River
- Lake

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# Map 3. Boise County Wildfire Mitigation Planning

## County-wide Wildland Fire Protection Responsibility



0 1 2 3 4 5 10 Miles  
 Projection UTM, Zone 11, NAD27 Datum



### Legend

#### Responsibility and Resource

- BLM
- Idaho Department of Lands
- Forest Service
- Rural Fire District
- Volunteer Fire District
- Repeater

#### Other Mapped Features

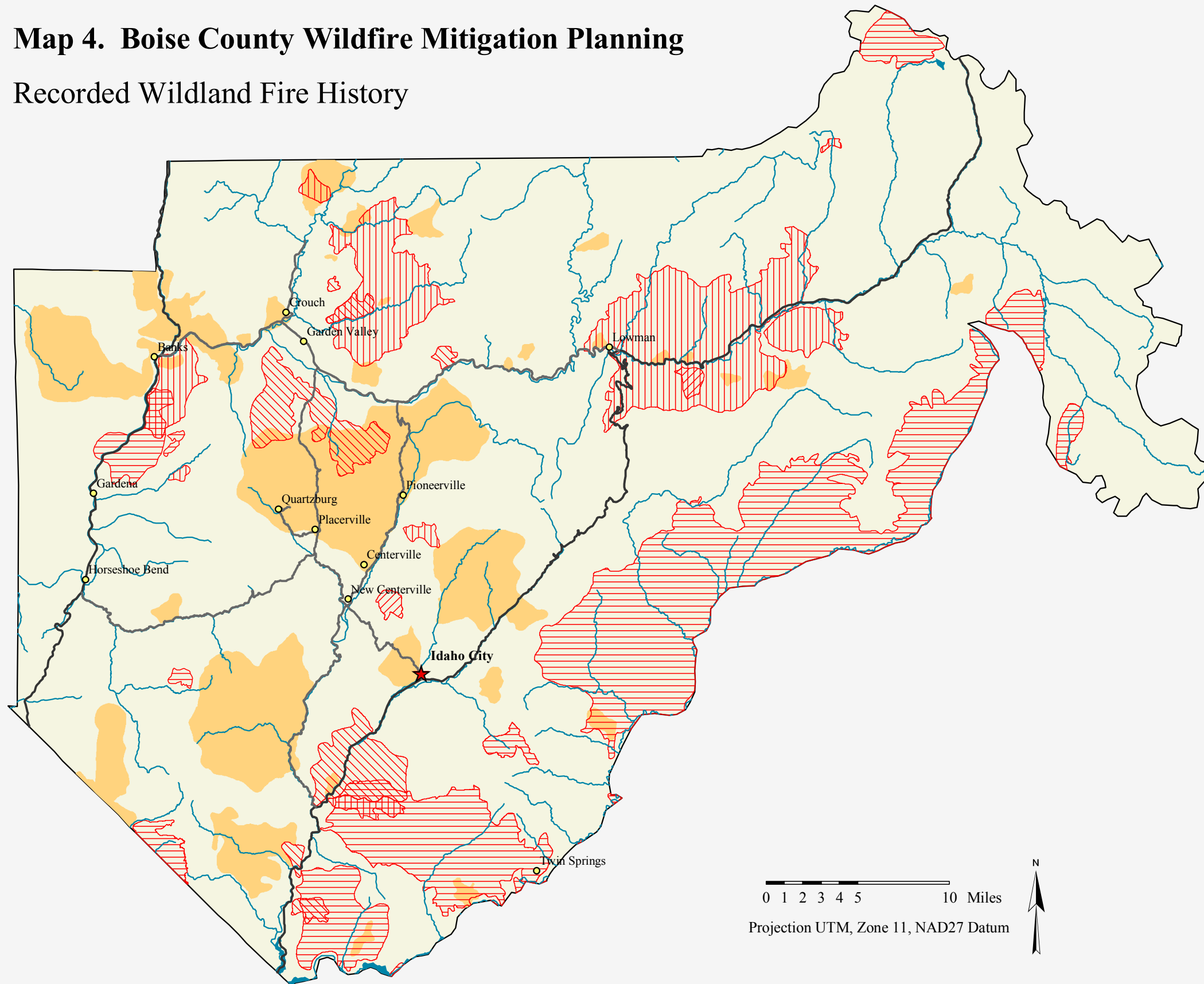
- County Seat
- City or Town
- State Highway
- County Road
- Major River
- Lake

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# Map 4. Boise County Wildfire Mitigation Planning

## Recorded Wildland Fire History



### Legend

#### Wildland Fire Occurrence

- 1990-1994
- 1980-1989
- 1970-1979
- 1960-1969
- 1900-1950

#### Other Mapped Features

- ★ County Seat
- City or Town
- State Highway
- County Road
- Major River
- Lake

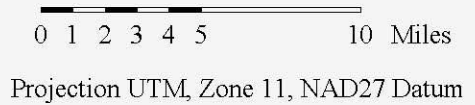
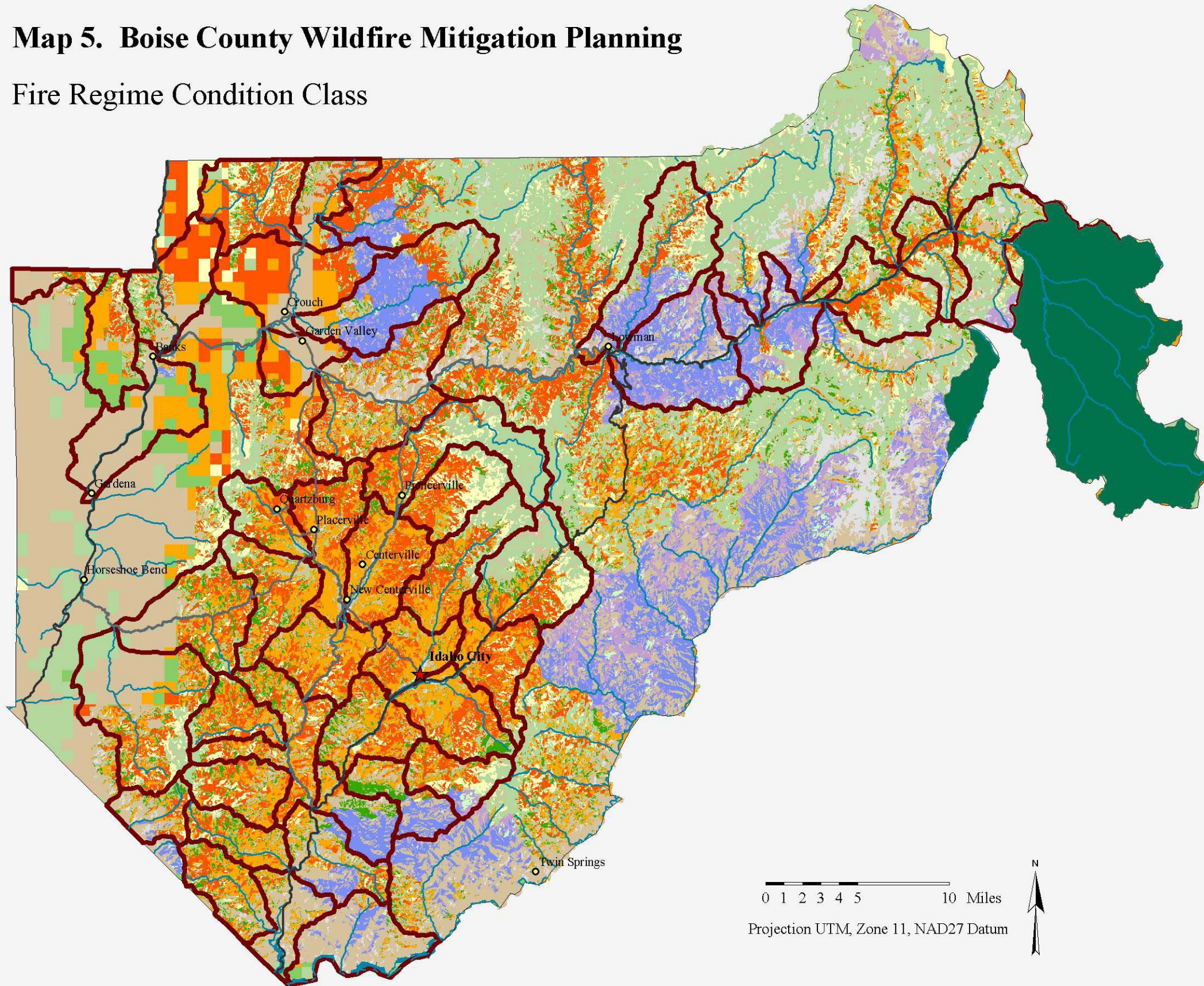
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# Map 5. Boise County Wildfire Mitigation Planning

## Fire Regime Condition Class



### Legend

#### Regime and Class

- Fire Regime 1
  - Condition Class 1
  - Condition Class 2
  - Condition Class 3
  - Condition Class Unkown
- Fire Regime 3
  - Condition Class 2
  - Condition Class Unkown
- Fire Regime 3 and 5
  - Condition Class 1
  - Condition Class Unkown
- Non-Forest
- Rock

#### Other Mapped Features

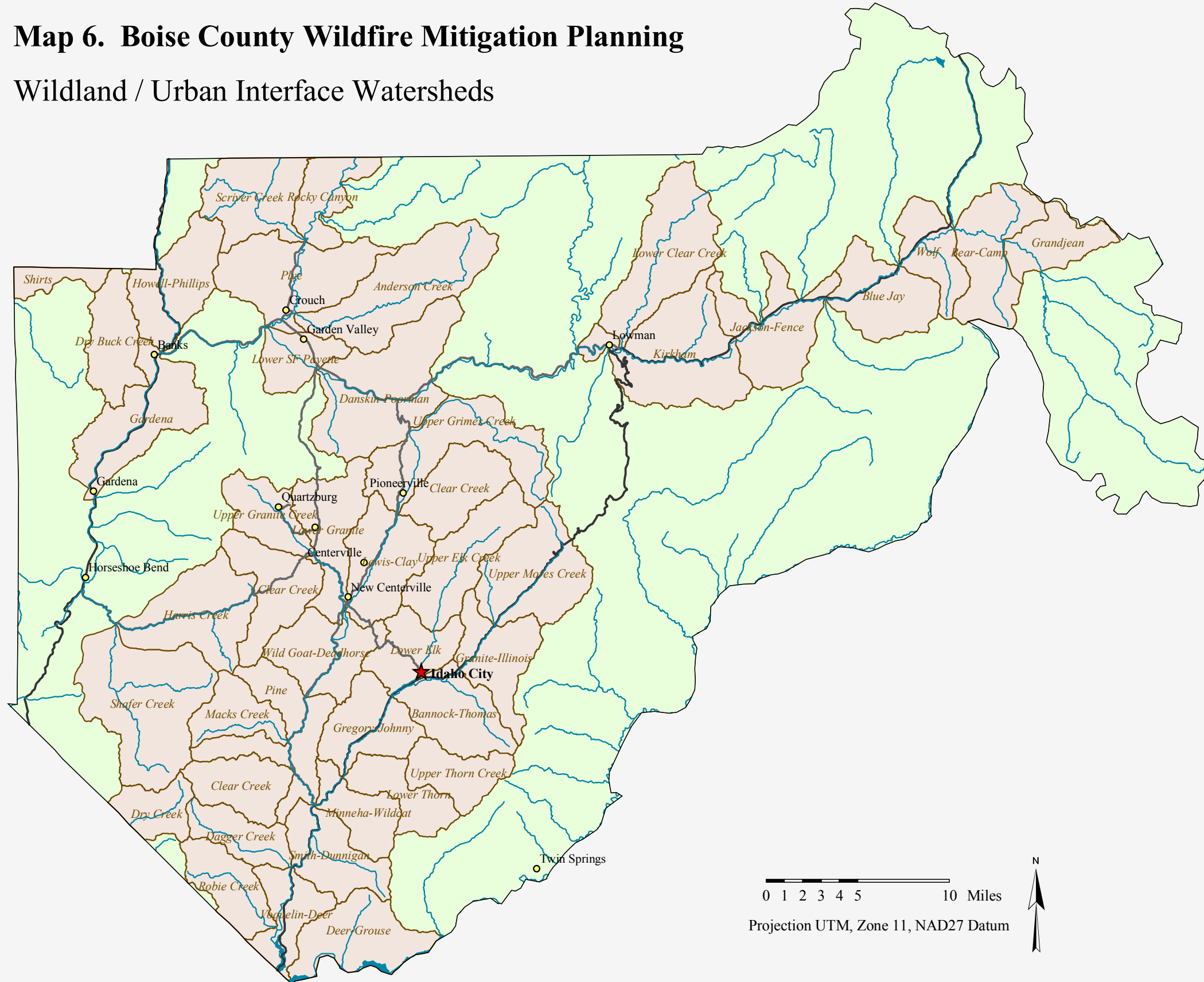
- County Seat
- City or Town
- State Highway
- County Road
- Major River
- Lake
- Research Natural Area
- WUI Watershed

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# Map 6. Boise County Wildfire Mitigation Planning

## Wildland / Urban Interface Watersheds



### Legend

#### Watershed Designation

- WUI
- non-WUI

#### Other Mapped Features

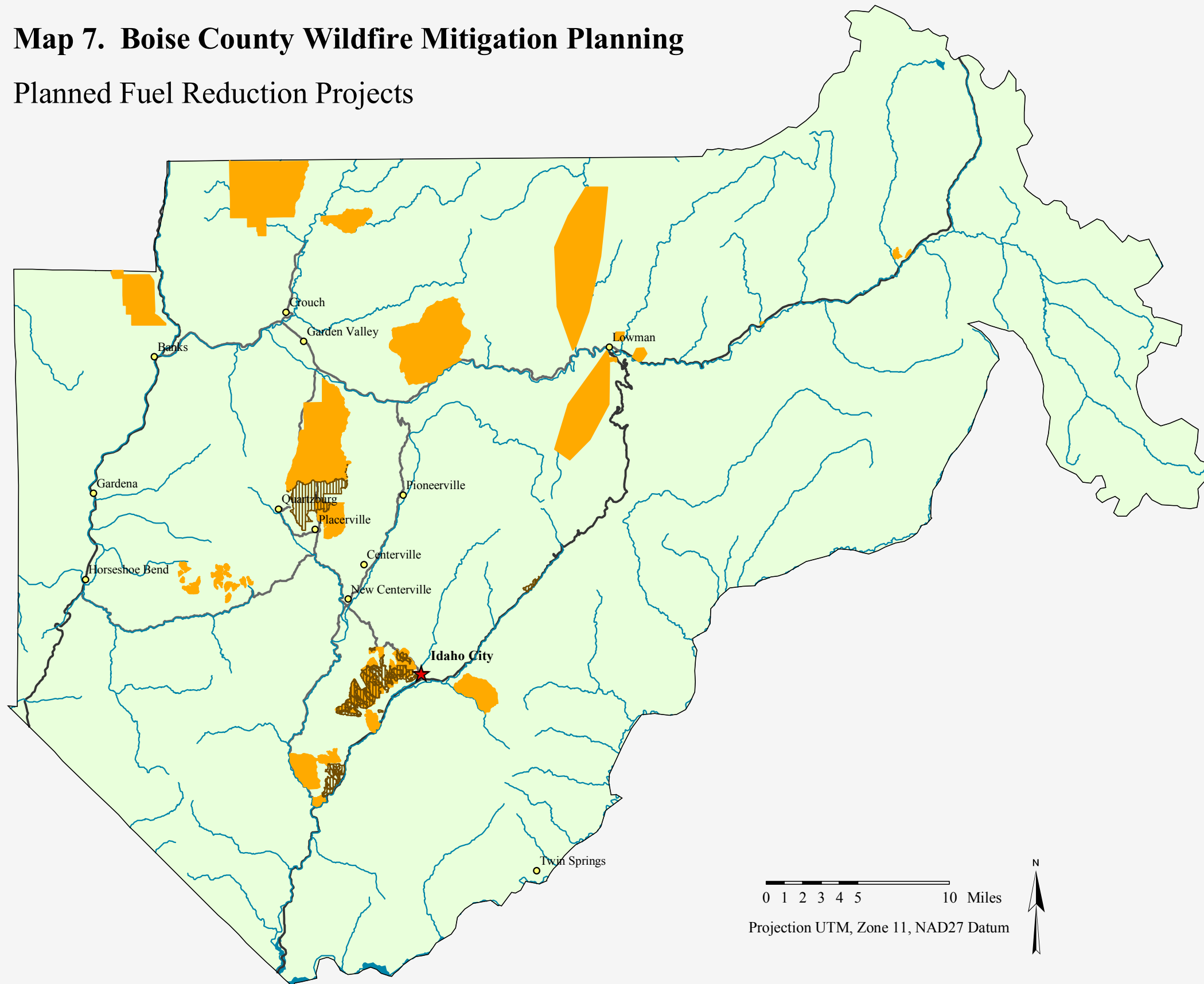
- ★ County Seat
- City or Town
- State Highway
- County Road
- Major River
- Lake

Map prepared by **DYNAMAC CORPORATION** Environmental Services July 2003

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# Map 7. Boise County Wildfire Mitigation Planning

## Planned Fuel Reduction Projects









### Legend

#### Fuels Treatment

-  Mechanical
-  Prescribed Fire

#### Other Mapped Features

-  County Seat
-  City or Town
-  State Highway
-  County Road
-  Major River
-  Lake

Map prepared by  July 2003

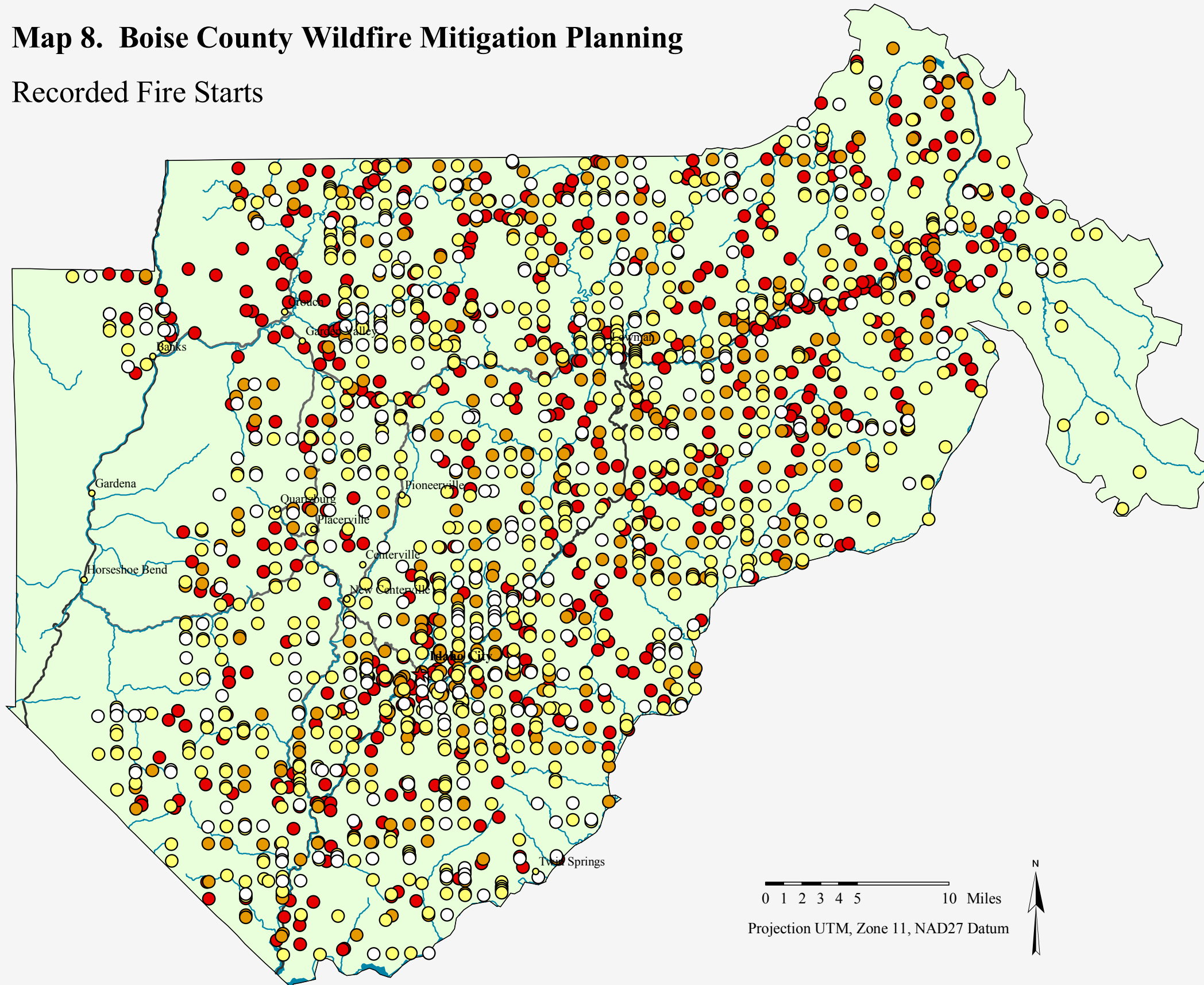
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0 1 2 3 4 5 10 Miles  
Projection UTM, Zone 11, NAD27 Datum



# Map 8. Boise County Wildfire Mitigation Planning

## Recorded Fire Starts



0 1 2 3 4 5 10 Miles  
Projection UTM, Zone 11, NAD27 Datum



## Legend

### Fire Start Occurrence

- 1990-1997
- 1986-1989
- 1960-1969
- 1956-1959

### Other Mapped Features

- ★ County Seat
- City or Town
- State Highway
- County Road
- Major River
- Lake

Map prepared by **DYNAMAC CORPORATION** Environmental Services July 2003

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## **APPENDIX B**

### **CHARTS**

## NFPA 1144 WILDFIRE CHECKLIST- EXAMPLE

<b>Wildfire Hazard Severity Checklist</b>					
Place an X in the appropriate gray box for the desired choice <b>unless noted otherwise</b> . The table will automatically tabulate your total.					
A. Subdivision Design		E. Roofing Material			
1. Ingress and egress ( <i>pick one only</i> )		1. Construction material ( <i>pick one only</i> )			
a. Two or more roads in/out	0 <input type="checkbox"/>	Class A roof	0 <input type="checkbox"/>		
b. One road in/out	7 <input type="checkbox"/>	Class B roof	3 <input type="checkbox"/>		
2. Road Width ( <i>pick one only</i> )		Class C roof	15 <input type="checkbox"/>		
a. >7.3 M (24 ft)	0 <input type="checkbox"/>	Not rated	25 <input type="checkbox"/>		
b. >6.1 M (20 ft) and ≤7.3 M (24 ft)	2 <input type="checkbox"/>	<b>F. Building Construction</b>			
c. ≤6.1 M (20 ft)	4 <input type="checkbox"/>	1. Materials (predominate) ( <i>pick one only</i> )			
3. All Season Road Condition ( <i>pick one only</i> )		a. Non-combustible/fire-resistive siding, eaves, & deck (see Chapter 8)			
a. Surfaced Road, grade <5%	0 <input type="checkbox"/>	0 <input type="checkbox"/>	0 <input type="checkbox"/>		
b. Surfaced Road, grade >5%	2 <input type="checkbox"/>	b. Non-combustible/fire-resistive siding, eaves, & deck			
c. Non-Surfaced Road, grade <5%	2 <input type="checkbox"/>			5 <input type="checkbox"/>	0 <input type="checkbox"/>
d. Non-Surfaced Road, grade >5%	5 <input type="checkbox"/>			10 <input type="checkbox"/>	0 <input type="checkbox"/>
e. Other than all season	7 <input type="checkbox"/>	2. Building setback relative to slopes of 30% or more ( <i>pick one only</i> )			
4. Fire Service Access ( <i>pick one only</i> )		a. > 9.14 M (30 ft) to slope			
a. ≤91.4 M (300 ft) with turnaround	0 <input type="checkbox"/>	1 <input type="checkbox"/>	0 <input type="checkbox"/>		
b. > 91.4 M (300 ft) with turnaround	2 <input type="checkbox"/>	b. < 9.14 M (30 ft) to slope			
c. <91.4 M (300 ft) w/o turnaround	4 <input type="checkbox"/>			5 <input type="checkbox"/>	0 <input type="checkbox"/>
d. >91.4 M (300 ft) w/o turnaround	5 <input type="checkbox"/>	<b>G. Available Fire Protection</b>			
5. Street Signs ( <i>pick one only</i> )		1. Water source availability ( <i>pick one only</i> )			
a. Present [ 10.2 (4 in) in size and reflectorized	0 <input type="checkbox"/>	a. Pressurized water source availability			
b. Not Present	5 <input type="checkbox"/>	1892L/min (500gpm) hydrants < 304.8 m (1000ft apt)			
<b>B. Vegetation (Fuel Models)</b>		0 <input type="checkbox"/>	0 <input type="checkbox"/>		
1. Characteristics of predominate vegetation ( <i>pick one only</i> )		946.4 L/min (250gpm) hydrants < 304.8 m (1000ft apt)			
within 91.4 M (300 ft)		1 <input type="checkbox"/>	0 <input type="checkbox"/>		
a. Light (Grasses, Forbs, Sawgrass, Tundra NFDRS Fuel Models A, C, L, N, S, & T	5 <input type="checkbox"/>	b. Nonpressurized water source availability (off site)			
b. Medium (light brush & small trees) NFDRS Fuel Models D, E, F, H, P, Q, & U	10 <input type="checkbox"/>			3 <input type="checkbox"/>	0 <input type="checkbox"/>
c. Heavy (dense brush, timber & hardwoods) NFDRS Fuel Models B, G, & O	20 <input type="checkbox"/>	≥ 946.4 L/min (250gpm) continuous for 2 hrs			
d. Slash (timber harvesting residue) NFDRS Fuel Models J, K, & L	25 <input type="checkbox"/>	< 946.4 L/min (250gpm) continuous for 2 hrs			
2. Defensible space ( <i>pick one only</i> )		5 <input type="checkbox"/>	0 <input type="checkbox"/>		
a. More than 30.48 M (100 ft) of vegetation treatment from structure	1 <input type="checkbox"/>	c. Water unavailable			
b. 21.6 M to 30.48 M (71 to 100 ft) of vegetation treatment from structure	3 <input type="checkbox"/>	10 <input type="checkbox"/>	0 <input type="checkbox"/>		
c. 9.14 M to 21.3 M (30 to 70 ft) of vegetation treatment from structure	10 <input type="checkbox"/>	2. Organized response resources ( <i>pick one only</i> )			
d. < 9.14 M (30 ft) of vegetation treatment from structure	25 <input type="checkbox"/>	a. Station ≤ 8km (5 mi) from structure			
<b>C. Topography within 91.4 M (300 ft) of Structure</b>		1 <input type="checkbox"/>	0 <input type="checkbox"/>		
1. Slope ≤ 9%	1 <input type="checkbox"/>	b. Station > 8km (5mi) from structure			
2. Slope 10% to 20%	4 <input type="checkbox"/>	3. Fixed Fire Protection ( <i>pick one only</i> )			
3. Slope 21% to 30%	7 <input type="checkbox"/>	a. NFPA 13, 13R, 13D sprinkler system			
4. Slope 31% to 40%	8 <input type="checkbox"/>	0 <input type="checkbox"/>	0 <input type="checkbox"/>		
5. Slope ≥ 40%	10 <input type="checkbox"/>	b. None			
<b>D. Additional Rating Factors (rate all that apply)</b>		5 <input type="checkbox"/>	0 <input type="checkbox"/>		
<b>Note:</b> Place a number from 0-5 in the appropriate yellow box.		<b>H. Utilities (Gas and Electric)</b>			
1. Topographical features that adversely affect fire wildland fire behavior	0-5 <input type="checkbox"/>	1. Placement ( <i>pick one only</i> )			
2. Areas with history of higher fire occurrence than surrounding areas due to special situations (heavy lightning, railroads, escaped debris burning,	0-5 <input type="checkbox"/>	All underground utilities			
3. Areas that are periodically exposed to unusually severe fire weather and strong dry winds	0-5 <input type="checkbox"/>	0 <input type="checkbox"/>	0 <input type="checkbox"/>		
4. Separation of adjacent structures that can contribute to fire spread	0-5 <input type="checkbox"/>	One underground, one aboveground			
<b>I. Totals for Subdivision</b>		3 <input type="checkbox"/>	0 <input type="checkbox"/>		
		(check-point totals) - Hazard assessment			
		All aboveground		5 <input type="checkbox"/>	0 <input type="checkbox"/>
		1. Low hazard:		< 40 points	
2. Moderate hazard:		40-69points			
3. High hazard:		70-112 points			
4. Extreme hazard:		> 112 points			
DEVELOPMENT/ COMMENTS					
LAT:		LONG:			

**APPENDIX C**

**PUBLIC PARTICIPATION/PLANNING PROCESS DOCUMENTATION**

## **PUBLIC PARTICIPATION/PLANNING PROCESS DOCUMENTATION**

Public participation was a key component of the strategic planning process for the Boise County Mitigation Wildfire Plan (The Plan).

The Plan integrates a cross-section of citizen and agency input that was gathered throughout the planning process.

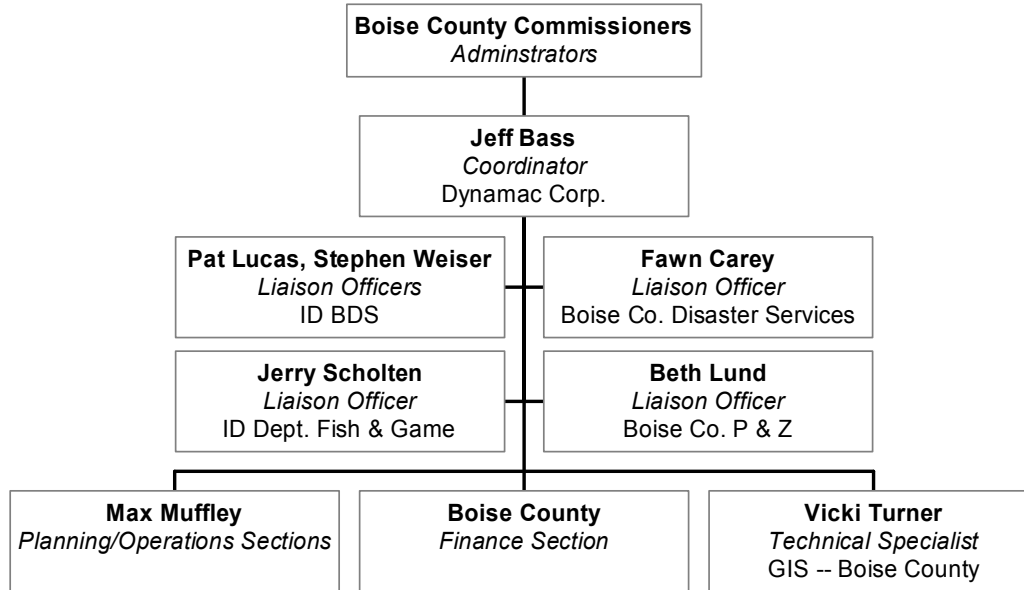
Structured under the Incident Command System, the Boise County Wildfire Group was formed to steer this process. The Group was comprised of knowledgeable individuals representing the major land stakeholders in the county, including:

- Boise County Commissioners
- Boise County GIS
- Boise County Planning and Zoning
- Boise County Disaster Services
- Boise County Assessors
- Boise County Fire Fighters Association
- Boise County Volunteer Fire Department Chiefs
- Boise County Sheriff's Office
- Idaho Bureau of Disaster Services
- Idaho Department of Lands
- Idaho Fish and Game
- Home Owners' Associations
- County Residents and Land owners
- USDI, Bureau of Land Management, Lower Snake River District
- USDA-Forest Service, Boise National Forest

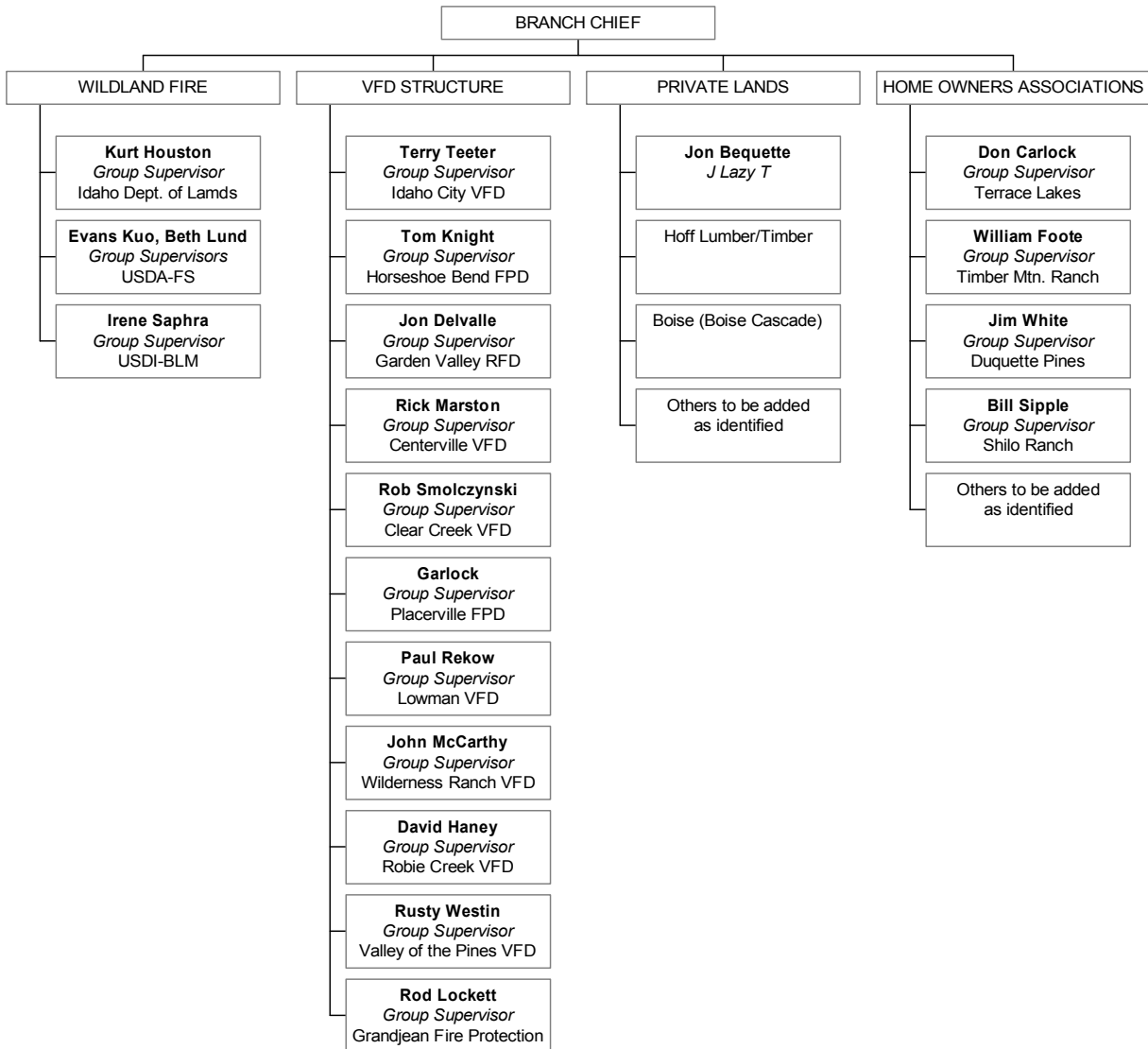
The use of ICS provided optimal information exchange, hazard identification and mitigation recommendation development. Public participation was accomplished by distribution of questionnaires that address wildfire concerns and suggestions, participation by homeowners associations at the team leader level, and utilization of information from community hazard identification and mitigation reports conducted within Boise County by Dynamac Corporation for the Bureau of Land Management in 2001.



# Boise County Wildland Fire Group



# Boise County Wildland Fire Group -- Branches



# Boise County Wildland Fire Group -- Branches -- Garden Valley Division



## MEETINGS AND PUBLIC OUTREACH

### Meeting 1 — Boise County Wildfire Group, Date: 01/23/03

**Location:** Idaho City, Idaho

**Objective(s):** The objectives of the first meeting for the Boise County Wildland Fire Mitigation Plan were:

1. Recognition by County Commissioners
2. Familiarization with County Wide Wildfire Plan requirements
3. Boise County Wildfire Group Organizational development.
4. Document Boise County Wildfire Group position assignments.

**Participants:**

Roger Jackson, Chairperson, Boise County Commissioners  
Vicki Turner, Boise County GIS specialist  
Richard Markley, District Ranger, USFS, Idaho City, Boise National Forest  
Walt Rogers, District Ranger, USFS, Lowman, Boise National Forest  
Evan Kuo, Fire/Fuels Specialist, Boise National Forest  
Kurt Houston, Forester/Fire Specialist, Idaho Department of Lands  
Rosey Thomas, Fire Management Officer, Lower Snake Field Office, BLM Idaho  
Randy Eardley, Fire Specialist, Lower Snake Field Office, BLM Idaho  
Irene Saphra, Fuels Specialist, Lower Snake Field Office, BLM Idaho  
Stephen Wieser, Idaho Bureau of Disaster Services, Boise, Idaho  
Pat Lucas, Idaho Bureau of Disaster Services, Boise, Idaho  
Fawn Caray, Boise County Disaster Services  
Jerry Schulte, Idaho Department of Fish and Game  
Rob Smolezynski, Clear Creek Volunteer Fire Department Chief  
Jon Delvalle, Garden Valley Volunteer Fire Department Chief  
Will Reynolds, Clear Creek Volunteer Fire Department  
Terry Teeter, Idaho City Volunteer Fire Department Chief  
John McCarthy, Wilderness Ranch Volunteer Fire Department Chief  
Carrie Wiss, Wilderness Ranch Volunteer Fire Department  
Joe Weiss, Placerville VFD and EMS  
Deanna Stevenson, Editor, Idaho World Newspaper  
Don Carlock, Terrace Lakes Home Owners Association  
Beckie Nichols, Terrace Lakes Home Owners Association  
Craig Hawk, Terrace Lakes Home Owners Association  
William Foote, Timber Mountain Ranch Home Owners Association  
Jim White, Duquette Pines Home Owners Association  
John Bequette, J Lazy T Ranch  
Jeff Bass, Garden Valley Resident, Dynamac Corporation

**Documentation/Synopsis:**

Meeting started at 7 PM, Mr. Roger Jackson provided a welcome to attendees. Mr. Jackson introduced Jeff Bass of Dynamac Corporation as the selected Coordinator for development of the Boise County Wildfire Plan (The Plan).

Mr. Bass provided information about the plan and background.

Development of the Boise County Wildfire Mitigation Plan is recommended by the Idaho Statewide Implementation Strategy for the National Fire Plan. This strategy was developed in 2002 by a statewide group and signed by the Governor, Idaho Department of Lands, Idaho Fire Chiefs association and Federal and other state agencies.

The plan is designed to meet FEMA grant requirements and build a foundation for assistance to Counties in reducing exposure and risk to wildfires.

The Boise County Wildfire Group was initiated under a modified Incident Command System structure.

Plan flow charts were distributed by Mr. Bass, and organizational positions were filled. Future Boise County Wildfire Group Meetings were to be held monthly, Group Supervisors were divided into two branches, the Wildfire Branch, consisting of Division Supervisors from Idaho Department of Lands, Bureau of Land Management and the U.S. Forest Service, and the VFD/Structure/Private Land Owner Branch with Division Supervisors from the Volunteer Fire Departments, and Large Land Owners. Team leaders were representatives from numerous Home Owner Associations.

Examples of Wildfire Community Questionnaires were distributed to the participants. A press release addressing the plan development, identifying the Boise County Wildfire Group, and coordinator point of contact was provided to the editor of The Idaho World following the meeting and was published on 1/30/03 in the County newspaper.

**Meeting 2 — Boise County Wildfire Group, Date: 02/20/03**

**Location:** Horseshoe Bend, Idaho

**Objectives:**

1. Identify and select recommended County Wide Wildfire Priorities.
2. Identify wildfire hazards by Group Supervisors and Team Leaders.

**Participants:**

Dale Hansen, Boise County Commissioners  
Vicki Wilkins, Boise County GIS  
Rosey Thomas, Fire Management Officer, BLM, Lower Snake River Dist.  
Richard Markley, District Ranger, U.S. Forest Service, Boise N.F.  
Walt Rogers, District Ranger, U.S. Forest Service, Boise N.F.  
Evans Kuo, Fire/Fuels Specialist, U.S. Forest Service, Boise N.F.  
Myron Hatinger, Fire/Fuels Specialist, U.S. Forest Service, Boise N.F.  
Ray Mockly, Fire/Fuels Specialist, U.S. Forest Service, Boise N.F.  
Stephen Weiser, Idaho Bureau of Disaster Services  
Carl Sturdy, Boise Cascade Corp.  
Jim White, Duquette Pines HOA  
John Bequette, J Lazy T Ranch  
Mike Hefner, Horseshoe Bend City Fire Department  
Jon Delvalle, Garden Valley Fire Department  
Joe Weiss, Placerville EMS and Fire Department  
Kurt Houston, Idaho Department of Lands  
Bob Stevenson, Garden Valley Fire Board  
Tom Knight, Horseshoe Bend Fire Department  
Jennifer Myslivy, Fuels Specialist, U.S. Forest Service, Boise N.F.  
Max Muffley, Wildfire Branch Coordinator, Dynamac Corporation  
Jeff Bass, Plan Coordinator, Dynamac Corporation

**Documentation/Synopsis:**

Max Muffley of Dynamac Corporation introduced as Branch coordinator for the Wildfire Branch.

The priorities selected for the Boise County Wildfire Mitigation Plan were decided upon, they are, life, property, and values at risk.

Wildfire hazards were identified by Group Supervisors and Team Leaders were as follows. County Wide Wildland Fuels build up in wildland/urban interface areas, availability of wildfire suppressants in the wildland/urban interface, ingress/egress to current and future developments in the wildland urban interface, County wide fire emergency communications, and fuels build up and forestry issues on Federal and state managed lands.

GIS data needs were presented and web sites for storage of data provided. Risks were address as being low, moderate, and high, and will be included in mitigation actions according to priorities.

A press release discussing the meeting, specifically the priorities selected and hazards identified by the Boise County Wildfire Group with points of contact, organizational structure and representation was provided to the editor of The Idaho World and published on 2/26/03 in the County newspaper.

**Meeting 3 — Boise County Wildfire Group, Date: 03/23/03**

**Location:** Garden Valley, Idaho

**Objectives:**

1. Identify locations of wildfire hazards and high risk areas in Boise County on GIS maps supplied by Boise County, Idaho Department of Lands, and U.S. Forest Service
2. Identify County infrastructure areas of risk

Develop mitigation recommendations for hazards with high risks.

**Participants:**

Fred Lawson, Boise County Commissioner  
Marla Lawson, Lowman, Idaho  
Irene Saphra, Fuels/Fire Specialist, BLM, Lower Snake River District  
Daryl Albiston Field Office Manager, BLM 4 Rivers Field Office  
Kurt Houston, Forester/Fire Specialist, Idaho Department of Lands  
Carl Sturdy, Boise Cascade Corporation  
Mike Hefner, Horseshoe Bend Fire Department  
John McCarthy, Wilderness Ranch Fire Department  
Carrie Wiss, Wilderness Ranch Fire Department  
Pamela Garlock, Placerville Fire Department, Boise County Dispatch  
Jon Delvalle, Garden Valley Fire Department  
Stanley Erskine, Lowman Fire Department  
Myron Hotinger, Fire/Fuels Specialist, U.S. Forest Service Boise N.F.  
Evans Kuo, Fire/Fuels Specialist, U.S. Forest Service Boise N.F.  
Jerry Scholten, Idaho Department of Fish and Game  
Max Muffley, Wildfire Branch Coordinator, Dynamac Corporation  
Jeff Bass, Plan Coordinator, Dynamac Corporation

**Documentation/Synopsis:**

VFD/Structure Group identified County infrastructure assets as risk elements and reviewed identified hazards for development of mitigation recommendations. The Wildfire and VFD/Structure Groups concluded that areas of high risk will be identified in GIS data with focus on communities and community depended watersheds. Watersheds at high risk were identified by the Wildfire Group. The BCWG elected to prepare wildfire plan mitigation recommendations as short term and long term.

A press release discussing the meeting, specifically informing citizens of the focus on community dependent watersheds, long and short term mitigation goals, and County infrastructure needs was provided to the editor of "The Idaho World" and published on April 3<sup>rd</sup>, 2003. A point of contact for the plan was included in the press release.



**Meeting 4 — Boise County Wildfire Group, Date: 04/22/03**

**Location:** Idaho City, Idaho

**Objectives:**

1. Review and provide additional mitigation recommendation action items- VFD/Structure Branch.
2. Identify GIS data needs for identification of action items- Wildfire Branch

**Participants:**

Terry Teeter, Idaho City Fire Chief  
Jon Delvalle, Garden Valley Fire Chief  
Pamela Garlock, Placerville VFD, Boise County Dispatch  
Jerry Scholton, Idaho Dept. of Fish and Game  
Dick Markley, District Ranger, U.S. Forest Service, Boise N.F.  
Myron Hotinger, Fire/Fuels Specialist, U.S. Forest Service, Boise N.F.  
Evans Kuo, Fire Management Officer, U.S. Forest Service, Boise N.F.  
Jim White, Duquette Pines HOA  
Bruce Reichert, Duquette Pines HOA  
Vicki Turner, Boise County GIS  
Kitty Arrons, Boise County Resident  
Steve Wilkins, Centerville Resident  
Max Muffley Wildfire Branch Coordinator, Dynamac Corporation  
Jeff Bass Coordinator, Dynamac Corporation

**Documentation/Synopsis:**

Boise County Wildfire Mitigation Plan progress and tracking was presented by the coordinators. VFD/Structure branch provided additional recommendations to the action items and reinforced emergency services county-wide communication needs, mobilization/communication plans, rolling stock needs (water tenders), training and PPE.

The Wildfire branch identified high risk WUI watersheds and will coordinate with County and Dynamac GIS specialists. Dynamac's ftp site will be use to store data. County GIS specialist will be very busy in May.

Plan coordinator will work with Boise County Assessors office for cost/benefits. Mitigation Action items will be presented as long and short term.

Priorities will be recommended, final prioritization will be conducted by the Boise County Commissioners.

The survey of the Boise County Fire Fighters conducted by Idaho Department of Lands will identify needs of VFD throughout the county and will be added to the appendix of the plan.

A press release describing the meeting specifically long and short term plan goals, the State VFD survey, GIS identification and mapping of high risk watershed for inclusion to the plan was provided to the editor of The Idaho World and published on April 30, 2003. A point of contact for input to or questions about the plan was provided in the article.

## Meeting 5 — Boise Count Wildfire Group, Date 5/22/03

**Objectives:** Review Draft Boise County Wildland Fire Mitigation Plan for additional inputs, and changes.

**Participants:**

Myron Hotinger Fire/Fuels Specialist, U.S. Forest Service Boise N.F.  
Beth Lund Fire Management Officer, U.S. Forest Service Boise N.F.  
Jerry Scholten, Idaho Department of Fish and Game  
Stanly Erskine, Lowman VFD  
Kurt Houston, Forester/Fire Specialist, Idaho Department of Lands  
Evans Kuo, Fire Management Officer, U.S. Forest Service Boise N.F.  
Fawn Caray, Boise County Disaster Services  
Rosey Thomas, Fire Management Officer, BLM, Lower Snake River District  
Walt Rogers, District Ranger, U.S. Forest Service Boise N.F.  
Dick Markley, District Ranger, U.S. Forest Service Boise N.F.  
Dale Hanson, Boise County Commissioner  
John Bequette, J Lazy T ranch  
Max Muffley, Dynamac Corporation  
Jeff Bass Dynamac Corporation

**Documentation/Synopsis:**

A draft of the Boise County Wildland Fire Mitigation Plan was distributed to attendees for review of format, mitigation action items, timelines and confirm GIS data needs. Modifications to the action items were accomplished and some projected timelines adjusted.

Electronic copies of the draft were then sent to all Boise County Wildfire Group Supervisors, and Liaisons. Hard copies of the draft were delivered to the Boise County Commissioners. Some GIS data needs in support of the mitigation action items will be completed in June.

## Meeting 6 — Boise County Wildfire Group, Date 6/26/03

**Objective:** Review Final Boise County Wildland Fire Mitigation Plan

**Participants:**

Jerry Scholten Idaho Department of Fish and Game  
Evans Kou, Fire Management Officer, U.S. Forest Service, Boise N.F.  
Walt Roger, District Ranger, U.S. Forest Service, Boise N.F.  
Irene Saphra, Fire/Fuel Specialist, Lower Snake River District, BLM  
Mike Theisen, Fire/Fuels Specialist, Lower Snake River District, BLM  
Myron Hotinger, Fire/Fuels Specialist, U.S. Forest Service, Boise N.F.  
Kurt Houston, Forester/Fire Specialist, Idaho Department of Lands  
Stephen Weiser, Bureau of Disaster Services, State of Idaho  
Pat Lucas, Bureau of Disaster Services, State of Idaho  
Jon Delvalle, Chief, Garden Valley Fire Department  
Terry Teeter, Chief, Idaho City Fire Department  
Fawn Caray, Boise County Disaster Services  
Max Muffley, Dynamac Corporation  
Jeff Bass, Dynamac Corporation

**Documentation /Synopsis:**

A copy of the Draft Boise County Wildfire Mitigation Plan was distributed electronically to all participants and all members of the BCWG. Final review input provided at the workshop included input for modifications, additions to and deletions from the plan by County and State Bureau of Disaster Services, representative from the U.S. Forest Service, Bureau of Land Management, Idaho Department of Fish and Game, Idaho Department of Lands, and the Fire Chief present. All action items and mitigation recommendations were reviewed and final inputs for structure, implementations and word were selected. GIS data on hard copy maps was provided by the U.S. Forest Service and Idaho Department of Lands, map data and information was reviewed for clarification. U.S. Forest Service GIS data will be sent by compact disc to the Dynamac Corporation GIS specialist for inclusion with the final County Wildland Fire Mitigation Plan.

The Final Plan will be delivered to Boise Count on July 11<sup>th</sup>. Review of final plan requested by group prior to planning signature date.

### **Scoping and County Questionnaire:**

Wildfire hazard assessment questionnaires were distributed to residents of Boise County during hazard assessments conducted in Garden Valley, Horseshoe Bend, and Idaho city by Dynamac Corporation in 2001, additional community questionnaires were distributed during the County Wildfire Mitigation plan. Of the total questionnaires returned the mitigation actions most requested by residents of Boise County were:

1. Additional prevention education and activities including Firewise practices and workshops.
2. Private, Federal and State Lands wildfire fuels reduction by thinning, removal, prescribed fire, chipping, selective removal after thinning,
3. Assistance and improvement for Boise County VFDs in equipment (wildfire fighting) Apparatus (engines and water tenders), training and communications.

**Community Questionnaire Wildland Fire Hazard and Mitigation  
Boise County, Idaho**

To reduce the risk of wildfires, Boise County is initiating a County-wide Wildfire Mitigation Plan. The plan seeks to reduce the threat of wildland fire through risk assessment and hazard identification. Mitigation measures will include but are not limited to wildfire prevention and reduction of fuels, increasing fire protection capabilities of communities, and public education. The goal of the program is to decrease the chances of wildfire spreading from public lands onto private or community lands and vice-versa. You can help in this County-wide effort by providing information and suggestions on potential assessment and mitigation efforts.

1. What town or community do you live in or closest to?

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2. How great a risk do you think wildfires pose to your residence?

---

---

3. What areas around your community do you think are an extreme fire hazard and pose a wildfire risk to homes or property?

---

---

4. What do you think might be the best way to mitigate, or reduce this hazard?

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---

5. Do you know of any recent actions taken by the community, the county, etc., to reduce the risk of wildland fires or to protect residents from wildfires spreading from public to private lands?

---

---

6. Have there been recent fire reduction education programs in your community? If so, what was the nature of the projects?

---

---

Who sponsored them and when?

---

7. Besides residences and community buildings, are there other locations or properties (may or may not be a structure) that have a high environmental, cultural, or economic value and should be a priority for fire risk reduction?

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---

8. Do you think your community is prepared to combat wildland-urban interface fires?

---

---

If not, what do you think could be done to improve your town's / subdivision's wildland-urban interface firefighting capabilities?

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If we have questions or would like more information, can we contact you?

Name:

---

Address:

---

---

Phone:

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***Thank you for your time and your ideas!***

**APPENDIX D**

**COST COMPARISON ANALYSIS**



## **COST COMPARISON ANALYSIS**

Boise County contains numerous developments, subdivisions and communities separated by miles of mountainous terrain. County-wide there are approximately 5,300 homes and four incorporated communities. Most areas of Boise County are at risk to wildfires. Of the 5,300 homes within the County it is estimated that three-fourths (3,975) of them have some risk to wildfires. Hazardous fuel reduction, increased wildfire emergency services, and improved county emergency services communications can mitigate risk to life and property in Boise County.

A sample of 835 Boise County residential homes taken from seven different locations within the County yielded an averaged assessed value of \$103,306 per residence. Fifteen percent of this average was added for personal property in the homes. This provided the total average value of \$118,802 per residence.

Using an average home value of \$118,802 the total estimated value of Boise County homes is \$472,237,950. Add to this the value of county assets including county structures, communication sites, and court houses the estimated total value of assets at risk to wildfire is over \$500,000,000. This total does not include the value of timber resources, or expense in protection of watersheds, and vegetation rehabilitation or soil erosion control efforts after a wildfire.

### **Mitigation Recommendation Costs, Boise County**

Estimated costs for wildfire mitigation recommendations within Boise County are: \$700,000 for County-wide road side, private and developed lands hazardous fuel reduction and vegetation disposal-mitigation recommendation number 7, hazard priority 5.

Estimated costs for emergency services communication requirements include: \$25,000 for County and Fire Department Communications, mitigation recommendation number 1 and 2, hazard priority 1.

Boise County Fire Departments have identified priorities for construction of or additions to 5 Fire Stations, additional training, PPE, equipment and engines, brush trucks and water tenders, cost estimates are provided in mitigation recommendation number 5, hazard priority 4. Total cost estimate for county wide fire departments is approximately \$2.1 million.

## **BENEFITS OF MITIGATION**

Stakeholders evaluating the economic benefits of mitigation should consider numerous “direct” scenarios, including, but not limited to avoiding:

- Building/property damages
- Content damages
- Inventory damages
- Rental income losses
- Relocation and disruption expenses
- Proprietor’s income losses

Some of “indirect” effects to consider, (positive or negative) include changes to the following:

- Commodity and resource prices
- Availability of resource supplies
- Building and land values
- Capital availability and interest rates
- Availability of labor
- Economic structure
- Infrastructure
- Local, state, and national regulations and policies
- Insurance availability and rates

Total economic impacts are the sum of direct and indirect economic impacts. Decision makers should understand the total economic impacts of natural disasters in order to calculate the benefits of a mitigation activity.

Additionally, it must be realized that benefit/cost analysis, when used alone, may divert attention from other important issues. It is important to consider the qualitative factors of a project associated with mitigation that cannot be evaluated economically. There are alternatives. Many communities and developments are looking towards developing multi-objective projects, including: integration of natural hazard mitigation with projects related to watersheds, wildfire protection, environmental planning, community economic development and small business development.

**APPENDIX E**  
**LIST OF ACRONYMS**

## LIST OF ACRONYMS

AMSL	Above Mean Sea Level
BCWG	Boise County Wildfire Group
BDS	Idaho Bureau of Disaster Services
BLM	Bureau of Land Management
CCFD	Clear Creek Fire Department
CFD	Centerville Fire Department
°F	Degrees Fahrenheit
FEMA	Federal Emergency Management Agency
GVFD	Garden Valley Fire Department
HOAs	Home Owners' Associations
ICFD	Idaho City Fire Department
ICS	Incident Command System
IDL	Idaho Department of Lands
MOU	Memorandum of Understanding
MSL	Mean Sea Level
NEPA	National Fire Protection Association
NWCG	National Wildfire Coordinating Group
PVFD	Placerville Fire Department
RCFD	Robie Creek Fire Department
RFD	Rural Fire Department
U.S. Forest Service	United States Department of Agriculture, Forest Service
VFD	Volunteer Fire Department
VPFD	Valley of the Pines Fire Department
WGA	Western Governors' Association
WRFD	Wilderness Ranch Fire Department
WUI	Wildland/Urban Interface

**APPENDIX F**  
**FINANCIAL/TECHNICAL RESOURCES**

## **FINANCIAL/TECHNICAL RESOURCES**

Financial resources that can provide support for various wildland fire mitigation action items include various State and federal grants administered through Idaho Department of Lands, the Bureau of Land Management, the Natural Resource Conservation Service, and the Federal Emergency Management Agency.

Hazardous fuels reduction grants for Boise County can be combined from developments in the county and applied for through Idaho Department of Lands. Grant administration costs should be included into county wide grant requests.

Boise County VFDs grant application is through the BLM program for VFD assistance and the FEMA grant program, grant application from county wide priorities should assist the Boise County VFD as grant recipients.

Numerous technical resources are available for wildfire mitigation. Internet home pages of Idaho Department of Lands, the U.S. Forest Service, the Bureau of Land Management, and NFPA can be accessed for additional information.

### **Wildfire Technical Resources:**

Idaho Department of Lands, internet address for information about state of Idaho lands is  
Website: [www2.state.id.us/lands](http://www2.state.id.us/lands)

Federal Wildland Fire Policy, Wildland /Urban Interface Protection  
Federal report describing areas that need improvement nationally  
Website: <http://www.fs.fed.us/land/wildfire>

National Academy of Public Administration, Wildfire Suppression: Strategies For Containing Costs  
Website: [www.napawash.org](http://www.napawash.org)

Bureau of Land Management, National Fire Plan, and links,  
Website: [www.blm.gov](http://www.blm.gov)

USFS Fire Sciences Laboratory  
[www.firelab.org](http://www.firelab.org)

**APPENDIX G**

**BOISE COUNTY VFD SURVEY 2003**

## **BOISE COUNTY VFD SURVEY 2003**

Boise County has 12 Volunteer Fire Departments and 189 volunteer fire fighters. All the VFDs have responded to wildfires with the county. The greatest impacts to these VFDs are funding, followed by acquisition of equipment.

The survey analysis of VFD needs indicates that 6 of the departments have a high priority need in communications equipment, 8 departments have high priority wildfire training needs, 7 of the fire departments have priority needs in Personnel Protective Equipment (SCBA, Bunker Gear, Wildfire PPE), and 10 departments have apparatus (engines, brush trucks, water tender) priority needs.

The first or second priority identified by eight of the twelve Volunteer Fire Departments is for additional facilities, new or expanded Fire Stations.



**APPENDIX H**

**REFERENCES**

## REFERENCES

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Boise County Fire Fighters Association, 2003 Fire Department Survey.

Boise County Fire Protection Guidelines For Residential Development in the Urban-Wildland Interface.

Boise County Subdivision Ordinance.

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Interagency Fire Education Initiative, Resource Management Education Unit, 2001, <http://fire.nifc.nps.gov/fire/ecology/docs/ecplinit.html>.

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National Academy of Public Administration, September 2002: Wildfire Suppression: Strategies For Contain Costs, published by the National Academy of Public Administration.

National Wildfire Coordinating Group, October 1999. Establishing fire Prevention Education Cooperative Programs and Partnerships.

Presidential Directive/HSPD-5: Management of Domestic Incidents

State of Idaho Strategy for Implementation of the National Fire Plan

State of Idaho: Land Ownership Status

U.S. Forest Service and Idaho Dept. of Lands: Wildfire Ignitions in Boise County

U.S. Forest Service, Boise National Forest document: Forest Risk Assessment.

U.S. Forest Service and Idaho Dept. of lands; Fire Regimes and Condition Class.

Video: Firewise Landscaping, Part 1- Overview

Video: Firewise Landscaping, Part 2- Design and Installation

Video: Firewise Landscaping, Part 3- Maintenance