Chapter 1 – Introduction

Purpose and Scope

The Wild Connections Conservation Plan (WCCP) proposes an ecological approach to managing the lands in and around the Pike and San Isabel National Forests. The Upper Arkansas and South Platte Project (UASPP) has facilitated the Wild Connections planning since 1995. Working in collaboration with local groups and individuals, we inventoried more than 100 roadless areas in the two watersheds, completed GIS analyses, sought public and expert input, and crafted this Wild Connections Conservation Plan. The WCCP provides a scientifically based framework for conservation at many levels:

- It contains specific recommendations for the Pike-San Isabel forest plan revision.
- It is part of the larger ecoregion efforts exemplified by the Southern Rockies Wildlands Network Vision created by the Southern Rockies Ecosystem Project.
- It is a framework for local conservation initiatives by civic and conservation groups.

We formally submit this Wild Connections Conservation Plan to the Pike-San Isabel Forest Plan Revision team for consideration as an option during the collaborative process for revision of the Forest's Land and Resource Management Plan. It also serves as a case study as to how principles of conservation biology can be feasibly applied to actual management practices within the Pike-San Isabel National Forest. This proposal is based on sound conservation biology principles, with supporting expert and ecological/species data sources and cited documentation. Most important, this proposal is ***realistic, feasible, and implementable***. Further information on our approach is detailed in Chapter 2 – The Wild Connections Methodology.

Although this plan is designed for submission to the Forest Service for the Pike-San Isabel Forest Plan Revision, it does contain information and data on surrounding critical lands outside of the Forest Service's immediate jurisdiction. Wildlife movements and maintaining sustainable ecosystems do not adhere to political boundaries, and thus our scope is one of landscape connectivity in the spirit of conservation biology.

Goals and Objectives

Setting goals and objectives with the intent to identify and alleviate current critical threats and impacts to biological diversity will inherently address and help mitigate the underlying **causes** of current ecological dysfunction. Only by addressing and solving the underlying causes can we have the greatest potential for preventing a recurrence of the same problems in the future. Merely treating the symptoms only results in temporary relief and is ecologically and economically inefficient.

Therefore, the primary goal of this conservation plan is ***to protect and restore the native biological diversity of the Pike-San Isabel National Forest***. A secondary goal is ***to promote sustainable interactions between the human society and the natural environment of this National Forest.*** In circumstances in which there is insufficient information available to gauge the impacts of management activity, deference must be given to protecting native biological diversity.
Utilizing the framework of conservation biology, and those of Noss and Cooperrider (1994), UASPP has identified the following fundamental objectives that move towards the fulfillment of the above major goals:

- Employ proactive management strategies and policies that solve and mitigate current threats and pressures to our public lands, rather than solely rely on treating the symptoms of current

damage and imbalances;
- Protect large, remaining areas of primitive and wild habitat within the system by implementing strictly protective management;
- Represent, expand and diversify the current portfolio of protected areas to include sustainable, large areas of all native ecosystem types, including all successional stages and natural ranges of variability, as well as to include lower elevation ecosystems, such as ponderosa pine forests and piñon-juniper woodlands;
- Secure additional protection of habitat and prevent further landscape fragmentation in order to restore connectivity between the large wild 'core' areas to ensure the natural ability of species to disperse and migrate;
- Protect and restore ecologically effective populations of all native species once abundant to the Pike-San Isabel, including large carnivores, in natural patterns of abundance and distribution;
- After scientific study, control and eradicate invasive exotic species which are detrimental to the ecosystem;
- Protect and restore ecological and evolutionary processes, such as disturbance regimes, hydrological processes, nutrient cycles, and biotic interactions;
- Manage landscapes and natural communities to be responsive to short-term and long-term environmental change and to maintain the evolutionary potential of the biota;
- Build a model of sustainable human habitation and land use that is consistent with conserving both native biodiversity and local economies.

Layout and Design

Chapter 2 – The Wild Connections Methodology details our approach, reasoning, science based analysis, and data sources used in creating our detailed proposal.

Chapter 3 – Forest-Wide Recommendations contains over-arching management guidance, compatible with conservation principles, for general issues that are prevalent across the entire Pike-San Isabel National Forest, irrespective of theme or location. For example, invasive species, fire management, and recreation are a few of the issues addressed.

Chapter 4 – Thematic Approach to Land Management defines the terminology and sets the land management approach employed by this proposal. This proposal utilizes management ***Themes***, or zones, to geographically distribute ***Desired Conditions*** across the forest. ***Objectives***, ***Guidelines***, and ***Suitability of Areas*** analyses serve to help guide specific project level planning that will work towards achieving the ***Desired Conditions*** for specific areas and themes.

Chapter 5 – Complexes: Area-Specific Management Recommendations contains our detailed, area-specific proposal utilizing the theme based approach to land management. As an organizational tool, this proposal divides the Pike-San Isabel National Forest into eleven separate ***Complexes***, based on geo-physical characteristics of the land such as mountain ranges, parklands or canyon systems. Each complex narrative provides details and justifications for our management recommendations for specific areas.

Chapter 6 – Landscape Connectivity: Other Lands in the Pike-San Isabel Region discusses the other lands critical to both habitat and connectivity, such as adjacent National Forests, state parks, and BLM lands. Although out of the jurisdiction of the USFS, it is critical that Forest management considers the greater ecosystems to which it is connected. National Forest activities must be compatible with management activities on these adjacent public lands.

Additional materials are included in **Appendices**.

The National Forests

The Pike and San Isabel National Forests are located in the mountain ranges of south-central Colorado, and together they total approximately 2.2 million acres. They encompass the headwaters of the South Platte River and the Arkansas River respectively and are noted for most of Colorado's premiere Fourteeners, as well as lower montane forests, mountain grasslands and shrublands. Half a dozen mountain ranges trending northwest to southeast, the intervening valleys and parklands, and a network of rivers, streams, lakes, fens and wetlands provide great visual contrast and biological diversity. Together the National Forests span the landscape from the Continental Divide between Denver and Leadville south almost to the Colorado-New Mexico border and west to east from the Sawatch and Sangre de Cristo Ranges to the foothills of central Colorado.

The two National Forests are one administrative unit with headquarters in Pueblo. Six Ranger Districts - the South Platte, South Park, Pikes Peak, Leadville, Salida, and San Carlos - provide oversight and on-the-ground management.

Pike National Forest

Containing 1,106,600 acres, the Pike National Forest contains the headwaters of the North, Middle and South Forks of the South Platte River. The Middle and South Forks come together in South Park, and are joined by the North Fork before the river leaves the mountains to flow through metropolitan Denver and onward across the plains. This river system provides the majority of domestic water for the Denver metro area. It supports a great diversity of wildlife with 13,000-14,000 foot peaks across the northern end from Mount Evans to the Mosquito Range and on the east from Pikes Peak down to lower elevations in the canyons near Cheesman Reservoir. It includes Mount Evans, Lost Creek and part of Buffalo Peaks Wilderness Areas. Since it borders the major urban corridor from Denver to Colorado Springs, it is also a popular recreation area.

San Isabel National Forest

Containing 1,104,000 acres, the San Isabel National Forest gives life to the Arkansas River near Leadville that then flows down the valley below the Sawatch Range and through the canyons between Salida and Royal Gorge. After leaving the mountains near Pueblo, it is joined by tributaries such as the Purgatoire that drain the southern reaches of the San Isabel. Perhaps most noted for the string of Fourteeners along the Sawatch Range, including Mount Elbert, Colorado's highest peak, and the long narrow range of the Sangre de Cristo Mountains, the San Isabel also has a large amount of lower elevation land along the Arkansas canyons and in the Wet Mountains. Wilderness Areas include all or parts of Holy Cross, Mount Massive, Collegiate Peaks, Buffalo Peaks, Sangre de Cristo, Greenhorn Mountain, and the twin cones of Spanish Peaks. Recreation is also an important activity on the San Isabel National Forest.

Cimarron and Comanche National Grasslands

The Pueblo office also administers the Cimarron and Comanche National Grasslands. However, the planning process for the two Grasslands is an independent and separate process, and thus they are not directly discussed or advocated within this Wild Connections Conservation Plan.

Critical Threats to Public Lands

The stress placed upon our public lands by the following threats is a serious, difficult, and pervasive issue that management agencies must address. As substantial documentation and studies exist on the impacts of these threats, we will only acknowledge them here. However, it is critical to reiterate that ***only by addressing the underlying causes of ecological dysfunction can a truly sustainable management approach to our public lands evolve.*** These threats are key factors affecting our current land health, and thus the approach taken by this Wild Connections plan seeks to solve and mitigate these impacts.

For additional information on the following threats, references or data, refer to the bibliography or contact the staff of UASPP.

1) **Loss and Fragmentation of Wildlife Habitat**
   Direct conversion of natural ecosystems to other uses such as agriculture, housing, and industry, as well as fragmentation of natural areas into smaller and smaller parcels have had an equally profound impact on the capacity of the land to maintain healthy and resilient populations of native species and general ecological viability. Roads are the dominant fragmenting factor. The recent population explosion in the Pike-San Isabel region has created the need for additional roads, recreational opportunities on Forest Service lands, and has led to exurban sprawl. This results in the loss and fragmentation of wildlife habitat, and specifically stresses lower-elevation habitats which enjoy the least amount of protection.

2) **Loss and Decline of Native Species**
   Many species of native animals, especially carnivores, large ungulates and other keystone species, have been entirely lost or greatly reduced in numbers across their historical ranges. The loss of large carnivores is more complex than the simple absence of a species as it creates an ecological imbalance. Carnivores play an important role in regulating ecosystems, and predation can affect flora and fauna that seem ecologically distant from the carnivore (Terborgh, 1999).

3) **Loss and Alteration of Natural Processes**
   Historical and present fire suppression activities have altered natural fire regimes. This has changed the forest canopy and natural meadows or other openings, altered forest stand densities and age-mix balances, and increased the size and intensity of fires due to the prevalence and widespread distribution of fuels. Water quality and regimes have also been dramatically altered by roads, dams and diversions, mine runoff, pollution, draining of wetlands, livestock grazing, and introduction of nonnative species. Although commercial logging is no longer a major threat, the increase in fuels treatment projects has brought increasing levels of manipulative activity, including road construction, to our national forest lands.

4) **Invasive Species**
   Dale Bosworth, Chief of the US Forest Service has identified invasive species as one of the four significant threats to our Nation's forest and rangeland ecosystems. Native plants usually do not compete well with invasive plants for nutrients, sunlight, and water. As a result, our biologically diverse mountain meadows, grasslands, and wetlands are in danger of being overrun by non-native, invasive species.

5) **Appropriation of Wildlands for Intensive Recreation**
   The dramatic increase in non-motorized recreation over the past three decades, partially fueled by new advances and technologies in extreme jeeps, 4-wheel drive trucks, ATVs, dirt bikes, and snowmobiles, has led to an unprecedented proliferation of motorized activity in our national

forests. The rampant spread of motorized use has caused unplanned roads and trails, erosion, watershed and habitat degradation, damage to cultural resource sites, and has negatively impacted survival and reproduction of some wildlife species due to the excessive noise and disturbance.

6) **Economic Activities – Oil, Gas, Mining and Range Management**
Currently, oil and gas development and mining are only a minor extractive use of the Pike-San Isabel. However, thousands of historical prospects and abandoned mines are present, many still causing water pollution from heavy metals and acidic flows. Ranching has greatly influenced the culture, economy, and ecology of Colorado and the Pike-San Isabel region. While many ranchers are good stewards of the land, and large intact ranches increasingly provide critical open-space habitat for wildlife in this rapidly developing region, grazing may also have many negative impacts on the ecosystems of the Pike-San Isabel. Domestic livestock have different foraging habits than native herbivores, including the tendency of cattle to congregate in riparian areas. Additionally, overgrazing has contributed to the spread of exotic weeds.

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