

Lincoln County, Wyoming

Community Wildfire Protection Plan



2006

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**Lincoln County
Community Wildfire Protection Plan**

SIGNATURE AUTHORIZATION: My signature below verifies that I have reviewed and approved the Lincoln County Community Wildfire Protection Plan.

CHAIRMAN Date
LINCOLN COUNTY COMMISSIONERS
925 SAGE AVE
KEMMERER, WY 83101

COUNTY FIRE WARDEN Date
LINCOLN COUNTY
P.O. BOX 203
COKEVILLE, WY 83114

CHAIRMAN Date
SOUTH LINCOLN COUNTY FIRE DISTRICT
P.O. BOX 188
KEMMERER, WY 83101

CHAIRMAN Date
BEAR RIVER FIRE DISTRICT
P.O. BOX 99
COKEVILLE, WY 83114

CHAIRMAN Date
UPPER VALLEY FIRE DISTRICT
AFTON, WY 83110

STATE FORESTER Date
1100 WEST 22nd STREET
CHEYENNE, WY 82002

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Lincoln County, Wyoming Community Wildfire Protection Plan

Executive Summary

This plan will guide land managers, elected officials, planning departments and other citizen groups in their efforts to minimize the effects of wildfire upon the communities within Lincoln County. Implementation will require the collaboration of several jurisdictions including the Forest Service, Bureau of Land Management, State Lands, National Park Service, County Fire, Fire Districts, and local Fire Departments. Mitigation of fuels that increase wildfire potential is an ongoing task and the plan will require periodic review and amendment.

Background

Lincoln County is a diverse community with several types of land use patterns, vegetation, precipitation, and access issues. In the recent past, the Alpine 2 Fire and the Commissary Fire illustrated the need for comprehensive fire planning. Fuels reduction, road and water access improvement, homeowner education and subdivision design will be the basic goals of the plan.

The county is 4,000 square miles in size. Approximately three fourths of the land area is publicly managed. The population is approximately 16,000. The southern two thirds of the county consists of ranchland areas with hay meadows, high desert sagebrush areas and timbered foothills. Most of the population is located in the towns of LaBarge, Opal, Kemmerer, Diamondville and Cokeville. Some existing rural subdivisions continue to develop in the foothill areas. The northern third of the county consists of the Star Valley area on the Salt River drainage and the Greys River areas that are primarily in the Bridger-Teton National Forest. The population of Star Valley is predominantly rural with rather high growth rates in areas that interface wildlands. Only 30% of the Star Valley population is located within the towns of Afton, Thayne, Star Valley Ranch, and Alpine.

Introduction

Reducing wildfire risk to communities, municipal water supplies, and other at-risk Federal land as well as enhancing efforts to protect watersheds and address threats to forest and rangeland health, including catastrophic wildfire, across the landscape are a couple of "Purposes" of the "Healthy Forest Restoration Act of 2003 (HFRA)".

The Healthy Forest Restoration Act of 2003 allows local government, local fire departments, and the State agency responsible for forest management, in consultation with interested parties and the Federal land management agencies, to develop a Community Wildfire Protection Plan that identifies and prioritizes areas for hazardous fuel reduction treatments.

The Wildland-Urban Interface, Municipal Water Supply Systems, and epidemic of disease or insects are components of the Community Wildfire Protection Plan.

The County Commissioners have requested the County Fire Warden and the Office of Planning and Development to work with the fire districts and state forestry to develop a Community Wildfire Protection Plan for the county as described in the "Healthy Forests Restoration Act of 2003".

The Community Wildfire Protection Plan shall be a dynamic document subject to regular review and updates as necessary. The plan will be presented to the Lincoln County Planning and Zoning Commission for inclusion into the Comprehensive Plan. The plan will guide design and regulation of future development in the county. Of particular interest are the increasing demands for rural residential subdivisions as well as the increasing impacts of recreation uses on or near the public lands.

This document is the result of the County Commissioners' request. The document includes maps depicting eleven (11) areas within Lincoln County that have been identified and prioritized through the collaborative efforts of the signatories. The maps also depict the areas identified on the National Register as being "at risk" to wildfire. The areas of concern have been prioritized based upon fuel hazards, risk from wildfire, infrastructure, and other values such as view-sheds and watersheds. The drought experienced in recent years adds real credence that management of our forest resources is

imperative for much needed irrigation water as well. Epidemic insect and disease infestations and /or catastrophic wildfires serve no purpose for the community of Lincoln County, Wyoming.

Background:

Prior to the "Healthy Forests Restoration Act of 2003", Lincoln County, County Fire, state forestry, and federal wildland cooperating agencies within the county have taken an active role in beginning the needed work in the wildland urban interface.

- County Fire has met with the County Commissioners and the Office of Planning and Development in the hopes of adopting guidelines for future developments, obtaining a County Fire Resolution, and possibly cooperative funding for a full-time County Wildfire Mitigation Coordinator.
- Wyoming State Forestry Division, Lincoln County, and private landowners have completed mitigation work around homes in the Alpine area.
- Bureau of Land Management has completed an assessment and mitigation plan for the Kemmerer Resource Area and have initiated mitigation based upon the plan.
- Wyoming State Forestry Division has written an assessment and mitigation plan for the Alpine, Star Valley Ranch, and Commissary Ridge areas.
- Fossil Butte National Monument has developed, and implemented a fire management plan that includes prescribed fire to reduce fuel loads within the National Monument. (Fossil Butte Plan approved 12/17/04)

Management Considerations -where applicable to the respective jurisdictions:

All jurisdictional entities should seek opportunities to develop water sources, where feasible, that would be applicable to wildfire suppression, structure protection, and structural firefighting. These water sources may include spring development, dry hydrants, pond restoration, and storage facilities

- **USFS:**
 1. Continue working with special use leases to perform mitigation work -seek additional opportunities to provide incentives.

2. Continue implementing the prescribe burn program in place.
 3. Where applicable, use harvests and thinning to maintain diversity in both age- class and stand densities to curtail epidemic insect & disease outbreaks and to reduce the potential for large scale stand replacement wildfires.
- **BLM:**
 1. Where applicable, use harvests and thinning to maintain diversity in both age - class and stand densities to curtail epidemic insect & disease outbreaks and to reduce the potential for large scale stand replacement wildfires.
 2. Continue to implement prescribe burning to facilitate fuels reduction.
 - **County & Municipal Governments:**
 1. Seek to establish fire resolutions
 2. Develop fire protection guidelines/rules that enhance life safety & structure survivability as well as suppression effectiveness.
 3. Coordinate future developments with adjacent jurisdictions or property owners
 - **Fossil Butte National Monument:**
 1. Continue to implement the Monument's fire management plan to reduce the potential for large-scale, stand replacing wildfires and wildfires that spread beyond the Monument boundary
 - **County Fire:**
 1. Continue work with private ownerships:
 - .Emphasize landowner responsibilities to create fire resistant structures/communities.
 - .Information & Education regards to "Fire Wise" opportunities. .Seek hazard fuel reduction incentives/funding if appropriate. .Develop evacuation plans if appropriate/needed.
 - .Evaluate infrastructure needs such as access and turnarounds - especially those relevant to firefighter safety.
 2. Seek funding opportunities for infrastructure needs if needed.

- **WSFD**
 1. Continue assistance to County Fire with assessments and mitigation needs as necessary.
 2. Continue assistance to County Fire with silvicultural recommendations on private land where necessary.
 3. As warranted, continue coordination and assistance to the county and municipal governments, the planning commission, fire districts, fire boards, and fire warden in regards to funding opportunities, mitigation coordination/coordinator, and other facets of fire protection for the health and safety of the county citizenry as warranted.
 4. Continue assistance to County Fire with hazard fuel reduction through cost- share programs as needed and practical.

Areas of Concern -by priority

1. Alpine
2. Star Valley
3. Pomeroy Subdivision
4. Cokeville
5. Fontenelle
6. Pine Creek Ski
7. Canyon Club
8. Nugget
9. Hobble Creek
10. Sage Jct.
11. Twin Creek

Enabling Authority

18-5-208. Coordination of planning efforts with federal agencies.

The board of county commissioners of a county which has officially adopted a comprehensive plan pursuant to W.S. 18-5-202(b) may participate in efforts to coordinate the plan with federal regional forest or other resource management plans as provided in the Federal Land Policy and Management Act of 1976 and federal regulations adopted pursuant to that act, including, but not limited to, Title 36, of the Code of Federal Regulations, part 219.7 and Title 43, of the Code of Federal Regulations, part 1610.3.

1. Comprehensive Plan

V. PUBLIC LANDS

GOALS:

The County will actively participate in all public land management decision-making processes and anticipates federal agency participation in county planning efforts and activities.

BACKGROUND:

Lincoln County contains approximately 1.8 million acres of publicly managed lands (See Map 4). The economy of Lincoln County and its respective communities is dependant upon the multiple uses of these lands. Due to these facts it becomes imperative that Lincoln County actively participates in planning for the wise use and management of these lands. Provisions in the Federal Land Policy and Management Act (FLPMA), Council on Environmental Quality and other management and planning regulations provide for Lincoln County to engage in and have a strong voice in the planning and decision making process associated with managing its public lands (See Appendix 3).

OBJECTIVES:

1. Develop a working relationship with public land managers and coordinate efforts on wildlife, grazing, access, economic, social and cultural issues.
2. Promote and support public land uses consistent with orderly development and efficient use of renewable and non-renewable resources.
3. **Provide a County Public Lands Plan for federal and state land resources issues.**

VI. ENVIRONMENTAL RESOURCES

GOAL:

Protect and manage the natural resources of Lincoln County.

BACKGROUND:

Lincoln County has always been dependant upon the resources located within the county for its economic base and sustainability of the communities located within its borders (See Maps 5ae). The wise use and conservation of these resources is essential to the continuance of economies, customs and culture that has existed for several generations.

There are many reasons why people have chosen to live in Lincoln County. One of these reasons is the abundance of unspoiled environmental resources. For the past several years Lincoln County has experienced a large amount of growth which in turn has put pressure on the environmental resources (See Appendix 4). The citizens of Lincoln County feel a strong need to protect these resources and still allow for growth. (See Maps 6a & 6b)

As of the spring of 2004, over 4,800 subdivision lots existed in Lincoln County with approximately 30% of those lots having a structure located on the lot. Each of these lots will have a septic system to deal with the liquid waste, **an increased demand for water, roads**, and solid waste. All of these impacts create an additional consumption of land and resources.

OBJECTIVES:

- 1. Prevent on-site erosion and impacts to streams.**
- 2. Promote safe and adequate water quality and quantities.**
3. Identify locations and methods for the disposal of solid, liquid and agricultural waste.
4. Protect the riparian, wetland and 100 year flood plain areas of Lincoln County from encroachment and impacts by development.
5. Guard against air pollution and maintain the air quality of the county.
6. Promote the use of Transfer of Development Rights (TDR's) and Purchase of Development Rights (PDR's) for the sustainability of environmental resources.
7. Guard against the production of light pollution in Lincoln County.

VII. HAZARDS

B. Natural and Man Made

GOAL:

Minimize the loss of life and property due to natural or man-made hazards (I.E. **fire**, slope movement, avalanche, mine subsidence, etc)

The Fire Plan may be considered by the County Commissioners and the Planning and Zoning Commission for inclusion into the Lincoln County Comprehensive Plan.

APPENDICES

- A. Community Descriptions**
- B. Communities At Risk Matrix**
- C. Fire Hazard Severity Form**
- D. Generalized Fuel Treatment Objectives and Guidelines**
- E. Maps**
- F. Individual Project Plans**

APPENDIX A COMMUNITY DESCRIPTIONS

Alpine

The Town of Alpine is located at the far northern part of Lincoln County. As with most of the Star Valley area, Alpine is experiencing a rapid growth in population and development of private lands through out the area. The growth is mostly private residential which consist of single family dwellings and some denser developments of apartments with businesses scattered through out.

There are several areas of concern in the Town of Alpine and the areas that surround it.

Lakeview Estates Subdivision is located on the east side of Alpine and has homes built into the forested steep hillside. The lots range in size from a quarter of an acre to 1 acre. Most of the homes built in the wooded areas face the problem of steep narrow roads, many which have only one way in and out. Some of the roads have sharp turns that make maneuvering the larger fire apparatus very difficult. In the winter months some of the roads are not assessable under adverse conditions. The wooded areas have heavy fuel loads of dead and standing trees and a lot of down and dead material with heavy underbrush. The Town of Alpine does have a water system and most areas where hydrants are located have adequate water flows. Many of the hydrants are spaced more than 1000 feet apart which starts to cause some trouble in moving water for fire fighting.

Rees Subdivision: This subdivision is located northeast of Alpine and is expected to be annexed into the Town in the near future. This subdivision is located in a wooded area that abuts National Forest. All of the lands located there have a heavy fuel load with many dead and standing trees, down and dead materials with heavy underbrush. Roads are narrow with driveways that are long with no turning radius big enough for fire vehicles. Some homes are built on steep down slopes.

A water system was put in the Rees subdivision in 2005 and now has water hydrants located 600 feet apart. The main road is a one way road and under normal conditions is the only way in and out. The Ridge Estates, a new development to the west of Rees has put in a road that connects the subdivisions; this connection is for emergency services only and is gated. The homeowners association is involved in the North Lincoln County Fuels Reduction Program and is working on an evacuation plan.

The Ridge Estates is a new development that started in 2005 and will be annexed into the Town of Alpine in the near future as well. This is to the west of Rees and has the same problems of dead and standing trees, heavy fuel loads of down and dead materials with heavy underbrush. The road going in is a narrow two way with steep grades that make it dangerous for fire apparatus in the winter months. This subdivision has a water system with good water flows, the lots range in size from a quarter acre to three quarter acres. The homeowners that built in the wooded areas are participating in the North Lincoln County Firewise Program.

North of the Ridge Estates and on the east side of highway 89 are a number of private dwellings built on wooded lot some of which border National Forest. These homes have the same problems as many of the before mentioned subdivisions. They are built in wooded areas with heavy fuels loads. Most roads are very narrow with steep grades and sharp bends. There is very little room for fire apparatus to move

around, many roads are dead ends. There are no water systems in this area and in the case of fire water has to be shuttled in.

The area north and west of the Alpine community is mostly flat grassland that is bordered on the west by Palisades Reservoir. Homes built in this area have little or no threat from wildfire.

Land outside of the Town of Alpine on the south borders the BTNF on the east and borders Idaho on the west. As the land heads south to Etna there is a mixture of subdivisions and private parcels of land. On the west side of Highway 89 there are a number of homes built in forested land. Alpine Retreat 1 & 2 is a subdivision on the west that abuts up to Idaho. The road into Alpine Retreat is a narrow one way road with steep grades and sharp bends and little annual maintenance. There is no water system and at this time no electrical power to the area. As with the rest of the area new homes are added each year. Homes in here are involved in the Firewise program.

Continuing south on highway 89 south from Alpine to Etna there is old and new development on both the east and west sides of the valley. Many homes are in forested areas and abut national forest. Most of these homes are at danger from wildland fires. The older developments have narrow roads with steep grades and sharp bends. Most have no water system. The fuels loads rate from light to heavy with a lot of standing dead trees and heavy under brush.

The newer developments have better roads and water systems, but many still face the threat of wildfire because of heavy fuel loads. Continuing education of homeowners along with participation of local government has and will help reduce this threat The North Lincoln County Firewise Program now reaches from the Alpine community to the Salt River Heights out side of the Town of Thayne.

The goals of the Firewise Program are to continue to educate the homeowners in Star Valley about fire prevention outside of the home as well as inside. To help homeowners develop Firewise Programs that includes evacuations plans and annual preventive maintenance. Emphasizing the responsibility of the individual homeowner as well as partnering up with local fire departments, town and county governments.

Star Valley

In the Afton and Thayne area we have several areas for concerns, not only for fire but an all response.

Salt River Heights: This area located off of U.S. HWY. 89 Mile post 96 in the Narrows located on the east side. Access to this subdivision is a steep grade and has tight turns making it hard for a response in the summer and almost imposable in the winter. There is a fuel load problem with a mix of brush and ladder fuels mixed with conifers. There is only one way in and out of this area, and no water supply.

Narrows Vista Subdivision: It's off county road 128 and behind Salt River Heights. It has the same issues as Salt River Heights. We respond there the same way.

Star Valley Ranch: SVR has accesses problems also along with water supply. The south end the homes are mostly located on the golf courses or on the foothills in the aspen trees with some brush and ground fuels. North Star Valley Ranch has more of the road problems and the homes are built in the

trees. Most of the trees are aspen mixed with conifers and there is a lot of dead brush and trees - making it a high risk for fire.

Bedford Turnerville: Some of the same issues as Star Valley Ranch mainly along the foothills areas of concern Strawberry Subdivision, Fertile Acers, Pine View Estates, and Green Valley Subdivision. They all have access, water, and fuel load problems.

Afton area: Does not have the same issues however along the foothills on the east side of the valley; you have ground fuels with no water supply. The west hills access can be an issue when shuttling water, the big trucks need room to turn around and pass each other. It has become a bigger issue with homes going in.

Pomeroy Subdivision

This area includes the subdivisions of Commissary Ranches, Spring Canyon Ranches and Aspen Springs.

Commissary Ranches: Located 20 miles from Kemmerer off County Road 306. The land ownership surrounding the area is BLM, State Forestry and private. The properties range in size from an acre to several acres. Dwellings are generally log cabins with metal roofs. There are some dwellings with wood siding and asphalt roofs. There are just a few with shake roofs. A Firewise program has been established and this summer, 22 properties were assessed.

There are three main entries into Commissary Ranches. The roads are narrow and dirt. They are minimally maintained and there is no winter maintenance (most of the dwellings are second homes). The roads inside the subdivision are steep in places and narrow. Road signage is a minimum and many properties do not have addresses on them.

Spring Canyon Ranches: Located 30 miles from Kemmerer off of County Road 306. The Spring Canyon Ranches have similar land ownership and property sizes to that of Commissary Ranches. Dwellings and the roads are also similar. Next summer, plans are to establish a Firewise program in Spring Canyon Ranches.

Aspen Springs: Located 10 miles from Kemmerer off of US Hwy. 30. The land ownership in the area is primarily BLM and private. The properties range in size. The dwellings are mobile homes with out buildings for horses, equipment, etc.

The roads are dirt and maintained. Residents live there year round. The road system is adequate.

The Hazard Level for this area as determined by the International Urban-Wildland Interface Code would be moderate to high.

Due to the distance from an organized fire department and the non-existence of hydrants, properties in these areas would be at great risk in the event that fire approaches the area.

Cokeville

The community of Cokeville lies near U.S. Highway 30, 45 miles north and west of Kemmerer and 54 miles south of Afton. Land ownership within the fire management area is primarily private with some BLM and State ground intermixed. The community of Cokeville itself has a good water supply and fire department to respond to fire interface needs. The perimeter of the community has grass meadows and sage brush communities surrounding it. Structures within the community are of mixed construction and type, from brick to log to ordinary frame construction with mostly asphalt shingles or steel roofing. Two miles south and west of Cokeville is the Taylor Subdivision, or Longview Estates, a community of 30 to 40 year round structures that has a sage brush interface on three sides of it. This area is located along County Road 207 and has limited access, with two main roads, that both intersect County Road 207. Water supply for this area is residential wells, leaving fire protection to the shuttling of water from nearby Cokeville. There have been several fires in and around this subdivision in the recent past, some due to natural causes, such as lightning, and also man made fires. The sage brush community is directly west and south of the subdivision, which is also directly in line with the prevailing winds in the area. As of yet, no fire protection evaluations or treatment plans have been implemented in this area.

Fontenelle

Pine Creek Ski

The Pine Creek Ski Area is located on County Road 204, approximately 7 miles east and north of Cokeville. This area is significant because of the economic impact it has on the Cokeville area and the investment that Lincoln County has in the facilities here. As a ski area, the surrounding community is steep slopes that are conifer cover and also sage brush. The ski lodge and the ski lift are the main areas of concern here due to their cost. There is only one road in and water supply is limited to the water in Pine Creek. Fire suppression efforts come from Cokeville and would be shuttle and drafting operations. This area is prone to natural fire hazards, such as lightning, with a few strikes and fires nearly every year. The lodge is constructed of a cement basement with log covering the vast majority of the building.

Canyon Club

The Canyon Club area has two places of concern for fire prevention and protection. Located along U.S. Highway 89 just inside the Wyoming border near Geneva, Idaho and 35 miles south of Afton, this area consists of conifer tree stands and sage brush communities. The Canyon Inn is a dinner club and hotel with common frame construction that lies between the highway and Thomas Fork Creek. Thick underbrush, willows, conifers, and sage brush all surround this structure. The only access is on and off of the highway directly north of the buildings. The fire department response for this area is from Cokeville, 25 miles to the south. The only water supply is the well for use by the facility and Thomas Fork Creek, which is frozen in winter months.

The other area of concern is 2 to 3 miles east on US Highway 89 where a small subdivision of part time and full time residents have homes for outdoor use, like hunting, in a loose community. The main road, Homestead Road, forks from the main BLM road shortly after leaving the highway. This is the main

road in and out of the area, fire protection efforts are again from Cokeville and have to access the area from US Highway 89 and 28 miles away. This area is more immediately surrounded on all sides with a sage brush community with conifers on the surrounding ridges and hills. Water supply for this area would be shuttled water and drafting operations from a small creek and Thomas Fork Creek near the highway.

Nugget

Hobble Creek

The Hobble Creek area is located in a remote area within the Bridger-Teton Forest near Cokeville. There is a small private lot of land 2 miles north of the Hobble Creek campground near Lake Alice. This area is accessed from the Big Park area of the forest, which is 35-40 miles from Cokeville, the area of fire protection. This area is surrounded by dense conifer stands on steep slopes. The few buildings there are at considerable risk of wildfire if one should strike this area. There is only one road in and out of this area and response would be small type 6 engines due to the nature and size of the road. Water could only be drafted from Hobble Creek to supply fire suppression efforts.

Sage Junction

The Sage Junction area lies half way between Cokeville and Kemmerer with two main areas of concern. One is a small residential area near the railroad tracks and US Highway 30, the other is a commercial property on Wyoming Highway 89, 3 miles west of Sage Junction. Both areas are surrounded by a sage brush community and wildfires are due occur here semi-regularly. Fire suppression efforts come from both Cokeville and Kemmerer, both of which are approximately 22 to 23 miles away and respond as mutual aid to one another in this area. The water supply is shuttle and drafting when the small creek near this area is running water or not frozen over.

Twin Creek

APPENDIX B

Four wildland/urban conditions have been identified for use in the wildland urban interface (Norton 2002). These include the Interface Condition, Intermix Condition, Occluded Condition, and Rural Condition. We have included a fifth one, Undeveloped Condition. Descriptions of each are as follows:

INTERFACE CONDITION: a situation where structures abut wildland fuels. There is a clear line of demarcation between the structures and the wildland fuels along roads or back fences. The development density for an interface condition is usually 3+ structures per acre.

INTERMIX CONDITION: a situation where structures are scattered throughout a wildland area. There is no clear line of demarcation; the wildland fuels are continuous outside of and within the developed area. The development density is in the intermix ranges from structures very close together to one structure per 40 acres.

OCCLUDED CONDITION: a situation, normally within a city, where structures abut an island of wildland fuels (park or open space). There is a clear line of demarcation between the structures and the wildland fuels along roads and fences. The development density for an occluded condition is usually similar to that found in the interface condition and the occluded area is usually less than 1,000 acres in size.

RURAL CONDITION: a situation where the scattered small clusters of structures (ranches, farms, resorts, or summer cabins) are exposed to wildland fuels. There may be miles between these clusters.

UNDEVELOPED CONDITION: parcels of land that have no structures, other than maybe fences, power lines, gas line, etc., that are of scenic, water, wildlife habitat, agricultural livelihood, or other special value.

APPENDIX B

LINCOLN COUNTY COMMUNITIES AT RISK

Communities at Risk	Priority Ranking	Risk Category	Associated Communities, Areas, & Developments	General Legal Description by Township and Range
ALPINE	1	INTERMIX / INTERFACE	Town of Alpine, Alpine Village 1,2,3; Payne; Miller-Payne; Wildflower; Indian Creek; Blue Lake Estate; Archie Hill; Leon Livingston; Alpine Meadows; Palisades Pines; Lazy B; Aspen Ridge Estates; Meadow Ridge Estates; Flying Saddle; Rees; and Peters subdivisions, and scattered individual homesites (Federal Register)	T27N, R118 & 119W
CANYON CLUB	7	INTERMIX	Scattered ranches and Canyon Springs subdivision (Federal Register)	T28N, R118, 119, 120W
COKEVILLE	4	INTERMIX	Scattered ranches, Taylor subdivision, and residential homes (Federal Register)	T24 N, R119 ?& 120W
FONTENELLE	5	INTERFACE	Scattered ranches and summer / recreational cabins (Federal Register)	T25N, R116 & 117W
HOBBLE CREEK	9	INTERMIX	Summer / recreational cabins (Federal Register)	T28N, R117 1/2W
NUGGET	8	INTERMIX	Scattered ranches and residential homes (Federal Register)	T21 & 22N, R116W
PINE CREEK SKI	6	INTERMIX	Scattered ranches, Smith's Fork subdivision, and Pine Creek Ski resort area (Federal Register)	T25N, R118W
POMEROY SUBDIVISION	3	INTERMIX/ INTERFACE	Spring Canyon and Commissary Ranch subdivisions, summer /recreational cabins, scattered ranches (Federal Register)	T23&24 N, R116W
SAGE JCT	10	INTERMIX	Scattered ranches (Federal Register)	T21N, R119 &120W
STAR VALLEY	2	INTERMIX/ INTERFACE	Towns of Afton, Star Valley Ranches, and Thayne, Lonesome Dove Ranch; Moreno; Packsaddle; Alpine Retreat 1,2; Trail Ridge; Shadow Dancer Estates; and Salt River Cove subdivisions, and scattered ranches (Federal Register)	T30 – 36N, R118 & 119W
TWIN CREEK	11	INTERMIX	Scattered ranches and homesites (Federal Register)	T21N, R117 & 118W

APPENDIX C

FIRE HAZARD SEVERITY FORM

A. Subdivision Design	Points	D. Roofing Material	Points
1. Ingress/Egress		Class A Fire Rated	1___
Two or more primary roads	1___	Class B Fire Rated	5___
One road	2___	Class C Fire Rated	10___
One-way road in, one-way road out	5___	Non-rated	20___
2. Width of Primary Road		E. Fire Protection Water Source	
20 feet or more	1___	500 GPM hydrant within 1000 feet	1___
Less than 20 feet	3___	Hydrant farther than 1000 feet or draft site	2___
3. Accessibility		Water source 20 min. or less, round trip	5___
Road grade 5% or less	1___	Water source farther than 20 min., and 45 min. or less, round trip	7___
Road grade more than 5%	3___	Water source farther than 45 min, round trip	10___
4. Secondary Road Terminus		F. Existing Building Construction	
Loop roads, cul-de-sacs with an outside turning radius of 45 feet or greater	1___	Non-combustible siding/deck	1___
Cul-de-sac turnaround, Dead-end roads 200 feet or less in length	3___	Non-combustible siding, combustible deck	5___
Dead-end roads greater than 200 feet in length	5___	Combustible siding and deck	10___
5. Street Signs		G. Utilities (gas and/or electric)	
Present	1___	All underground utilities	1___
Not present	3___	One underground, one aboveground	3___
B. Vegetation (IUWIC Definition)		All above ground	5___
1. Fuel Types		Total for Subdivision	
Light	1___	Moderate Hazard	40-59
Medium	5___	High Hazard	60-74
Heavy	10___	Extreme Hazard	75+
2. Defensible Space			
70% or more of site	1___		
30% or more, but less than 70% of site	10___		
Less than 30% of site	20___		
C. Topography			
8% or less	1___		
More than 8%, but less than 20%	4___		
20% or more, but less than 30%	7___		
30% or more	10___		

APPENDIX D

GENERALIZED FUEL TREATMENT OBJECTIVES AND GUIDELINES

These options provide example management techniques that can be generally applied to vegetative cover types found in Lincoln County. Nonetheless, a professional should be consulted in determining management techniques in specific forest stands.

Management Objectives:

The greatest reduction in potential wildfire intensity will be achieved by prioritizing treatment as follows in conifer stands:

1. Remove excessive down material.
2. Remove ladder fuels.
3. Reduce canopy closure/density.
4. Maintain fine fuels to a minimum through sound grazing practices.
5. Remove excessive down material.
6. Remove ladder fuels.
7. Reduce canopy closure/density.

Raise canopy base heights to at least 10-15 feet above the ground in mixed species stands (lodgepole, Douglas fir, aspen). Basal area (BA*) less than 80 square feet; open canopy, crowns at least 20 feet apart; multiple ages especially with aspen recruitment.

Rejuvenate aspen stands as they typically exhibit much lower intensity fire behavior.

Break up sagebrush continuity to reduce potential wildfire intensity. Achieve a canopy coverage of no more than 30%.

Along roads, perimeters of parking areas and property lines between federal and private lands in rural communities and undeveloped parcels construct shaded fuel breaks a minimum of 50 feet, preferably 100 feet, from the edge of the travel surface both sides or on both sides of the property line.

Along trails use the shaded fuel break prescription a minimum of 25 feet both sides.

Around all structures use a defensible space prescription. **Note:** Because of the nature of the fire service in Wyoming; 95% of the departments are volunteer, and of the remoteness of many of the structures to the nearest fire department, areas around structures and the structures themselves should be made as survivable (able to withstand a fire before the fire department arrives) as possible.

Vegetation Objectives:

Remove ladder fuels within all cover types and maintain this condition over time. Open canopy to prevent proliferation of a crown fire and maintain this over the life of the stand.

Remove over-story trees in stands that would require the removal of mature trees for generative success of the stand as well as increased safety within the forest.

Remove conifers from aspen stands to set back succession. Provide structural diversity in aspen community type across the landscape.

Break up sagebrush continuity to achieve a canopy coverage of no more than 30%.

Maintain fine fuel loadings to a minimum through good grazing practices

Treatment objectives:

Thin all conifer stands to a BA of 80 to 100 square feet with an average crown spacing of 20 feet. Remove ladder fuels. Raise crown base heights on eight (8) inch diameter trees and larger to 8-16 feet throughout the treatment units. Reduce surface fuels of large down woody material to 5-7 tons/acre and maintain this condition over time. Remove conifers from aspen clumps and increase aspen regeneration in these areas.

Shaded Fuelbreak Prescription:

Minimum spacing of 30 feet between tree canopies,

Spacing between understory and overstory fuels a minimum of 15 feet to prevent laddering

All trees pruned to a minimum height of 12 feet from the ground but no more than 2/3 of the total live crown height

Density of the understory canopy a maximum of 30% cover.

Clumps of trees (no more than 4 stems per clump) may be left and treated as a single tree.

Crown spacing to the nearest tree should be a minimum of 40 feet from clumps.

All spruce, subalpine fir, Douglas fir, and lodgepole pine currently infested with bark beetles will be removed.

Defensible Space Prescription:

Zone 1 (30 feet around all structures):

Grass should be maintained as a lawn.

Shrubs should be no taller than 18" and should be fire resistant. (see Appendix D for a potential list)

Use of broadleaf trees or conifers that lend themselves to lower branch pruning.

Spacing between tree crowns should be a minimum of 30 feet.

All trees should be pruned to a minimum of 12' above the ground but no more than 1/3 of the living crown.

No down dead material on the ground.

Maximum of one standing dead (no needles) tree.

All conifers infested with bark beetles shall be removed.

Zone 2 (the area between 30 feet and 60 feet from structure):

Grass should be no higher than 8 inches and should be cut when curing has occurred

Spacing between shrubs should be twice the diameter of the shrub foliage.

All trees should be pruned a minimum of 10' from the ground but no more than 1/3 of the live crown.

All down dead material that is 50 % sound should be removed from the ground.

Spacing between tree crowns should be a minimum of 15 feet.

All conifers infested with bark beetles shall be removed.

Zone 3 (the area from 60 feet to 200 feet from the structure):

Trees should have a minimum of 6' between crowns

Trees should be pruned a minimum of 6' above the ground

Clumps of trees (no more than 4 stems per clump) may be left and treated as a single tree with a minimum crown spacing of 15' to the nearest crown.

Down dead material should be no higher than 12 inches from the ground.

Heavy accumulations (more than 30 % coverage of down dead material) of sound (more than 50% sound) down dead material should be removed.

A maximum of 2 standing dead trees (no needles present) per acre.

All conifers infested with bark beetles shall be removed.

Brush Communities

Convert brush communities to grass communities 50 to 100 feet around structures; fences, compressor sites, above ground pipelines, power lines, buildings, and well sites. Maintain thru mechanical or prescription burning practices.

Continue with a cooperative prescribe burn program involving private, state and federal lands when possible.

“Leave” Trees

Aspen Areas – Leave all aspen trees. Aspen clumps (clump = 3 or more aspen). Leave **NO** live conifers within the clumps and within 10-20 feet of the clump if the clump is composed of mature trees. If clump is composed of seedlings or saplings, remove all live conifers within clump and within 10-20 feet of the clump.

Conifer stands should be thinned to a basal area* of 80. This will be about 100 to 150 trees per acre. The spacing would be between 20 to 25 feet between tree stems. If clumps of trees are to be left, clumps should include no more than 8 stems and the surrounding vegetation should have a spacing of 30 feet between the outer edges of the crown of the clump. All ages and species can be maintained within the stand for diversity, however, if pruning is not done, subalpine fir and spruce trees would be the preferred species for removal over Douglas fir and lodgepole pine.

In pure lodgepole pine stands and other coniferous stands where the succession stage would like to be changed to the initial stage, small clear-cuts no larger than 30 acres in size may be utilized.

All down dead material (that is at least 60% sound) and slash created from cuttings that is 3 inches in diameter and larger should be piled for burning, chipped and spread, or removed from the stand. All other slash and remaining chipped material should scattered to lie within 6 inches of the ground. Standing dead trees left for snags should be 80% needle less and should be no more than 3 per acre. When leaving snags, consider spike topped, dead topped living trees, trees as alternatives to standing dead.

Prune limbs on remaining trees 6'-15' from the ground. Do not remove more than 50% of the live crown of the tree.

Prescribed Burn Aspen Objectives

Aspen – Immediately post burn attain 70-90% of understory vegetation scorched.

Immediately following burn 50-80% removal of duff and litter.

Attain > 50-80% mortality of aspen trees (>5.9"DBH) within one year of burn.

Attain > 85% conifer mortality within one year of burn.

Attain < 20% bare ground cover, within 5 years post-treatment.

Attain 2000-5000 aspen stems/acre at 6ft height over 70% of the treatment area with a strong terminal leader.

Attain at least 1000-2000 aspen stems/acre at 10-15 ft. height with a strong terminal leader, within < 15 years post treatment.

Maintain ungulate herbivore levels at < 30% browse levels of terminal, main leader.

(***BA**: Basal Area. A measure of relative density of trees in a stand. A measure of the square footage of tree stem material per acre.)

Wildlife Considerations

The varied habitats that exist within the different communities makes it hard to generalize habitat treatments. When specific projects are considered, the Green River office of the Game & Fish Department, both terrestrial and aquatic biologists, will be consulted to determine needed mitigation actions. However, all fuels projects will have limited or no activity between November 15 and April 15 to minimize disturbance in crucial winter ranges of big game. Surface disturbance with ¼ mile of sage grouse leks will be avoided during March 1 to May 15.

Projects involving known raptor nests will have very limited activity to no activity during the period between February 1 to July 31 for the critical nesting and brood rearing period.

When locating and improving fill and drafting sites along creeks, rivers, ponds, and reservoirs, care needs to be given to not alter the stream channels. If a need exists for channel modification, the fishery personnel with the Green River office of the State Game & Fish Department should be contacted for direction.

During suppression actions, firefighters should try to use water sources within the same drainage. This will minimize the spread of nuisance species, such as whirling disease parasites, into new drainages.

Roads

There are several roads that provide access to fire suppression apparatus thus allowing the suppression forces to keep wildland fires small. These roads could be kept open for recreational use, fuel reduction projects and access for suppression activities. If roads need to be closed for public safety, wildlife habitat protection, or other reasons, they should be reclaimed to prevent erosion by out sloping, water barring, and seeding and blocked with a gate and or signed to prevent public vehicular access but could allow for travel by fire suppression action resources.

Generally speaking, all wildland interface subdivisions in the county lack the necessary road width to safely evacuate homeowners and at the same time allow for ingress of emergency response vehicles. The majority of these subdivisions have one way in and one way out, with little or no turn around space for fire trucks, and very few pull outs or widenings. An effort should be made to widen and improve these roads for better access for fire equipment.

Signing of state, county and subdivision roads is very important. Work needs to continue in the maintenance of these signs and new street signing in subdivisions along with correct rural numbering be put up. With the purchase of new fire apparatus, weight limits of existing bridges should be check and upgraded where needed.

Appendix E

MAPS

APPENDIX F

Individual Project Plans

As individual projects are planned, they will be included for additions to this plan.

Future Bureau of Land Management Kemmerer Field Office projects include but are not limited to the following:

Red Canyon Prescribed Burn in Township 21 North, Range 118 West

Elk Mountain Prescribed Burn in Township 20 North, Range 118 West

Pine Creek Ski Area Fuels Reduction in Township 24 North, Range 118 West

Bartlett Creek Forest Health in Township 25 North, Ranges 115 and 116 West

Spring Canyon / Commissary Ranch Fuels Reduction in Township 24 North, Range 116 West

