

# **Natural Selection Alternative.**

**For the Medford District BLM**

**South Deer Landscape Management Project**

**Submitted by**

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**Submitted by  
Deer Creek Valley Natural Resource Conservation Association  
P.O. Box 670  
Selma, Oregon 97538**

This alternative was prepared by the Deer Creek Valley Natural Resources Conservation Association (DCV) in collaboration with BLM, South Deer Forest Committee, Selma community and the larger community. It is based on 14-Criteria for Sustainability (see Appendix Pg.9), supported and endorsed by hundreds of individuals, community leaders and organizations.

DCV appointed a core team including the following individuals and focus: Mary Camp, team coordinator; Orville Camp, author of the Natural Selection Alternative; Lynne Campbell, research site specific data; and Pamela Tennity, community outreach. Andrea King provided editing. Numerous others from DCV and the general public have contributed to this project.

The fundamental concepts and philosophy regarding this Natural Selection Alternative were developed by and are copyrighted by Orville Camp. *Premises* and *Criteria for Sustainability*, were developed for the purpose of evaluating proposed forest practices before action is taken. Natural-selection-based concepts were first implemented at Camp Forest by Orville Camp in 1967. These concepts have since, been implemented by many people in several countries.

Exhibits:

1. Map of West South Deer OI Units
2. Map of East South Deer OI Units
3. OI Unit Table
4. Map of West Lake Selmac Trail
5. Map of Thompson Creek Overlook Trail System
6. Historical 1855 Map of Aulthouse Pack Trail
7. Dennis Odion, Fire Ecologist, Letter of Support

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## **Ecosystem-centered Purpose and Need**

The purpose and need of the *Natural Selection Alternative* is to provide a variety of commodities and uses while allowing nature to retain and restore species, habitats, functions, and forest ecosystem health across the landscape.

### **Philosophy and Vision of Natural-Selection-Based Practices and Natural Selection Alternative Resource Objectives and Actions**

The *Natural Selection Alternative* recognizes that natural forests contain biological, ecological, economic, recreational, aesthetic, historical and spiritual values. It will sustain these values.

*Natural-Selection-Based* perspectives recognize 1) that other species create forests, 2) that many forest lands, especially non-entered late-succession forests, should be preserved as they are, 3) the need for natural recovery of forests damaged by human management, 4) that human needs require the extraction of resources from some forest lands, and 5) the total forest ecosystem must remain intact, with human activities in harmony with nature.

#### **Best traits, resource extraction, productivity, connectivity and restoration**

Species sustainability relies on reproduction of best survival traits. Naturally evolved environments allow species to adapt to them. The natural-selection-based approach retains best traits for all species.

Green plants sustain life on Earth. Green plants with best traits sustain their species. Under the natural-selection-based approach, organisms with best traits (stronger dominants) are retained. Only the dying (“weaker members”) or dead, are removed to serve human needs. The dead and dying (including snags and woody material of the forest floor) sustain the living. To extract sustainably (both green and dead), humans must share these resources with all naturally evolved species. The more trees extracted the less snags and woody material will be left to serve other species needs. The Natural Selection Alternative will extract resources at sustainable levels. (1)

Sustainable extraction levels require stewards with fundamental understanding of how ecosystems function, and how resource extraction will affect each of the “eight essentials”: Climate, soil, water, air, food, shelter, habitat, and reproduction necessities that determine which species can survive. When there is uncertainty about resource extraction, those in question will be left until doubts are resolved. The Natural Selection Alternative will offer high skill forest work to qualified stewards that adhere to natural-selection-based criteria for sustainability.

The Natural Selection Alternative will meet or exceed the Medford District Resource Management Plan objectives and actions/directions requirement for down wood, snags, and riparian reserves (p. 26-28) including ACS objectives (p. 22), and for Matrix lands (p. 38-40) .

The Natural Selection Alternative will retain all naturally evolved successional habitats across the landscape including riparian reserves. A no-treatment area of 50 feet adjacent to perennial streams and 25 feet adjacent to intermittent non-fish bearing streams and springs, will be maintained. There will be no treatment within the full riparian reserve where there is a domestic

water source.

Since no trees are removed before they have been naturally selected, the volume of removal is restricted to what the forest is naturally able to produce. Retaining forest structure and functions at all times means no forest “down time” so the forest is always in full productivity.(2,3) No down time, means no restoration costs. Forest resource volume is expected to increase over time.(4)

Every part of the forested landscape including meadows, aquatic, and riparian areas, will remain or become a corridor for evolved species. The Natural Selection Alternative leaves habitats intact so early and late successional ecosystems can evolve to their natural conclusions.

In natural-selection-based practices, the term ‘restoration,’ or ‘recovery’, means to restore original late successional communities to their original species and ecological functions.

The Natural Selection Alternative will retain the few remaining small islands of natural late successional and legacy forests in South Deer to 1) sustain late successional species, 2) provide wildlife reservoirs for restoring early successional plantations that currently encompass much of the South Deer Project area, 3) moderate climate locally, regionally and globally, 4) store and filter high quality water, 5) provide wildlife corridors across the landscape, 6) understand the meaning of forest recovery by showing what they look like and how they function, and 7) serve human visual, spiritual, educational, natural history, recreation and tourism needs.(5,6)

Resource extraction will occur in early successional forests where past extraction has occurred and be such that young forests will be allowed to evolve to late successional community conditions. Legacy, and structurally intact late successional forests, will not have resource extraction. (See map-Exhibits 1 and 2; OI Unit Table: Exhibit 8)

The Natural Selection Alternative will address climate change issues through optimal green plant and carbon storage, and reducing fire risk without burning.(7)

### **Fire and the Wildland Urban Interface**

A higher level of resource extraction will be used in areas of South Deer that have dwellings within the home-ignition zone (approximately 100 feet beyond the dwelling).(8)

“Treating the home-ignition zone . . . can almost eliminate the possibility of homes burning in wildfires.”(9)

### **Natural fire frequency and severity**

Historic studies of fire in the region show a wide range in fire intervals.(10) Late successional forests in South Deer represent a historical fire variable and will be retained in their natural state (natural fire will occur).

The Natural Selection Alternative will allow (if scientifically supported) natural fire in some areas where fire has been absent long enough to allow low fire severity.

Increased early successional tree plantations in the Deer Creek watershed have resulted in increased forest fire hazards and risks. The Natural Selection Alternative will restore and retain low fire hazard conditions by retaining stronger dominant trees and closed canopies.(11) Lower fire hazard conditions will return as canopies close and trees grow taller, ground fires are less likely to reach the canopy and as understory is reduced or disappears.

### **Prescribed fire, forest floor woody material, and slash**

Natural Selection Alternative will not use prescribed fire unless it can be shown that an evolved species is in danger of extinction because of lack of fire. Since prescribed burning will not be used, the Natural Selection Alternative will retain natural levels of woody material on the forest floor necessary for retaining forest biological and ecological health and productivity. With the Natural Selection Alternative there is little slash and that is lopped and scattered.(12,13,14,15,16,17,18,19)

### **Non-native plants**

The Natural Selection Alternative will retain environments best suiting native species, preempting invasions of non-native species through: 1) canopy coverage that will retain climate, soil and water conditions not favorable to non-native species (one-lane roads will help retain or achieve canopy coverage), 2) minimal soil disturbance (through use of rubber-tired resource extraction equipment on roads and restriction of off-road heavy equipment), and 3) minimal fire.

Stewards will prevent invasions of non-native species and eliminated them, when necessary, through; 1) physical removal, 2) manual application of least toxic effective chemicals, and 3) weed prevention protocols and eradication, in accordance with Medford District Integrated Weed Management Plan and programmatic EIS, that comply with BLM and NSA objectives of retaining forest health.. (20)

### **Visual, spiritual, recreational, educational, historical and tourism**

Highway 199 is the premiere recreation and nature-education development opportunity for Oregon's costal mountains. South Deer is with this visual corridor and there is easy access from 199 past Lake Selmac through South Deer to the Oregon Caves. The Natural Selection Alternative will retain visual values and an environment in which the untrained eye will be unaware of ongoing forest product removal. It will develop aesthetically pleasing, hiker-friendly trail and road systems, creating opportunities for recreation, nature-based education, and tourism.

The Thompson Creek Overlook Trail System has a long history of being used for visual, spiritual, recreational, educational and hiking values. Further development of this trail system will provide low elevation easily accessible recreational opportunities to meet the growing demand for recreation on public land. A 1.5' to 2' wide trail system, with grades of generally 10% or less, will serve both short and long hiking needs for all ages. The trail system will be built or upgraded by hand or with mechanical equipment (e.g., chainsaws, trail building machines). The upgraded trail system will have 6 miles of various looping hiking options through a variety of ecosystems including late successional legacy forests and rock outcroppings with spectacular panoramic views of South Deer, Grants Pass, Oregon Coast Range and California mountains. (See Map Exhibit 4 for layout) If access can be acquired, the trail is proposed to continue to Kerby Peak.

See Appendix: South Deer “*Significant Features*”

See Appendix: “*The Natural Selection Alternative Promises to be a Beneficial Alternative for the Tourism Economy in the Highway 199 Travel Corridor*” by Roger Brandt.

See trail maps: Exhibits 3,4 and 5.

### **Trail or road?**

The main difference between trails (for hiking) and roads (for vehicles) is width, but basic design principles apply to both. It is proposed that this contour-loop-access-system be used to develop future trails around Lake Selmac in T 38-7-Sections 13, 18 and 19.

### **Roads can serve human needs while retaining healthy forests**

The concentric-contour-loop-access-system will be located and designed to retain biological and ecological integrity across the landscape, retain upper canopy structure connectivity where possible, allow economically efficient removal of products, and adhere to high visual standards.

The contour-access-road-system will be designed to contour the land perpendicular to natural water flows to minimize water diversion and erosion. Late successional forests will not have products removed from them so will have roads only when necessary to connect to areas beyond them. Extremely steep slopes, unstable soils, swamps, alongside streams, and special habitats, will be avoided.

### **Access economics**

The contour-access-road-system will be designed for perpetual use and economical access to a variety of resources. The system will aid in inventory and extraction of products for special markets. It will allow use of smaller equipment with less economic and environmental impact. Its low-cost design, construction, and maintenance will permit upgrading without major costs of road relocation.

### **Fire access**

The Natural Selection Alternative looping-contour-access-road-system will serve as effective firebreaks and provide alternate entrance and escape routes.

### **Contour-access-systems design**

Overall road density, with the contour-access-road system, will be less than current skid, temporary, and permanent road density.

Existing roads will be analyzed for low ecosystem impact and for efficient use and removal of forest resources. They will be used where appropriate. All skid roads will be eliminated. Natural decommissioning will be used where new growth will naturally recover biological and visual values, active decommissioning will be used where natural recovery is unlikely.

Road 38-7-27.1 has design problems that cannot be corrected. It has a history of polluting domestic water. Road caused stream diversions will be restored to their natural channels. This road will be allowed to naturally decommission to a narrow foot trail. This road has been used as a trail and will be integrated into the Thompson Creek Overlook Trail System. Road 38-7-

27.2, also part of the Thompson Creek Overlook Trail System, will be naturally decommissioned to a ten foot wide trail that will allow limited recreational vehicle uses related to trail uses. This road will be extended (possibly a few hundred feet) to allow a recreational vehicle turnaround to be developed. (See Thompson Creek Overlook Trail System Exhibit 4)

New concentric-contour-looped-access-roads will be predominantly ten feet wide with curve widening. Roads will parallel each other at 300 to 600 feet, and will retain grades of three to ten percent where practicable. Existing dead-end roads will be converted into loop roads where practicable. (See Road Maps Exhibits 6 & &)

Doublewide roads will be reduced to ten-foot width to enable reconnecting of the canopy for wildlife corridors and to reduce erosion. Where practicable, road width will be allowed to naturally decommission to 10-foot wide surfaces on the outer edge to enable canopy closure and to reduce erosion. Roads with existing reciprocal agreements will be negotiated with party holders on a case-by-case basis.

#### **Access and vehicles**

Resources not hand carried will be lined to the road. Rubber tired equipment will be used for resource extraction and will be kept on roads. No heavy equipment will be allowed off-road. No track vehicles will be used for resource extraction.

#### **Cultural and socioeconomic**

Ecosystem health will have priority over short-term economic health. Long-term economic health will have priority over short-term economic health.

The Natural Selection Alternative of the South Deer Project will be a showcase demonstration project for sustainable relationships and practices. It will demonstrate economic solutions to the environmental/job dilemma, opening doors to sustainable cottage industries, added-value local enterprises, and increased tourism.

“In Oregon, the relationship between the environment and the economy is changing. Industries that extract raw materials are stagnating, while industries that benefit from the presence of environmental amenities are growing rapidly.”(20)

#### **Harvest volumes**

Natural-selection-based extraction retains optimal green foliage across the landscape, thus optimal volume will first be attained, and then retained. As young cutover forests recover to late successional conditions, they will produce more products with greater values.

#### **Certification**

Products extracted will meet natural-selection-based criteria for sustainability. Forest health values will be prioritized through certification of stewards, products and processors. Certification of practitioners and resources will allow consumers to support sustainable forest practices.

#### **Stewardship**

Forest stewardships will be created and tailored for local, small (one- or two-person), sustainable



operations that will contribute to long-term stable local economies. Each steward(s), will have exclusive access to certain kinds of resources from a designated parcel of land. Parcels will be set up relative to available resources, geography, and logical access. Parcel size will be determined by the available resources that may be extracted sustainably under the NSA criteria for sustainability and the guidelines of the Medford BLM RMP.

Within three years, a majority of South Deer should be under stewardship contracts, all within five years. Existing roads will be used to start. Stewardship contracts with renewal options will be developed. Contracts will be jointly designed and approved by the community and BLM. People making forest practice decisions will receive on-the-ground training, apprenticeship, and continuing education to understand natural-selection-outcomes.

### **Monitoring**

A research and monitoring program will be established to evaluate effects of using natural-selection-based criteria for sustaining long-term forest health, and the ability to produce a sustainable local economy. BLM's current baseline data will be important to the process. Non-entered areas will be used as control areas.

Species traits and the environment determine "natural-selection-outcomes." Human actions that change climate, soil, water, air, food, shelter, habitat and/or reproduction necessities, will be evaluated in terms of the "cumulative effects of natural-selection-outcomes".

### **Demonstration/Research Project**

The Natural Selection Alternative of the South Deer Landscape Management Project provides an opportunity to apply natural-selection-based resource extraction concepts to community forests. Scientific research, community participation, permanent jobs, and tourism and recreation values are parts of this concept. Undisturbed heritage forests will provide educational opportunities unmatched in any classroom.

# Appendices

## DCVNRCA comments Re: BLM Need for Action; BLM Issues and Concerns

### Purpose of and Need for Action

- **Purpose of Action**

The purpose of the proposed action is to implement the Medford District Resource Management Plan. The purpose of this environmental assessment (EA) is to evaluate a range of alternatives, assessing regulatory compliance and efficacy in meeting project area needs. The EA will assist in the decision making process by assessing the environmental and human effects resulting from implementing the alternatives.

This EA tiers to the following documents:

- (1) *Final EIS and Record of Decision for the Medford District Resource Management Plan (RMP)* (June 1995).
- (2) *Final Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl* (February 1994).
- (3) *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and its attachment A entitled the Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (NFP)*(April 13, 1994).
- (4) *Final Supplemental Environmental Impact Statement for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (March 2000), and the *Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (January 2001)
- (5) *Record of Decision and the Final Supplemental EIS to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines* (March and January 2004);
- (6) *Record of Decision Amending Resource Management Plans for Seven Bureau of Land Management Districts and Land and Resource Management Plans for Nineteen National Forests Within the Range of the Northern Spotted Owl, and its Final Supplemental EIS for the Clarification of Language in the 1994 Record of Decision for the Northwest Forest Plan amending wording about the Aquatic Conservation Strategy* (March 2004).
- (7) *Medford District Noxious Weed Environmental Assessment* (April 1998).
- (8) *Final Supplemental Environmental Impact Statement, Management of Port-Orford Cedar in Southwest Oregon* (December 2003)

In addition to the documents cited above, project planning drew from information and recommendations from the following:

- (1) *Deer Creek Watershed Analysis* (November 1997)
- (2) *Rogue River/South Coast FY04-08 Timber Sale Projects Biological Assessment* (July 2003) and *USFWS Biological Opinion* (#1-14-03-F-511, October 2003).
- (3) *USFWS Biological Opinion* (1-7-98-F-3211, September 1998)

(4) 2003 Survey and Manage Annual Species Review (Forest Service Memorandum November 20, 2001, file code 1900/2620; and BLM Information Bulletin No. OR-2002-033).

Terminology used in this EA follow the definitions of the RMP.

## 1.2 Need for Action

BLM: Ninety-five percent of the South Deer project area lies in Wildland Urban Interface, designated by the National Fire Plan. Eighty five percent of the project area classifies into fire condition class 3. Condition class 3 results from a reduction in fire frequency. As a result, vegetation attributes, fuel loading, and fire behavior have been significantly altered. Condition class 3 represents a greater risk for increased fire size, intensity, and severity.

DCV: We agree there is a greater risk for increased fire size, intensity, and severity in the South Deer project area, but it's not in the late successional legacy forests, and it isn't because of "a reduction in fire frequency. It's the conversion of late successional forests to early successional tree plantations that caused a greater "risk for increased fire size, intensity, and severity."

*"Timber harvest, through its effects on forest structure, local microclimate, and fuels accumulation, has increased fire severity more than any other recent human activity".*  
--Sierra Nevada Ecosystem Project, 1996, final Report to Congress

BLM: Forest stands, including upslope and riparian areas, currently lack species diversity and structure. Importantly, high stocking density and underbrush competing for light and water resources have reduced stand vigor and resiliency, prolonging succession toward a diverse stand condition. Low-diversity, over stocked stands provide poor wildlife corridors and instream large wood recruitment potential. Additionally, stand growth rates and resiliency to disease are reduced.

DCV: "High stocking density and underbrush competing for light and water resources" is a natural biologically and ecologically healthy condition. So called "overstocked stands" provide good wildlife corridors for many species. "Reduced stand vigor and resiliency, prolonging succession toward a diverse stand condition" implies a need for human intervention and treatment.

BLM: Streams in the project area do not provide adequate fish habitat. Bank erosion, lack of wood and little pool habitat were identified as limiting aquatic conditions. Present conditions are likely to continue into the near future. Approximately 50 percent of the riparian zone stands do not contain a large tree component necessary for instream wood recruitment. High road densities and culverts, leading to accelerated erosion and restricted aquatic connectivity, were also identified as limiting aquatic conditions.

DCV: Poorly designed and constructed high impact roads, not "High road densities and culverts", are "leading to accelerated erosion and restricted aquatic connectivity."

BLM: Matrix land allocation comprises 8% of the Grants Pass Resource area. The South Deer Project area includes 7,000 acres of BLM managed lands of which 4500 acres were designated matrix. As stated in the NWFP and the Medford Resource Management Plan, a major focus for matrix land allocation is to produce a sustainable supply of timber and other forest commodities to provide jobs and to contribute to community stability. The requirement to produce forest commodities was further emphasized in the settlement agreement between the forest industry and federal land management agencies which identified matrix and O&C land as the primary land allocations for forest product production.

DCV: Past forest management practices have substantially reduced the available timber supply. Current ecosystem productivity is below historic forest levels. No one knows how to restore a late successional ecosystem. Species that created those ecosystems will restore them if they are protected and allowed to do so. The remaining islands of late successional forests must be protected and preserved to restore the landscape. South Deer has 60.6% of matrix area within the Deer Creek watershed.

BLM: The proposed action is designed to meet a variety of resource, social and economic needs of the South Deer landscape including:

- Management of the watershed in a manner that will provide for and promote a wide variety of non-commodity outputs and conditions including wildlife habitats, sustainable forest conditions, fuel hazard reduction, recreation opportunities, maintenance or improvement of water quality, and fisheries.
- Contribution to the Medford District's timber harvest/forest products commitment on matrix lands, thus helping meet the demand for wood products regionally and nationally.

### **1.3 Project Location and Land Use Allocations**

The project area is located in the Deer Creek 5<sup>th</sup> field watershed. Project area maps are in Appendix A. The project area is within matrix (Southern General Forest Management Area) and riparian reserve land allocations, with inclusions of spotted owl Late Successional Reserves. Management objectives for the different land use allocations (LUA) are set forth in the Pacific Northwest Forest Plan and the Medford District's Resource Management Plan (RMP). Refer to these documents for a discussion of relevant objectives.

### **1.4 Issues and Concerns**

A variety of issues and concerns were raised during project scoping by interested individuals or groups outside the BLM and by BLM's interdisciplinary team. In this EA an issue is something unique to the project area that may need particular consideration and which may contribute to defining a particular action alternative.

Pertinent issues are listed below. Many of these issues were identified in the Deer Creek Watershed Analysis and were used in the design of the proposed project and alternatives. In some cases, an issue was initially considered by the planning team and then eliminated from further analysis because it was not within the scope of the project or did not meet the purpose

and need. These are summarized in Appendix E. The pertinent planning issues are:

1.BLM: High stand densities throughout the project area are resulting in declining vigor of conifers and shade intolerant species (i.e., ponderosa pine, sugar pine, black oak, Pacific madrone). Fire exclusion has contributed to growth stagnation in some stands as well as to slow seral stage progression/succession. There is recent mortality from drought stress and subsequent Mountain pine beetle infestation within the project area.

DCV: High stand densities are how environmental testing, and reproduction of best species traits are accomplished, how species adapt to ever-changing environments. Fire may remove some stems and make more room for others to grow, but this does not generally increase overall growth and generally sets back “seral stage progression/succession.”

2.BLM: Fire exclusion has led to a departure from natural fuel conditions resulting in high fuel hazard conditions across the majority of the planning area.

DCV: Forest management practices are the leading cause of the “departure from natural fuel conditions resulting in high fuel hazard conditions across the majority of the planning area.” Introducing fire in early successional forests is costly, and causes more problems over the long term than it solves. The late successional forests in South Deer don’t have high fire hazard conditions. The challenge is to serve our needs without degrading other species’ ability to restore early successional forests to low fire hazard late successional forests.

“The current popular and frequently repeated hypothesis about fires in the Klamath Mountains is that – as a result of fire suppression and other human activities – large fires are occurring more frequently and are larger and more intense than they were in the past (Atzet et al. 1988, USDA Forest Service 1994, 1995, 1996, 1998b, Brookes 1996). This position is predicated on assertions, that, because of fire suppression: 1) the number of fires in the region has declined over time, 2) fires are substantially larger today than in the past, and 3) large, intense fires are the results of unnaturally high levels of fuels accumulation. However, none of these assertions have been supported with empirical data from the Klamath Mountains or by analysis demonstrating that a change in fire frequency, size or severity has occurred from historic to present. If this hypothesis is not true, it may lead to inappropriate forest management and adverse impacts to regional biodiversity.” (21)

3.BLM: Vegetation conditions combined with increasing rural residential development in the project area are continuing to increase the fire hazard and risk. The majority of the project area is within the designated Wildland Urban Interface (WUI)

DCV: Research for the Structure Ignition Assessment Model (SIAM) conclusions: “SIAM modeling, crown fire experiments, and WUI fire case studies show that effective fuel modification for reducing potential WUI fire losses need only occur within a few tens of meters from a home, not hundreds of meters or more from a home.” “These research conclusions redefine the WUI fire problem as a home ignitability issue largely independent of wildland fuel management issues.”(22)

4.BLM: The demand for recreation opportunities is increasing in the planning area, especially in the Lake Selmac area.

DCV: Another important consideration for this planning project is its location along the scenic Highway 199 corridor. Visual, spiritual, recreational, and tourism values have high relevance

5.BLM: In select areas, poor road drainage and culvert design has increased sedimentation and reduced migration of aquatic organisms.

6.BLM: Fish bearing stream reaches in the watershed provide poor habitat/channel conditions.

DCV: Actions in the Deer Creek watershed should be evaluated by their impacts on the outstanding and remarkable values of the Wild and Scenic Illinois River area.

DCV: The Deer Creek Watershed Analysis points out two ecological large scale issues/functions of concern: “(1) the condition of critical terrestrial linkage between the Deer Creek watershed and other provincial watersheds; and (2) the condition of the aquatic habitat particularly as it relates to salmonid species.”(23) The few remaining isolated small islands of late successional forests are not ecologically connected, thus restricting and preventing dispersal of late successional species. The stream system of this watershed is “poor” when compared to the reference condition. Streams depend on springs and seeps to provide summer flows.

DCV: Submitted *14 Criteria for Sustainability* at BLM’s scoping meeting, April 2004, for use on South Deer Landscape management Project.

## Northwest Forest Plan

On April 2, 1993 President Clinton asked at the Forest Conference in Portland:

"How can we achieve a balanced and comprehensive policy that recognizes the importance of the forest and timber to the economy and jobs in this region, and **how can we preserve our precious old-growth forests**, which are part of our national heritage and that, once destroyed, can never be replaced?"

The President set forth five principles to guide the federal interagency effort to develop a strategy to protect the old-growth related species and produce a sustainable level of timber:

President Clinton said, "First, we must never forget the human and the economic dimensions of these problems. **Where sound management policies can preserve the health of forest lands, sales should go forward.** Where this requirement cannot be met, we need to do our best to offer new economic opportunities for year-round, high-wage, high-skill jobs. Second, as we craft a plan, **we need to protect the long-term health of our forests, our wildlife, and our waterways.** They are gifts from God, and we hold them in trust for future generations. Third, our efforts must be, insofar as we are wise enough to know it, **scientifically sound, ecologically credible, and legally responsible.** Fourth, the plan should **produce a predictable and sustainable level of timber sales and non-timber resources that will not degrade or destroy the environment.** Fifth, to achieve these goals, we will do our best, as I said, to make the federal government work together and work for you. We may make mistakes but we will try to end the gridlock within the federal government and we will insist on collaboration not confrontation."(24)

### 14 Criteria for Sustainability ©

Based on Orville Camp's work, submitted by Deer Creek Valley Natural Resources Conservation Association as an alternative for the South Deer Landscape Project, Selma, OR

#### Forest Ecosystem Health

**1. Forest ecosystem health (biological and ecological) must have priority over timber sale volume.**

*We depend on forest ecosystems for countless purposes and uses. Healthy forests are needed to sustain trees, meet other needs, and to protect us from fire; we cannot do this without prioritizing forest ecosystem health.*

**2. Seral stages of ecological succession will be retained across the landscape; older forest ecosystems must not be converted to younger ones.**

*Forests that are hundreds of years old are necessary for sustaining younger forests and human communities. Due to past forestry silvicultural practices, most older forests have been cut down, leaving early successional forests. This has resulted in later successional forest habitats being destroyed and species that depend upon them to become threatened, endangered and even extinct. There is no need to create more early successional forests, but there is a huge need to restore later successional forests.*

**3. Nature's processes select for removal: Only "weaker member" trees in the process of being replaced by "stronger dominants" may be removed.**

*Nature's natural selection process is key to sustainability. Natural selection sustains best genetic traits. Natural selection is the only time tested and proven process of selecting individual trees for removal in a way that will sustain forest ecosystem health. This new-to-us paradigm of relying on nature to select for removal is not clearly stated in either BLM's Standards and Guidelines or Record of Decision. We submit that is primarily because the process is not fully understood by current forestry decision makers.*

**4. Cutover or degraded forests must be restored; un-entered forests must remain un-**



entered.

*There are few un-entered forests remaining. These are needed to retain habitats for the few remaining later-successional communities to provide necessary scientific research models, and for restoration purposes. Natural forests provide insurance against irrevocable ecosystem failure. All cut down or degraded late successional forests must be restored to healthy condition (none have been). BLM must not enter any more uncut forests until they have restored the ones they've cut down, fully understand how they function, and know what it takes to restore them.*

**5. Habitats for naturally evolved species must be retained across the landscape.**

*Habitats for native species of terrestrial and aquatic species (including riparian areas) must be retained across the landscape, not just in designated patches and dispersal corridors.*

**6. Air, water and soils must not be degraded or contaminated.**

*Air, water and soil determine forest ecosystem health. Slash burning, fertilizing, and the spraying of pesticides that contaminate and degrade the environment must be prohibited.*

**7. Forest practices must not increase forest fire hazards**

*Lowest fire-hazard conditions exist in late-successional forests that contain large trees. Natural-selection-based resource removal practices, that are conditional on retaining habitat needs for evolved species, retain late-successional, low-fire-hazard conditions. Nothing shall be done to cause forests to revert to earlier successional ecosystems with higher fire-hazard conditions.*

**8. Harvest methods must be low impact: no helicopters or off-road heavy equipment such as mechanical harvesters.**

*Helicopters are one of the most dangerous, fuel-inefficient, and noisy machines ever devised for logging. Helicopter logging generally requires too much forest canopy removal. Mechanical harvesters are heavy, wide machines designed to replace chainsaw operators (thus eliminating jobs); they traverse the landscape, compacting soils and damaging forest structure wherever they operate. Both are degrading; neither eliminates roads. They require forwarding equipment and/or skid roads. Helicopters and mechanical harvesters must be prohibited in forest ecosystems.*

### Community Health

**9. Long term community health must have priority over timber sale volume.**

*Forests cannot sustain timber productivity without retaining biologically and ecologically healthy ecosystems. Our local economy is declining because forest, water, and fish resources are declining. We must protect all forest resources and place community health above timber sales.*

**10. Aesthetic and recreational values must be developed and maintained.**

*Aesthetic and recreational resources hold far more value for the public than timber extraction.*

**11. Forest related jobs must be developed and maintained in the context of these criteria.**

*a) Forest jobs must be directly related to how well ecosystem health is retained. The healthier the forest ecosystem, the healthier the forest-related job market will be.*

**12. Timber Sale purchasers and timber harvesting contractors must be separate to avoid conflicts of interest.**

*Timber buyers focus on getting timber. To improve forest health, those selecting forest products for removal must prioritize overall forest health. Those who depend on the forests for all their products and uses, which includes the public, must focus on and prioritize retaining all forest values, not just certain kinds of trees. The DCVNRCA recommends that, in order to avoid conflicts of interest, individuals making timber purchasing decisions should be functionally isolated from those who are selling the timber.*

**13. In order to create more local jobs, contracts must be designed for one- or two-person operations, thus allowing equal opportunities for all-size operations.**

*The best, most sustainable jobs are typically done by local, small (one- or two-person) operations. The community will also benefit from greater diversity of products and uses*

**14. These criteria must not be construed to justify degradation of any forest ecosystem.**

*Forests must not be degraded; this is the number one priority. None of the above criteria shall be interpreted in any way that allows ecosystem health degradation.*

## **Significant Features of Deer Creek Watershed**

### **Klamath-Siskiyou Bioregion**

The Klamath Siskiyou Bioregion, of which South Deer is a part, is one of the greatest reservoirs of biological diversity in North America. Its wild rivers contain some of the most valuable salmon and steelhead habitat in the contiguous United States. Many endemic species have survived here for millions of years.

### **South Deer Aquatic**

Thompson Creek, McMullen Creek, Deer Creek, and Illinois River are critical, undammed tributaries of the Rogue River watershed.

### **Lake Selmac**

Lake Selmac is located in the heart of the South Deer forest project. Lake Selmac provides camping, boating, fishing, beauty, and solitude.

### **Lake Selmac Equestrian and Hiking Trails**

The Lake Selmac Campground, west, south and east equestrian trails, provide visitor access to surrounding forests. See west trail map: T38-R8-S13 OI Unit 4.

### **Lake Selmac Resort**

The Lake Selmac Resort provides RV hookup sites, miniature golfing, boat rentals, food, etc.

### **Crescent City to Jacksonville Pack Trail**

This 1800's trail traversed Sailors' Diggings in Waldo, Reeves Creek, Lake Selmac area of the South Deer Project, Mooney Mountain, and into the Applegate Valley.

### **Biscuit Fire**

The Biscuit Fire, is located one mile west of Selma. The Selma Community and Education Center is planning an interpretive center for Biscuit.

### **Anderson West Lone Pine Trail**

The easy to access, easy to hike Lone Pine Prospect trail leads through a mile of late successional legacy forest to a chromite mine created in 1941, and has views that include the Biscuit Fire.

### **Althouse Pack Trail**

The 1800's Althouse Pack Trail extends from Sailors' Diggings in Waldo to Jacksonville via Thompson Ck. Remnants of this trail can still be found in the South Deer Project area, and Thompson Creek Overlook Trail connects to it (T38-R7-S27 OI Unit 4). See Historical Althouse Pack Trail Map: Exhibit 6.

### **Thompson Creek Overlook Trails**

The Thompson Creek Overlook Trail System, approximately ten miles of looping trails, weaves through miles of late successional legacy forests to the top of Camp Mountain.

Rock outcroppings allow outstanding views of the Deer Creek watershed, Siskiyou Mountain Range and Coast Range. This area is used in DCVNRCA and community educational forest tours. It meanders through T38-R7-S22, S23, S26, S27, S35 and is accessed from old Aulhouse House Pack in S.27, S.35 from upper Thompson Creek Road, and from White Creek S. 23. See Map Exhibit 5

### **Horse Heaven**

Horse Heaven is a serpentine outcropping covered with native grasses and other flora, a highly visible landmark from South Deer's Little Greyback Mountain area. Local folklore has it that early settlers ranged their horses there. One year the horses were trapped there because of an early, heavy snowfall. They all died and went to heaven. T38-R7-S26

### **Camp Forest**

Natural-selection-based forest practices were first introduced at Camp Forest in 1967. People from around the world have come to Camp Forest to tour and learn how forest ecosystems function and how to have sustainable relationships with them. T38-R7-S27

### **Selma Community and Education Center**

The Selma Community Education Center in downtown Selma is positioned to promote forest visual, spiritual, recreation, education and tourism values.

## Literature Cited

1. Hammond, Herb. 1991. Seeing the Forest Among the Trees. The Case for Wholistic Forest Use, p 209

*“Many foresters and timber managers would claim that it is not possible to develop broad principles for timber management—everything is site specific. In Part IV we discussed the current misuse of site specific management. However, the most important flaw in this argument is that a set of broad ecological principles exists which apply to virtually **all forests**, whether the temperate rainforest on the west coast of British Columbia, the boreal forests across northern Canada, or the Acadean forest of eastern Canada. With regard to timber management, the foremost principle is this: **we need to have forests to have trees**. Whole forests, from the largest tree to the smallest bacteria, from vibrant life to death and decay—all are required to produce the timber yields that humans desire and claim to sustain.*

*The other important ecological principles which must be respected are not numerous, but from them we can derive ecologically responsible timber management practices for any forest stand:*

***The cutting and removal of even one tree is an unnatural event.** Large old trees require hundreds, perhaps thousands of years to grow. Once cut, you can't stand them back up again. Orville Camp, well-known advocate of selection systems of timber management, says, “When in doubt, don't!” Good advice for ensuring that both forests and human options are maintained. I am not suggesting here that we should not cut trees. However, I believe it is important to remember that nature never removes the bodies. If we intend to “mimic nature.” we must do it humbly and we must start here.*

***Each forest stand needs old trees, snags, and fallen trees...***

***Disease and insects are essential parts of a fully functioning forest...***

***Over time, all forest phases must occupy every forest site...***

***Sustainable timber yields require sustainable forests...***

2. Hammond, Herb. 1991. Seeing the Forest Among the Trees. The Case for Wholistic Forest Use, p 74.

*“Foresters have explained that decadent trees are rotting faster than they are growing, thereby “wasting” forest space...According to Dr. Jerry Franklin, Wood accumulations in old growth forests are usually stable over the long run. Stands generally will not disappear in decades or even centuries as a result of mortality and diseased.”*

3. Tiedemann, Arthur R., Klemmedson, James O., and Bull, Evelyn L. *Solution of forest health problems with prescribed fire: are forest productivity and wildlife at risk?* Forest Ecology and Management 127 (2000) Pg 9-10  
*“Long-term productivity is a concern in developing strategies to solve the forest-health problem (Gast et al., 1991; Wickman, 1992; Everett et al., 1993). Objectives for achieving sustainable productivity have not been well defined for Western forests, however, and existing guidelines are vague. Everett et al. (1993) suggest that forest managers define desired, future stand conditions and focus management efforts on achieving them. Any prudent plan should describe management goals in terms of forest productivity, biodiversity, wildlife habitat, and other resource outputs and values.*

*A primary concern whenever prescribed fire is used in forest management is loss of nutrients and impaired site productivity. This concern increases with changes in nutrient status that accompany successional advancement of forest systems in the absence of periodic fire. These changes usually involve increased accumulation of nutrients above the ground, much of it in the forest floor, and raise concern about the fate of these nutrients with careless use of fire or failure to consider fuel nutrients in fire plans. If sites that can be burned are treated without harvest, much of the nutrient capital accumulated in the forest floor is vulnerable to loss. If sites are harvested and residues are burned, not only will nutrients removed in trees be lost, but also — potentially—much of the nutrient pool in slash and forest floor, depending on burning conditions. Thus, the potential to adversely affect long-term site productivity is always present. Evidence of reduced productivity is shown in the simulation model developed by Keane et al. (1990). Their 200-year simulation model compares development of basal area of ponderosa pine, western larch, and Douglas-fir under regimes of no fires with basal areas of the same species under fire intervals of 10, 20, and 50 years. At a fire interval of 10 years, the basal areas of ponderosa pine and western larch were predicted to decline by 50% or more in 200 years. Reductions of basal area of both species were predicted at the 20-year interval, but not as dramatically as with the 10-year interval. Under the 50-year interval, basal area of ponderosa pine and Douglas-fir both increased and that of western larch declined. The model indicated that, in the absence of*

fire, basal area of Douglas-fir would increase steadily to the year 200. Although basal area of ponderosa pine and western larch declined, the total basal area predicted for the site was greater (ca. 70 m<sup>2</sup> ha<sup>-1</sup>) than that with any other simulation. The 50-year fire-interval simulation provided the next greatest basal area of about 50 m<sup>2</sup> ha<sup>-1</sup>.

Landsberg (1994) provides the most comprehensive assessment of the effect of prescribed fire on forest productivity. In a review of more than 50 studies of the effects of prescribed fire on tree growth in the genus *Pinus*, she concluded that growth response can be affected by many factors: species, stand characteristics, tree characteristics, and burning conditions. The consensus of the studies, however, was that tree growth decreased after prescribed burning because of injury to crowns, roots, or both.

Concern for effects of burning on productivity was expressed as early as 1924 in a paper by Show and Kotok (1924) for pines and associated tree species in California. Powers (1991) concludes that productivity of forests has declined because of substantive losses of surface organic matter and declines in soil porosity as a consequence of harvest activities and burning. Boyer (1987) reported that periodic burning of longleaf pine (*P. palustris* Mill.) over a 10-year period for understory hardwood control reduced pine growth, regardless of season of burning.

Reasons cited for reduced productivity after prescribed burning vary. Landsberg (1994) summarizes several reasons: direct injury to tree stems, crowns, and roots; reduction in microorganisms such as mycorrhizae, with concurrent reductions in nutrient availability; reduced photosynthetic capacity; and changes in carbon allocation.

The evidence indicates that losses from the forest-floor nutrient pool associated with prescribed burning can impair long-term productivity (Grier et al., 1989; Landsberg, 1992; Klemmedson and Tiedemann, 1995). The relation between fire-induced changes in the nutrient states of the forest floor and the actual productivity of the residual stand has not been established. Vose and Swank (1993) conclude that major pools of nutrients in woody material and the forest floor dictate a fire management strategy that places a high priority on maintaining an intact forest floor. They advise a balance between the desire to reduce logging slash and competition while minimizing forest-floor consumption. Observed reductions in growth of ponderosa pine after prescribed burning in central Oregon (Cochran and Hopkins, 1991; Landsberg, 1992) may be attributed to changes in the nutrient status of the forest floor/soil system (Monleon et al., 1997). They observed reduced mineralization of N in N-poor ponderosa pine stands in eastern Oregon for up to 12 years after burning and concluded that this reduction may explain the observed pattern of long-term productivity decrease in these stands."

4. Hammond, Herb. 1991. Seeing the Forest Among the Trees, The Case for Wholistic Forest Use, Pg 74.  
"...old-growth forests develop the highest quality wood fiber which will ever be produced in our forests...The rotation period of time at which a forester considers a tree to be "mature" is between 60 and 120 years for most species...Therefore managers of tree plantations plan to never again permit the growth of ancient forests and the development of the high quality, fine-grained wood they contain."
5. Hammond, Herb. 1991. Seeing the Forest Among the Trees, The Case for Wholistic Forest Use, Pg 32  
"Old growth forests are much more than sources of timber. They play an important role in the carbon dioxide/oxygen balance by fixing immense quantities of carbon through photosynthesis. They are some of the world's greatest carbon storage reservoirs, buffering against global climate change. They provide critical fish and wildlife habitat, which is not replicated in young managed forests. They are the home of specialist organisms, such as certain mycorrhizal fungi and predator insects, which are necessary to protect young forests. They store and filter high quality water, an ever dwindling resource as we degrade more and more forest habitat. They furnish increasingly valuable public recreation and wilderness tourism destinations, supporting entire tourism industries in remote locations."
6. DellaSala, Dominick and Strittholt, James. Nd (recent). Importance of Roadless Areas in Biodiversity Conservation: A Scientific Perspective, Executive Summary.  
"Small roadless areas share many of attributes in common with larger ones, including:

- *Essential habitat for species key to the recovery of forests following disturbance such as herbaceous plants, lichens, and mycorrhizal fungi*
- *Habitat refugia for threatened species and those with restricted distributions (endemics)*
- *Aquatic strongholds for salmonids*
- *Undisturbed habitats for mollusks and amphibians*
- *Remaining pockets of old-growth forests*
- *Overwintering habitat for resident birds and ungulates*
- *Dispersal "stepping stones" for wildlife movement across fragmented landscapes"*

7. Rapp, Valerie. 2004. *Western Forests, Fire Risk, and Climate Change*, USDA Pacific Northwest Research Station, Science Update, Issue 6

*"Enhanced carbon storage in ecosystems is, in fact, a major goal of the federal program to address climate change. But another forest policy is to reduce fuels and thus fire risk in the West, a policy that can release stored carbon. This key observation links the fire and fuels issue in the West to the global carbon change issue. The two issues are fundamentally coupled, yet the proposed solutions are seemingly opposed."*

*"Two ways exist to limit the amount of carbon in the atmosphere, and thus reduce global warming. One way is to limit carbon dioxide emissions generated from burning fossil fuels. The second way is to sequester more carbon in ecosystems or bury it in geologic structures. In the Western United States, however, the conundrum would be how to balance carbon storage with reducing fuels and fire risk."*

8. Cohen, Jack D. 2000. *What is the Wildland Fire Threat to Homes?* USDA Rocky Mountain Research Station, Fire Sciences Laboratory, Missoula, MT. Lecture presented to School of Forestry, Northern Arizona University, Flagstaff, AZ, on April 10, 2000

*"The home ignition zone extends to a few tens of meters around a home not hundreds of meters or beyond. Home ignitions and thus, the W-UI fire loss problem principally depend on home ignitability."*

9. Odion, Dennis C.; Frost, Evan J.; Strittholt, James R.; Jiang, Hong; DellaSalla, Dominick A., and Moritz, Max A. 2003/2004. *Patterns of Fire Severity and Forest Conditions in the Western Klamath Mountains, California*, *Conservation Biology*, Pages 927-936, Volume 18, No 4

*"Treating the home-ignition zone as described by Cohen (2002) can almost eliminate the possibility of homes burning in wildfires. This would increase fire-management options and perhaps ultimately further conservation goals in the Klamath-Siskiyou ecoregion."*

10. Odion, Dennis C. 2004. *Comments on the Biscuit Post-Fire Logging Draft Environmental Impact Statement*.

*"However, all fire history studies that have been done in the region, based on scarred trees, have found a wide range in fire intervals, long fire free periods, and that the range in fire intervals is a more important property than the mean (summarized by Frost and Sweeney 2000). Agee (1991) found a pre-settlement fire-free period greater than 100 years at nearby Oregon Caves. Over time scales beyond the last few centuries, there has not been any stationary amount of charcoal accumulation (Mohr et al. 2000), a measure of fire's importance on the landscape over time. Fire has been both more and less common over meaningful time scales compared to recent centuries; there is no average tendency because of climatic variability. The description of historic fire intervals in the DEIS needs to be rewritten to accurately reflect high variability and non-equilibrium tendencies. These properties are associated with high levels of biodiversity (Odion et al. In Press).*

*The Tree-based fire history studies have ignored the longest fire intervals experienced by most trees, the one prior to the first fire scar on sampled trees, which can only be estimated (Baker and Ehle 2001). These fire history studies also use methods that extrapolate fire from a point location across space, which further over estimates fire frequency. Finally, areas sampled in fire scar studies cannot be assumed to represent the entire landscape; they are the locations where fire has operated in a way that has allowed for concentrations of trees scarred by low severity fires to develop. These may be unique locations where lightning and human ignitions were frequent, and fire size small." ... "Most importantly the DEIS rationalizes timber harvest as a means to return a regime of relatively frequent fire at regular intervals. This fire regime would be unnatural, and would not allow for the landscape diversity that has existed historically."*

11. Odion, Dennis C.; Frost, Evan J.; Strittholt, James R.; Jiang, Hong; DellaSalla, Dominick A., and Moritz, Max A. 2003/2004. *Patterns of Fire Severity and Forest Conditions in the Western Klamath Mountains, California*, Conservation Biology, Pages 927-936, Volume 18, No 4

*"In our study area, harvest treatments to reduce fire severity based on a model of fuel build-up in the absence of fire would be misdirected because long-unburned areas exhibited the lowest fire severity."*

12. Tiedemann, Arthur R., Klemmedson, James O., and Bull, Evelyn L. *Solution of forest health problems with prescribed fire: are forest productivity and wildlife at risk?* Forest Ecology and Management 127 (2000) Pg 6

*"The forest floor is a key component in the biology of forest ecosystems, but it is probably more affected and more likely to be lost by fire than any other component of forest ecosystems (Page-Dumroese et al., 1991). According to McNabb and Cromack (1990), "The most important criterion for reducing nutrient losses from prescribed burning is to minimize the loss of the forest floor." With low intensity wildfires and, in many prescribed fires, the forest floor may be the only part of the forest to burn. If forest floor is viewed only as the annual accumulations of dead plant and animal remains, loss of forest floor may seem inconsequential, even when fire is used frequently in pursuit of short-term goals of productivity or naturalness (Sackett et al., 1993; Covington et al., 1997). But, when viewed in terms of the complex chemical, physical, and biological processes that take place during decomposition of these dead organic resources (Swift et al., 1979), loss of forest floor by burning does have consequences that warrant careful consideration. Decomposition in the forest floor performs two major functions — mineralization of nutrients and the formation of soil organic matter (Swift et al., 1979); both are key to long-term ecosystem productivity and stability. When the forest floor is burned too frequently, nutrient replenishment and organic matter formation are diminished. Other roles and attributes ascribed to the forest floor are that it serves as the essential linkage between nutrient cycling processes, both above- and belowground; provides protection to the soil surface and improves soil architecture; facilitates water absorption and retention; and moderates soil temperatures (Kittredg , 1.948; Harvey et al., 1976; Wells et al., 1979; Page-Dumroese et al., 1991)."*

13. Odion, Dennis C. 2004. Comments on the Biscuit Post-Fire Logging Draft Environmental Impact Statement.

*"Prescribed burning following a fire free period of 40 years was found to eliminate the non-sprouting manzanita (Arctostaphylos morroensis (Odion and Tyler 2002). The same immaturity risk has also been described for knobcone pine (Keeley et al 1999). It may apply to a number of species in the Biscuit Fire area. Because this risk is a widespread phenomenon, excess fire is generally more of a threat to biodiversity than a lack of fire, and this threat has been realized in much of the world due to human ignitions (Bond and van Wilgen 1996)."*

14. Baker, William L. September 1994. *Restoration of Landscape Structure Altered by Fire Restoration*, Conservation Biology, Vol 8 No 3. Pg 763-769

*"Unusually large fires would probably hasten the restoration of landscape structure, while small prescribed fires will not restore the landscape, but instead will produce further alteration."*

15. Baker, William L. September 1994. *Restoration of Landscape Structure Altered by Fire Restoration*, Conservation Biology, Vol 8 No 3. Pg 763-769

*"... Small prescribed fires should be used only in special circumstances to accomplish species-level restoration goals, recognizing that repeated use of such fires will have a cumulative adverse effect on restoration goals at the landscape levels."*

16. Frost, Evan J and Sweeney, Rob. 2002. *Fire Regimes, Fire History and Forest Conditions in the Klamath-Siskiyou Region: An Overview and Synthesis of Knowledge.*

*"Lastly, it is important to recognize that the insights offered here represent a poorly developed "state of the art" because we currently have a very incomplete understanding of the role of fire in these forests, how this role has changed over time, and the most effectual means for restoring forests degraded by past management. There are significant risks associated with decisions made in the face of this high level of uncertainty. While ecosystem management plans will be developed in the absence of complete understanding, widespread application of highly intrusive treatments under the auspices of restoration could lead to further damage of the Klamath-Siskiyou region's forest ecosystems."*



17. Tiedemann, Arthur R., Klemmedson, James O., and Bull, Evelyn L. *Solution of forest health problems with prescribed fire: are forest productivity and wildlife at risk?* Forest Ecology and Management 127 (2000) Pg 4  
*“The next question is about the feasibility of returning these stands to a condition that emulates pre-settlement species composition and spacing (even if we knew what they were). Emerging ecological theory on community thresholds, stable states, and succession (Laycoff, 1991; Tausch et al., 1993) suggests that this task may not be simple. Nearly 100 years of fire exclusion, possible climate changes, and past management practices may have caused these communities to cross thresholds and to reside now in different steady states. If so, returning to some previous condition may be difficult to achieve, expensive to maintain, or both. Baker (1992) is straightforward in his conclusion that “landscapes that have been altered by settlement and fire suppression cannot be restored using traditional methods of prescribed burning, which will simply produce further alteration.”*
18. Hammond, Herb. 1991. Seeing the Forest Among the Trees, The Case for Wholistic Forest Use, Pgs 66-67  
*“The Ministry’s claim that slash burning releases nutrients to support new growth is plainly at odds with natural processes. The foliage, branches, and stems of trees—whether logged or naturally fallen—serve as a storehouse of nutrients for a new community of forest plants. This storehouse is designed to be released slowly, over centuries. Once nutrients are released from this woody debris in a form available to plants, they are no longer stored for a long period. Nutrients are water soluble, and many leach rapidly through the forest soil and away from the site. Slash burning releases a “flush” of nutrients which does indeed produce a short-term “flush” of growth. The ultimate result, however, is a longterm reduction in the nutrient pool available for tree growth.*  
  
*The final purpose for slash burning, according to the Ministry, is to reduce fire hazard. However, the actual level of fire hazard created by unburned slash must be weighed against the very real damage done by slash burns which escape into living forests and burn out of control every year....”*
19. Tiedemann, Arthur R., Klemmedson, James O., and Bull, Evelyn L. *Solution of forest health problems with prescribed fire: are forest productivity and wildlife at risk?* Forest Ecology and Management 127 (2000) Pg 7  
*“...With maturity and later successional stages, the forest floor becomes an increasingly significant pool of nutrients in the cycling process (Rodin and Bazilevich. 1967; Odum, 1969; Page-Dumroese et al., 1991).”*
20. Lorah, Paul and Southwick, Rob and Southwick Associates. 2000. *Historical Economic Performance of Oregon and Western Counties Associated with Roadless and Wilderness Areas* 8.
21. Frost, Evan J. and Sweeney, Rob. 2002. *Fire Regimes, Fire History and Forest Conditions in the Klamath-Siskiyou Region: An Overview and Synthesis of Knowledge.*
22. Cohen, Jack D. N.d. *Reducing the Wildland Fire Threat to Homes: where and how much?*
23. U.S. Department of the Interior, Bureau of Land Management, Medford District, Grants Pass Resource Area. 1997. *Deer Creek Watershed Analysis*
24. President Clinton guiding mandate: Forest Ecosystem Management: An Ecological, Economic, and Social Assessment. 1993. And *Underlying Needs and Purposes*. 1994. Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old Growth Forest Related Species Within the Range of the Northern Spotted Owl.

## **The Natural Selection Alternative Promises to be a Beneficial Alternative for the Tourism Economy in the Highway 199 Travel Corridor**

Roger Brandt, Highway 199 Traveler ([highway199traveler.com](http://highway199traveler.com))  
2004

The Highway 199 corridor has more to see than any other road through the coast range of Oregon, California and Washington and for this reason offers one of the most important tourism development opportunities in the state of Oregon and California. Forest management planning can contribute to the recreational, educational or scenic resources that strengthen the sustainability and diversity of economic opportunities communities can gain from public lands. Management objectives that create a diversity of economic opportunities through tourism can cast a positive influence that brings international dollars into this country and creates jobs that cannot be exported or outsourced to other nations. The Highway 199 travel corridor is very important to the overall tourism development strategy of Oregon and state administrators are placing increasing emphasis on developing regional cooperative markets to attract national and international travel in Oregon (Davidson, 2004). All public lands within the Highway 199 corridor have the potential to contribute to this state goal as well as benefit communities along travel corridors that feed into Highway 199 from both California and Oregon.

The following information assesses the economic potential of tourism along the Highway 199 travel corridor, reviews local strategic goals for business development in Illinois Valley, assesses travel industry trends and target audiences who are most likely to use the Highway 199 travel corridor and the resources that motivate them to travel. These will be compared to the objectives of the Natural Selection Alternative (NSA) to predict how this plan may contribute to increasing the sustainability of the travel industry, meet strategic planning goals for Oregon's lowest income community and assess how these resources will influence a positive travel experience that increases the potential of future travel clientele through positive word of mouth promotion.

### **The Economic Potential of Tourism in Illinois Valley**

The Illinois Valley is bisected by Highway 199, a popular travel route between Redwood National Park and Crater Lake National Park as well as a corridor for visitors who travel from the cultural center of Ashland to visit the coast and Oregon Caves National Monument. Most visitors traveling this route come from the metropolitan communities of Portland or San Francisco (Rolloff, 1995). Visitors commonly travel from the metropolitan areas along the coast to Redwood National Park and then follow Highway 199 inland to Crater Lake before returning home. The Highway usually has an annual traffic load of about one million vehicles. In 1992, the state estimated that 289,000 vehicles, about one third of the vehicles traveling on Highway 199, represent tourist traffic (Wetter, 1994). An estimate of tourist spending in Illinois Valley can be obtained from surveys conducted at Oregon Caves National Monument, an attraction that gets almost all its visitor traffic from Highway 199. Surveys conducted at Oregon Caves National Monument in 1995 indicate the average daily spending per group to be \$90 (Stynes, 2001). Assuming that each group travels together in one vehicle and the average spending per group is \$90, the approximate potential tourism dollars traveling on Highway 199 through the Illinois Valley would be about 26 million dollars annually. Considering that daily spending in adjacent California counties is higher (Del Norte=\$131, Siskiyou-Trinity=\$124, Humboldt=\$153) the estimate obtained from the Oregon Caves survey is low but is nevertheless adequate to illustrate that there is a high potential for making money if tourism attractions can be developed to encourage visitors to spend more time in Illinois Valley. Note: A survey conducted at Oregon Caves in 2003 produced a daily average spending estimate of \$135/day (Hogart et al, 2004).

Tourism is an important industry and contributes an annual income of about \$95 million dollars to Josephine County and about six billion annually to the Oregon economy. Tourism is extremely important along the Highway 199 corridor because this route has more to see than any other coast mountain travel corridor in Oregon, California and Washington and this makes it one of the most important tourism development opportunities in Oregon as well as California because travel from metropolitan areas in both states benefit communities in the Highway 199 corridor as well as communities in travel routes that feed into and out of Highway 199. Forest management on public lands in the Highway 199 corridor will make larger economic contributions to local and state communities if land management practices can be used to contribute to tourism resources that create diversified and sustainable business opportunities.

### **Tourism identified as the number one business opportunity in Illinois Valley**

Over the past five years, a significant movement has taken place to establish a destination tourism environment in the Illinois Valley. Several positive things have happened as a result. The Bureau of Land Management is working to install a wheelchair accessible botanical trail in an area of botanical interest at the foot of Eight Dollar Mountain. The Oregon State Parks Department is planning to construct a large campground at the Forks State Park near Cave Junction. The town of Cave Junction has begun a project to decorate the fronts of buildings and make flowerbeds using rocks representative of the Eight Dollar Mountain Botanical Area and Kalmiopsis wilderness. The intention of this and other projects is to spur visitor interest in the area and provoke visitors to explore and spend more time in the area. A one hundred page Action Plan for Sustainable Tourism in the Illinois Valley was completed in June, 2003 to help identify how a destination environment that retains visitor spending can be created.

Tourism development and preservation of resources are both goals of the *Illinois Valley Strategic Plan for Community Development*, a plan that was generated as a result of this community being Federally designated as an Enterprise Community. Federal grants were provided to develop the plan which contains strategies that the community has been slowly working to attain. A large element of these strategies focuses on tourism and education and include:

#### Business development:

Produce new jobs in the Illinois Valley by creating a viable destination (tourism) industry. Increase visitor length of stay, develop Ecotourism attractions and market the area's unique combination of rugged charm and character.

#### Quality of life:

Educate the community and newcomers about the importance of healthy riparian zones for the maintenance of water quality and aquatic habitat.

Restore and protect the natural environment and the ecologically significant areas that maintain the quality of life that attracts visitors and residents to the Illinois Valley.

Tourism planning and development in Illinois Valley has focused on experiences and opportunities that appeal to the Geotourism and senior traveler market. Tourism constitutes a sustainable, multimillion dollar industry for the communities of Illinois Valley, Josephine County and the state of Oregon. Projections by tourism organizations indicate that tourism will experience a pronounced increase over the next two to three decades. It is important that land management agencies work with the community to assure that scenic values, educational experiences and opportunities to see nature are both preserved and accessible.

### **Illinois Valley Travel Industry History and Performance**

Visitors driving through the valley on Highway 199 have traditionally slipped through the fingers of business owners and other travel oriented businesses in the Illinois Valley. This is illustrated in a 1995 survey at Oregon Caves that revealed the majority of visitors to be “drive through” travelers who are coming from one destination and traveling to another (Rolloff, 1995). A typical traveler spends about three to four hours at Oregon Caves National Monument and then departs without spending any time in other areas of the valley. Few indicate they are repeat visitors. About five percent of the visitors going to Oregon Caves in 1995 stayed in Illinois Valley lodging and another five percent stayed at local campgrounds.

Community members of Illinois Valley are aware that very little of the traffic on Highway 199 stops in the Illinois Valley and understand that there needs to be more to attract visitors to stop and spend time. Since Oregon Caves is considered to be the premiere tourism site in the valley, many business owners often discuss how to increase visitor travel to the monument as a way to increase tourism spending in Illinois Valley. However, the ability of the monument to support increased tourism must be balanced with resource protection issues and safety issues associated with tours becoming too crowded. For this reason, tourism proponents are looking to other parts of the Illinois Valley for tourism attractions that can be used to capture tourism dollars and to position Illinois Valley as a destination environment. To be effective at selecting the right kind of attractions, planners need to understand the traveling public.

Recent research indicates a growing interest among travelers in local culture and history (Stueve 2002). For this

reason, discussion on tourism development in Illinois Valley has focused increasing attention on preserving cultural resources such as the wood products industry, which has been a significant part of the Valley's cultural heritage for decades. This idea could be widely embraced because most residents and environmental groups and wood product advocates recognize fuel reduction for forest health, community safety and productivity to be common ground. The proponents for tourism development are among the people who feel there is an opportunity in the Selma area where forest management on BLM land can accomplish several positive goals to include: our wood product industry is retained as a cultural resource in the community, residents get the forest thinned while at the same time preserve the scenic values that contribute to their quality of life and the tourism industry gets a resource that helps stop visitor traffic in Josephine County. Tourism development also provides the BLM with an additional benefit of collaboratively educating the public about forest management objectives with examples that the public can visit. This has the potential of educating a large segment of residents from communities and metropolitan areas in western states and is an opportunity to mitigate misunderstandings about forest management and build public trust. I personally anticipate that all parties in Selma area and Illinois Valley would want to cast a positive light on management goals supporting an economy that benefits the wood product industry, local community residents and travel businesses. There would also be a strong support from the State Tourism Council because it supports themes that build a compelling tourism resource for attracting interstate and international travel and meets Oregon State Economic Development Department goals for creating a diversity of sustainable jobs in Oregon.

### **Visitor Profiles for Southwestern Oregon**

Understanding travel industry trend, behavior of the traveling public and resources that motivate the public to travel are essential to making sound decisions about travel industry development strategies. A survey conducted in 1995 at Oregon Caves provided the following information about visitors traveling in southwestern Oregon (Rolloff, 1995);

Visitor Education: 42% of visitors have a college education and half of these had a graduate degree.

Visitor Income: The average annual income for visitors to Oregon Caves was \$50,000.

Reasons for Travel: The top reasons for travel were viewing scenery, doing something with the family, and to learn more about nature.

The 1994 Tourism Assessment for Illinois Valley cited a Siskiyou National Forest District-Four Recreation Survey that indicated the primary reasons for tourism activity included visitor interest in viewing scenery, auto travel and hiking/walking (Wetter, 1994). Similar interest is also seen in Oregon state travel profiles which states, "people come to Oregon to indulge their interest in outdoor recreation, nature experiences and historic sites". They also noted many Oregon travelers are engaged in a family oriented trip (Longwood, 1997).

A recent survey conducted by the National Geographic Society in conjunction with the Travel Industry Association of America (TIAA) indicates that a large sector of the travel and tourism industry will be influenced by a growing public interested in the human and natural attributes that make one place distinct from another (Stueve, 2002). The survey grouped these individuals into a travel class they label as Geotourism. This group represents about 55 million Americans, which is greater than one third of the total 154 million American travelers. The survey indicated Geotourists share a general agreement that their travel experience is better when the destination preserves its natural, historic, and cultural sites. Over half (53%) of Geotourist agree that their travel experience is better when they have learned as much as possible about their destination's customs, geography and culture. The majority of these travelers are Baby Boomers (43%) and Senior Matures over 65 years (27%) comprising together 70% of the Geotravel sector, a total of about 38 million Americans. About 45% of Geotourists have a college education.

The age of travelers is an important consideration and the large number of retired now entering the travel market gives reinforcement to the need for accessible, low impact recreation. There are 50 million disabled in the United States and 60-70% of these individuals are "Senior Matures" who are 65 years or older. Senior Matures comprises 16% of all domestic trips in America. "Junior Matures", age 55-64, comprise 15% of domestic trips and 45% are "Baby Boomers" whose first members reached age 55 in 2001 (Rhoades, 2001). There is a large sector of the traveling population who are entering the age where disabilities will become an issue and accessibility to recreation resources will become increasingly important. The senior market is approaching explosive proportions and, in order to capture this market in Illinois Valley, it will be important for land management agencies such the USFS to support local communities by planning and preparing to serve the needs of mature travelers.

An insight to activities that might appeal to seniors can be found in a survey conducted by the Outdoor Recreation Coalition of America (Marwick, 1997), which identified activities such as walking and observing nature as being

important senior activities. They also noted that walking was the top activity in the United States with bicycling, hiking and bird watching close behind. Hiking footwear ranked as the highest growth area among outdoor recreation retailers. An interesting component of the survey noted there is an increasing interest in American society to reunite families and participate in activities that allow for group participation. As this trend becomes established, the growing senior market will also have the potential to bring younger sectors of society into the travel market as part of the national trend to reunite families and do family oriented activities. Trails and accessible nature experiences will be important in attracting these visitors to the Illinois Valley.

Projections for nature-based tourism and travel by seniors and their families comprise a large segment of the traveling population. Surveys indicate these individuals are interested in nature and want to have opportunities for healthful exercise such as walking and hiking. The unique, natural resources of Illinois Valley have a tremendous potential for attracting the nature-based tourism travel sector. Surveys of visitors in the Illinois Valley disclose a high interest in viewing scenery, hiking/walking, family oriented activities and educational experiences so this trend may already be underway. If resources can be made accessible and appealing to the interest and needs of this sector of traveling Americans the Illinois Valley could enjoy a sustained, nature-based tourism economy for a minimum of three to four decades.

### **The Natural Selection Alternative**

The Natural Selection Alternative (NSA) has objectives and implementation planning that contributes to tourism development goals and strives for outcomes that are attractive to the nature-based travel audience such as educational opportunities, attractive recreational resources and scenic integrity along the Highway 199 travel corridor.

*Contour access route:* The “concentric contour loop access system” has the potential of being used for recreational activities such as family oriented mountain biking, equestrian, or fitness walking. Accessibility for mobility impaired may be more feasible on a network of roads designed under this system. Alternative recreational uses of the contour loop system has the potential to increase quality of life, property value, and the potential for entrepreneurial enterprise on public lands.

*Preservation of cultural lifestyles:* Preservation of the forest extraction culture in a locally managed environment creates a travel resource especially attractive to the Geotourist travel sector according to a recent survey conducted by the Travel Industry Association of America (TIAA) and the National Geographic Society. The NSA vision includes income from forest management by individuals selected under this program as well as the potential for making additional income through conducting tours or educational programs.

*Scenic values:* The Natural Selection Alternative is likely to have little to no perceptible impacts on visual resources.

*Educational opportunities:* A wide variety of forest management topics can be offered as educational experiences for the nature-based travel sector, an audience who values and seeks family oriented educational opportunities. The educational opportunities that could be provided in the NSA will enjoy a certain charm because the educational programs will be provided by ecological oriented resident foresters who can put a face on forestry and give travelers a chance to interact with local personalities.

The NSA contributes to the resources that help to build tourism infrastructure and attain goals for creating a destination environment in the Illinois Valley. Cottage Industry entrepreneurs, artists, crafters, and host/service businesses will benefit from tourist retention. The NSA preserves or creates resources that are important to the nature-based travel audience, the fastest growing travel sector with the strongest potential for long-term sustainability. The management of public land that will bring the greatest benefit to the local community includes actions that preserve our local cultural wood products heritage, scenic values, and increase the opportunity for educational and recreational activities that bring families together and promote personal health.

### **Conclusion**

The Highway 199 corridor has more to see than any other travel corridor through the coast range of Oregon, California and Washington and for this reason offers one of the most important tourism development opportunities in the state of Oregon and California. Forest management on BLM lands should consider ways to increase the number of tourism resources as a measure to have public lands contribute to a more diversified economy. With this approach it will be possible to get wood fiber and provide jobs, reduce fire hazards at the forest/community interface, create educational and recreational opportunities for capturing tourist dollars on Highway 199 and increase the quality of life and property value for residents. The NSA moves in the direction of accomplishing these

objectives.

The Oregon State Tourism Commission is currently focusing on the development of regional cooperative markets to create new business opportunities that attract both national and international travel in Oregon. For this reason, it is important that tourism planning in Illinois Valley be circumspect about creating or preserving resources that are relevant to the stories of potential partners in Oregon and California. Partnering across state and county borders will provide a more interesting and compelling attraction for visitors who want to experience unique scenic and natural areas. A variety of exemplary educational nature and cultural experiences are the foundation of nature-based tourism. The NSA moves in the direction of accomplishing these goals.

Experts in tourism and tourism economies acknowledge nature-based tourism and nature education to be the fastest rising sectors in the travel industry (Powers, 2004). Surveys indicate that more than 55 million Americans are interested in this type of experience giving credence to the substantial and sustainable future that nature-based tourism can bring to a community. Forest management practices that support central tourism themes will help to galvanize stories on geocology, fire ecology and forest management into a high value visitor experience. High value experiences meet Oregon state goals for tourism development and will move Illinois Valley closer to community goals for establishing a destination environment for the valley. The economic benefits of working today to manage public lands with goals for community quality of life, fiber extraction, tourism and education will benefit the Illinois Valley and Josephine County for decades. The NSA offers a strategy for accomplishing these management goals.

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South Deer Landscape Plan            Roger Brandt

6 January 2005

Abbie Josie, Field Manager, Grants Pass Resource Area  
Medford District, Bureau of Land Management  
3040 Biddle Road  
Medford, OR 97504

Dear Ms. Josie,

In my professional capacity as a fire ecologist, I have been asked by the Deer Creek Valley Natural Resources Conservation Association to evaluate a draft of the South Deer Landscape Management Project, Natural Selection Alternative. The draft I received is dated 30 November 2004. The draft indicates that the Deer Creek Valley Natural Resources Conservation Association in collaboration with BLM, South Deer Forest Committee, Selma community and the larger community have collaborated on this alternative. I am not affiliated with any of these groups, nor have I been hired or paid to support any position. I am currently a research biologist with the Institute of Computational Earth Systems Science, UC Santa Barbara. I maintain a residence in SW Oregon, and have done fire research in this region. A CV listing my experience and publications is at the website listed above. My evaluation here is based on my professional judgment and experience in fire ecology, and my familiarity with the relevant scientific literature on fire and vegetation and disturbance/diversity relationships. I provide these comments in the interest of encouraging the use of ecological principles in public land management.

I endorse the management approach reflected in the Draft Alternative, even though it involves extracting timber, which will always have ecological impacts. The approach to extracting timber in this case appears to be a means of minimizing further damage and disturbance in the Watershed that could occur from future harvesting activities. Past logging disturbances have affected a considerable area of the South Deer Creek Watershed in a relatively short period of time. Natural disturbances over the same time period, particularly fire and insect pathogens, would probably have not amounted to as much disturbance over a similar amount of time historically for two reasons. First, fire and insect disturbances are believed to have occurred in a patchwise fashion, affecting relatively small portions of the landscape at irregular intervals (Whittaker 1960). Second, fire and insect disturbances are of lower overall magnitude than most past harvesting disturbances because the biotic legacies (woody biomass, seed banks, soil integrity) are not removed or disabled by natural disturbances. The Alternative recognizes correctly that a high degree of disturbance overall has occurred in the South Deer Creek, the effects of which are still evident. The Alternative correctly points out that there is no ecological need for the creation of more early successional habitat at this time. In particular, early successional habitat that lacks pre-disturbance legacies. Additional acute disturbances, particularly those of human origin, against which organisms have not evolved defenses, can be predicted from disturbance ecology principles to have a negative effect on species diversity in the Watershed. This would be counter to goals of maintaining biodiversity, which, as an ecologist, I feel are important.

Native organisms have also not evolved with deliberate burning, as it is typically applied in our region. This may involve pile burning, which sterilizes patches of soil, which then become prone to invasion by exotic species (Korb et al. 2004). Prescribed burning is also typically done during spring or after fall rain. Fires at this time do not produce the natural range of severities and other natural fire effects (Moritz and Odion 2004). These fires are lethal to numerous organisms that survive fire during the regular fire season, such as soil stored seeds that become seasonally sensitive (Borchert and Odion 1995). Nesting birds and dormant herptofauna may be adversely affected. Finally, out of season burns have been found to increase fuel loading (Show and Kotok 1924). Plant tissue is unusually sensitive to heat during the wet season, when tissue moisture content is high. Out of season burning causes much foliar mortality while often consuming very little surface fuel. These factors explain the findings that areas where out of season burns (e.g. spring, or after fall rains) were undertaken soon had more available fuel present after fire than existed beforehand (Show and Kotok 1924). For these reasons, I concur with the Alternative in its opposition to prescribed burning.

Importantly, the Alternative does recognize that the Watershed is a fire prone environment, especially with the amount of early successional vegetation that is present. The threefold strategy of maintaining remaining closed forest, treating areas where fire severity is most elevated due to human impacts (dense plantations), and focusing on the home ignition zone for protecting property from fire is a logical approach to fire hazards. There is no need to further increase landscape level fire risk by opening forests and promoting vegetation that has a self-reinforcing relationship with severe fire. Moreover, as Jack Cohen's analyses have shown, the problem of home ignition is only effectively dealt with by treating the home ignition zone. The most important thing to treat in this zone is the roof of the home, if it is composed of wood shingles. I would like to see this mentioned in fire protection approaches in the Watershed, and I



hope that there is a creative way for BLM to assist homeowners in the most important step toward protecting homes from wildfires, having a non-combustible roof.

My only other substantive concern with the Alternative is whether the removal of weak trees would lead to numbers of snags and amounts of coarse woody debris that are sufficient for supporting wildlife. The plan suggests that snags will be managed for, but more specifics could be provided for reassurance. There are probably far fewer snags, and less wildlife that uses these resources in the Watershed now compared to historically.

It seems like the South Deer Watershed management could become a great example of collaboration between community and government stakeholders leading to sound management balancing ecological and economic goals. I sincerely hope that this is the case, and that the approach outlined in the Alternative is adopted. It would be a notable accomplishment for all involved. Please let me know if you would like further information or clarification of any of these comments. Thank you for your consideration.

Sincerely,

Dennis C. Odion, Vegetation Ecologist

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