

# City of Prineville Natural Features Study

## Goal 5 ESEE Analysis

for the  
Prineville Urban Growth Area

*The City of Prineville and the surrounding area lie in a spectacular basin framed by dramatic geological forms and resource lands ... Preservation and enhancement of surrounding natural environmental system is a vital aspect of the community ... Protection of these special areas offers more than just aesthetic benefits; they can preserve the community's natural beauty without sacrificing economic development.*

*(Prineville Comprehensive Plan, p. 45)*



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# Part I: Introduction

## A. The Community Vision

On March 14, 2007, the Prineville City Council adopted a new comprehensive plan for the City and its urban growth area. The *Prineville Comprehensive Plan* seeks to achieve balance between urban development on the one hand, and preservation of natural features on the other. As noted on page 44 of the plan:

*The future of Prineville will be shaped by how the community decides to accommodate and balance that against preservation of various elements of the natural environment. ... Efforts to protect the natural environment should focus on maintaining a balance between the economy and ecology of the area while enhancing aesthetics and livability ideals of the community.*

This report provides background information and analysis that supports City and County efforts to achieve such balanced community growth.

## B. The Statewide Context

Prineville's goal of balancing land conservation and development conflicts are mirrored in Statewide Planning Goal 5: Natural Resources. Goal 5 sets forth procedures that must be followed by local governments to resolve conflicts between urban development and protection of natural features.

This Introduction describes Goal 5 requirements, summarizes City and County Goal 5 planning efforts, and explains why the Prineville Planning Commission's recommended approach to meeting these requirements is consistent with local resource inventories and planning objectives.

In summary, the Goal 5 process requires an inventory of natural features, identification of conflicting urban uses, an analysis of the "Economic, Social, Environmental and Energy" consequences of protection alternatives (an "ESEE Analysis") and adoption of local regulations to protect significant resource sites.

However, as noted in the *Updated Goal 5 Natural Features Program Outline* (Winterbrook Planning, March 2007), there are a number of protection options that do not require an Economic, Social, Environmental and Energy (ESEE) consequences analysis. Conflict resolution programs that do not require an ESEE analysis include the following:

1. Applying "Safe Harbor" programs set forth in the Goal 5 administrative rule to significant surface water resource sites;



2. Continuing to apply adopted City and County Goal 5 regulations to significant resource sites (or portions thereof);
3. Recognizing that certain conflicts have already been resolved by an approved development application;
4. Applying Goal 7 natural hazard regulations to Goal 5 resource sites within hazard areas;
5. Applying Goal 6 “water quality” programs to significant groundwater sites; or

As discussed in subsequent sections of this report, the *Draft Program Outline* recommends use of Options 1-5 for protection of most Goal 5 resource categories in Prineville. Goal 5 protection programs that do not fall into one of the five categories listed above must be consider the ESEE (economic, social, environmental and energy) consequences of alternative courses of action prior to adopting a protection program.

This approach allows the City to focus on the primary policy issue facing the decision-makers in Prineville:

**How to resolve conflicts between planned urban development and protection of Barnes Butte and rimrock scenic areas and bird nesting habitat throughout the urban growth area?**

## **C. Goal 5 Rule Requirements Related to the ESEE Analysis**

The Goal 5 rule (OAR Chapter 660, Division 23) requires that local governments conduct comprehensive inventories of potential Goal 5 resources and to determine the relative significance of each resource site. On March 14, 2007 the Prineville City Council accepted the *Prineville Goal 5 Natural Features Inventory* (Winterbrook 2007).

Where conflicting uses are identified but conflicts have not been resolved, the Goal 5 rule<sup>1</sup> requires that local governments analyze the Economic, Social, Environmental and Energy (ESEE) consequences of three regulatory options:

- Full resource protection (*i.e.*, allow no conflicting development);

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<sup>1</sup> OAR 660-023-040(4) **Analyze the ESEE consequences.** *Local governments shall analyze the ESEE consequences that could result from decisions to allow, limit, or prohibit a conflicting use. The analysis may address each of the identified conflicting uses, or it may address a group of similar conflicting uses. A local government may conduct a single analysis for two or more resource sites that are within the same area or that are similarly situated and subject to the same zoning. The local government may establish a matrix of commonly occurring conflicting uses and apply the matrix to particular resource sites in order to facilitate the analysis. A local government may conduct a single analysis for a site containing more than one significant Goal 5 resource. The ESEE Analysis must consider any applicable statewide goal or acknowledged plan requirements, including the requirements of Goal 5. The analyses of the ESEE consequences shall be adopted either as part of the plan or as a land use regulation.*



- Limited resource protection (the limited protection option addressed in this ESEE Analysis is based on the *Draft Program Outline* accepted by the City Council as subsequently modified by the City and County Planning Commissions); and
- No resource protection (*i.e.*, allow development without restriction).

As noted above, the required ESEE analysis for (1) Barnes Butte scenic resources and (2) bird nesting habitat throughout the urban growth area, is included in Part II, Goal 5 of this report. Local governments must consider the results of the ESEE analysis when formally adopting a “program” to resolve conflicts between land development and protection of significant resource sites.

## D. Prineville Area Planning Background

Over the years, Crook County has adopted natural features inventories, policies and regulations for Goal 5, 6 and 7 natural features. The City of Prineville has also adopted limited regulations to protect such features. On March 14, 2007 the City adopted a new comprehensive plan for the area within the Urban Growth Boundary (UGB) to replace the plan originally adopted by Crook County in 1978. This plan provides a policy framework regarding the protection of Goal 5, 6 and 7 resource areas.

New plan policies found in the Prineville Comprehensive Plan support the draft *Goal 5 Draft Program Outline* for resolving conflicts between urban development and conservation of natural features. The *Draft Program Outline* was accepted by the City Council in March of 2007 for purposes of conducting the required ESEE Analysis. Following two public hearings held in May and June of 2007, the Crook County and Prineville Planning Commissions recommended changes to the draft *Program Outline*. The findings in this report support the *Planning Commissions’ Recommended Goal 5 Program Outline*. **Throughout the remainder of this report, the term “Recommended Program Outline” means the Planning Commissions’ Recommended Goal 5 Program Outline (June 2007).**

### 1. The Crook County Comprehensive Plan and Implementing Ordinances

The Crook County Comprehensive Plan was adopted in 1978 (Ordinance 17) and includes land within the Prineville Urban Growth Boundary (UGB). The Crook County Comprehensive Plan includes inventories, goals and policies related to Statewide Planning Goal 5 (natural and cultural resources), Goal 6 (air, water and land resource quality), and Goal 7 (natural hazards) resources sites both within and outside the UGB.

For riparian corridors, wildlife habitat and rimrock resource sites, Crook County has identified conflicting uses, conducted an ESEE Consequences Analysis, and adopted resource protection policies. The County has also adopted implementing regulations in Crook County Zoning Regulations Ordinance 18 (CCZO). Crook County Ordinance 18,



Zoning Regulations, includes several provisions to protect Goal 5 sites and Goal 7 hazard areas that are further described in Table 1, above, and in the *Program Outline*.

The City of Prineville also has adopted implementing regulations to protect significant Goal 5, 6 and 7 resource sites in the Prineville Zoning Ordinance (PZO). As documented in the *Program Outline*, the City has adopted limited regulations to protect surface water resources (riparian corridors and wetlands).

## **2. Prineville's New Comprehensive Plan (2007)**

In 2005, the City of Prineville decided to create its own comprehensive plan – separate from, but coordinated with, Crook County. In 2007, the Prineville City Council adopted a new *Prineville Comprehensive Plan* for its urban growth area. In Particular, the City Council adopted a general policy framework for protection of Goal 5, 6 and 7 natural features. This policy framework supports protection of Goal 6 (groundwater resources) and 7 (natural hazards) features.

The policy framework also calls for protection of certain Goal 5 resources (riparian corridors, scenic rimrock, wetlands, bird nesting sites) using a combination of Goal 5 "safe harbor" provisions, existing city and county regulations, and Goal 6 and 7 standards.

Finally, the policy framework sets forth a process for adopting specific Goal 5 regulations to resolve conflicts with Barnes Butte scenic resources:

***Prineville will allow for appropriate residential development, while protecting Barnes Buttes and associated steep slopes, dry washes and raptor habitat through a three-tiered protection program.***

Without defining the precise level of protection for Barnes Butte scenic and wildlife habitat resources, the new *Prineville Comprehensive Plan* policies call for evaluation of a limited protection program identified in the draft *Program Outline* through the Goal 5 ESEE process.

### **Chapter 3 Natural Environment - Purpose and Intent**

*In 2006-07, the City contracted with Winterbrook Planning to prepare site-specific inventories of the location, quantity and quality of Goal 5 resources within and immediately outside the Urban Growth Boundary. Winterbrook worked with Crook County GIS staff to prepare detailed descriptions and maps of significant riparian corridors, wetlands, wildlife habitat and scenic areas.*

*The Goal 5 inventory "clusters" significant natural resource into the following contiguous natural resource sites:*

- 1. Barnes Butte Scenic Area and Hudspeth Drainage***
- 2. Upper Ochoco Creek Riparian Corridor and Scenic Rimrock***



3. **Lower Ochoco Creek Riparian Corridor**
4. **Upper Crook River Riparian Corridor and Scenic Rimrock**
5. **Lower Crooked River Riparian Corridor and Scenic Rimrock**
6. **Ryegrass Drainage Riparian Corridor**

*Winterbrook also worked with Crook County staff to map significant groundwater resources and Goal 7 natural hazards, including steep slopes, slide hazards, floodplains and dry wash areas. There is considerable overlap between Goal 5 natural resources and Goal 7 natural hazards within the Prineville UGB: approximately two-thirds of Prineville's Goal 5 natural resource area is affected by one or more natural hazards.*

*Next, Winterbrook prepared a draft limited protection program for all significant natural resources. The limited protection program balances urban development needs with conservation of the Goal 5 resource site. Generally, this program begins with existing Crook County and Prineville regulations, and combines Goal 5 (natural resource) and Goal 7 (natural hazard) protection programs where appropriate.*

*Next, Winterbrook evaluated the economic, social, environmental and energy consequences of three alternatives:*

1. *full local protection of each resource site (allow no conflicting urban development);*
2. *no local protection (allow conflicting urban development without mitigation); and*
3. *limited protection of each resource site based on the draft Goal 5 protection program.*

*After considering the draft limited protection program and its ESEE consequences, the City adopted a final Goal 5 protection program that implements the following natural resource and hazard policies.*

## **Issues, Goals, Policies, and Programs**

- *Local citizens desire to be good stewards of their community's natural resources, including significant natural resource sites and natural hazards shown on the Prineville Goal 6 and 7 inventories.*
- *The local economy can benefit from efforts to protect the natural environment. Prineville considered the economic consequences of resource and hazard protection in its analysis of economic, social, environmental and energy (ESEE) consequences of alternative resource protection programs.*
- *Programs are needed to address the protection of the natural environment in a balanced and fair fashion given the urban development goals of the City. Prineville's limited protection program achieves an appropriate balance between urban development needs (employment, housing, schools, parks and institutions), conservation of significant natural resources, and protection of life and property from natural hazards.*
- *Riparian and wetland areas support important wildlife and ecology and should be retained and enhanced to the greatest extent possible. Wildlife habitat associated with rivers, creeks and wetlands will be protected by maintaining and enhancing riparian vegetation*



*within significant riparian corridors.*

- *The creeks and rivers that traverse the community need special setback protection and corridor enhancement. Prineville has applied a three-tiered protection program that recognizes different levels of development that have occurred near Ochoco Creek, Crooked River, and the Hudspeth and Ryegrass Drainages.*
- *The cliffs and rimrock areas should be preserved and local regulations should be crafted to limit development intrusion into these areas. Prineville will continue to apply Crook County scenic setbacks along rimrock canyons as land is annexed to the City.*
- *Barnes Butte provides the scenic backdrop and identity to Prineville, and is recognized as the community's defining scenic resource site. Prineville will allow for an appropriate residential development, while protecting Barnes Buttes and associated steep slopes, dry washes and raptor habitat through a three-tiered protection program.*
- *The Prineville community has long experience with damaging floods. Prineville will amend the floodplain ordinance to incorporate a "no net loss of flood storage capacity" standard. Significant riparian corridors and wetlands within the 100-year floodplain will have a high level of protection.*
- *The water table is high in many areas of the community. To avoid further contamination of local aquifers, Prineville shall protect inventoried groundwater resources through adoption of a well-head protection ordinance as recommended by the Oregon Department of Environmental Quality.*
- *The open spaces and natural areas within the community need to be inventoried and networks of open space within the community shall be maintained and enhanced, including wildlife habitat corridors, stormwater management areas, trails and other sensitive areas. Prineville will maintain updated inventories of Goal 5 natural resource and Goal 7 hazard areas.*

In addition to plan text related to open space and natural resources, the Council accepted:

- *The Prineville Natural Features Inventory (Winterbrook Planning, January 2007). This inventory documents the location, quality and quantity of four categories of Goal 5 resources in six resource sites (or clusters of resource categories). In addition to maps of each resource category, the inventory also included maps of Goal 7 floodplain, drywash, steep slope and slide hazard areas.*
- *The Revised Natural Features Program Outline (Winterbrook Planning, March 2007) to serve as the initial basis for analyzing the Economic, Social, Environmental and Energy (ESEE) consequences of the proposed "limited protection program."*



To follow through on the Council's policy commitment, the next step in the Goal 5 process is for the Planning Commission to consider the ESEE consequences of three program alternatives for Goal 5 resource sites that are not protected by existing adopted Goal 5 regulations, approved development plans, Goal 5 safe harbor provisions, Goal 6 water quality regulations (groundwater resources), or Goal 7 natural hazard regulations.

## E. Significant Goal 5 Resources

The *Natural Features Inventory* (NFI) identifies and determines the significance of four types of Goal 5 resources:

- Surface water resources (riparian corridors and wetlands);
- Wildlife habitat (including riparian and upland habitat);
- Scenic resources (including rimrock and Barnes Butte); and
- Groundwater resources (below the surface).

The NFI also maps Goal 5 natural hazard areas, including floodplain, steep slopes, slide hazard areas, and dry washes.

Since resource categories frequently overlap, the NFI clusters surface resource categories – by location – into six Natural Resource Sites (NRS):

1. Barnes Butte and Hudspeth Drainage
2. Upper Ochoco Creek and Southeast Rimrocks
3. Lower Ochoco Creek
4. Upper Crooked River and South Rimrocks
5. Lower Crooked River and Southwest Rimrocks
6. Ryegrass Ditch

Note: Because groundwater resources are found throughout the Prineville urban growth area and addressed under Statewide Planning Goal 6 (water quality), the resource category is addressed separately.

*The Prineville Goal 5 Natural Features Inventory* describes the location, quantity and quality of four types of significant Goal 5 resources. These resources are summarized below.



## 1. Surface Water Resources

Surface water resources include perennial streams and wetlands and are shown on the *Prineville Natural Features Inventory* (NFI) Figures 1 and 2.<sup>2</sup>

- Crooked River, Ochoco Creek and Ryegrass Ditch are the only “fish-bearing streams” within the Prineville UGB, as shown on Oregon Department of Forest (ODF) maps. All have average annual flows of less than 1,000 cubic feet per second (CFS), and have associated wetlands. Ochoco Creek and Crooked River also have substantial floodplains.
- The Prineville UGB includes an additional riparian corridor – and associated wetlands – that is not listed as a “fish-bearing stream”: Hudspeth Drainage. This riparian corridor is framed by a deep ravine. Hudspeth Drainage includes almost all the remaining locally significant wetlands within the UGB that are not associated with Ochoco Creek, the Crooked River or Ryegrass Ditch. The Department of Land Conservation and Development (DLCD) has advised Winterbrook that Hudspeth Drainage can be protected under the “safe harbor” provisions of OAR 660-023-090(8).
- There are only a few locally significant wetlands located outside of protected riparian corridors. These isolated wetlands are within NRS 4: Upper Ochoco Creek and Southeast Rimrock. The significance of local wetlands is determined based on Department of State Lands (DSL) administrative rules.

## 2. Scenic Resources

As shown on NFI Figures 1 and 4, scenic resources include Crooked River canyon rimrock and Barnes Butte.

### Crooked River Rimrock

The Crooked River canyon rimrock defines the southern and western backdrops to the City. These flat top landmasses have important scenic qualities also recognized in City and County planning documents. The rimrock face provides the most prominent visual element of the landmass; this face is identified as the primary scenic resource as shown on Figure 4 of the Inventory. Below the face are the talus slopes, which while also significant, form the secondary scenic resource. Thus, the primary scenic area is the rimrock face itself, and the secondary scenic area is the talus slope between the base and the face of the rimrock, as shown on Figures 1 and 4.

### Barnes Butte

Barnes Butte is a geologic landmass that forms the northeastern backdrop to the City of Prineville. It has important scenic qualities recognized in both City and County planning documents. Barnes Butte’s steep slopes, rimrock areas, and large rock outcrops contribute to the scenic qualities. Between areas of exposed rock, the vegetative cover

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<sup>2</sup> Dry washes are protected by Goals 6 and 7.



on Barnes Butte includes bunchgrasses and forbs, a light cover of shrubs, and juniper trees. The butte's side slopes are carved by multiple dry wash canyons, whose channels are subject to periodic inundation and flooding from heavy rains. The butte's vegetation and dry wash canyons further contribute to its scenic qualities.

For the purpose of the scenic inventory, Barnes Butte can be defined as the landmass rising abruptly from the surrounding valley floor and visible from identified viewpoints. The NFI recognizes primary and secondary scenic backdrops both of which are considered significant for Goal 5 purposes:

- The *primary* backdrop is the more prominent northern section including the pinnacle. The primary backdrop on Barnes Butte includes the northern pinnacle (at elevation 3,549 feet) and the top approximately 200 feet of the northern ridge that is visible from all vantage points, including multiple sites within downtown and other low-lying areas of town.
- The *secondary* backdrop is the southern terrace and the steep slopes along the base of Barnes Butte. The secondary backdrop includes the southern terrace, discernable as an integral part of Barnes Butte from the east (e.g., Barnes Butte Road), from the south (e.g., the Ochoco Highway), or from higher elevations (e.g., Ochoco Viewpoint at 3190 feet), but may not be visible or visually prominent from the town center. The steep sides of Barnes Butte, which generally (but not exclusively) exceed 18 percent slope, also form part of the secondary backdrop by defining the edges and base of the larger mass.

### **3. Associated Wildlife Habitat**

The NFI includes riparian wildlife habitat (associated with wetlands and streams) and upland habitat (associated with Barnes Butte and Rimrock areas). Thus, wildlife habitat is found in association with both surface water resources and scenic resource areas.

- Wildlife habitat areas in Prineville include the riparian corridors and wetland complexes located along the Crooked River, Ochoco Creek, Ryegrass Drainage, and the Hudspeth Drainage. These corridors provide forage, water, cover and movement corridors for a variety of birds, mammals, other terrestrial wildlife. For example, as many as 187 species of birds have been documented using these riparian areas within the county, and many of these species occur along Prineville's Crooked River, Ochoco Creek, and Hudspeth Drainage. The Crooked River and Ochoco Creek provide important aquatic habitat as well, supporting populations of native redband trout and seven other game fish species.
- Important upland habitats include Barnes Butte and Crooked River rimrock. The butte's rock crevices, vegetation, dry wash canyons, and the neighboring wetlands complexes (most notably along the Hudspeth Drainage) provide forage, cover and nesting habitat for a variety of wildlife. Prairie falcon, golden eagle, red tailed hawk



and Osprey all nest on the slopes of Barnes Butte and its adjacent lowlands. Similar nest sites (e.g., golden eagle) are found along Crooked River rimrock.

- Crook County has mapped large expanses of mule deer winter range and antelope range in the Upper and Lower Crooked River NRS. When the UGB was amended in 2003, small range areas were included within the UGB. However, County zoning specifies that protection of these rangelands will cease when the City applies urban zoning. Therefore, conflicts have been already resolved, in the long term, in favor of urban development.

#### **4. Ground Water Resources**

Several large drinking water protection areas are identified on a City map entitled "Wetlands-Drinking Water." The protection areas are located within the central and eastern areas of the Prineville UGB, and near the airport to the southwest. The areas groundwater aquifers are fed by several sources including infiltration from Crooked River, Ochoco Creek, the Ryegrass Ditch, irrigation systems, as well as migration from overlying and underlying geologic formations. Primary use of groundwater includes drinking water and irrigation. **Groundwater resources are protected under Goal 6, Water Quality, and therefore do not require an ESEE Analysis.**

### **F. Program Options for Protecting Significant Natural Resource Sites (NRS)**

As noted in the *Program Outline*, there are several local options for resolving conflicts between development and natural resources in Prineville. Conflicts can be resolved in one of six ways by:

1. Continuing to apply adopted City and County Goal 5 regulations to significant resource sites (or portions thereof);
2. Applying "Safe Harbor" programs set forth in the Goal 5 administrative rule to significant surface water resource sites (OAR 660-023-090);
3. Recognizing that certain conflicts have already been resolved by approved development conditions (e.g., Iron Horse Outline Development Plan);
4. Applying Goal 7 natural hazard regulations related to steep slopes, slide hazards or floodplains to Goal 5 resource sites within hazard areas;
5. Applying Goal 6 "water quality" programs to significant groundwater sites; or
6. Conducting an ESEE (economic, social, environmental and energy) consequences analysis prior to adopting a protection program.

As discussed in subsequent sections of this report, the *Program Outline* recommends use of Options 1-5 for protection of most Goal 5 resource categories.

Table I-1 summarizes the Program Outline recommendations accepted by the City Council for each resource category and site. Table 1 relies on a combination of adopted



regulations and Goal 5 safe harbor provisions, but assumes that the City and County will adopt standards prohibiting development on (a) slopes of 25% or greater, (b) within mapped slide hazard areas at the base of rimrock, and (c) within 50 feet of the centerline of mapped dry washes.

**Table I-1. Recommended Conflict Resolution Methods**

Resource Site	Goal 5 Safe Harbor	Goal 7 Natural Hazard	Adopted Regulations or Land Use Decision	Goal 5 ESEE Analysis
<b>Barnes Butte / Hudspeth Drainage</b>	Riparian Corridor Assoc. Wetlands <sup>2</sup>	Steep Slopes Slide Hazards Dry Washes	Iron Horse ODP <sup>5</sup> Rimrock Setback <sup>4</sup>	<ul style="list-style-type: none"> <li>▪ <b>Barnes Butte Scenic Areas</b></li> <li>▪ <b>Bird Nesting Sites</b></li> </ul>
<b>Upper Ochoco Creek / SE Rimrocks</b>	Riparian Corridor Assoc. Wetlands <sup>2</sup>	Steep Slopes Slide Hazards Dry Washes Floodplain <sup>1</sup>	Riparian Setbacks <sup>3</sup> Rimrock Setback <sup>4</sup>	<ul style="list-style-type: none"> <li>▪ <b>Scenic Areas at Rimrock Base</b></li> <li>▪ <b>Bird Nesting Sites</b></li> </ul>
<b>Lower Ochoco Creek</b>	Riparian Corridor Assoc. Wetlands <sup>2</sup>	Steep Slopes Slide Hazards Dry Washes Floodplain <sup>1</sup>	Riparian Setbacks <sup>3</sup> Rimrock Setback <sup>4</sup>	<b>Bird Nesting Sites</b>
<b>Upper Crooked River / South Rimrocks</b>	Riparian Corridor Assoc. Wetlands <sup>2</sup>	Steep Slopes Slide Hazards Dry Washes Floodplain <sup>1</sup>	Deer Winter Range – County EFU Zone Riparian Setbacks <sup>3</sup> Rimrock Setback <sup>4</sup> Isolated Wetlands- Angler’s Canyon ODP <sup>6</sup>	<ul style="list-style-type: none"> <li>▪ <b>Scenic Areas at Rimrock Base</b></li> <li>▪ <b>Bird Nesting Sites</b></li> </ul>
<b>Lower Crooked River / SW Rimrocks</b>	Riparian Corridor Assoc. Wetlands <sup>2</sup>	Steep Slopes Slide Hazards Dry Washes Floodplain <sup>1</sup>	Antelope Range – County EFU Zone Riparian Setback <sup>3</sup> Rimrock Setback <sup>4</sup>	<b>Scenic Areas at Rimrock Base</b>
<b>Ryegrass Ditch</b>	Riparian Corridor Assoc. Wetlands <sup>2</sup>			<b>Bird Nesting Sites</b>
<b>Groundwater Resources</b>	Groundwater resources are recommended for protection under a model ordinance developed by the Oregon Department of Water Quality, and therefore are protected under Statewide Planning Goal 6 (Air, Land and Water Resources Quality).			

Source: Updated Goal 5 Natural Features Program Outline

<sup>1</sup> Floodplain Regulations: Prineville §153; Crook County §3.170

<sup>2</sup> Safe Harbor for Riparian Corridors and Associated Wetlands: OAR 660-023-090

<sup>3</sup> Riparian Corridor Setbacks for Unincorporated Areas within UGB: Crook County §4.190

<sup>4</sup> Top of Rimrock Setback: Crook County §4.210

<sup>5</sup> Iron Horse Outline Development Plan (ODP) Final Decision (SUB 05-707)

<sup>6</sup> Angler’s Canyon ODP



## **G. Limited Protection Program or “Recommended Program Outline”**

In March of 2007, the Prineville City Council accepted both the *Prineville Goal 5 Natural Features Inventory* and the *Revised Natural Features Program Outline*. The inventory identifies and maps four types of significant Goal 5 resources in six natural resource sites. During the joint public hearing process before the Crook County and Prineville Planning Commissions in May and June of 2007, the Planning Commissions recommended changes to the *Revised Natural Features Program Outline* accepted by the City Council. The *Recommended Natural Features Program* describes the modified “limited protection program” that is considered and recommended in this ESEE analysis. This limited Goal 5 protection program – as recommended by the Planning Commissions – is summarized below.

### **1. Surface Water Resources**

Goal 5 surface water resources include perennial streams and wetlands.<sup>3</sup> The *Recommended Program Outline* has been changed from a three- to a two-tiered approach to resolving development conflicts<sup>4</sup> within the Ochoco Creek, Crooked River, Hudspeth Drainage and Ryegrass Ditch riparian corridors. The recommended approach relies on a combination of: (a) existing County setback regulations outside the City Limits; (b) newly adopted Goal 6 water quality and 7 natural hazard regulations; (c) the “safe harbor” provisions of the new Goal 5 administrative rule;<sup>5</sup> and approved Outline Development Plans (Iron Mountain ODP for Hudspeth Drainage and Angler’s Canyon ODP for isolated wetlands). The Angler’s Canyon ODP obviated the need for the “third tier” of regulations for isolated wetlands.

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<sup>3</sup> Higher elevation dry washes are protected as Goal 6 and 7 resources, as discussed in Section II, Goals 6 (Water Quality) and 7 (Natural Hazards).

<sup>4</sup> A “conflicting use” is defined in the new Goal 5 administrative rule as “a land use, or other activity reasonably and customarily subject to land use regulations, that could adversely affect a significant Goal 5 resource ... Local governments are not required to regard agricultural practices as conflicting uses.” Conflicting uses in riparian corridors are vegetation removal, grading and construction.

<sup>5</sup> As defined in OAR 660-023-020(2): “A ‘safe harbor’ consists of an optional course of action that satisfies certain requirements under the standard process. Local governments may follow safe harbor requirements rather than addressing certain requirements in the standard Goal 5 process. For example, a jurisdiction may choose to identify ‘significant’ riparian corridors using the safe harbor criteria under OAR 660-023-0090(5) rather than follow the general requirements for determining ‘significance’ in the standard Goal 5 process under OAR 660-023-0030(4). Similarly, a jurisdiction may adopt a wetlands ordinance that meets the requirements of OAR 660-023-0100(4)(b) in lieu of following the ESEE decision process in OAR 660-023-0040.”



## 2. Scenic Resources

The *Recommended Program Outline* recommends limited protection for scenic rimrock and Barnes Butte.

### Scenic Rimrock

The existing 200-foot setback from the top of the rimrock edge is a clear and objective standard as required by Goal 5. However, there are no clear and objective standards that address the protection of the scenic and aesthetic values of the rimrock face and talus debris slope, or the related slope and rock fall hazards.

Thus, the recommended program outline covering the scenic area between the rim and 100 feet out from the base of the Rimrock side slopes is as follows:

- No residential construction or development on the rimrock face (Goal 7), 200 feet back from the rimrock face (existing regulations), on talus debris slopes of 25 percent or greater (Goal 7), or within mapped dry wash canyons (Goals 6 and 7).
- Design and grading standards apply to residential construction within visible talus debris slopes shown on NFI Figures 1 and 4 (Goal 5).
- Engineering and grading standards apply to all development and earthwork, including fill or removal, within areas of 18 to 25 percent slopes (Goal 7).
- All development within 100 feet from the base of the Rimrock (talus) slope (the potential hazard area) shall be subject to a geological analysis completed by a licensed engineering geologist and approved by the City Engineer (Goal 7).

The *Recommended Program Outline* proposes specific density and design standards for construction, development and earthwork within secondary scenic resource areas. These design standards would address such issues as building height, bulk, separation, exterior materials and orientation. The secondary scenic area is Figures 1 and 4, and is found on sloped areas between the rimrock face and the base of rimrock. Please see detailed discussion of the *Recommended Program Outline* in Part II, Goal 5 of this report. Outside of Goal 7 hazard areas and the existing top-of-rimrock setback area, the scenic protection program requires an ESEE analysis.

### Barnes Butte

The *Recommended Program Outline* proposes a two-tiered protection program for the Barnes Butte scenic area. As noted in Part II of this report, most conflicting uses with the Barnes Butte scenic area and bird nesting sites were resolved with the approval of the Iron Horse Outline Development Plan (ODP). The entire scenic impact area shown on NFI Figure 4 is within the Iron Horse ODP; therefore, conflicts have been resolved in this area. Outside of Goal 7 hazard areas, the scenic protection program requires a detailed ESEE analysis. Please see detailed discussion of the *Recommended Program*



*Outline* in Part II, Goal 5 of this report.

1. **Tier 1:** Very limited development would be allowed on the mapped primary scenic resource area. Earthwork standards would limit and mitigate from cuts and fills that would otherwise scar the face of the butte. Specific design standards would apply. The extent of residential development allowed, if any, depends on the ESEE Analysis found in Part II, Goal 5 of this report.
2. **Tier 2:** Specific density and design standards would apply to development and earthwork within secondary scenic resource areas (Goal 5), and areas of 18 to 25 percent slopes (Goal 7). Residential design standards would address such issues as building height, bulk, separation, exterior materials and orientation. Earthwork standards would limit and mitigate impacts from cuts and fills.

### **3. Associated Wildlife Habitat**

Fish and wildlife habitat along riparian corridors is protected on a limited basis by the proposed Goal 5 “safe harbor” protection program. Several bird nesting sites within the Prineville UGB receive partial protection under recommended safe harbor provisions.

Chapter 18.120 Sensitive Bird Habitat of the Crook County Code sets forth standards for development review within a quarter-mile of significant bird nesting sties. Generally, these standards mandate coordination with the Oregon Department of Fish and Wildlife regarding vegetation removal and the timing of construction. However, the Iron Horse ODP Final Decision determined that this provision no longer applies upon annexation to the City of Prineville.

The *Recommended Program Outline* would require that significant bird nesting sites continue to be protected by Oregon Department of Fish and Wildlife (ODFW) standards regarding the timing and location of construction activities within a quarter mile of sensitive bird habitats. However, after considering ESEE consequences, the Planning Commissions need to decide whether to continue to protect the Osprey nesting site on school grounds near SE Combs Flat Road.

Mule deer winter range and antelope range areas were included within the Prineville UGB in 2003 (Ordinance 17, amendment 57). These areas are part of much larger range lands that are protected by Crook County’s EFU 2 (Prineville Valley Area) and EFU 3 (Powell Butte Area) zones. Each of these zones states that range land protection (one home per 40 or 80 acres) will remain until the range resource area is annexed to the City and receives urban zoning (Section 18.20.010(14)(e)(iii)). Thus, Crook County has made the decision to protect this resource in rural areas, but to allow conflicting uses fully within the Prineville UGB, as urban zoning is applied.



## 4. Ground Water Resources

In Prineville, groundwater is the water source for the public water supply and irrigation. Because it serves the public water supply, it is important to the health of the community to protect the groundwater from possible contamination. One reason groundwater is a particular interest in Prineville is because of the area's high water tables. High water tables mean that ground and surface waters have greater interaction and the shallow water table in general is more vulnerable to contamination from lands above.

The Oregon Department of Environmental Quality (DEQ) provides information on Significant Groundwater Areas and Potential Contaminant Sources. Significant Groundwater Areas are defined by the Oregon Drinking Water Program (DWP) based on the susceptibility of groundwater to contamination in relation to the length of time it takes for water to infiltrate an aquifer. The length of time is a function of the soils and geology surrounding the aquifer and the depth from surface to aquifer. As water passes through layers of soil, it may be stripped of many possible contaminants, ideally minimizing the transport of contaminants from the surface to the aquifer. The less time it takes for water to infiltrate, the more susceptible the aquifer and the groundwater in the aquifer are to contamination.

The DWP also has identified Potential Contaminant Sources (PCS) in Prineville. For public water systems served by groundwater sources, the most threatening "potential contaminant sources" from the higher risk categories of inventoried sites include<sup>6</sup>:

- Housing - High Density (more than 1 house per half acre)
- Transportation - Freeways/state highways/other heavy use roads
- Large Capacity Septic Systems (serves more than 20 people)
- Sewer Lines - Close proximity to public water system
- Above Ground Storage Tanks - Excluding water and residential tanks
- Crops - Irrigated (inc. orchards, vineyards, nurseries, greenhouses)
- Automobiles - Repair shops
- Septic Systems - High density (more than 1 system per acre)

Significant Groundwater Areas with potential aquifer infiltration of less than 2 years were considered significant, as were Potential Contaminant Sources listed as "higher" hazards. The remaining area within DEQ's Significant Groundwater Area outside of the > 2-year sensitivity zone is shown as the Impact Area. These areas are mapped on Inventory Figure 5, Groundwater Resources.

Though no specific groundwater protection regulations have been adopted, the City has identified the development of comprehensive stormwater and wellhead planning, management and regulatory strategies as a priority (Draft Lower Crooked River Watershed Assessment, 2006).

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<sup>6</sup> DEQ - <http://www.deq.state.or.us/wq/dwp/riskoverview.htm> (accessed 1/15/2007)



The *Program Outline* recommends a three-part program to protect groundwater resources:

1. Adopt the proposed Goal 5 safe harbor program to protect Wetland and Riparian Areas, to reduce the risk of contamination through surface water and groundwater interaction;
2. Obtain technical assistance from DEQ to develop and implement a drinking water protection strategy to assure a safe and adequate drinking water supply for Prineville over the long term; and
3. In coordination with DEQ, adopt a Goal 6 groundwater protection program that reduces the risk of potential contaminants in local drinking water protection areas, particularly within the 2-year sensitivity zone areas mapped in Figure 5 of the Inventory.

## H. Conflicting Uses

Once the inventory has been completed and the significance of each "resource site" determined, the next step in the Goal 5 process is to identify conflicting uses and activities that typically are regulated by City or County zoning. As noted above, conflicts are resolved for most significant Goal 5 resource sites by existing zoning (e.g., rimrock protection standards), natural hazard standards (new steep slopes, floodplain, slide hazard standards), riparian corridor safe harbor provisions, and approved development plans (most particularly the Iron Mountain ODP and the Angler's Canyon ODP).

Thus, for purposes of this analysis, conflicting uses are identified for the Barnes Butte Scenic Area (Primary, Secondary and Impact Areas) and Sensitive Bird Nesting Sites.

The Goal 5 Rule (OAR 660-23-010) defines conflicting uses as follows:

*(1) "Conflicting use" is a land use, or other activity reasonably and customarily subject to land use regulations, that could adversely affect a significant Goal5 resource (except as provided in OAR 660-023-0180(1)(b)). Local governments are not required to regard agricultural practices as conflicting uses.*

In an urban area, there are many examples of conflicting uses that typically are not regulated by zoning, but could adversely affect a Goal 5 resource. For example, air pollution can adversely affect aquatic vegetation, but is typically not regulated by local zoning. City zoning regulations typically regulate where and how urban development may (or may not) occur on a specific site.



Urban development is broadly defined, and includes a wide range of land uses (residential, commercial, industrial, parks and schools, streets and public facilities) and activities (vegetation removal, grading, construction) that may or may not be directly associated with a specific land use. For example, vegetation removal often occurs at the time of building construction, but may occur independently.

The Goal 5 Administrative Rule describes how conflicting uses are identified:

*(2) Identify conflicting uses. Local governments shall identify conflicting uses that exist, or could occur, with regard to significant Goal 5 resource sites. To identify these uses, local governments shall examine land uses allowed outright or conditionally within the zones applied to the resource site and in its impact area. Local governments are not required to consider allowed uses that would be unlikely to occur in the impact area because existing permanent uses occupy the site. The following shall also apply in the identification of conflicting uses: (a) **If no uses conflict with a significant resource site, acknowledged policies and land use regulations may be considered sufficient to protect the resource site.***

This section identifies land uses and activities that conflict with preservation of Goal 5 resource values, based primarily on the applicable zoning within the City Limits, and on the applicable comprehensive plan designation within the Prineville Urban Growth Boundary (UGB). The City of Prineville has not yet adopted the City's draft comprehensive plan. Therefore, this ESEE Analysis relies on Crook County Comprehensive Plan designations to determine conflicting uses within the UGB. By applying a combination of existing regulations and proposed Goal 7 regulations, full protection of the following scenic resources is assured:

- Cliffs, steep slopes and mapped dry washes on Barnes Butte and the rimrock base – protected by Goal 7 development prohibition on slopes of 25% or greater and within mapped dry washes;
- Top of rimrock setback – protected by existing 200-foot Goal 5 scenic setback standard;
- Passive recreational uses, such as trails and viewing areas, are not considered conflicting uses because they have minimal and acceptable visual impacts. The passive recreational park planned by BLM for the primary scenic area, therefore, is not considered a conflicting use; and
- Conflicting uses in the Barnes Butte scenic impact area (Tier 3) have been fully resolved by the Iron Horse ODP;
- The Iron Horse ODP partially resolves most conflicting uses within secondary and primary scenic areas.



Table I-2, below, identifies remaining land uses and activities that may conflict with scenic and wildlife resource sites and which, therefore, require an ESEE analysis.

**Table I-2. Conflicting Use Matrix: Barnes Butte Scenic Area and Bird Nesting Sites**

Resource Site(s)	Comprehensive Plan Designation / Zoning	Park or School Conflicts	Planned Streets or Utilities	Vegetation Removal & Grading
Barnes Butte Primary Scenic Area (Tier 1)	Residential Open Space/Parks (BLM) Iron Horse ODP	No	Yes Conflicts partially resolved by Iron Horse ODP	Yes Conflicts partially resolved by Iron Horse ODP
Barnes Butte Secondary Scenic Area (Tier 2)	Residential Iron Horse ODP	No	Yes Conflicts partially resolved by Iron Horse ODP	Yes Conflicts partially resolved by Iron Horse ODP
Barnes Butte Bird Nesting Sites (5)	Residential Open Space/Parks (BLM) Iron Horse ODP	No	Yes Conflicts partially resolved by Iron Horse OHP	Yes Conflicts partially resolved by Iron Horse ODP
Upper Ochoco Creek Secondary Scenic Area	Residential	No	Yes	Yes
Upper Ochoco Creek (SE Combs Road) Bird Nesting Site (1)*	Residential Commercial	Schools (nesting site on school grounds)	Yes (within ¼ mile impact area)	No (nest on light standard)
Upper Crooked River Secondary Scenic Area	Residential (EFU) - White Horse Ranch site	No	Yes	Yes
Upper Crooked River Bird Nesting Sites (2)	Residential (EFU) – White Horse Ranch Site Impact Area	No	Yes**	Yes**
Lower Crooked River Secondary Scenic Area	Residential (EFU)	No	Yes	Yes
Ryegrass Creek (Lamonta Road) Bird Nesting Sites (2)	Industrial, Commercial and Residential within Impact Areas	No	Yes	No Riparian Safe Harbor

\* The Planning Commissions may choose to allow conflicting uses and activities for this highly impacted nesting site without further local regulation. See discussion in Part II, Goal 5.

\*\* The exact location of the two golden eagle nesting sites is under review. It is likely that street, vegetation removal and grading conflicts will cease to exist if the actual nesting sites are determined to be further south than shown on NFI maps.



## I. Correlation among Goal 5 ESEE Factors and Goals 1-14

The ESEE Analysis must also comply with applicable Statewide Planning Goals. Table I-3 shows the relationships among the four ESEE factors of Goal 5 and the 13 applicable Statewide Planning Goals as they apply to scenic resource and upland wildlife habitat sites (bird nesting and deer winter range) within the Prineville UGB. Part II of this report elaborates on these relationships.

**Table I-3. ESEE Consequences and the Statewide Planning Goals 1-15**

Applicable Statewide Planning Goal ESEE Consequence	Economic	Social	Environmental	Energy
<b>Goal 1 (Citizen Involvement)</b> Document and Consider Citizen Comments	X	X	X	X
<b>Goal 2 (Land Use Planning)</b> Adequate Factual Base Agency Coordination Consider Alternatives Ultimate Policy Choices Implementation Adequate to Carry Out Policies	X	X	X	X
<b>Goals 3 and 4 (Agricultural and Forest Lands)</b>	NA	NA	NA	NA
<b>Goal 5 (Natural Resource Protection)</b> Adequate Goal 5 Inventory Significance Determination ESEE Analysis 3 Decision Options Clear and Objective Standards		X X	X X	
<b>Goal 6 (Water Quality)</b>	X	X	X	
<b>Goal 7 (Natural Hazards)</b> Flooding Hazard Steep Slopes / Slide and Erosion Hazards Earthquake Hazards	X X X	X X X	X X X	
<b>Goal 8 (Recreational Opportunities)</b> Suitable Park Sites Park Development Impacts	X	X	X X	
<b>Goal 9 (Economic Development)</b> Adequate Land Supply Provide Jobs Provide Commercial and Office Uses Development Impacts	X X X	X X X	X	
<b>Goal 10 (Housing)</b> Adequate Buildable Land Supply Affordable Housing Opportunities Clear and Objective Standards Development Impacts	X X X	X X X	X	
<b>Goal 11 (Public Facilities / Services)</b> Efficient Provision of Urban Services Public Facilities Project Impacts	X X	X X	X	



Applicable Statewide Planning Goal ESEE Consequence	Economic	Social	Environmental	Energy
<b>Goal 12 (Transportation)</b>				
Safe and Efficient	X	X		
Connectivity	X	X		
Multi-Modal Transportation	X	X		
Transportation Project Impacts			X	
<b>Goal 13 (Energy Conservation)</b>				
Housing Near Employment				X
Public Facilities				X
Transportation Connectivity				X
Compact Urban Form				X
Maximum Efficiency of Land Use				X
<b>Goal 14 (Urbanization)</b>				
Compact Urban Growth Form	X	X	X	
Maximum Efficiency of Land Use	X	X	X	
Livability	X	X	X	

## J. Where we are in the Goal 5 Process

Prineville and Crook County are now in the last step of the Goal 5 review process. To get here Winterbrook Planning has worked with City and County staff, the Prineville and Crook County Planning Commissions, Prineville area citizens and property owners, and Prineville and Crook County decision-makers to:

1. Inventory of the location, quantity, and quality of significant Goal 5, 6 and 7 Natural Features. The *Prineville Natural Features Inventory*, as modified as a result of Planning Commission public hearings, meetings this requirement.
2. Determine significant resource sites in each of these resource categories. **Figure 1: Goal 5 Natural Resource Composite Map** shows six significant Goal 5 resource areas within the four resource categories. An NRS includes one or more natural resource categories.
3. Determine "impact areas" for each NRS resource category. The rationale for the Barnes Butte Scenic and Bird Nesting Site impact areas is discussed in the *Prineville Natural Features Inventory*.
4. Determine land use activities and development that conflict with the preservation of resource values on significant NRS, based on existing zoning, and considering limitations on development required by proposed Natural Hazard overlay districts.
5. Determine which Goal 5, 6 and 7 resource sites may be protected without a Goal 5 ESEE analysis (i.e., by existing regulations, by Goal 6 or Goal 7 protection measures, by the safe harbor provisions of the Goal 5 rule, or by conditions of an approved outline development plan). These resources include:



- **Crooked River, Ochoco Creek, Hudspeth Drainage and Ryegrass Ditch** Riparian Corridors – including associated wetlands and riparian habitat as shown on NFI Figures 1 and 2 (Protected by Goal 5 safe harbor standards and Iron Horse ODP conditions)
  - **Crooked River and Upper Ochoco Rimrock** and associated habitat (Protected by existing top of rimrock setback and Goal 7 hazard standards – except for secondary scenic areas between the rimrock face and the base of rimrock as shown on NFI Figures 1 and 4)
  - **Groundwater Resources** as shown on NFI Map 5 (Protected by Goal 6 – Water Quality)
  - **Isolated Wetlands** as shown on NFI Figures 1 and 2 (Protected by Angler’s Canyon ODP conditions)
  - **Mule Deer and Antelope Range Lands** as shown on NFI Figures 1 and 3 (Protected by existing County regulations until urban zoning is applied)
6. The next step in the Goal 5 process is the ESEE (Economic, Social, Environmental and Energy) Consequences Analysis for Goal 5 resource sites that do not fall completely into one of the above categories. As noted above, the ESEE analysis will focus on the following resources as mapped in the *Prineville Natural Features Inventory*:
- Barnes Butte Scenic Resource Areas and Bird Nesting Habitat
  - Upper Ochoco Creek Bird Nesting Habitat
  - Upper Crooked River Secondary Scenic Rimrock and Bird Nesting Habitat
  - Lower Crooked River Secondary Scenic Rimrock
  - Ryegrass Ditch Bird Nesting Habitat

The final next step in the Natural Features process will be to adopt implementing land use regulations. The *Revised Program Outline* accepted by the City Council – as modified by the City and County Planning Commissions as the *Recommended Program Outline* – would require the following code provisions:

**A. Natural Hazards (Goal 7):**

1. Amend Goal 7 floodplain regulations to:
  - a. Require balanced cut and fill (no net loss of flood storage capacity); and
  - b. Prohibit most development in areas where the floodplain overlaps with a Goal 5 resource site.
2. Adopt a new Goal 7 Hillside Protection overlay district that:



- a. Requires geological studies for development on slopes of 18% or greater and for potential rock fall areas at the base of rimrock;
- b. Prohibits development on slopes of 25% or greater; and
- c. Prohibits development (except road and utility crossings) within 50 feet of the centerline of dry washes.

**B. Bird Nesting Sites (Goal 5)**

Recognize that many conflicts were resolved by the Iron Horse ODP approval, and adopt Oregon Department of Fish and Wildlife (ODFW) review process consistent with the recommendations of the final ESEE Analysis for mapped Raptor / Osprey nesting habitat. Consider removing protection from the Osprey site near Combs Flat Road.

**C. Barnes Butte Primary and Secondary Scenic Areas (Goal 5)**

Recognizing that many scenic conflicts were resolved by the Iron Horse ODP approval, adopt a two-tiered scenic design review program for:

1. Barnes Butte primary scenic areas; and
2. Barnes Butte secondary scenic areas.

**D. Crooked River and Ochoco Creek Rimrock Secondary Scenic Areas (Goal 5)**

Continue to apply the existing 200-foot building setback to the area parallel to the rimrock edge. Apply Tier 2 design review standards to the secondary scenic area at the base of rimrock.

**E. Riparian Corridors and Associated Wetlands (Goal 5)**

Continue to apply existing County riparian setback standards and adopt new Goal 5 "safe harbor" regulations for the following riparian corridors (including associated wetlands), by establishing a 50-foot non-disturbance setback (can be reduced to 25-feet in developed areas with mitigation) for the Crooked River (the existing 100-foot setback would continue to apply to areas outside the City Limits); Ochoco Creek; Hudspeth Drainage (also protected by Iron Horse ODP); and Ryegrass Ditch.

**F. Isolated Wetlands (Goal 5)**

Recognize that Goal 5 isolated wetland conflicts have *already* been resolved by the City's approval of Angler's Canyon ODP.

**G. Groundwater Resources (Goals 5 and 6)**

Adopt groundwater protection program based on Department of Environmental Quality (DEQ) model ordinance, consistent with Statewide Planning Goal 6 (Water Quality).



## Part II: Statewide Planning Goal & ESEE Analysis

Statewide Planning Goals 1-2 and 5-14 are applicable and addressed in this analysis. Goals 3 (Agricultural Lands) and 4 (Forest Lands) are not applicable because the ESEE Analysis does not address rural land outside the Prineville UGB. However, issues related to protection of farm and forest lands are addressed under Goal 14, Urbanization.

### Goal 1: Citizen Involvement

Prineville has a long history of active citizen involvement. The broad policy direction for the Natural Features program is derived from policies in the newly-adopted Prineville Comprehensive Plan and direction provided by City Council. Both of these documents speak to the importance of achieving a *balance* between resource conservation and the community's urban development objectives. Because the "full protection" and "no protection" options cannot achieve such a balance, the focus of City and County citizen involvement efforts has been on some form of "limited protection" as described in the *Updated Program Outline* accepted by the City Council for Planning Commission review.

Goal 1 requires that the City and County actively solicit citizen input during all phases of the planning process, including all phases of the Goal 5 process – from the Goal 5 inventory to adoption of regulations and incentives. As documented below, Prineville property owners, special interests and citizens have been actively involved in each stage of the Prineville Natural Features project.

Citizens and property owners also were notified of and asked to participate in the Natural Features Inventory process. A Public Review Draft of the inventory reports, maps, and data sheets was released in February 2007. The City and County provided public notice and contacted interested parties to inform them about the draft inventory report and opportunities to provide comments and corrections. Copies of the Public Review Draft were available at City Hall, Crook County Planning Department, and on the project website. The Natural Features Inventory was accepted by the Prineville City Council in March of 2007.

During the winter and spring of 2007, the Crook County and Prineville Planning Commissions held public work sessions and hearings on the Natural Features Inventory, Program Outline, and the draft ESEE (economic, social, environmental and energy) Analysis. As shown in Attachment A, which includes the minutes from the public hearings, the Planning Commissions recommended changes to draft Goal 5 inventory and program in response to public comments and Commission deliberations.

In addition to letters submitted into the public hearing record, Attachment A includes a series of tables prepared by Prineville staff that summarize and respond to oral and written comments received by the Planning Commissions. Attachment A also includes



minutes from Crook County and City of Prineville public hearings related to the Planning Commissions' recommendations to their respective elected bodies.

During the spring of 2007, the Crook County Court and the Prineville City Council held joint public hearings to consider the Planning Commissions' recommended Goal 5 implementation program. As shown in the minutes for the joint public hearings, the elected officials recommended additional changes to draft City and County regulations in response to public comments and elected official deliberations. In addition to letters submitted into the public hearing record, Attachment A includes a series of tables prepared by Prineville staff that summarize and respond to oral and written comments received by elected officials. Attachment A also includes minutes from Crook County and City of Prineville public hearings that further explain the balancing process resulting from their consideration of public comments and their public deliberations.

The *Revised Program Outline* served as the basis for most public comments discussed below. However, as noted above, this program evolved in response to comments from property owners and the general public, as envisioned by Statewide Planning Goal 1, Citizen Involvement. The *Recommended Program Outline* was carefully crafted to balance the wide range and often disparate comments received through the extensive City and County public and agency participation process.

At the June 6, 2007 joint planning commission public hearings, it was decided to combine the Measure 56 notices for the *Natural Features Inventory*, the *Goal 5 ESEE Analysis*, and draft land use regulations. Public hearings before the City and County were scheduled for these matters in August of 2007.

### ***ESEE Relationship to Goal 1***

Citizen and property owner participation is critical to the utility of the Prineville Natural Resources ESEE Analysis. Citizens and property owners were invited to provide information related to the economic, social, environmental and energy consequences of the three decision options (full, limited and no protection) outlined in the Goal 5 Rule. However, as noted above, public comments focused on the *Recommended Program Outline* which was amended as a result of the citizen involvement process.

The City and County have maintained an ongoing record of property owner and citizen comments as they apply to the three decision options described in this ESEE Analysis. To encourage meaningful citizen involvement, citizen comments related to the Limited Protection are included in Attachment A to this document.

### ***Goal 1 Conclusion***

Because Prineville and Crook County citizens have been notified and provided the opportunity to be involved in all phases of the Natural Resources Project, the Goal 5 amendments resulting from this project comply with Statewide Planning Goal 1, Citizen



Involvement. Citizen comments related to the *Program Outline* (Draft Goal 5 Limited Protection Program) were explicitly considered prior to adoption of the Goal 5 program supported by this ESEE Analysis.

## Goal 2: Land Use Planning

Goal 2, like Goal 5, is essentially a procedural goal. Goal 2 requires that:

- There be an adequate factual base for making land use decisions;
- Local, state, and federal agencies be notified and their concerns be considered and accommodated to the extent possible;
- Alternatives be considered before making ultimate policy choices;
- Policy choices be clearly articulated in the comprehensive plan; and that
- Implementation measures be consistent with and adequate to carry out such policy direction.

### ***ESEE Relationship to Goal 2***

The factual basis for the Natural Resources Project includes the Natural Features Inventory, background documentation related to the selection of *Recommended Program Outline* (including the significance determination), and this ESEE Analysis. These documents provide City and County decision-makers with the information necessary to make informed policy decisions related to balancing sometimes-conflicting development and natural resource conservation objectives.

The Natural Resources Project provides a positive model for City-County coordination. City and County staff and a consultant team have worked collaboratively in each phase of the Natural Resources Project. Contemporaneous public work-sessions were held before both the City and County Planning Commissions. Joint public work sessions also were held before the City Council and the County Court of Commissioners to ensure a coordinated response to natural resource management within the Prineville UGB.

State and federal agencies have also been involved in this process, and their concerns have been considered and accommodated wherever possible. Key state agencies include the Department of Land Conservation and Development (DLCD), the Department of State Lands (DSL), the Department of Fish and Wildlife (ODFW), and the Department of Environmental Quality (DEQ). Federal agencies with comparable areas of jurisdiction have also been invited to review and comment on the Natural Resources program. In particular, the Bureau of Land Management (BLM) has been involved in helping to define



the location, quality and quantity of natural resources and potential impacts on such resources.

Goal 5 requires that the ESEE consequences of three “alternative” decision options be considered as part of the Goal 5 process. This ESEE Analysis considers the economic, social, environmental and energy conservation consequences of:

- Fully protecting all significant scenic and wildlife habitat sites;
- Providing no local protection for significant scenic and wildlife habitat sites; and/or
- Providing limited protection for significant scenic and wildlife habitat sites, as specified in the *Recommended Program Outline* approved by the Planning Commissions.

The Prineville and Crook County Planning Commissions considered a variety of methods for inventorying and determining the significance of Natural Resources within the Prineville UGB. These groups also considered a wide range of regulatory and incentive measures for potential inclusion within the Goal 5 protection program.

The Goal 5 implementation program will be designed to provide clear and objective regulatory measures to implement the policy direction provided by City and County elected officials. Each significant natural feature has corresponding Comprehensive Plan policies and land use regulations to resolve conflicts between urban development and resource conservation objectives.

## ***Goal 2 Conclusion***

For the reasons stated above, the Goal 5 Inventory, ESEE Analysis and *Recommended Program Outline* resulting from the public hearing process comply with Statewide Planning Goal 2, Land Use Planning.



## Goal 5: Natural and Scenic Resources

Goal 5 reads (in relevant part) as follows:

*To protect natural resources and conserve scenic and historic areas and open spaces.*

*Local governments shall adopt programs that will protect natural resources and conserve scenic, historic and open space resources for present and future generations. These resources promote a healthy environment and natural landscape that contributes to Oregon's livability. \* \* \**

*Following procedures, standards, and definitions contained in commission rules, local governments shall determine significant sites for inventoried resources and develop programs to achieve the goal.*

The Goal 5 rule (OAR Chapter 660, Division 23) implements Goal 5 in much the same way as zoning regulations implement more general plan policies.

### Goal 5 Procedural Steps

Goal 5 sets forth a *process* for resolving conflicts between natural resource preservation on the one hand, and urban development on the other. If conflicts have not been resolved in one of the five ways identified in the Introduction to this Report, then an ESEE analysis must be conducted prior to adopting clear and objective standards for resource protection.

Goal 5 does not mandate "protection" of significant natural resource sites as that term is commonly used. Rather, as explained in the Goal 5 Rule (OAR Chapter 660, Division 23), "'protect' means to develop a program consistent with this division." In cases where conflicts are resolved in one of the five ways discussed in the Introduction to this Report, no ESEE analysis is required.

#### Step 1: Inventory

The Goal 5 rule requires that local governments conduct comprehensive inventories of potential Goal 5 resources and to determine the relative significance of each resource site. As required by the Goal 5 Rule, Prineville has prepared valid Goal 5 inventories showing the location, quantity, and quality of significant Goal 5 resource sites within the Prineville UGB.

The Goal 5 Inventory and significance determination is found in the *Prineville Natural Features Inventory* (Winterbrook Planning, January 2007).



- On March 14, 2007 the Prineville City Council accepted the *Prineville Goal 5 Natural Features Inventory*. The NFI consists of a report and seven maps:
  - Figure 1 – Goal 5 Resources Composite Map
  - Figure 2 – Surface Water Resources (Goal 5)
  - Figure 3 – Wildlife Habitat (Goal 5)
  - Figure 4 – Scenic Areas (Goal 5)
  - Figure 5 – Groundwater Resources (Goals 5 and 6 Water Quality)
  - Figure 6 – Natural Hazards (Goal 7 Hazards)
  - Figure 7 – Composite Map (Goal 5, 6 and 7 Composite)
  
- After reviewing public testimony in May and June of 2007, the Prineville and Crook County Planning Commissions recommended approval of a modified version of the *Prineville Goal 5 Natural Features Inventory* (As recommended by the Crook County and Prineville Planning Commissions, June 2007). Specific changes included the following:
  - **NFI Figures 6 and 7: The slope threshold for determining Goal 7 unbuildable land was changed from 30% to 25%.**
  - **NFI Figures 2, 6 and 7: A minor dry wash and an artificial ditch shown as a dry wash were removed from the inventory based on the approved Iron Horse ODP.**
  - **NFI Figure 2: Amend legend on Figure 2 to state “Goal 7 Dry Washes” rather than “Dry Washes” to show that dry washes are primarily a Goal 7 hazard rather than a Goal 5 surface water resource.**
  - **NFI Figure 5: Remove “higher contamination hazard” from the Figure 5 legend, and remove “dots” from the Figure 5 map. These dots are subject to change as contaminated sites are cleaned up over time.**
  - **NFI Figures 3 and 7: Two raptor nesting sites located outside the UGB, with impact areas affecting White Horse Ranch inside the UGB, were moved further to the south based on an ODFW letter and map.**

## Step 2: Identify Conflicting Uses

The Goal 5 Rule also requires that land uses and related activities that conflict with the full protection of significant Goal 5 resource sites be identified. However, the *Planning Commissions' Recommended Program Outline* resolves conflicts with most Goal 5 resources in a manner that does not require an ESEE analysis, as summarized below:

### A. Goal 7 Natural Hazards

1. Amend Goal 7 Floodplain regulations to:



- a. Require balanced cut and fill (no net loss of flood storage capacity); and
  - b. Prohibit most development in areas where the floodplain overlaps with a Goal 5 resource site.
2. Adopt a new Goal 7 Hillside Protection overlay district that:
- a. Requires geological studies for development on slopes of 18% or greater;
  - b. Prohibits development on slopes of 25% or greater;
  - c. Requires geological studies for development on talus debris slopes at the base of rimrock; and
  - d. Prohibits development (except for passive recreation, street and utility crossings) and within 50 feet of the centerline of mapped dry washes.
3. Limit development within riparian corridor impact areas by applying floodplain protection standards.

**B. Bird Nesting Habitat**

Recognize that most Barnes Butte bird nesting habitat conflicts have *already* been resolved by the Council's approval of a 20-year Iron Horse ODP. [An ESEE Analysis is included in this report for bird nesting sites and their impact areas outside the Iron Horse ODP.]

**C. Barnes Butte Scenic Area**

Recognize that most Goal 5 scenic conflicts have *already* been resolved by the Council's approval of a 20-year Iron Horse ODP and that planned passive recreational uses on land owned by the Bureau of Land Management (BLM) do not conflict with scenic values. Since the scenic impact area (Tier 3) is entirely within the approved Iron Horse ODP, conflicts in this area are resolved. [An ESEE Analysis is included in this report for primary and secondary scenic areas in areas of 25% slope or less.]

**D. Scenic Rimrock**

Continue to apply the existing 200-foot building setback to the area parallel to the rimrock edge. [An ESEE Analysis is included in this report for secondary scenic areas where the slope gradient is 25% or less.]

**E. Riparian Corridors and Associated Wetlands**

Adopt Goal 5 "safe harbor" regulations for the following riparian corridors, including associated wetlands, by establishing a 50-foot non-disturbance setback (that can be reduced to 25-feet in developed areas with mitigation) for the following streams:



1. Crooked River (however, the existing 100-foot setback would continue to apply to areas outside the City Limits);
2. Ochoco Creek;
3. Hudspeth Drainage (also protected by Iron Horse ODP);
4. Ryegrass Ditch.

#### F. Isolated Wetlands

Recognize that all Goal 5 isolated wetland conflicts have *already* been resolved by the City's approval of Angler's Canyon ODP.

#### G. Groundwater Resources

Adopt groundwater protection program based on Department of Environmental Quality (DEQ) model ordinance, consistent with Statewide Planning Goal 6 (Water Quality).

Tables II-5-1 and II-5-2, below, identify *remaining* land uses and activities that are currently allowed by the Prineville Comprehensive Plan and Development Code, with the Barnes Butte Scenic area and significant bird nesting sites.

### Step 3: Conduct ESEE Analysis

Where conflicting uses are identified but conflicts have not been resolved, the Goal 5 rule<sup>7</sup> requires that local governments analyze the Economic, Social, Environmental and Energy (ESEE) consequences of three regulatory options:

- Full resource protection (*i.e.*, allow no conflicting development);
- Limited resource protection (the limited protection option addressed in this ESEE Analysis is based on the *Program Outline* accepted by the City Council); and
- No resource protection (*i.e.*, allow development without restriction).

The required ESEE analysis for (1) Barnes Butte scenic resources, and (2) bird nesting habitat, is included below.

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<sup>7</sup> OAR 660-023-040(4) **Analyze the ESEE consequences.** *Local governments shall analyze the ESEE consequences that could result from decisions to allow, limit, or prohibit a conflicting use. The analysis may address each of the identified conflicting uses, or it may address a group of similar conflicting uses. A local government may conduct a single analysis for two or more resource sites that are within the same area or that are similarly situated and subject to the same zoning. The local government may establish a matrix of commonly occurring conflicting uses and apply the matrix to particular resource sites in order to facilitate the analysis. A local government may conduct a single analysis for a site containing more than one significant Goal 5 resource. The ESEE Analysis must consider any applicable statewide goal or acknowledged plan requirements, including the requirements of Goal 5. The analyses of the ESEE consequences shall be adopted either as part of the plan or as a land use regulation.*



## Step 4: Develop Goal 5 Program

Local governments must consider the results of the ESEE analysis when adopting a “program” to resolve conflicts between land development and protection of significant resource sites.

As noted in Part I and above, Goal 5 riparian corridors and associated wetlands, isolated wetlands, and rimrock areas (except for talus debris slopes), are recommended for protection through the “safe harbor” provisions of the Goal 5 administrative rule, by existing rimrock setback standards, by existing and proposed Goal 7 (Natural Hazard) standards, and by conditions of approved Outline Development Plans. Groundwater will be protected by the model ordinance prepared by the Department of Environmental Quality under Goal 6 (Water Quality).

Remaining *unprotected* Goal 5 resources include (a) bird nesting habitat sites and (b) Barnes Butte primary and secondary scenic and rimrock scenic resources. The following summarizes the limited Goal 5 protection program, for these resource categories, as described in the *Planning Commissions’ Recommended Program Outline*:

### 1. Bird Nesting Habitat

Adopt Oregon Department of Fish and Wildlife (ODFW) review process – *consistent with the recommendations of the final ESEE Analysis* – for mapped Raptor / Osprey nesting habitat, while recognizing that most Goal 5 bird nesting habitat conflicts have *already* been resolved by riparian corridor “safe harbor” and Goal 7 slope hazard regulations, and the Council’s approval of a 20-year Iron Horse ODP.

### 2. Barnes Butte and Rimrock Scenic Areas

Adopt a two-tiered scenic design review program process – *consistent with the recommendations of the final ESEE Analysis* – for Barnes Butte and rimrock primary and secondary scenic resources, while recognizing that most Goal 5 scenic conflicts have *already* been resolved by the Council’s approval of a 20-year Iron Horse ODP. Design and density standards applicable to Barnes Butte secondary scenic areas would also apply to rimrock secondary scenic areas, as shown on Figure 4.

## Bird Nesting Habitat ESEE Analysis

Fish and wildlife habitat associated with riparian corridors are protected, in large part, by proposed “safe harbor” regulations. Mule deer winter range and antelope range within the UGB will be protected by Crook County EFU regulations until land is annexed and rezoned for urban uses by the City of Prineville.



Remaining significant wildlife habitat sites are limited to Osprey and raptor bird nesting sites found in the Barnes Butte, Upper Ochoco Creek, Ryegrass Ditch, and Upper Crooked River Natural Resource Sites (NRS). This section focuses on the ESEE consequences of the full protection, no protection, and limited protection decision options for significant bird nesting habitat.

*Economic consequences* also are considered under the discussion of other goals – especially Goals 9 (Economy), 10 (Housing), 11 (Public Facilities) and 12 (Transportation). That discussion addresses the economic consequences of three general conflicting use categories: commercial/industrial, housing, and public facilities. The discussion of *energy consequences* (which are minimal in this case) is consolidated under Goal 13, Energy Conservation.

**Uses and Activities that Conflict with Bird Nesting Habitat**

The primary conflicting activities for Osprey and raptor bird nesting habitat include vegetation removal, excavation and construction allowed in the following plan designations: Residential, Commercial, Industrial and Open Space / Parks. Such activities typically occur during the site preparation phase of an approved development, but potentially could occur at any time.

Table II-5-1 repeats conflicting use information from the Part I, Section F of this report.

**Table II-5-1. Conflicting Use Matrix for Significant Bird Nesting Sites**

Resource Site(s)	Comprehensive Plan Designation	Public & Semi-Public Conflicts	Planned Streets or Utilities	Vegetation Removal & Grading
Barnes Butte Raptor Nests (5)	Residential (2 sites) Open Space/Parks (BLM - 1 site) Outside UGB (2 sites)	BLM Ownership Passive Park Trails	Iron Horse OHP	Yes
Upper Ochoco Creek (Combs Road) Osprey Nest (1)	Residential Commercial	School	No	No
Ryegrass Creek (Lamonta Road) Osprey Nests (2)	Industrial; Commercial; Residential (with limited protection by riparian corridor safe harbor standards)	City, Federal Ownership	Yes	Yes
Upper Crooked River Raptor Nests (2)	Residential (but partially protected by Goal 7 steep slope standards)	None known	Yes	Yes



## ***ESEE Consequences Analysis for Significant Bird Nesting Sites***

### **Environmental Consequences – Bird Nesting Sites**

The environmental value of bird nesting habitat sites is described in detail in the *Prineville Natural Features Inventory*, which is incorporated into this ESEE Analysis by reference. The full protection option would prohibit all land uses and activities that conflict with (i.e., reduce the integrity of) significant nesting sites and range lands within the quarter-mile impact area established by ODFW and Crook County. The full protection option would have entirely positive environmental consequences for bird nesting habitat.

However, the full protection option for land within a rapidly-growing urban area such as Prineville is not practical. With the possible exceptions of raptor nesting sites found outside the UGB, within the Barnes Butte primary scenic area, and (to a certain extent) on Crooked River rimrock in the southern tip of the UGB, nesting sites in the Prineville UGB *already* have been impacted by various levels of urban development. For example, an Osprey nest is associated with the Prineville Jr. High School. Osprey nests within the protected Ryegrass Ditch riparian corridor are surrounded by developed residential, commercial and industrial district. More recently, the approved Iron Horse ODP allowed for residential, park and school development within the impact areas of four raptor nesting sites.

Conversely, the no protection option would have negative environmental consequences for bird habitat, by allowing conflicting urban uses – especially disruptive construction activities – without limitation. Under this scenario, bird nesting sites would likely be displaced and associated environmental value would be lost.

In contrast to the full protection and no protection options, the limited protection option set forth in the *Recommended Program Outline* allows for existing urban development to remain and for new urban development to occur on a limited basis consistent with the recommendations of the Oregon Department of Fish & Wildlife (ODFW) regarding the timing and location of construction activities.

The limited protection program for nesting sites described in the *Recommended Program Outline* is designed to protect nesting sites *per se* and to rely on a combination of riparian corridor safe harbor regulations for sites near streams (restrict development within 50 feet of the top of stream or river bank), slope development standards for sites on Barnes Butte or Crooked River / Ochoco Creek rimrock (prohibit development on slopes of 25% or greater and on talus slopes below the rimrock), and ODFW programs to manage the timing and location of construction activities within a quarter mile of the nest itself.



However, the SE Combs Road Osprey nesting site has none of these Goal 5 or Goal 7 protection measures, and is located in a developed school site. Moreover, the impact area for this nesting site extends beyond the City Limits, an area that is likely to redevelop in the near to intermediate future. Therefore, it may be more difficult to protect this nesting site from conflicting uses, and may be more onerous on property owners to coordinate on the timing of construction activities.

The environmental consequences of the limited protection program are positive to the extent that this program is effective in maintaining nesting sites in and around Prineville. For example, the Iron Horse ODP approved residential, school and park development within the *impact areas* of three of these nesting sites. Two of the affected nesting sites are outside the Iron Horse ODP site within the primary Barnes Butte scenic area, and one is located in the northwest portion of the property, outside the Barnes Butte scenic area. The Iron Horse ODP allows urban development (schools, active parks, residential) to completely surround the only raptor nest found on the Iron Horse property.

The environmental consequences of this decision were somewhat negative, in that the decision may have reduced the likelihood that raptors will continue to nest in these sites. However, at the time of approval, the City found (a) that land within the City Limits was not protected by County wildlife habitat protection measures, and (b) that coordination with ODFW had occurred. Adverse environmental impacts of future development will be mitigated further because future coordination with ODFW will limit subdivision and home construction during the nesting season. Further mitigation has occurred in Iron Horse by preserving open space on steep slopes near one of the raptor nesting sites. Finally, the proposed regulations require ODFW approval of construction mitigation plans during the tentative subdivision plat approval process.

The four raptor nests that are not located on the Iron Horse ODP site are found in areas that are protected by either the Hudspeth Lake safe harbor setback (one nesting site) or steep slope hazard standards (three nesting sites). As noted above, the Iron Horse development has been approved within the impact areas of three of these four nesting sites.

### **Social Consequences – Bird Nesting Sites**

The *Prineville Comprehensive Plan* recognizes the importance that the community places on preserving wildlife habitat, including bird nesting sites, as urban development proceeds within the urban growth boundary. Since most bird nesting sites are found on Barnes Butte, on rimrock, or within riparian corridors – the nests themselves are protected by Goal 5, 6 and 7 regulations. However, their impact areas are much more difficult to fully protect in an urban setting.



The social consequences of the full protection option are both positive and negative. Social benefits resulting from full protection of bird nesting sites include preservation of recreational and educational values associated with observing large birds of prey in an urban setting. In general, wildlife viewing has increased steadily since 1980, when a nationwide survey of wildlife-related recreation found that 55 percent of respondents interact with wildlife near their homes by watching, feeding, photographing, or painting them (Shaw et al. 1985). In Seattle, for example, a survey found that 90 percent of park-users reported that the presence of wildlife enhanced their recreational experience of the park (Dick and Hendee 1986).

Full protection of nesting sites areas *in an urban context* has counter-balancing social costs. Adverse social consequences associated with the full protection option include:

- **Social Equity** – the view that property owners should not bear the full burden of maintaining bird nesting sites especially within urban growth boundaries, which generally are reserved for future urban development. (See Goal 1 ESEE discussion.)
- **Employment Opportunities** – In limited circumstances, such as the Ochoco Creek industrial area – full protection of significant bird nesting sites could decrease the supply of development-ready industrial land necessary for basic employment opportunities. Loss of such jobs would have severe and adverse social consequences for the community. (See Goal 9 ESEE discussion.)
- **Affordable Housing** – The provision of a variety of housing opportunities is also called for in the *Prineville Comprehensive Plan*. Protection of all bird nest impacts areas would substantially reduce the City's residential buildable land area and therefore could further increase housing costs for existing and future residents. (See Goal 10 ESEE discussion.)
- **Efficient Use of Scarce Public Resources** – Prineville and Crook County decision-makers have a fiduciary responsibility to their constituents to use public monies wisely. The full protection option could substantially increase the costs of providing public infrastructure and therefore could have adverse long-term social consequences for existing and future community residents. Maintaining continued confidence in the ability of City and County elected officials is also a governance issue: the community's long-term ability to work together to solve environmental, social, economic and energy problems depends in significant part on the confidence that the citizenry places in local elected officials. (See discussion of Goal 11 and 12 ESEE consequences.)



- **Premature Loss of Rural Open Space** – Inefficient use of land within the Prineville Urban Growth Boundary (UGB) could result in premature conversion of farm and forest land to urban uses to meet future urban growth needs. There are substantial social benefits for Prineville area residents associated with maintaining such rural lands. (See discussion of Goal 14 ESEE consequences.)

In contrast, the no protection option would result in the loss of the social benefits from full protection listed above. The no protection option would be inconsistent with *Prineville Comprehensive Plan* policies would result in displacement of Osprey, golden eagle, peregrine falcon and other raptor species. Allowing conflicting uses fully without safeguards for nesting sites will result in the loss or degradation of one of the community's defining characteristics, thus eroding the City's livability. Associated recreational and educational values also would be lost or degraded. Crook County and Prineville residents place a high premium on environmental values, including wildlife habitat. If such values are not conserved in a balanced manner, public trust in elected officials and in local government would be compromised.

In the case of the Combs Road Osprey site, in particular, the social costs of the no protection option would be adverse, because of the potential lost educational opportunity provided by an Osprey nest on a school site.

### **Economic Consequences – Bird Nesting Sites**

The economic costs associated with the full, no and limited protection options for bird nesting sites is addressed in the Goal 9, Economic Development, section of this ESEE report. Generally speaking, the full protection option for nesting sites plus impact areas are generally adverse, in that substantial buildable areas would become “off limits” for residential, commercial, industrial and recreational uses. The no protection option could also have adverse economic impacts, because nesting sites in proximity to residential, office and recreational areas can add to their value. The limited protection option strikes an appropriate balance between the two, by protecting the nest sites themselves while mitigating for construction impacts, especially during the nesting season.

However, in the case of the Combs Road Osprey nesting site, the economic consequences of the limited protection option could be serious and adverse *if* birds are nesting during the construction season *and* major construction activities are proposed within a quarter mile of the school light standard upon which the Osprey nest is located.

### **Energy Consequences – Bird Nesting Sites**

The economic costs associated with the full, no and limited protection options for bird nesting sites are minimal and are addressed in the Goal 13 (Energy



Conservation) section of this report. There are no major energy consequences associated with any of these decision options.

### ***ESEE Conclusion and Recommendation – Bird Nesting Sites***

The full protection option for bird nesting sites and their impact areas is unrealistic within an urban setting. The no protection option ignores the value that Prineville area residents place on wildlife habitat in an urban setting. The *Recommended Program Outline* extends existing Crook County standards (Chapter 18.120 Sensitive Bird Habitat) to development within the Prineville urban growth area. This program protects existing nest sites and limits adverse impacts from construction and vegetation removal during the critical nesting season.

This ESEE analysis has resulted in the following recommendations:

- Upper Ochoco Creek NRS: The Osprey nesting site located off Combs Flat Road is completely surrounded by urban development and has no other Goal 5, 6 or 7 protection measures. Given the existing level of development, and the fact that the nesting site is located on developed school grounds, the City would rely solely on ODFW recommendations regarding the timing of new construction projects to minimize impacts during nesting season. Based on the ESEE Analysis, the positive social and environmental consequences of the limited protection program are outweighed by the potentially severe adverse economic consequences in this developing area of the City. Therefore, this particular nesting site should receive no local protection under Goal 5.
- Ryegrass Ditch NRS: Two Osprey nesting sites are located along Ryegrass Ditch NRS, along Ryegrass Ditch in a generally developed industrial and residential area. The primary protection measure for these sites is the 50-foot buffer from the stream bank afforded by the riparian corridor safe harbor. This buffer should be protected from further incursion to maintain as much of the impact area around these nests as reasonably possible. The City and County should rely on ODFW recommendations regarding the timing of new construction projects on abutting sites within the impact area to minimize impacts during nesting season.
- Barnes Butte / Hudspeth NRS: There are four raptor nests within the UGB in this area and two outside the UGB. The impact areas for raptor nests outside the UGB extend into the urban growth area. One of the sites is found on BLM land not far from the northern border of the Iron Horse property. The Iron Horse ODP approved residential, school and park development within the *impact areas* of three of these nesting sites, subject to further coordination with ODFW during the preliminary tentative subdivision plat approval process. The four raptor nests that are not located on the Iron Horse property are found in areas that are protected by either the Hudspeth



Lake safe harbor setback (one nesting site) or steep slope hazard standards (three nesting sites). As noted above, Iron Horse development has been approved within the impact areas of three of these four nesting sites. The City and County should rely on ODFW recommendations regarding the timing of new construction projects on sites within bird nesting site impact areas to minimize impacts during nesting season.

- Upper Crooked River / Rimrock: These raptor nesting sites are located in generally unbuildable rimrock areas – further to the south than shown on Figure 3 of the Winterbrook NFI. (See comments from Mayberry Group.) The impact areas extend only slightly, if at all, to unbuildable talus slope areas, floodplains and the Crooked River riparian corridor protection by “safe harbor” regulations. However, residential and recreational development on some buildable land may be affected by the quarter-mile impact area.<sup>8</sup> The timing and location of construction activities will be limited based on ODFW recommendations, in much the same manner as they were in the Iron Horse ODP process. The City and County should rely on ODFW recommendations regarding the timing of new construction projects on sites within bird nesting site impact areas to minimize impacts during nesting season.

## Barnes Butte and Rimrock Scenic Area ESEE Analysis

The *Prineville Comprehensive Plan* calls for the limited protection of Barnes Butte and rimrock primarily because of its social value to the community. The following statements and policies are quoted directly from the recently-adopted City comprehensive plan, and underscore the importance of the Barnes Butte scenic and other natural resource areas to the Prineville community:

- ***The visual aspects are unique. Dramatic geological features frame the community setting.*** (p. 13)
- ***Residential zones include amenities promoting family living environments and safe places for children to play walk to school, and experience natural resources are highly desired.*** (p. 30)
- ***New residential developments shall analyze the impact of the new development upon community infrastructure, natural resources, and local cultural attributes before development can proceed. Any necessary mitigation plan shall be examined for feasibility and effectiveness in remedying impacts. ... Prineville has many natural features worthy of preservation and***

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<sup>8</sup> At the May 15<sup>th</sup> public hearing, representatives of The Mayberry Group, Inc. (Mike Gregory and Mark Rust) testified that they had more site-specific information regarding the location of the 100-year floodplain, talus debris slopes, and the golden eagle nesting sites themselves. This information should be incorporated into *The Prineville Natural Features Inventory* prior to adoption by the City Council and County Court.



*enhancement. New residential developments shall incorporate where practical, existing natural features into new projects as a way to protect the natural beauty of Prineville. (p. 31)*

- *Prineville's topography and small town charm are inseparably linked with natural floodplains and drainage ways, air quality issues, sensitive riparian areas, steep slopes, varied topography, historic flooding potential, urban flora and fauna, and high water tables. Thus, Prineville will need to adopt development regulations to protect critical areas (sensitive fish and wildlife habitat, frequently flooded areas, steep slopes, wetlands) and preserve air quality. Regulations should be balanced with other local values and in conformance with state law. Efforts to protect the natural environment should focus on maintaining a balance between the economy and ecology of the area while enhancing aesthetics and livability ideals of the community. (p. 44)*
- *The City of Prineville and the surrounding area lie in a spectacular basin framed by dramatic geological forms and resource lands. ... Preservation and enhancement of surrounding natural environmental system is a vital aspect of the community. ... Protection of these special areas offers more than just aesthetic benefits; they can preserve the community's natural beauty without sacrificing economic development. (p. 45)*
- *Local area livability can be enhanced and growth can occur in and around special areas if development regulations take the following into consideration: ... Special setback standards from cliffs edges and architectural design requirements for hillside areas. ... Preservation of key open spaces. ... Protection of local values regarding the social and ecological benefits of maintaining the natural environment. (p. 45)*
- *Thus, adequate land for complete neighborhood components is essential as well as a mix of housing choices and open spaces. Mixed-use and preservation of natural resources will also be a part of neighborhood design and could increase the need for additional residential land inventories. (p. 128)*
- *The Prineville community desires to encourage and sustain affordable housing while protecting the physical characteristics of land relating to soils, slopes, erosion, drainage, natural features and vegetation. (p. 129)*

The *Prineville Comprehensive Plan* also includes a Natural Resources policy that applies directly to the Barnes Butte scenic area:

*Barnes Butte provides the scenic backdrop and identity to Prineville, and is recognized as the community's defining scenic resource site. Prineville will allow for appropriate residential development, while protecting Barnes Butte and associated steep slopes, dry washes and raptor habitat through a three-tiered protection program.*



## ***Uses and Activities that Conflict with Barnes Butte and Rimrock Base Scenic Area Protection***

The *Revised Program Outline* calls for full protection of Barnes Butte primary scenic area, and limited protection of secondary scenic areas on Barnes Butte and at the base of rimrock. Secondary scenic resource areas would be limited to two units per gross acre of land affected by the secondary resource area, with design review standards to limit impacts from grading and residential construction. Brooks Resources has documented substantial adverse economic and social consequences related to the full protection option, and requests that limited residential construction be permitted within this area, subject to strict design standards.

Barnes Butte and Ochoco Creek / Crooked River rimrock talus slopes are designated for Residential use on the Crook County Comprehensive Plan map, and will be (or has been) zoned R2 upon annexation to the City. Please see the ESEE analysis under Goal 10 (Housing) for a discussion of consequences for the residential land supply. Publicly owned Bureau of Land Management (BLM) land within the UGB on Barnes Butte is designated for Open Space / Parks use. The park plan, however, calls for passive recreational uses that do not conflict with scenic values on Barnes Butte.

Figure II-5-1 (The Iron Horse Scenic Resources Map) shows the Barnes Butte primary and secondary scenic resource areas with the approved Iron Horse ODP. This map also shows the location of the Barnes Butte scenic impact areas.

The northeast edge of the approved Iron Horse ODP includes both primary and secondary scenic resource areas. Approximately 35 of the 120 acres shown on the Iron Horse concept plan are designated as a primary scenic resource area, and approximately 55 acres is designated as a secondary scenic resource area. The entire Barnes Butte scenic impact area is located on the Iron Horse site. Conflicts for the scenic impact area were resolved by the approval of the Iron Horse ODP.

The Barnes Butte secondary scenic resource area ends at Laughlin Road, and includes almost all of Area 3, which was added to the UGB in 2003. Secondary scenic areas at the base of Ochoco Creek and Crooked River rimrock are shown on Figures 1 and 4.

Table II-5-2 summarizes uses that conflict with Barnes Butte primary and secondary, and rimrock secondary, scenic resources. As noted under the Goal 7 (Natural Hazards) discussion, most types of urban development are prohibited on slopes of 25% or greater and within 50 feet of the centerlines of mapped dry washes within the Barnes Butte primary and secondary scenic resource areas. Many, but not all, development conflicts on Barnes Butte have been resolved by approved plans and conditions for the Iron Horse Outline Development Plan (ODP).



**Table II-5-2. Conflicting Use Matrix Goal 5 Scenic Areas**

Resource Site(s)	Comprehensive Plan Designation	Park or School Conflicts	Planned Streets or Utilities	Vegetation Removal & Grading
Barnes Butte Primary Scenic Area (Tier 1)	Residential Open Space/Parks (BLM) Iron Horse ODP	No	Yes Conflicts partially resolved by Iron Horse ODP	Yes Conflicts partially resolved by Iron Horse ODP
Barnes Butte Secondary Scenic Area (Tier 2)	Residential (UGB Areas 1, 2A and 3) Iron Horse ODP	No	Yes Conflicts partially resolved by Iron Horse ODP	Yes Conflicts partially resolved by Iron Horse ODP
Upper Ochoco Creek Secondary Scenic Area (Tier 2)	Residential	No	Yes	Yes
Upper Crooked River Secondary Scenic Area (Tier 2)	Residential (EFU) - White Horse Ranch site	No	Yes	Yes
Lower Crooked River Secondary Scenic Area (Tier 2)	Residential (EFU)	No	Yes	Yes

**Conflicts Resolved and Unresolved by the Iron Horse ODP**

The Prineville City Council adopted findings approving the Iron Horse Outline Development Plan (ODP) on January 24, 2006. As approved, the 900-acre Iron Horse site includes a maximum of 2,771 residential units, a commercial district, a school site, a civic center, and 296 acres of “open space” (including private land, common open space, and landscaped areas within public rights-of-way). Iron Horse is to be phased over a 15-20 year period.

As documented in the findings approving the Iron Horse ODP (SUB-05-707), the Council excluded the southeast 120 acres (“Area 2A” outside the City Limits). The Council approved the following aspects of the ODP that affect development within the Primary and Secondary Scenic Areas:

1. Building heights up to a maximum of 2.5 stories or 35 feet;<sup>9</sup>

<sup>9</sup> Section 153.004 Definitions, of Chapter 153: Land Development, of the Prineville Code of Ordinances (PCO) defines “Height of Building” as follows:

*Height of Building. The vertical distance from the grade to the highest point of the coping of a flat roof, to the deck line of a mansard roof or to the average height of the highest gable of a pitch or hip roof.*



2. The Iron Horse ODP, including the general location of the neighborhood services, residential areas, schools, parks, open space and streets (as shown on Maps #61-6d).

However, the Iron Horse ODP did *not* include a detailed grading plan, showing proposed cut and fill slopes, lot grading and street grades. This is important, because PCO Section 153.089 (Cutting and Filling), requires Planning Commission approval for alteration of lot elevations by more than an average of three feet from "natural, pre-existing grade."<sup>10</sup> Cut and fill slopes also are limited by this section. For the Planning Commission to approve a grading plan that does not meet the standards of this section, a public hearing is required, and the Applicant must meet three criteria. Two of the criteria relate to slope hazard and drainage engineering requirements. The third, however, relates to scenic views (PCO 158.089 (D)(2)(b)):

*"That construction on the cut or fill will not adversely affect the views of adjacent property over and above the effect without land alteration, or that modifications to the design and/or placement of the proposed structure will minimize the adverse impact."*

In response to this standard, the Council's Findings (p. 38) read as follows:

*In order to be in compliance with the above stated criteria, the Applicant shall not fill or grade in excess of three feet on average without Planning Commission approval. This is condition of approval. See Condition 7. Approval may be granted during each stage of development.*

PCO Section 153.194 (Streets and Other Public Facilities) includes maximum street grade standards (PCO Section 153.194(Q)) for collector streets (10%) and local streets (12%). The Council's Findings (p. 51) regarding this standard reads as follows:

*As shown on the Outline Development Plan Map #6a-6d, the Applicant has proposed to construct the streets within the PUD to City standards, with the exception of the proposed street width.*

Thus, Planning Commission approval, through a discretionary review process, may be necessary to approve modifications to adopted City grading standards. These standards are applied at the tentative plat approval stage, on a case-by-case basis.

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<sup>10</sup> Historically, the City has interpreted this provision to apply to the entire development area under review, rather than to individual lots within the development area. For example, the 3% standard would apply to the area subject to tentative subdivision map review, not to individual lots within the tentative subdivision map area. This is because lot grading will occur when homes are constructed on approved lots shown on the final subdivision plat.



The Iron Horse ODP was approved with a number of conditions. Several of these conditions clarify how future tentative subdivision plat maps will be reviewed for consistency with the *Prineville Comprehensive Plan*, Prineville land use regulations (the PCO), and the approved Iron Horse ODP:

1. *The Applicant shall apply for each phase of development with the City of Prineville Planning Department through the Tentative Plan Map review process. \* \* \* Specific setbacks that might be deemed necessary for natural resource and/or natural hazard areas (other than those set forth in this Final Decision) will be reviewed at that point in time to assure compliance with the Comprehensive Plan and the City of Prineville Code of Ordinances. In order to be in compliance with Crook County Comprehensive Plan goals and policies, the specific design of each phase of development shall take into account the natural features outlined in the Comprehensive Plan. All applicable goals and policies shall be adhered to, including natural hazard policies. Construction of homes and roads in natural hazard prone areas shall be such as to minimize the effect of the potential natural hazard.*
7. *No cutting, filling or grading of the site shall be in excess of an average of three feet without Planning Commission approval. All cutting, filling and/or grading activity shall first be approved by the Planning Commission prior to such activity on the site.*
8. *The Applicant shall assure compliance with all applicable Comprehensive Plan goals and policies related to natural hazards and steep slopes during the Tentative Plat Map review process (when more specific parcel locations are known).*
28. *The Applicant shall comply with all relevant portions of the City of Prineville Code of Ordinances (PCO) and the Comprehensive Plan.*
29. *The proposed street and access standards are hereby approved, provided the street standards maintain the planned functionality for their intended use. Planning, Public Works and Crook County Fire and Rescue Department reserve the right to further review the street standards of each tentative plan map if they have clear, objective and measurable evidence that the functionality of the streets are not adequately accommodating the planned flow of traffic and parking. Such right of review may only be enabled where proposed alignments: encounter topography and grades in excess of adopted standards; encounter rock outcrops or other such natural features that may impact reasonable vision clearance standards; do not meet the requirements of the State Transportation Rule; compromise the functionality of the streets to the extent that it can be demonstrated that they are not adequately accommodating the planned flow of traffic and parking; or where street standards and/or alignments duplicate or otherwise impair alternative pedestrian routes incorporated into the approved Outline Development Plan.*
30. *The exception to the 25-foot height limitation, as proposed by the Applicant for apartments and townhomes, shall be limited to the locations proposed by the Applicant in the Outline Development Plan.*
35. *The Applicant-proposed Hudspeth drainage common open space area shall not be reduced in area from those limits shown on the Outline Development Plan, as*



*Updated above in Condition 32 and Exhibit B referenced herein, or be less than 25 foot each side of the delineated wetland, whichever creates the most common open space.*

As shown on Figure II-5-1, the eastern portion of the Iron Horse ODP extends into the Barnes Butte primary and secondary scenic resource areas, and includes all of the Barnes Butte scenic impact area. Residential development is planned in all of these areas, in some cases on slopes in excess of 18%. Based on this preliminary review, it is uncertain whether the "3% from native grade" alteration standard can be met *while also* meeting City street grade requirements in several areas. Since this standard is ambiguous (it appears to apply to individual lots but has been interpreted to apply to entire development areas), uncertainty is further increased because interpretations by appointed and elected officials can change. In any case, it seems likely that discretionary Planning Commission review and approval may be required in order to approve future grading plans.

Based on the analysis above, it appears that grading conflicts have been resolved to the extent that the standards of PCO 153.191 (Cutting and Filling) and 158.089 (Streets) are met *without* discretionary Planning Commission review. As noted above, one of the three approval standards for deviating from the "3 foot alteration" criterion has two discretionary aspects that relate directly to scenic views:

- the "cut or fill will not adversely affect the views of adjacent property over and above the effect without land alteration," or
- *"modifications to the design and/or placement of the proposed structure will minimize the adverse impact."*

The conditions also make it clear that tentative subdivision plats must be reviewed subject to applicable provisions of the Prineville Comprehensive Plan and land use regulations. For these reasons, the Planning Commissions concluded that this potential grading conflict has not been resolved fully and should be considered in this ESEE analysis.

## **Environmental Consequences – Primary and Secondary Scenic Areas**

As documented in the *Prineville Natural Features Inventory*, primary and secondary scenic areas have associated wildlife habitat benefits that would be preserved if the full protection option were chosen by the City. Full protection of these scenic areas would also prohibit all vegetation removal and excavation (except as necessary for trail and viewpoint construction), which can result in increased erosion and degradation of water quality. The reverse would be true if the no protection option were implemented: wildlife habitat would be eliminated and development in primary and secondary areas would adversely affect wildlife habitat.



The limited protections afforded by conditions approving the Iron Horse ODP and the *Recommended Program Outline*, may adversely impact wildlife habitat and bird nesting sites. However, these adverse impacts are mitigated by requirements to coordinate with ODFW regarding construction activities during the nesting season. The numerous conditions of approval required of future development phases also mitigate potential impacts from erosion. Future environmental impacts from development of Site 2A and 3, and from development in rimrock secondary scenic areas, also will be mitigated by implementation of the *Recommended Program Outline*. As noted below, the *Recommended Program Outline* strikes balance between urban development and environmental protection called for in the *Prineville Comprehensive Plan*.

The limited protection program also benefits existing and future Prineville residents – including those who will eventually be living in Iron Horse and Angler’s Canyon planned developments, and who have the most to lose if adjacent open space is compromised. Thus the environmental consequences of the limited protection program recommended by the Planning Commission are largely positive. Further discussion of impacts to significant bird nesting habitat is found in the previous section of this report.

### **Social Consequences – Primary and Secondary Scenic Areas**

In Prineville, impacts on scenic views have major social consequences. The full protection option would have positive social consequences for existing and future residents who would benefit from untrammelled views of Barnes Butte primary and secondary scenic areas, and Ochoco and Crooked River rimrock secondary scenic areas, as shown on Figure 4 of the *Prineville Natural Features Inventory*. The *Prineville Comprehensive Plan* recognizes the importance of Barnes Butte and rimrock views for community identity, and for establishing a scenic backdrop to soften the impacts of a rapidly growing community.

The rimrock base also defines the several gateways to the community, including entrances into the City from the east (Ochoco Highway - NE 3<sup>rd</sup> Avenue); southeast (Paulina Highway - Combs Flat Road), the south (Crooked River Highway – Main Street), and southwest (Highway 126) and the northwest (O’Neil Highway). Development of talus debris slopes at the base of these rimrock rock canyons would be highly visible. Inappropriate development of these areas would have serious adverse impacts on the visual quality of these community gateways.

However, the full protection option has serious and adverse social consequences if applied to primary and secondary scenic resource areas. As discussed under Goal 10 (Housing) and Goal 14 (Urbanization), full protection of these scenic resources as mapped would remove more than a hundred acres of otherwise buildable residential land from the residential land inventory in UGB Expansion Areas 1, 2A,



3, 4 and 5. The Goal 5 rule requires that local governments maintain a 20-year supply of buildable residential land when Goal 5 protection measures reduce the residential land supply.<sup>11</sup> When the Prineville UGB was expanded in 2003, “buildable land” with slopes of 25% or less (without other natural resource values) was added to the UGB specifically to meet the housing need of a growing community. Thus, removal of buildable land from the residential land inventory has two adverse social consequences: (a) the supply of buildable land within the existing UGB will be reduced below the required 20-year supply, and (b) the UGB probably would need to be expanded on or before the next Periodic Review to meet identified housing needs.

Moreover, the full protection option would limit the City’s ability to create “complete communities.” The newly adopted *Prineville Comprehensive Plan* includes numerous references to social value of creating “complete communities” such as approved by the Iron Horse ODP. For these reasons, the full protection option would have serious and adverse environmental and social consequences.

In contrast, the no protection option would have the potential to allow continuous rows of brightly-colored, high-profile homes served by wide streets that require extensive cuts and fills. The only area of Barnes Butte and secondary rimrock scenic areas that would *not* be subject to urban development is owned by the Bureau of Land Management. The remainder could be scarred by grading and unaesthetic subdivision development. Thus, the no protection option would have highly negative social consequences, and would be inconsistent with social and environmental values espoused in the *Prineville Comprehensive Plan*.

The limited protection program described in the *Revised Program Outline* avoids these two extremes by recognizing that the Iron Horse ODP has been approved with conditions; by prohibiting homes in the primary scenic area; by limiting residential construction in secondary scenic areas to two units per gross acre; and by requiring strict grading and design mitigation standards. Allowing secondary scenic resource areas to develop at two units per gross acre (rather than a zero units per acre) would have the following social consequences: (a) the capacity of the UGB to meet 20-year residential land needs would be marginally reduced; and (b) the area required for UGB expansion to meet future residential land needs

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<sup>11</sup> **660-023-0070 Buildable Lands Affected by Goal 5 Measures**

(1) If measures to protect significant resource sites inside urban growth boundaries affect the inventory of buildable lands in acknowledged plans required by Goals 9, 10 and 14, a local government outside of the Metro UGB, and Metro inside the Metro UGB, prior to or at the next periodic review, shall: (a) Amend its urban growth boundary to provide additional buildable lands sufficient to compensate for the loss of buildable lands caused by the application of Goal 5; (b) Redesignate other land to replace identified land needs under Goals 9, 10, and 14 provided such action does not take the plan out of compliance with other statewide goals; or (c) Adopt a combination of the actions described in subsections (a) and (b) of this section.



would be substantially reduced.

However, as documented in comments from property owners, there are adverse economic and social consequences associated with the *Revised Program Outline* that should be considered by the Planning Commissions prior to making final recommendations to the City Council and County Court. The Planning Commissions received comments from Brooks Resources regarding the proposed prohibition of residential development within the primary scenic resource area, and from the Mayberry Group and Ochoco Lumber regarding limitations imposed within the secondary resource area. Brooks Resources was generally supportive of proposed density and design standards for secondary scenic resources on Barnes Butte.

**Brooks Resources** provided a new concept development plan showing a potential low density alternative within the primary scenic area. Brooks Resources has also provided detailed information identifying adverse social consequences that could result from prohibiting residential development on primary scenic areas. (June 1, 2007 letter from Randall Jones, pp. 5-6) Adverse social impacts identified in this letter include reduction of the buildable land supply within the UGB, with a corresponding decrease in housing potential; disruption of the grid street system resulting in a number of dead-end streets that require increased grading for cul-de-sacs; decreased emergency vehicle access; the relocation of the a planned reservoir that would decrease its utility; and loss of a planned vehicular access point to higher elevation BLM land that is planned for park use. Brooks Resources suggests that a strict no-build contour line has the potential to create a "bath-tub ring effect" on Barnes Butte, whereas limited low density development within less steeply sloped portions of the primary resource areas would create "a more natural feathered edge."

To mitigate potential adverse social consequences for the greater Prineville community (i.e., from those with views of the primary and secondary resource area), Brooks Resources has suggested a number mitigation measures that could be incorporated into the anticipated scenic overlay zone:

- Building height limitations (35 feet in secondary resource area);
- Master street tree plan designed to soften the effect of cuts and fills;
- Earth-tone exterior colors (including siding, roof, molding and exposed metal surfaces);
- Minimize cuts and fills;
- Shield outdoor lighting and reduce or eliminate street lighting in primary and secondary scenic areas;
- Preserve existing trees;
- Limit the height and design of exterior fencing;
- Use of zonal, native landscaping that does not require permanent irrigation; and



- Establishment of common open space easements and tracts to protect native vegetation and natural features.

The **Mayberry Group** focuses almost entirely on NFI mapping of the White Deer Ranch property, and generally argues for being exempted from the secondary scenic designation. (May 24, 2007 letter from Mark Rust, pp. 2-4) There is no specific discussion of social consequences that would result from Goal 5 design, density and height standards discussed in the *Revised Program Outline*. There is, however, the implied concern that the location and density of residential development may be adversely affected (from the property owner's point-of-view) by the secondary scenic designation. Given slopes on the western portion of the White Deer Ranch site, it is doubtful that the recommended two units per gross acre standard for secondary scenic areas would reduce densities substantially below those proposed on the draft site plan.

The **Ochoco Lumber Company** submitted comments pointing out that an ESEE Analysis had not been completed for Goal 5 resources affecting its property. (May 29, 2007 letter from Bruce Daucsavage, pp. 2-3) For reasons stated in Part I of this report, an ESEE analysis is not required to apply riparian corridor "safe harbor" provisions to Ochoco Creek, or to implement Goal 6 provisions related to groundwater quality and drinking water supply. The Ochoco Lumber Company provided no information regarding actual ESEE consequences from the proposed secondary scenic resources program.

### **Economic Consequences – Scenic Areas**

The Planning Commissions considered comments regarding economic consequences from Brooks Resources, the Mayberry Group and Ochoco Lumber Company.

**Brooks Resources** provided detailed information identifying adverse economic consequences that could result from prohibiting residential development on primary scenic areas. (June 1, 2007 letter from Randall Jones, pp. 5-6) The preliminary (not approved) Iron Horse ODP shows 45 large single family lots at a density of 1.6 units per acre. Assuming an average *net* value of \$160,000, the potential lost revenue amounts to \$7,227,000. The impact on assessed value for tax purposes would be \$225 million; at an assessment rate of \$16 per thousand in assessed value, potential lost revenues would amount to \$360,000 annually.

**Ochoco Lumber Company** and **Mayberry Group** provided testimony implying potential adverse economic consequences, but provided no hard data. As indicated in Winterbrook's June 5, 2007 memo to the Planning Commissions, it does not appear that limiting residential development to two units per gross acre within the secondary scenic area will have substantial adverse economic impacts for development as proposed preliminarily at White Deer Ranch.



Winterbrook notes that these economic costs do not account for lost construction industry jobs and payroll, or increased per-unit costs for providing public facilities and services. Nor do they account for potential lost value to off-site property owners if rimrock and Barnes Butte views are compromised. On the other hand, the City of Prineville values its rimrock canyon and Barnes Butte views as evidenced by the text of the *Prineville Comprehensive Plan*. The value of the Barnes Butte and rimrock canyon scenic views is measurable in terms of housing prices. Anecdotal evidence derived from a simple review of real estate listings indicates that "territorial" and "mountain" view feature prominently in advertisements, indicating at least a perceived increase in real estate values.

The "hedonic pricing method" has been applied successfully to estimate economic values open space and views that demonstrably affect market prices.<sup>12</sup> Other communities have found substantial increases in off-site property values resulting from "territorial" or "mountain" views. For example, Stephen Miller, quoted in an Islesboro Islands Trust publication (*Economic Benefits of Open Space*, May 1992) notes that:

***"Open space provides additional positive economic benefit by supporting tourism; encouraging more cost-efficient development; allowing nature to perform its life-giving, valuable work; and establishing a quality of life that attracts businesses and others to relocate."***

A similar study in New Hampshire found that state residents are assessed higher property taxes based on individually evaluated view factors. Properties with assessed view factors typically have increased property values ranging from

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<sup>12</sup> The "hedonic method" is most commonly applied to variations in housing prices that reflect the value of local environmental attributes. It can be used to estimate economic benefits or costs associated with environmental amenities, such as aesthetic views. The hedonic pricing method is relatively straightforward and uncontroversial to apply, because it is based on actual market prices and fairly easily measured data. If data are readily available, it can be relatively inexpensive to apply. If data must be gathered and compiled, the cost of an application can increase substantially. In a recent literature review, most economic models that looked at the effect of open spaces on property values used "proximity to" rather than "view of" open spaces to simplify their property evaluations using the hedonistic pricing method. However anecdotal evidence indicates that there is a strong correlation between unobstructed territorial views and property values. (See, e.g., "The Effect of Environmental Zoning and Amenities on Property Values: Portland Oregon," N.R. Netusil, *Land Economics* 81 (2): 227-246; "The Effect of Open Space Type on a Home's Sale Price: Portland, Oregon," M. Lutzenhiser and N.R. Netusil, *Contemporary Economic Policy*, 19 (1): 291-298; or "The Impact of Open Spaces on Property Values in Portland, Oregon," B. Bolitzer and N.R. Netusil. *Journal of Environmental Management*, 2000. 59:185-193.



\$30,000 - \$100,000. The Trust for Public Land found that conservation of key properties may have a net beneficial impact on tax receipts, because open space provides more in taxes from neighboring properties than it costs to provide services for residential development. (*Community Choices; Thinking through Land Conservation, Development, and Property Taxes in Massachusetts*. Trust for Public Lands, 1999)

Much more persuasive, however, is the City of Prineville's recent decision to compensate a Measure 37 claimant for alleged loss of value due to the 200-foot scenic top-of-rim setback standard. The City of Prineville provides a recent and directly applicable example of the value placed by the community as a whole on protecting scenic views. Prineville is unusual among Oregon cities in having made the policy choice to compensate a property owner for a Measure 37 claim, rather than degrade community views of scenic rimrock. City Council minutes from meetings held in September and October of 2006 document that the Council authorized payment of \$47,760 to the owner of a 15.67 acre property, to compensate for any loss in value resulting from implementation of the adopted 200-foot top-of-rimrock setback. Clearly, the community places great value on conservation of scenic views that define "quality of life" in Prineville.

The Barnes Butte scenic area is designated for residential and recreational use. For further discussion of economic consequences related to these primary uses, please see discussion under Goals 8 (Recreational Needs) and Goal 10 (Housing).

At the June 6, 2007 public hearing, all three property owners listed above agreed that the two units per gross buildable acre standard in secondary scenic areas did not impose an undue economic hardship. Therefore, the Planning Commissions concluded the *Recommended Program Outline* should limit residential development to a maximum of two units per gross acre, subject to design standards. With respect to the Barnes Butte primary scenic area, Brooks Resources commented that the one-unit-per-gross acre standard was acceptable, but registered concerns about the effects of limiting height to 25 feet (rather than the 35 feet allowed within the R2 zone), and other possible view mitigation standards identified below.

## **Energy Consequences – Scenic Areas**

The energy consequences of the three decision options for protection of the Barnes Butte scenic area are discussed further under Goal 12 (Transportation) and 13 (Energy Conservation). Generally speaking, the full protection option could have the unintended consequence of increasing out-of-direction travel and inefficient land use, within adverse impacts to transportation connectivity and energy efficiency.



## ***ESEE Recommendation – Barnes Butte and Rimrock Scenic Areas***

Both the full protection and no protection options have unacceptable economic, social, environmental, and energy consequences for Prineville and its significant scenic areas. The *Revised Program Outline* provided a reasonable balance between these two extremes. However, as a result of the public review process, the Planning Commissions considered two possible modifications to the *Revised Program Outline* accepted by the City Council for purposes of conducting an ESEE Analysis:

1. Are Goal 7 standards sufficient to limit scenic impacts from residential development within secondary scenic areas, or should additional density (two units per gross acre maximum), grading and design standards be applied to protect views on visible slopes at the base of scenic rimrock?
2. Should limited residential construction be allowed in the Barnes Butte primary scenic area subject to density (one unit per gross acre), grading and design review standards?

### **Secondary Scenic Resource Areas**

The discussion of ESEE consequences under Goal 10 (Housing) recognizes that the densities identified in the 2003 UGB amendments for Areas 1, 2A, 3, 4 and 5 cannot be achieved under the *Recommended Program Outline*. However, after considering public testimony, the Planning Commissions weighed adverse economic and social impacts to individual property owners against the positive economic, social and environmental impacts to neighboring property owners and the community as a whole. The Planning Commissions tentatively concluded that the two-unit-per-gross acre standard for secondary scenic resources, combined with design standards for buildings and grading, was effective in protecting scenic values and had minimal adverse ESEE consequences. The Commissions concluded that impacts to secondary rimrock and butte views can be mitigated with appropriate density, grading and design standards, such as those approved in the Iron Horse ODP and proposed in the *Recommended Program Outline*.

Thus, conflicting residential uses should be allowed in secondary scenic areas on a limited basis, subject to the following amendments to the PCO:

- **Residential design standards** – to mitigate potential impacts from bright building color, unsightly materials, and reflective windows. These standards would apply to primary and secondary scenic areas as mapped on Figure 4.
- **Grading mitigation standards** – to mitigate for cut and fill impacts within all scenic areas, grading standards should be clarified and mitigation standards adopted. Mandatory grading mitigation requirements such as minimizing cut and fill slopes, using of local rock materials for retaining walls,



road placement along existing contours, home placement to block views of major cuts and fills, planting of native grasses and shrubs to minimize erosion and view impacts, planting of street trees and the like.

- **Objective density, height, building separation, road width and setback requirements** – to mitigate residential and road construction impacts in the Barnes Butte and rimrock secondary scenic areas (including but not limited to land within Area 2A (approximately 65 acres), Area 3 (approximately 99 acres), Area 4 (approximately 40 acres), and Area 5 (approximately 40 acres) that are outside the existing city limits and do not have an approved ODP):
  - No residential construction on slopes of 25% or greater except for connecting streets and pathways (Goal 7);
  - Maximum of two units per gross acre within the secondary scenic area;
  - Maximum of 35 feet in height from finished grade;
  - Minimum of 30 feet separation (when homes are viewed from neighboring properties) and required plantings between homes;
  - Flexible street standards allowing narrow streets, sidewalks on one side of the street, parking bays and one-way loop systems to minimize cuts and fills for road construction and access;
  - Minimum street building setbacks of 5 feet to reduce cuts and fills for driveways; and
  - Lighting standards that strictly limit impacts.

These standards are designed to encourage homes to “stair-step” with existing contours, to minimize the apparent height of new construction, and to soften visual impacts. The separation standards provide for intervening vegetation between otherwise continuous homes when viewed from the neighboring urban properties. (The ordinance would provide specific directions based on conditions on the ground.) The narrow street standards and setback reductions can help minimize cuts and fills necessary for streets and driveways, while creating more useable landscaped yard space. However, such standards can sometimes have unintended consequences. The Goal 5 rule provides for a two-tiered review process to allow for this eventuality. Therefore, the *Recommended Program Outline* allows for **modification of clear and objective standards through the PUD process where a net benefit to off-site views can be demonstrated**. For example, depending on topographical conditions, clustering of homes in a less visible area may have a lesser visual impact than adhering to the 30-foot separation standard.

### **Primary (Barnes Butte) Scenic Area**

Under the *Revised Program Outline* accepted by the City Council for purposes of conducting an ESEE Analysis, the Barnes Butte primary scenic area would be off



limits for most types of urban development. Barnes Butte primary scenic areas are limited to UGB Expansion Areas 2 (owned by the Bureau of Land Management), and 2A (owned by Brooks Resources).

- Recreational trails, viewpoints, educational signage, and similar passive recreational uses would be permitted within on BLM property and on private property within the Barnes Butte primary scenic area
- Testimony received from Brooks Resources demonstrates that substantial adverse social and economic impacts to the property owner would result from implementation of the “no development” standard in the *Revised Program Outline* for the Barnes Butte primary scenic resource area. Although Brooks Resources felt that the one-unit-per-gross acre standard was reasonable, concerns were raised regarding potential cost and practical implications of requiring a 25-foot height limitation.
- As noted in the Goal 11 and 12 analyses, prohibiting streets and public facilities within the Barnes Butte primary scenic area could limit the ability to provide an efficient grid street system and would prohibit construction of a higher elevation water reservoir on Brooks Resources property.
- As noted in the Goal 14 analysis, reducing densities inside the UGB can have the unintended consequence of forcing urban development on to adjacent farm land in the long run.

For these reasons, the Planning Commissions agreed to consider the policy option of allowing limited residential development, street and utility connections within the Barnes Butte primary scenic resource area. Such limited development would be subject to the same **residential design standards and grading mitigation standards** that apply in secondary scenic areas. In addition, development within the primary scenic area *might* be subject to the following **objective density, height, building separation, road width and setback requirements** standards:

The draft *Recommended Program Outline* for the Barnes Butte primary scenic area in Area 2A (approximately 35 acres) that is outside the existing city limits and do not have an approved ODP might look something like this:

- No residential construction on slopes of 18% or greater;
- Maximum of one unit per gross acre;
- Maximum of 25 feet in height from finished grade to maintain a lower profile;
- Minimum of 30 feet separation of homes that are clearly visible from the northwest, west and southwest, and required plantings between homes;
- Flexible street standards allowing narrow streets, sidewalks on one side of the street, parking bays and one-way loop systems to minimize cuts and fills for road construction and access;
- Minimum street building setbacks of 5 feet to reduce cuts and fills for driveways;
- Strict lighting standards.



However, the Planning Commissions have not heard public testimony regarding the ESEE consequences of this more restrictive program for the Barnes Butte primary scenic area. As with secondary scenic areas, should the Planning Commissions recommend allowing limited residential development in the primary scenic area, the *Recommended Program Outline* should allow for **modification of clear and objective standards through the PUD process where a net benefit to off-site views can be demonstrated.**



## Goal 6: Air, Land and Water Resource Quality

Statewide Planning Goal 6 requires that cities adopt policies and implementation measures to ensure that air, land, and water quality are not “degraded” and that state and federal environmental quality standards are met. The Goal 5 administrative rule (OAR 66-023-0240) states that Goal 5 procedural requirements do not apply to measures that implement Goal 6, provided that such measures do not “exceed” the requirements of these goals.

*(1) The requirements of Goal 5 do not apply to the adoption of measures required by Goals 6 and 7. However, to the extent that such measures exceed the requirements of Goals 6 or 7 and affect a Goal 5 resource site, the local government shall follow all applicable steps of the Goal 5 process.*

Prineville and Crook County are following all applicable steps of the Goal 5 process for all significant Goal 5 resource sites, as documented in this report. Riparian corridors are proposed for protection under Goal 5 “safe harbor” regulations. Groundwater is proposed for protection by a DEQ model ordinance.

### **ESEE Relationship to Goal 6**

The *Program Outline* recommends a three-part program to protect groundwater resources:

1. Adopt the proposed Goal 5 safe harbor program to protect riparian corridors, to reduce the risk of contamination through surface water and groundwater interaction;
2. Obtain technical assistance from DEQ to develop and implement a drinking water protection strategy to assure a safe and adequate drinking water supply for Prineville over the long term; and
3. In coordination with DEQ, adopt a Goal 6 groundwater protection program that reduces the risk of potential contaminants in local drinking water protection areas, particularly within the 2-year sensitivity zone areas mapped in Figure 5 of the Inventory.

Although this is primarily a Goal 6 (Water Quality) exercise, the City has completed a separate Goal 5 ESEE Analysis for groundwater resources, which is included as [Appendix 1](#). Protection of surface water resources, scenic areas, and wildlife habitat will help to maintain air, land, and water resource quality within the Prineville UGB by reducing the



impacts of urban development. Conversely, if significant Goal 5 resource areas are not protected, there are adverse consequences for air, land and water resource quality.

### ***ESEE Consequences of Full and No Protection Options for Air, Land, and Water Resource Quality***

This section considers environmental, economic and social consequences of fully protecting all significant resource areas identified in the “no protection option” (i.e., allowing conflicting uses fully). Energy consequences are addressed under Goal 13, Energy Conservation.

During this discussion, it is important to remember that Prineville and Crook County must comply with state and federal environmental quality regulations, and that both jurisdictions have local erosion control and stormwater management requirements that ensure compliance with Goal 6. Therefore, the “no protection” option for Goal 5 resources does not mean that air, land, and water resources will be unprotected. Rather, the “no protection” option means the loss of additional benefits provided by riparian corridors, wetlands and Wildlife Habitat for air, land, and water resources quality.

#### **Environmental Consequences**

***Wetlands*** provide important water quality functions. They reduce the impacts of excess nutrients in storm water runoff on downstream waters. Essentially equivalent to pollution removal, a wetland contributes to water quality by trapping sediment during periods of heavy rainfall, keeping it from entering adjacent downstream resources. Wetlands also trap nutrients such as nitrogen and phosphorus, helping to prevent or minimize algal blooms and subsequent oxygen deficiencies downstream. Wetlands reduce downstream flood peaks and store floodwaters by acting as flood regulators, trapping water during periods of high precipitation or flooding, and slowly releasing the flow downstream. By reducing the velocity and volume of stormwater flows, wetlands also reduce erosion and thereby help to preserve water and land quality.

The Local Wetland Inventory (LWI) evaluated the effectiveness of wetlands within the Prineville UGB to provide both of these functions. The LWI assessed each wetland’s water quality and hydrologic control function as “intact,” “impacted,” or “not present.” All of the wetlands described in the LWI were found to have some water quality and hydrological control value. Many Locally Significant Wetlands (LSWs) identified in the Natural Features Inventory had “intact” water quality function and hydrologic control function.

Full local protection of LSWs would ensure that water quality and hydrologic control functions remain intact, with corresponding benefits for water and land quality within the Prineville UGB.



//Prineville and Crook County were to allow fill and removal of isolated LSWs without local restriction, then these water quality and hydrologic control functions could be lost, to the detriment of land and water quality.

Although the Oregon Department of State Lands (DSL) and US Army Corps of Engineers would still have regulatory authority, maintaining the benefits of full protection would be less certain. This is true for two reasons: first, these agencies may grant a permit to fill and remove all or part of an LSW; and second, their monitoring and enforcement capabilities are limited by budget and staffing considerations. Therefore, there would likely be adverse environmental consequences for water quality if there were no local protection program (i.e., if conflicting uses were allowed fully).

***Riparian Corridors*** and associated wetlands also provide benefits for air, land, and water resources quality. Riparian corridors can enhance water quality in many ways. Undisturbed densely-vegetated riparian corridors trap sediments, inhibit erosion, and filter runoff originating from impervious surfaces, lawns, golf courses, and the like. Sedimentation and erosion, although natural processes, are accelerated in urban areas by increased impervious surfaces. Impervious surfaces also inhibit infiltration. Sediment within a riparian corridor can be from erosion of poorly vegetated uplands, runoff from impervious surfaces, or floods from an adjacent water resource. Sediments often carry nutrients (e.g. phosphates and nitrates) and pollutants (e.g. heavy metals, hydrocarbons) to water resources, altering water chemistry, burying spawning gravels and impacting fish and wildlife habitat. Excessive concentration of nutrients in the water can trigger algal blooms, depleting the water of oxygen required by fish and other aquatic organisms. The ability of a riparian corridor to resist erosion is related to slope, soil type, type of vegetation, vegetation cover, landscape position, and degree of human disturbance.

Riparian corridors and associated wetlands and floodplains provide a valuable flood management function by reducing the force and volume of floodwaters. Floodwaters flowing into a vegetated, flood-prone riparian corridor can be slowed or temporarily stored, reducing peak flows and downstream flooding. Woody vegetation, in particular, resists floodwaters and reduces its velocity. Topographic features such as swales and depressions can enhance a riparian corridor's ability to manage flood flows. Reducing the velocity of floodwaters in the riparian corridor allows infiltration of water into the soil. Water entering the soil is slowly released into the main channel, delaying its movement downstream.

Water temperature affects the ability of a stream to support viable populations of certain aquatic organisms. Riparian shade, especially forest canopy, moderates temperature within and adjacent to a water resource. Although stream temperatures are important throughout the year, summer temperature is



generally more critical for fish species such as salmonids. High water temperatures and sunlight are factors that can promote algal blooms, reducing dissolved oxygen required by anadromous fish and other cold-water dependent organisms. The aspect or orientation of the water resource and the height of the adjacent riparian vegetation play important roles in how effective riparian vegetation is in providing shade.

For reasons stated above, full protection of significant riparian corridors would have substantial water quality benefits within the Prineville UGB. //Prineville and Crook County were to allow unrestricted development of riparian corridors, then these water quality and hydrologic control functions could be lost, to the detriment of land and water quality. Therefore, there would be adverse environmental consequences for water and land quality if there were no local protection program for riparian corridors (i.e., if conflicting uses were allowed fully).

### **Economic Consequences**

Compliance with state and federal environmental standards can be costly for local governments. By fully protecting locally significant wetlands, significant riparian corridors, and groundwater resources, the costs of meeting water and air quality standards can be substantially reduced. For example, the Cities of Portland and Corvallis recently adopted stormwater master plans that recognize the benefits natural areas provide for on-site stormwater management. When stormwater is treated at the source by saving trees or reducing pavement, then stormwater infrastructure requirements are correspondingly reduced. Costs for compliance with National Marine Fisheries Service (NMFS) requirements related to water quality and temperature can also be reduced.

On the other hand, full protection of significant natural resources may not be the most cost-effective way to achieve environmental standards. For reasons stated in the Goal 8-12 discussion, full protection of *all* significant natural resource sites would likely result in decreased efficiency of land use, and resultant increases in land acquisition and development costs for parks, businesses, housing, public facilities and transportation projects.

In conclusion, there are positive economic consequences – in terms of reduced costs for meeting local, state and federal environmental standards – associated with the full resource protection option. However, these costs need to be weighed against urban land acquisition and development costs that are addressed in other sections of this chapter.

//Prineville were to allow conflicting uses fully, the costs for meeting state and federal environmental standards would likely increase substantially, along with increased infrastructure construction and maintenance costs. Reliance on “after



the fact" hard engineering methods of pollution control can have substantial dollar costs that need to be considered when determining the economic consequences of allowing unrestricted development (i.e., allowing conflicting uses fully).

### **Social Consequences**

The *Prineville Comprehensive Plan* recognizes the importance of clean air and water to the citizens of the area. The plan links air, land, and water resource quality to quality of life – thus underscoring their social value.

Full protection of significant wetlands, riparian corridors, and groundwater resources helps to maintain the livability that is so highly valued by Prineville residents. On the other hand, unrestricted development of significant natural resources in Prineville degrade air, land and water resource quality, and therefore would have serious and adverse social consequences for the community.

### ***ESEE Consequences of Recommended Program Outline for Air, Land and Water Resource Quality***

The *Recommended Program Outline* provides limited protection of significant wetlands, riparian corridors, scenic areas and associated wildlife habitat. A high level of protection is afforded these resources on steep slopes that are subject to erosion and landslides.

### **Environmental Consequences**

When compared with the full protection scenario, the *Recommended Program Outline* has marginal adverse environmental consequences for air, land, and water resource quality. Air quality will be marginally reduced as limited urbanization occurs within or at the edges of protected resource areas. Land quality will not be substantially affected, because of strong natural hazard provisions found in the discussion under Goal 7 (Natural Hazards). As noted above, Prineville and Crook County Planning Commissioners have afforded limited protection to riparian corridors, associated wetlands and groundwater resources, ensuring that water quality will not be degraded as a result of urban development.

Prineville' Goal 5 program should be viewed in the context of other local and state programs to maintain environmental quality. The Comprehensive Plans of Crook County and Prineville commit these jurisdictions to continued coordination with the Department of Environmental Quality (DEQ) to ensure that Oregon Environmental Quality Commission standards related to air, land and water quality are met.



## **Economic Consequences**

The economic consequences of the *Recommended Program Outline* are positive, because they will have the effect of reducing public and private stormwater collection and treatment costs. (See discussion under full protection scenario.)

## **Social Consequences**

The social consequences of the *Recommended Program Outline* are positive, because they will have the effect of reducing public and private stormwater collection and treatment costs. (See discussion under full protection scenario.)

## **Goal 6 Conclusion**

The Planning Commissions' *Recommended Program Outline* complements existing City, County, and State air, land, and water resource quality programs. When compared with the no protection scenario, both the full and limited protection programs have substantial positive ESEE consequences. The *Recommended Program Outline* anticipates adoption of a DEQ model ordinance to protect groundwater resources, while relying on Goal 5 riparian corridor safe harbor regulations to protect water quality in rivers, streams and associated wetlands.



## Goal 7: Natural Hazards

Goal 7 reads (in relevant part) as follows:

*To protect people and property from natural hazards.*

### *A. Natural Hazard Planning*

- 1. Local governments shall adopt comprehensive plans (inventories, policies and implementing measures) to reduce risk to people and property from natural hazards.*
- 2. Natural hazards for purposes of this goal are: floods (coastal and riverine), landslides, earthquakes and related hazards, tsunamis, coastal erosion, and wildfires. Local governments may identify and plan for other natural hazards.*

### **Natural Hazard Protection and Effect on ESEE Analysis**

Prineville and Crook County have adopted, or are adopting Goal 7 hazard protection programs that resolve most conflicts between development and Goal 5 resource preservation in areas with mapped natural hazards, based on clear and objective development standards. The Goal 7 protection program found in the *Recommended Program Outline* will protect the following inventoried Goal 7 hazard areas as follows:

2. Amend Goal 7 floodplain regulations to:
  - a. Require balanced cut and fill (no net loss of flood storage capacity); and
  - b. Prohibit most development in areas where the floodplain overlaps with a Goal 5 resource site.
3. Adopt a new Goal 7 Hillside Protection overlay district that:
  - a. Requires geological studies for development on slopes of 18% or greater;
  - b. Prohibits development on slopes of 25% or greater;
  - c. Requires geological studies for development on slopes of 18% or greater and for potential rock fall areas at the base of rimrock;
  - d. Prohibits development on slopes of 25% or greater; and
  - e. Prohibits development (except road and utility crossings) within 50 feet of the centerline of dry washes.

Land with slopes of 25% or greater and land within the 100-year floodplain is considered "unbuildable" for purposes of meeting housing needs, and generally unsuitable for meeting employment needs. Although limited development may occur within the 100-year floodplain outside of protected riparian corridors, such development



can only be permitted after safety concerns have been addressed. Because these severe hazard areas are unbuildable for most urban areas, the ESEE consequences of allowing, prohibiting or limiting conflicting uses are different for severe hazard areas than for otherwise buildable areas.

**Table II-7-1. Natural Resource Sites to be Protected by Goal 7 Hazard Protection Provisions**

Natural Resource Site	Stream or River Flood Plain	Hillside Slopes $\geq$ 25%	Dry Washes	Talus Debris Slopes
Barnes Butte / Hudspeth Drainage		X	X	X
Upper Ochoco Creek / Rimrock	X	X	X	X
Lower Ochoco Creek	X	X	X	X
Upper Crooked River / Rimrock	X	X	X	X
Lower Crooked River / Rimrock	X	X	X	X
Ryegrass Ditch	X	X	X	-

### ***ESEE Relationship to Goal 7***

Many of Prineville’ natural resources are located in areas with severe natural hazards: this is true of riparian areas and wetlands (flooding), scenic areas (steep slopes, landslide hazards), and wildlife habitat areas (steep slopes, landslide hazards and flooding). Prineville and Crook County Planning Commissioners carefully considered the overlap between Goal 7 natural hazard and Goal 5 natural resource areas when determining whether, and to what degree, natural and scenic resource areas should be protected.

In considering this relationship, Prineville and Crook County Planning Commissioners observed that allowing development in natural hazard areas generally could have severe and adverse economic, social, and environmental consequences. Therefore, they determined that areas subject to landslide or severe slope hazards, and undeveloped areas subject to flooding were considered unbuildable for most types of urban development.

It follows that protecting natural resource areas with natural hazards has fewer adverse economic and social consequences for property owners – as least insofar as *urban* development is concerned.



## ***ESEE Consequences of Full and No Protection Options for Land with Natural Hazards***

As noted above, the ESEE consequences for full protection of land with natural hazards are considerably different from those for land with no or easily remediable hazard potential. The adverse ESEE consequences of allowing urban development in hazardous areas with significant natural resources are compounded but the possibility of damage to life and property.

### **Environmental Consequences**

The environmental consequences of fully protecting natural and scenic resource areas are highly positive and are discussed in the Goal 5 and 6 sections of this chapter. These positive environmental consequences are reinforced in natural hazard areas, because prohibiting all conflicting uses decreases the likelihood of flooding and slope failure. Moreover, flooding and slope failure would adversely affect water quality in streams and would harm Wildlife Habitat, as well as fish and wildlife habitat.

Conversely, the environmental consequences of the no protection option are severe and adverse. Unrestricted urban development, grading and vegetation removal would increase substantially and the likelihood of flooding and slope failure, which would degrade land and water quality, fish and wildlife habitat, and scenic values.

These environmental considerations led Prineville and Crook County Planning Commissioners to conclude that natural and scenic resource areas with severe natural hazards generally should receive a higher level of protection than those without natural hazards.

### **Economic and Social Consequences**

The economic and social consequences of full resource protection, in areas with over-lapping natural resources and natural hazards, are mixed. Under the full protection option, the likelihood of damage to persons and property would be reduced when compared with the no protection option. In cases where development cannot safely occur, adverse economic and social consequences are less pronounced, because housing and businesses construction could not occur in any case.

However, the full protection option would *prohibit all conflicting uses and activities in all mapped hazard areas*, with adverse economic and social consequences to property owners, the general public and urban service providers. Such a complete prohibition would severely restrict the use of property for non-construction purposes (e.g., yards and gardens), increase the costs of providing public infrastructure, restrict public recreational opportunities,



prohibit most farm and forest management practices, and increase transportation costs resulting from out-of-direction travel. The full protection option would also limit the ability to access natural areas with attendant adverse social consequences. Wildfire hazards can increase under the full protection option, especially at higher elevations subject to thermal wind conditions.

## ***ESEE Consequences of the Recommended Program Outline for Land with Natural Hazards***

### **Environmental Consequences**

The environmental consequences of the *Recommended Program Outline* are positive, because draft hazard regulations reinforce proposed riparian corridor, wildlife habitat, and scenic protection standards.

### **Economic and Social Consequences**

Unlike the full resource protection option, the *Recommended Program Outline* allows for certain private and public land uses and activities that reduce adverse social and economic consequences for landowners and the public.

Strict building limitations are balanced by provisions that allow reasonable use of property in flood and slope hazard areas. For example, replacement of existing structures, construction of employment uses in within floodplains, removal of hazardous trees, construction of transportations and utility facilities, and construction of flood management facilities are permitted subject to locational and construction standards. In this manner, public facilities necessary for development outside of floodplain and slope hazard areas can occur.

Because the *Recommended Program Outline* allows for certain private and public uses and activities within hazard areas, subject to engineering and locational standards, adverse social and economic consequences are reduced without compromising public safety.

## ***Goal 7 Conclusion***

The *Recommended Program Outline* has positive environmental consequences because they reinforce other proposed provisions to protect natural and scenic resource areas. At the same time, the *Recommended Program Outline* provides the flexibility necessary to reduce adverse economic and social consequences of the full protection option.

The proposed legislative amendments that make up the *Recommended Program Outline* comply with Goal 7, Natural Hazards, because they provide clear and objective standards that to protect life and property from potential flood and slope hazards.



## Goal 8: Recreational Needs

Goal 8 requires local governments to plan for the park and recreational needs of their community. This Goal is related to the Goal 14 requirement to provide land to meet the “livability” needs of a community.

### ***ESEE Relationship to Goal 8***

Planning for, developing, and maintaining Prineville’s and Crook County’s system of parks, open space, and trails are closely related to the level of protection of afforded to significant wetlands, stream corridors, and vegetation. The Crook County Park and Recreational District are responsible for providing park and recreational services in the Prineville area. On the one hand, protecting natural resources provides open space and recreational opportunities for the community, which translates into positive social and economic consequences. On the other hand, intensive park development and human access to natural resource areas can have adverse environmental consequences.

Fortunately, the *Prineville Comprehensive Plan* recognizes the importance of the parks system in meeting the City’s environmental goals. Area parks have the following environmental benefits because they:

- Maintain green space to help filter and reduce run off from developed Areas;
- Help to protect natural and scenic features of the natural landscape;
- Provide habitat for wildlife and flora species;
- Help to reduce travel time to recreational areas and offset the effects of pollution.

The Bureau of Land Management (BLM) has planned for a regional park on land it owns within the Barnes Butte primary scenic area. This park will be managed, under intergovernmental agreement, by the Crook County Park and Recreation District. The passive recreational uses planned for this “nature park” do not conflict with scenic or wildlife habitat values in this area.

### ***ESEE Consequences of Full and No Protection Options for Meeting Long-Term Park and Recreational Needs***

With respect to park and recreational uses, low impact uses such as trails, picnicking, and passive recreational uses are not regarded as conflicting uses in an urban setting and would be permitted under the full protection option. In contrast, the no protection option would allow unlimited development of significant natural areas for park and recreational uses, such as recreational buildings, swimming pools, ball fields and skate board parks.



## **Environmental Consequences**

The environmental consequences of the full protection option are positive. Passive recreational uses would be allowed, but more intensive park development would not be permitted in natural and scenic areas.

## **Economic and Social Consequences**

The economic consequences of the full protection option would also be positive because much of Prineville's appeal to local residents and visitors comes from its extensive park system, which is accessible to and usable by the public. In contrast, the no protection option would allow intensive park and recreational uses in sensitive natural resource and scenic resource areas, which could compromise the social and economic value that Prineville and Crook County citizens place on parks that provide public access to natural open space.

## ***ESEE Consequences of the Recommended Program Outline for Meeting Long-Term Park and Recreational Needs***

The *Recommended Program Outline* outlined below provides for the protection of natural and scenic resources in Prineville's public park system, while allowing for public access and passive recreational opportunities. By maintaining parks with protected natural resource and hazard areas in a "near-natural state," the competing objectives of natural resource protection and public access are resolved. The environmental consequences of the *Recommended Program Outline* are positive. Passive recreational uses by Prineville and area citizens are expected in an urban setting, and contribute to the value of natural resources and scenic areas. Positive environmental consequences would also result because automobile travel would increase if Prineville lacked an accessible urban yet natural park system. Social and economic consequences are also positive: Prineville's urban natural park system provides substantial economic and social benefits for local residents and visitors.

## ***Goal 8 Conclusion***

The *Recommended Program Outline* includes provisions to protect natural resource and hazard areas, and effectively resolves conflicts between natural resource and scenic resource protection on the one hand, and intense recreational uses on the other. The *Recommended Program Outline* avoids the extremes of full protection (i.e., developed parks that conflict with natural resource and scenic values) on the one hand, and no protection (i.e., unrestricted active park use) on the other. The proposed amendments also support District and BLM park and recreation objectives of providing accessible nature parks for existing and future residents. Therefore, the proposed legislative changes outlined in the *Recommended Program Outline* comply with Goal 8, Recreational Needs.



## **Goal 9: Economy of the State**

Goal 9 requires Prineville to provide sufficient and suitable land within its UGB to meet long-term needs for industrial, commercial, office and mixed use development. Suitable industrial, commercial and office land is located on relatively flat land (generally less than 10% slope) that is relatively unconstrained by natural hazards or resources.

### ***ESEE Relationship to Goal 9***

The Goal 9 ESEE Analysis applies to land that is designated for employment (industrial, commercial, and office) uses on the *Prineville Comprehensive Plan* Map. The primary concern is that Prineville must maintain an adequate supply of land to meet economic development objectives. If land is removed from the industrial, commercial, or office buildable lands inventory to protect Goal 5 resources, and the supply falls below the needs projected in the *Prineville Comprehensive Plan*, then Goal 9 compliance is jeopardized.

This ESEE Analysis focuses on industrial and commercial development within the quarter mile bird nesting site impact areas, as shown on ODFW maps and NFI Figure 3. Since the proposed nesting site protection program does not limit the location of industrial development, or the industrial land supply, the only potential impact is on the timing of new construction that may disrupt bird nesting behavior and reproduction.

Conflicts between Goal 9 and Goal 5 resources often are difficult to resolve because commercial and industrial buildings typically consist of a single story and require large parking lots and maneuvering areas. Unlike residential areas, density transfer often is not a viable option. *The Recommended Program Outline* provides some flexibility in siting commercial and industrial buildings, by allowing for setback reductions in exchange for restoration and enhancement of the riparian corridor. There are no conflicts with primary or scenic rimrock areas, because these scenic areas are associated with generally "unsuitable" slopes of ten percent or greater.

Potential adverse economic impacts to residential developers are addressed in the Goal 5 and Goal 10 sections of this report.

### ***ESEE Consequences of Full and No Protection Options for Economic Development Objectives***

#### **Environmental and Energy Consequences**

In Prineville, potential Goal 9 conflicts exist only with bird nesting sites near industrial areas along Ochoco Creek and Ryegrass Ditch. Nesting sites themselves in riparian corridors will be protected through riparian corridor "safe harbor"



standards. The full protection option would have positive environmental consequences for bird nest sites, but would restrict development within a quarter mile of the nest itself. In contrast, the no protection option could have substantial adverse environmental consequences, by allowing construction activities to occur during the nesting season. The environmental consequences of the full protection and no protection options also are addressed in the Goal 5 and 6 sections of this chapter. Energy consequences of these options generally are addressed in the Goal 13 section of this chapter.

As noted in the discussion of the *Recommended Program Outline*, the severity of these adverse environmental consequences is mitigated by the fact that bird nests have co-existed with industrial and commercial development for years in this area. There are virtually no positive or negative energy consequences associated with the protection of nesting habitat impact areas.

### ***Economic and Social Consequences of Full and No Protection Options***

In commercial and industrial areas of Prineville, wildlife habitat can have some economic benefits, including improved consumer perceptions of businesses and greater worker productivity and job satisfaction. However, full protection of the entire quarter mile impact area(s) would result in the loss of commercial and industrial land and corresponding loss of existing jobs and future job opportunities.

With regard to bird habitat in industrial areas, the full protection option would offer relatively few economic and social benefits because the quarter-mile habitat impact area is too large to be integrated into an industrial development. The no protection option would eliminate potential construction timing issues, depending on whether birds are roosting or nesting when construction is planned within the quarter-mile impact area.

As noted in the Part II, Goal 5 section of this report, in areas where a great deal of new construction or redevelopment is proposed, the economic impacts of the *Revised Program Outline* may be more severe. Because the Combs Flat Road Osprey nesting site is located on school grounds in an area that is planned for large-scale redevelopment (Ochoco Lumber site), limiting construction activities during the nesting season could have severe and adverse economic consequences.

On the other hand, visual contact with protected habitat areas along riparian corridors can improve office worker productivity and job satisfaction (Kaplan and Kaplan 1989). Office workers with a view of habitat and greenery:

- 1) Found their job more challenging,
- 2) Were less frustrated about tasks and generally more patient,
- 3) Felt greater enthusiasm for the job,



- 4) Reported feelings of higher life satisfaction, and
- 5) Reported better overall health.

Office workers without a view noted 23 percent greater incidence of illness in the prior six months (Kaplan and Kaplan 1989). These studies apply more directly to office or industrial park workers and less to manufacturing and assembly workers. These benefits are offset in industrial and commercial areas by the high costs of industrial and commercial land, and the need to use such land efficiently within the Prineville UGB.

In conclusion, the full protection option for the quarter-mile impact area would mean that no development could occur within protected bird nesting sites or their respective impact areas. This option would severely restrict expansion of businesses and would limit areas where new commercial and industrial development could occur. Job growth in Prineville would be greatly impaired. For these reasons, full resource protection in Prineville is not a realistic public policy option. On the other hand, in commercial retail, office, and industrial park areas, unrestricted construction activities during the nesting season could cause remove bird nests to be abandoned.

### ***ESEE Consequences of the Recommended Program Outline for Economic Development Objectives***

To address the negative ESEE consequences of both the full and no protection options, and adverse impacts from the *Revised Program Outline* on the Osprey school nesting site near Combs Flat Road, the *Recommended Program Outline* was developed. The *Recommended Program Outline* relies on the riparian corridor safe harbor *plus* coordination with the Oregon Department of Fish and Wildlife on the timing of construction near occupied bird nesting sites. This program has proven effective in maintaining bird nesting sites, without adversely affecting ongoing economic development efforts.

#### **Environmental Consequences**

The environmental consequences of the *Recommended Program Outline* are somewhat adverse but acceptable in an urban context. While there is no guarantee that bird nesting sites will be retained over time in industrial and commercial areas, coordination with ODFW *plus* protection of nesting sites in riparian corridors will allow for more adaptable bird species, such as Osprey, to nest and breed successfully near employment centers.

#### **Social and Economic Consequences**

The social and economic consequences of the *Recommended Program Outline* are also mostly positive. Since nesting sites and other wildlife habitat are in protected riparian corridors, additional land is not needed to protect nesting sites themselves. A somewhat negative consequence may occur during the nesting season, when commercial and industrial construction plans must be coordinated



with ODFW. However, with proper phasing of construction, economic impacts can be minimized. As noted above, there are a number of social benefits that result from maintaining wildlife habitat near working and shopping areas.

However, in one case the adverse economic impacts of the nesting site off Combs Road may outweigh positive social and environmental impacts. The Osprey nest (which apparently is used intermittently) could cause construction delays in an area where major redevelopment is planned in the near to intermediate future. In this situation, Planning Commissions may wish to recommend the "no protection" option.

### **Goal 9 Conclusion**

The *Recommended Program Outline* preserves the industrial and commercial land supply within the Prineville UGB while maintain wildlife habitat associated with riparian corridors near industrial and commercial areas. The adverse environmental consequences of this limited protection decision are offset by the positive economic, social, and energy consequences of preserving industrial and commercial job opportunities within the Prineville UGB.

The *Recommended Program Outline* avoids the extremely adverse ESEE consequences associated with the full and no protection options. The *Recommended Program Outline* would protect all nesting sites within protect riparian corridors or scenic areas on a limited basis, by requiring property owners to coordinate the timing of construction activities with ODFW. The *Recommended Program Outline* essentially extends existing protections afforded by Crook County to land within the UGB.

The *Recommended Program Outline* excludes the Combs Flat Road Osprey site, located at the school, from local protection.



## Goal 10: Housing

Goal 10 requires Prineville to provide sufficient buildable land within its UGB to meet long-term housing needs, as defined in the Prineville Comprehensive Plan and ORS 197.303.<sup>13</sup>

Providing affordable housing opportunities in well-designed and livable neighborhoods is a primary consideration in the *Prineville Comprehensive Plan*. This document provides insight into the economic and social value that Prineville and area citizens place on quality neighborhoods that provide for a wide range of housing types and densities. Residential neighborhoods are integrated with – rather than distinct from – significant urban natural and scenic resources.

### ***ESEE Relationship to Goal 10***

The Goal 10 ESEE Analysis applies to land that is designated for residential uses within the Prineville UGB. The primary concern is that Prineville must maintain an adequate supply of buildable land to meet projected housing needs for each needed housing type. If land is removed from the residential buildable lands inventory to protect Goal 5 resources, and the supply falls below the needs for any “needed housing type” as projected in the *Prineville Comprehensive Plan* or as required by state statute, then Goal 10 compliance is jeopardized.

Prineville’s stated policy of achieving complete, livable and affordable residential neighborhoods – neighborhoods that are framed by open space and integrated with the natural environment – is of equal importance. The balancing that has occurred throughout the Goal 5 project and in this ESEE Analysis is specifically designed to

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<sup>13</sup> **197.303 “Needed housing” defined.** (1) As used in ORS 197.307, until the beginning of the first periodic review of a local government’s acknowledged comprehensive plan, “needed housing” means housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges and rent levels. On and after the beginning of the first periodic review of a local government’s acknowledged comprehensive plan, “needed housing” also means:

- (a) Housing that includes, but is not limited to, attached and detached single-family housing and multiple family housing for both owner and renter occupancy;
- (b) Government assisted housing;
- (c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490; and
- (d) Manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions.



resolve potential conflicts among affordable housing, conservation of significant natural resources, a good urban design in an urban context.

**The key remaining policy choice for the Planning Commissions (and ultimately elected officials) to resolve is whether to allow limited residential development within the Barnes Butte primary scenic area.** Most of the primary scenic area within the UGB is owned by the Bureau of Land Management (BLM) which has no residential development intentions. The only remaining primary scenic area within the UGB is owned by Brooks Resources. This land is located in Area 2A.

## ***ESEE Consequences of Full and No Protection Options for Housing***

### **Environmental Consequences of Full and No Protection**

The environmental consequences of the full protection option would be highly positive for reasons stated in the Goal 5 section of this chapter. Most of the land in the *Prineville Natural Features Inventory* – consisting of a mosaic of riparian corridors, scenic areas and associated wildlife habitat – is located on land planned and zoned for residential use. By prohibiting all types of residential development, including site preparation (vegetation removal and grading) and construction of supporting public facilities and services, this inter-connected mosaic of resources would remain largely intact. Thus, the system of natural resource polygons within the Prineville UGB would function much like a wilderness area: it would continue to provide an abundance of high desert resources that would not be threatened by urban encroachment.

The environmental consequences of allowing all residential uses without restriction would be extremely negative for the same reason: the vast majority of Prineville's significant natural and scenic resources are located on land planned and zoned for residential use. Unrestricted residential development would result in loss of the riparian, scenic and wildlife habitat functions and values described in the *Natural Features Inventory* and in the Goal 5 section of this report. This option would also violate the strong environmental conservation policies found in both the Crook County and Prineville comprehensive plans.

**Neither of the above decision options offers the balance sought by Crook County and Prineville decision-makers, for reasons discussed below.**

### **Economic and Social Consequences of Full and No Protection**

Neither the "full protection" nor the "no protection" options achieve the neighborhood balance envisioned in the *Prineville Comprehensive Plan*. Full protection of all significant natural resources would increase housing costs



substantially and would retain large tracts of resource land that would be distinct from, rather than integrated with, urban neighborhoods.

Because most significant natural and scenic resource areas considered in the *Prineville Natural Features Inventory* are located on land planned for residential use, the economic consequences of full resource protection for property owners, developers, and existing and future residents would be highly adverse.

Information provided by Brooks Resources in a June 1, 2007 letter explains why the full protection option – applied to primary scenic resource areas – would have extremely adverse effects on property owners' and on developers' ability to provide higher end housing opportunities. Although the City recently amended its UGB to provide for several hundred acres of additional residential land, the buildable land supply is rapidly being exhausted. The full protection option would limit further the City's ability to provide for needed housing as required by Goal 10. Large areas of otherwise buildable land would be off-limits to development, which would decrease the supply of land available for housing and would drive up housing costs for existing and potential residents of the area. Moreover, the full protection option would make it impossible to extend public facilities and services necessary to support needed housing, in contradiction to both Goals 10 and 11.

The full protection option also would have negative economic consequences for many property owners. While the environmental and social benefits of scenic areas and associated wildlife habitat would be preserved, prohibiting housing in all scenic resource and bird nesting habitat impact areas would deprive some property owners of reasonable economic use of their land. On developed properties, replacement of – or additions to – existing homes within resource sites would not be permitted under the full protection option. For vacant residential lands, full protection of natural and scenic resources in Prineville could severely impact the dwelling unit potential of these lands, or eliminate development potential entirely.

However, the full protection option would have a number of positive economic impacts. Economists, ecologists, and urban forestry researchers have documented a wide range of economic benefits that natural and scenic open space provides to local communities. As noted in the discussion of the *Recommended Program Outline*, these benefits are better achieved when urban natural resources are integrated into the design of neighborhoods.

Natural and scenic resources contribute to the economic vitality and stability of a community by increasing property values. For example, the values of houses in wooded neighborhoods have been shown to be higher than those of comparable houses in neighborhoods without trees (Morales 1980; Morales et al. 1983). Research shows that people will pay 3 to 7 percent more for properties with



significant tree cover versus those with few or no trees. Other studies have suggested that healthy, mature trees may add up to 10 percent or more to a property's value (Neely 1988).

Studies in the Portland metropolitan area have shown that nearby forested areas, riparian corridors, wetlands, and other types of open space increase homes sales prices. For example, a study compared the relationship between a home's sales price and its proximity to different open space types (Lutzenhiser and Netusil 2001). Five open space types were evaluated: urban parks, natural area parks, specialty parks/facilities, golf courses, and cemeteries. Urban parks were defined as at least 50% manicured or landscaped and developed primarily for active recreational use (e.g., ball fields, swimming pools). Natural area parks contained more than 50% native and/or natural vegetation with a focus on habitat preservation and passive recreation (e.g., hiking, wildlife viewing). The study found that property values are positively and significantly related to proximity to open spaces (for all open space types except cemeteries). Natural area parks within 1,500 feet of a home were shown to have the largest effect on home sales price (\$14,992 in 2003 dollars). Other open spaces also had statistically significant effects: golf courses (\$12,459), specialty park / facilities (\$7,965), and urban parks (\$1,709).

As noted in the Goal 11 discussion, natural resources can substantially reduce housing costs by reducing the costs of stormwater infrastructure. For example, natural areas intercept rainfall on leaves, branches, and trunks, and from there, the water evaporates (through evapo-transpiration) or slowly soaks into the ground. Natural vegetation can provide significant rainfall interception. In Western Washington and Oregon, for example, a single mature oak tree can intercept more than 1,100 gallons of rainwater per year (McPherson et al. 2002). For this reason, trees and native plant cover (whether considered here as wildlife habitat, scenic areas or riparian corridor vegetation) help to reduce stormwater runoff and lower the costs of stormwater management.

A recent study showed that street trees in Prineville provide enormous benefits in terms of reducing the costs of managing stormwater runoff. The study showed that trees in the city reduced runoff by more than 18 million cubic feet, translating into a stormwater management value of nearly \$110 million, or about \$400,000 expressed on an annual basis (American Forests 2001).

Under the no protection option, the economic benefits described above would be lost. If significant natural resource areas were to receive no protection and are fully developed, there would be direct and profound adverse impacts on the community livability, a reduction in property values for those living near natural resource areas, and a substantial increase in stormwater management and energy costs that would be transferred to homebuyers and owners. Although some property owners would likely benefit financially if there were no limitations



on housing development, there would also be serious adverse economic consequences associated with the no protection option.

## ***ESEE Consequences of the Recommended Program Outline for Housing***

To address the negative ESEE consequences of both the full and no protection options, Prineville and Crook County Planning Commissioners have tentatively approved a *Recommended Program Outline*. This program is discussed in Part II, Goal 5 of this report, and consists of a combination of Goal 7 (natural hazard) and Goal 5 (surface and ground water resources, scenic areas and wildlife habitat).

### **Environmental Consequences of Recommended Program Outline**

The environmental consequences of the *Recommended Program Outline* are generally positive. Wildlife habitat is protected, for the most part, by the riparian corridor "safe harbor" program and by protecting bird nesting sites that are also located within protected riparian corridors and steep slopes associated with Barnes Butte and scenic rimrock areas. Thus, the *Recommended Program Outline* does an excellent job of protecting most natural resources in an urban context, with largely positive environmental consequences.

### **Economic and Social Consequences of the Recommended Program Outline**

The *Recommended Program Outline* achieves the social and economic balance described in the *Prineville Comprehensive Plan*. By protecting significant riparian corridors and associated wetlands, groundwater resources, scenic views and associated wildlife habitat the urban design benefits of natural resources are achieved. By allowing limited residential development in secondary scenic areas, housing and urbanization objectives can also be achieved on a limited basis.

As noted above, the key policy choice for Crook County and Prineville appointed and elected is whether to allow limited residential development (at one unit per gross acre) within the Barnes Butte primary resource area – and more specifically on land owned by Brooks Resources in Area 2A.

**Brooks Resources** provided detailed information identifying adverse economic consequences that could result from prohibiting residential development on primary scenic areas. (June 1, 2007 letter from Randall Jones, pp. 5-6) The preliminary (not approved) Iron Horse ODP shows 45 large single family lots at a density of 1.6 units per acre. Assuming an average *net* value of \$160,000, the potential lost revenue amounts to \$7,227,000. The impact on assessed value for tax purposes would be \$225 million; at an assessment rate of \$16 per thousand in assessed value, potential lost revenues would amount to \$360,000 annually.



On the other hand, there are public costs associated with allowing residential development within primary scenic areas. The City of Prineville's recently decided to compensate a Measure 37 claimant for alleged loss of value due to the 200-foot scenic top-of-rim setback standard within the rimrock scenic impact area. The City of Prineville provides a recent and directly applicable example of the value placed by the community as a whole on protecting scenic views. Prineville is unusual among Oregon cities in having made the policy choice to compensate a property owner for a Measure 37 claim, rather than degrade community views of above scenic rimrock. City Council minutes from meeting held in September and October of 2006 document that the Council authorized payment of \$47,760 to the owner of a 15.67 acre property, to compensate for any loss in value resulting from implementation of the adopted 200-foot top-of-rimrock setback. Clearly, the community places great value on conservation of scenic views that define "quality of life" in Prineville.

To compensate for potential view impacts within the primary scenic resource area, Brooks Resources has offered a number of density and design standards. As noted in the Part II, Goal 5 discussion, the draft *Recommended Program Outline* offers a laundry list of density, height and design standards (in addition to those generally agreed upon for secondary scenic areas) that could be applied in the Barnes Butte primary scenic area. These standards will be included in draft land use regulations for consideration by the Planning Commission later this year (2007).

To demonstrate continued compliance with Statewide Planning Goal 10, the City may need to amend its UGB at or during the next Periodic Review to compensate for the limited reduction in the residential capacity resulting from (a) relatively rapid urban development over the last five years, and (b) lower permitted densities in planned residential areas resulting from the proposed scenic protection program. As noted in the Part II, Goal 14 (Urbanization) section of this report, the *Recommended Program Outline* has minimal impacts on planned densities within secondary scenic areas.

## **Goal 10 Conclusion**

The *Recommended Program Outline* will help to achieve the economic, social, and environmental values of the *Prineville Comprehensive Plan* as applied to urban residential neighborhoods. This program avoids the extremes of the full and no protection options, as well as their adverse ESEE consequences. **The key policy choice for Crook County and Prineville appointed and elected is whether to allow limited residential development (at one unit per gross acre with special design standards) within the Barnes Butte primary scenic resource area – and more specifically on land owned by Brooks Resources in Area 2A.**



## Goal 11: Public Facilities and Services

Goal 11 reads in relevant part as follows:

*To plan and develop a timely, orderly, and efficient arrangement of public facilities and services to serve as a framework for urban and rural development. Urban and rural development shall be guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable, and rural areas to be served. A provision for key facilities shall be included in each plan. Cities or counties shall develop and adopt a public facility plan for areas within an urban growth boundary ... **A Timely, Orderly, and Efficient Arrangement** – refers to a system or plan that coordinates the type, locations and delivery of public facilities and services in a manner that best supports the existing and proposed land uses.*

Public facilities and services include sanitary sewer, domestic water, stormwater management, municipal government, schools, police, fire, electrical, and communication facilities. Park and recreational facilities and transportation facilities are addressed respectively in the Goal 8 and Goal 12 sections of this chapter.

### **ESEE Relationship to Goal 11**

Public facilities and services provide the supportive framework necessary for urban development, and the provision of such facilities through the annexation process is the primary growth management tool.

Public facilities and services often conflict with the full protection of significant Goal 5 resource areas. Construction of public facilities and services usually requires vegetation removal and grading and often results in construction of impervious surface area. As urban development occurs, an urban level of public facilities and services is required. Such services often must pass through significant resource areas to serve buildable land outside of such areas. Although facilities like sanitary sewer, water, electrical, and communication lines often are found in public street rights-of-way, sanitary sewer and stormwater management facilities function most efficiently under gravity-flow conditions and benefit from location in or adjacent to natural drainageways. Water reservoirs must be located at higher elevations, which may conflict with scenic views. Buildings, parking areas, and recreational / training structures associated with schools and fire stations conflict with Goal 5 resources in a manner similar to residential or commercial uses.

Prineville has detailed master plans for sanitary sewer, domestic water, and stormwater management. These facilities are most likely to conflict directly with full natural resource or natural hazard protection because often there is no reasonable alternative to



routing these facilities through such areas to serve nearby buildable land. The specific locations of these conflicts are found throughout the urban growth area.

## ***ESEE Consequences of Full and No Protection Options on the Efficient Provisions of Public Facilities and Services***

### **Environmental Consequences**

The full protection option would have mostly positive environmental consequences because vegetation removal, grading, and construction of hard surfaces associated with public facilities would not be permitted. The positive environmental consequences of fully protecting all significant Goal 5 resource areas is discussed in the Part II, Goal 5 section of this report. The possible exceptions are stormwater management and sanitary sewer facilities. Depending on topographical and soil conditions, complete avoidance of natural resource areas in the construction of stormwater and sanitary sewer lines could impair the functionality of these urban facilities, with corresponding environmental problems. Pump stations and extensive excavation outside of natural areas might also be required, which could impair water quality and increase energy consumption and attendant pollution.

The no protection option would mean that public facilities and services would be allowed without restriction or mitigation on, through or under natural resource sites throughout the urban growth area. Such unregulated construction could adversely affect site hydrology, scenic values, water quality and wildlife habitat. This option would mean that no protections would be provided for significant natural and scenic resource sites or their respective impact areas. Years of community work toward building sustainable urban natural areas and developing a balanced approach to conserving such resources would be severely compromised.

### **Economic and Social Consequences**

Prineville's growth management program depends primarily on ensuring that the full range of public facilities and services is available to support urban development. This program has substantial social and economic benefits to Prineville citizens and businesses. The growth management program helps to ensure an adequate supply of serviced industrial, commercial, residential, and public lands (with associated job opportunities). The growth management program also call for "complete neighborhoods," thus ensuring that local shopping and services are available to residential areas, as are quality housing in well-designed neighborhoods, good and accessible schools, potable water, and adequate sanitation. By managing the direction and timing of growth, the public costs of providing public facilities and services are reduced.



However, Prineville' growth management and complete neighborhood programs would be difficult to achieve under the full protection option. This option would mean that no public facilities construction or maintenance could occur within protected significant natural resource areas. Since significant natural resource areas comprise a substantial portion of the land within the UGB, avoiding such areas would preclude the efficient provision of public facilities and services that are necessary to support planned urban development. The economic and social costs to the public resulting from a different form of "leap-frog" development would be extremely high.

For example, as noted in Brooks Resource's testimony, the full protection option in the Barnes Butte primary scenic area would mean that the reservoir would need to be located at a lower, and less efficient, elevation.

For example, schools would be unable to expand into bird nesting impact areas under any circumstances. Sanitary sewer and water services would be required to be routed around natural resource and hazard areas, regardless of public or private expense. This option would severely restrict future development patterns, both public and private, as roads and utilities could not be extended through resource areas. Prineville' quality-of-life and its appeal as a place to locate business would suffer substantially.

In conclusion, Prineville' public facilities – particularly its parks, schools, and tree-lined streets – are an important part of the community's identity. Fully protecting all significant natural resource areas would severely restrict urban growth and urban design options. Housing costs would increase dramatically, and job opportunities would be lost, with attendant social and economic impacts. Conversely, allowing unrestricted development of the sites would mean the loss or degradation of many of the economic benefits described previously.

The full protection option would have at least one significant but frequently overlooked economic benefit: natural and scenic areas provide substantial stormwater management benefits because they intercept or detain rainfall and reduce stormwater runoff. Unrestricted removal of trees and native vegetation to develop public facilities and schools will reduce the City's "green" stormwater infrastructure, necessitating the construction of extensive new facilities to address the increased storm flows. However, as noted above, these benefits can derive from the *Recommended Program Outline* as well.

### ***ESEE Consequences of Program Outline for the Efficient Provision of Public Facilities and Services***

Unlike the full protection option, the *Recommended Program Outline* allows the construction of public facilities and services that are necessary to support planned urban



development, consistent with Statewide Planning Goal 11. Public facilities and services should be permitted where consistent with adopted master plans. Finally, public facilities and services necessary to support permitted development may be approved, subject to an alternatives analysis that shows why the facility cannot be built outside of protected areas, and that provides mitigation for lost vegetation. In natural and scenic resource and hazard areas, supporting public facilities may be permitted where consistent with adopted plans, or subject to an alternatives analysis, engineering safety standards, and grading or vegetation mitigation.

### **Environmental Consequences**

The Prineville Comprehensive Plan includes numerous policies to protect riparian corridors, scenic areas and associated wildlife habitat. For reasons stated in the introduction to the Goal 11 section of this chapter, there are many instances where public facilities and services must be routed through protected natural resource areas to serve buildable lands. Such construction will have limited adverse environmental consequences, provided that mitigated standards are required. Therefore, the cumulative impact from public facilities construction and maintenance within protected natural resource areas need not be substantial.

### **Economic and Social Consequences**

Any negative environmental consequences from the *Program Outline* are more than offset by the positive economic and social consequences associated with the efficient provision of public facilities and services required by *Prineville Comprehensive Plan* policies and Statewide Planning Goal 11. This ESEE Analysis reinforces the role of public facilities in Prineville' growth management and complete neighborhoods program, and achieve the balance between the urban development and resource conservation objectives called for in the *Prineville Comprehensive Plan*. By allowing public facilities and services to be constructed and maintained within significant natural and hazard resource areas, subject to mitigation standards, the negative social and economic consequences described earlier in this section can be minimized.

### **Goal 11 Conclusion**

The *Recommended Program Outline* ensures that Prineville can continue to provide key public facilities and services necessary to support planned urban growth in a timely and efficient manner. This Goal 11 requirement is underscored by the policies of the *Prineville Comprehensive Plan*, and serves as the cornerstone for managing urban growth within the Prineville UGB. The ESEE consequences of allowing public facilities to be constructed without restriction, or of prohibiting public facilities construction and maintenance in all protected natural resource areas, would be extremely negative.



## Goal 12: Transportation

Goal 12 reads in relevant part as follows:

*To provide and encourage a safe, convenient and economic transportation system. A transportation plan shall (1) consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian; (2) be based upon an inventory of local, regional and state transportation needs; (3) consider the differences in social consequences that would result from utilizing differing combinations of transportation modes; (4) avoid principal reliance upon any one mode of transportation; (5) minimize adverse social, economic and environmental impacts and costs; (6) conserve energy; (7) meet the needs of the transportation disadvantaged by improving transportation services; (8) facilitate the flow of goods and services so as to strengthen the local and regional economy; and (9) conform with local and regional comprehensive land use plans. Each plan shall include a provision for transportation as a key facility.*

The *Prineville Comprehensive Plan* supports Statewide Planning Goal 12 by recognizing Prineville' role in the regional transportation system and the importance of an interconnecting system of local streets:

### **ESEE Relationship to Goal 12**

Goal 12 requires that local governments plan for a multi-modal, interconnected transportation system. Goal 12 reinforces the Goal 5 requirement to consider the ESEE consequences of providing transportation facilities to meet this goal. Prineville has an acknowledged Transportation System Plan (TSP) that identifies pedestrian, bicycle, and vehicle projects, as well as their estimated timing, location, and cost.

All transportation facilities conflict to some degree with full protection of significant natural and scenic resource areas. Like other public facilities and services, transportation facilities and their impacts vary widely – from multi-lane state highways to pervious-surfaced pedestrian trails. Local streets necessary to serve development are not necessarily shown on TSP maps, but may also have adverse impacts on significant natural resources.

Economic, social and environmental consequences related to transportation facilities are considered in this section. The substantial adverse energy consequences of the full protection option are considered in the Goal 13 section that follows.



## ***ESEE Consequences of Full and No Protection Options for Meeting Long-Term Transportation Needs***

Most of the Goal 11 ESEE Analysis applies equally to planned transportation facilities. The full protection option would preclude a multi-modal, interconnected transportation system, would decrease pedestrian and bicycle use, and would result in substantial out-of-direction travel. With diminished bicycle and pedestrian accessibility, transportation costs would increase and neighborhoods would become more auto-dependent. Full protection of resources in right-of-way areas could stop planned widening of Prineville streets and planned development of new roads. This would make the City and County noncompliant with Goal 12, as their joint *Transportation Systems Plan* could no longer be implemented.

As noted in the *Prineville Comprehensive Plan*, there are a number of ESEE benefits related to a multi-modal transportation system. The full protection option would preclude the City and County from constructing new bicycle lanes through significant natural and scenic resource areas as growth occurs. This would have substantial adverse social consequences for existing and future area residents and businesses.

The no protection option would allow for transportation facilities to be constructed through natural and scenic resource areas without considering alternatives and without mitigation. This could have substantial adverse impacts on the functions and values of Goal 5 natural and scenic resource areas, as described in the Goal 5, 6 and 7 sections of this chapter. The no protection option would also adversely affect the quality of residential neighborhoods, with adverse social consequences.

## ***ESEE Consequences of Program Outline for Meeting Long-Term Transportation Needs***

As with other public facilities, Prineville implicitly considered the ESEE consequences of proposed transportation projects when it developed its *Transportation Systems Plan*. The TSP was developed consistent with *Prineville Comprehensive Plan* policies to protect natural and scenic resources while providing for a multi-modal system of inter-connected streets. In this manner, many of the adverse environmental, social, and economic consequences of the full and no protection scenarios (described throughout this chapter) were avoided or minimized.

The *Recommended Program Outline* avoids the two extremes represented by the full and no protection options by allowing for planned transportation improvements consistent with the TSP. By allowing planned streets through protected resource and hazard areas where shown on adopted plans, adverse ESEE consequences from out-of-direction travel, congestion, and inability to access buildable land are avoided.



The *Recommended Program Outline* also recognizes the validity of the street plan incorporated into the Iron Horse ODP. As noted in comments provided by Brooks Resources, prohibiting limited street construction through the primary scenic would result in a series of local cul-de-sac streets, which would limit access to the planned Barnes Butte regional park and would interfere with street and pedestrian connectivity in this area.

By allowing needed transportation facilities on a limited basis with mitigation, the *Recommended Program Outline* allows for the full implementation of the Transportation Systems Plan with minimal adverse environmental impacts.

### ***Goal 12 Conclusion***

The *Prineville Comprehensive Plan* calls for a balance between achieving an efficient and multi-modal transportation system and protecting natural and scenic resources. By allowing for the maintenance and expansion of existing transportation facilities, and the improvement of planned facilities call for in the TSP – with mitigation – adverse ESEE consequences can be minimized.



## Goal 13: Energy Conservation

Goal 13 is short and to the point. It reads as follows:

*To conserve energy. Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.*

### **ESEE Relationship to Goal 13: Energy Conservation**

One of the four key consequences that must be considered in the Goal 5 ESEE Analysis process is “energy consequences.” Energy conservation is a theme that runs through several of the Statewide Planning Goals. Energy consequences must be explicitly considered under Goal 5 (Natural Resources), Goal 9 (Economy), Goal 12 (Transportation), Goal 13 (Energy Conservation) and Goal 14 (Urbanization). Evaluation of energy consequences is also implied in the notion of “efficient” public facilities planning. This ESEE Analysis consolidates the consideration of energy consequences related to all applicable statewide planning goals in this section.

### **Energy Conservation Consequences of Full and No Protection Options**

As observed repeatedly in other sections of this chapter, the full resource protection option *in an urban context* conflicts with key planning principles in both the Prineville and Crook County Comprehensive Plans, and in several Statewide Planning Goals. This conflict is especially evident with respect to Goal 13, Energy Conservation. The following bulleted list summarizes adverse energy consequences (i.e., increased energy consumption) that would result from implementation of the full resource protection option within the Prineville UGB:

- **Goal 5 (Natural and Scenic Resources).** The full protection option means that all significant natural and scenic resource areas are preserved. Full protection of these lands has the effect of creating a type of “leap-frog” development, because urban services must pass over or around undeveloped natural and scenic resource areas to reach buildable areas in the Urban Fringe. As noted below, this effect – coupled with the inability to construct urban facilities through natural and scenic resource areas – would have the unintended consequence of substantially increasing energy consumption.
- **Goal 8 (Parks and Recreation).** The full protection option limit public access (via streets) and parking to the planned Barnes Butte Park on BLM land. Without such local facilities, area residents would be forced to drive long distances to reach park



and recreational facilities, with attendant increases in energy consumption.

- **Goal 9 (Economy).** The full protection option for the bird nesting site impact areas would substantially reduce the supply of industrial and commercial land available for development, with attendant reductions in (a) local shopping and service opportunities, and (b) jobs. These reductions would force people to drive further to reach local shopping and service destinations and employment, and people would be less likely to bike or walk to work, with attendant increases in energy consumption.
- **Goal 10 (Housing).** The full protection option would increase *total* housing costs. Total housing costs include transportation and energy costs, and the costs of services like sewer, water, and storm drainage. Under the full protection option, the buildable land supply within the UGB would be substantially reduced, the costs of providing public facilities to serve new housing areas would increase, and travel distances to housing would increase as well – resulting in overall increased housing costs. This can create a vicious cycle that has been observed in most urban areas throughout the country. To reduce direct housing costs, people are willing to drive further, with attendant increases in energy consumption. Thus, an important consideration in maintaining an affordable housing supply is to maintain a buildable land supply near the urban center, which has the effect of reducing the need to drive a Single Occupant Vehicle (SOV) with attendant energy savings.
- **Goal 11 (Public Facilities).** The full protection option would require public facilities to be routed around natural and scenic resource areas, which would increase energy needed to construct and maintain more dispersed public facilities. This option could require the use of pump stations because gravity flow sewer would be impossible if all sewer lines needed to be located outside of natural drainage areas. This option could also preclude construction of higher elevation water storage reservoirs in natural and scenic resource areas, leading to increased consumption from booster pumps. Emergency services would be more expensive to provide, and fire, police, and ambulances would be required to serve a more dispersed area, thus consuming more energy. The effect of this form of “leap-frog” development” would be to substantially increase energy costs associated with the provision of key public facilities and services.
- **Goal 12 (Transportation).** As noted in the Goal 12 discussion, the full protection option would make implementation of the TSP impossible. The TSP calls for a multi-modal, interconnected systems of streets, pedestrian and bicycle facilities, and transit facilities. If the TSP could not be implemented, people would be more reliant on SOVs, there would a substantial increase in out-of-direction travel, and energy consumption would increase dramatically.
- **Goal 14 (Urbanization).** Finally, the full protection option would result in a less compact urban form, which would disperse housing, jobs, and parks, and force even more reliance on single occupancy vehicles or SOVs. Passing over otherwise



buildable areas to achieve full resource protection would mean premature expansion of the UGB, a consequent loss of agricultural land to provide produce to urban consumers. The lack of a compact urban form would have direct and adverse impacts on energy consumption.

**There are, however, positive energy consequences associated with the full protection option.** Urban areas typically are warmer than rural areas because of the urban “heat island” effect. Buildings, paved areas, sparse tree canopy, and lack of water in an urban area contribute to the higher temperature. In temperate climates, temperatures of urban centers such as Prineville are rising by approximately 0.5°F or more per decade. This can have major effects on energy consumption and air quality; a study of Los Angeles, for example, showed that a 1-degree rise in temperature could increase the city’s smog risk by three percent and its energy demand by two percent, adding \$25 million in electricity costs in a single year (Wade 2000).

Reduced energy needs for air conditioning or heating will mean that local power plants are not required to produce as much electricity or gas energy, and this conserves fossil fuels and reduces pollution, including carbon emissions. By providing shade over roads, sidewalks, park and school buildings and parking lots, trees in natural areas reduce the urban heat island effect. Removal of these resources can have significant adverse effects on energy consumption (and costs) and air quality.

**In contrast**, the no protection option would allow for the efficient provision of urban facilities and services, more affordable (but less desirable) housing, a more compact growth form, and attendant reductions in energy consumption. However, as noted in the Goal 5-10 sections of this chapter, the no protection option would have extremely negative environmental, social and economic consequences.

### ***Energy Conservation Consequences of Program Outline***

The key features of the *Recommended Program Outline* that ameliorate the excesses of the full protection program include the following:

- **Goal 5 (Natural and Scenic Resources).** Rather than protecting all significant natural and scenic resource areas, the *Recommended Program Outline* would not apply full Goal 5 protection to secondary scenic areas.
  - By allowing limited residential development within secondary (and perhaps primary) scenic areas, the unintended consequences of “leap-frog” development effect are reduced, because urban services no longer need pass over undeveloped natural and scenic resource areas to reach buildable areas in the urban fringe. This reduction – coupled with the ability to construct urban facilities through natural and scenic resource areas – with mitigation – allows a compact urban form that will result in energy conservation.
  - The decision not to afford local protection to the Combs Flat Road Osprey nesting site allows needed redevelopment of the Ochoco Lumber site, school



sites and adjoining unincorporated areas to proceed without restrictions to the timing of construction, thus encouraging more efficient and intensive urban development within the UGB.

- **Goal 8 (Parks and Recreation).** The *Recommended Program Outline* would make it possible to access park and recreational facilities inside the Prineville UGB. In natural areas, trails, access roads and parking areas would be allowed with mitigation, thus allowing area residents the opportunity to walk, bicycle, or drive to local park and recreational facilities, with attendant energy savings.
- **Goal 9 (Economy).** The *Recommended Program Outline* would maintain the supply of industrial and commercial land available for development, thus maintaining (a) local shopping and service opportunities, and (b) jobs. These changes allow people convenient access to local shopping and service destinations and employment, thus increasing the likelihood that people will bike or walk to work, with attendant energy savings.
- **Goal 10 (Housing).** The *Recommended Program Outline* would decrease *total* housing costs by maintaining the buildable land supply within the UGB, thereby reducing the costs of providing public facilities to serve new housing areas, and reducing travel distances to housing. This can mitigate vicious cycle that has been observed in most urban areas throughout the country. Thus, an important consideration in maintaining an affordable housing supply is to maintain a buildable land supply near the urban center, which has the effect of reducing the need to drive single-occupancy vehicles with attendant energy savings.
- **Goal 11 (Public Facilities).** The *Recommended Program Outline* would allow public facilities to be routed through natural and scenic resource areas, which would decrease energy otherwise needed to construct and maintain more dispersed public facilities. This program would reduce the need for sewer pump stations because gravity flow sewer would be more feasible in many cases. This program could also allow construction of higher elevation water storage reservoirs in natural and scenic resource areas, thus decreasing the need for booster pump stations. Emergency services would be less expensive to provide, because fire, police, and ambulances could serve a more concentrated area, thus consuming less energy. The effect of this form of concentrated development would be to substantially decrease energy costs associated with the provision of key public facilities and services.
- **Goal 12 (Transportation).** As noted in the Goal 12 discussion, the *Program Outline* would make implementation of the TSP possible. The TSP calls for a multi-modal, interconnected systems of streets, pedestrian and bicycle facilities, and transit facilities. If the TSP could not be implemented, people would be more reliant on SOVs, there would a substantial increase in out-of-direction travel, and energy consumption would increase dramatically.



- **Goal 14 (Urbanization).** Finally, the *Recommended Program Outline* would result in a more compact urban form, which would concentrate housing, jobs, and parks, and force less reliance on SOVs. By allowing limited residential development within secondary scenic areas, the *Recommended Program Outline* achieves a reasonable level of scenic resource protection while limiting premature expansion of the UGB and consequent loss of agricultural land. A compact urban form would have direct and positive impacts on energy conservation.

The *Recommended Program Outline* also maintains or improves upon the positive energy conservation effects of the full protection option. By protecting natural and scenic resources and vegetation near urban development, there will be a consequent reduction in summer air conditioning and winter heating costs and a reduction in the urban “heat island” effect.

### **Goal 13 Conclusion**

By protecting natural and scenic resources on a limited basis, the *Recommended Program Outline* achieves most of the positive energy consequences of the full protection option while enhancing energy conservation by encouraging a compact urban form and efficient provision of public facilities and services. The *Recommended Program Outline* achieves an appropriate balance between energy and natural resource conservation.



## Goal 14: Urbanization

Goal 14 reads in relevant part as follows:

*Establishment and change of urban growth boundaries shall be based on the following:*

- (1) Demonstrated need to accommodate long range urban population, consistent with a 20-year population forecast coordinated with affected local governments; and*
- (2) Demonstrated need for housing, employment opportunities, livability or uses such as public facilities, streets and roads, schools, parks or open space.*

*In determining need, local government may specify characteristics, such as parcel size, topography or proximity, necessary for land to be suitable for an identified need.*

The "location" section of Goal 14 sets forth criteria for determining the direction of urban growth:

*The location of the urban growth boundary and changes to the boundary shall be determined by evaluating alternative boundary locations consistent with ORS 197.298 and with consideration of the following factors:*

- (1) Efficient accommodation of identified land needs*
- (2) Orderly and economic provision of public facilities and services;*
- (3) Comparative environmental, energy, economic and social consequences; and*
- (4) Compatibility of the proposed urban uses with nearby agricultural and forest activities occurring on farm and forest land outside the UGB.*

### **ESEE Relationship to Goal 14**

Goal 14 is designed to ensure a long-term supply of buildable land to meet housing, population and livability (open space) needs. Growth management policies are designed to ensure orderly and efficient provision of public facilities and services (as does Goal 11), maximum efficiency of land use within the UGB, provision of sufficient serviced land to maintain a competitive land market, and a geographically-phased land development program.

Prineville and Crook County have adopted a growth management program that meets these objectives. As of 2003, there was sufficient buildable land within the UGB to meet long-term growth needs. Geographic phasing of urban development is assured in Prineville by requiring that key urban services be available before annexation of land and subsequent urban development may occur. Maximum efficiency of land use is assured



by (a) maintaining large lot sizes or unincorporated areas, while (b) encouraging higher density urban development once land has been annexed to the City.

Crook County Ordinance 17 has been amended many times over the last 39 years. In 2003, the County Court amended Comprehensive Plan Ordinance 17 (Amendment 57) by adding 2.8 square miles to the Prineville UGB. This amounted to a 20 percent increase from 10.7 square miles found within the 1978 UGB. Forty-three percent of the UGB expansion area (1.2 square miles) was intended for open space use – including land in the Barnes Butte scenic area owned by the Bureau of Land Management (BLM), scenic rimrock areas (200 feet back from the rim), steep slope and slide hazard areas, and riparian areas.

Ordinance 17, Amendment 57 included the following statement regarding the Barnes Butte scenic area:

*“Development within any portion of the Updated urban growth boundary adjacent to the Goal 5 resource and proposed to occur on slopes greater than 18 percent shall not be permitted until such time as an analysis has been completed of the potential impacts of such development on scenic and geologic resources. ‘Adjacent’ means any lands within 800 feet of a Goal 5 resource as identified in the Crook County Comprehensive Plan. Such analysis shall include at a minimum consideration of slope, potential visual corridors (including but not limited to the view corridor as measured from the intersection of Third and Main Streets in Prineville), and whether impacts may be mitigated through use of buffer areas. Clear and objective criteria implementing such standards and addressing at minimum the above shall be developed jointly by the city and county planning commissions and adopted by the Prineville City Council and Crook County Court prior to allowing development of such lands.”*

The *Recommended Program Outline* includes two Goal 5 programs that require an analysis of ESEE consequences: (a) protection of bird nesting habitat impact areas; and (b) protection of primary and scenic resource areas.

### ***ESEE Consequences of Full and No Protection Options for Land Use Efficiency***

The ESEE consequences of the full and no protection option on the effectiveness of Prineville’ growth management program were analyzed in the Goal 9, 10, 11, 12 and 13 sections of this chapter. Basically, the full protection option has the effect of reducing land use and public facilities efficiency, increasing housing costs, reducing residential capacity, decreasing job potential, and decreasing transportation connectivity. These factors combine to increase energy consumption because growth will be less compact and inter-connected.

As noted in the Goal 9 and 10 sections of this report, full protection of bird nesting site impact areas would have serious and adverse impacts on Prineville’s buildable land supply, which would force the premature expansion of the UGB and would result in lost



residential and employment opportunities. Such an approach is not practical in a rapidly urbanizing area such as Prineville.

The principal Goal 14 impact of the full protection option for scenic resources would be on the residential land supply. To determine the reduced residential capacity that would result from the full protection option for scenic resources, Winterbrook considered the potential impact of the density limitations in primary and secondary scenic areas on buildable residential land that was added to the Prineville UGB in 2003. The residential capacity findings supporting the 2003 UGB amendment assumed that:

- Slopes of 25% and greater, developed areas, wetlands, floodplains, streams and lakes were considered “unbuildable”;
- After subtracting for these constraints, the remaining vacant area would develop at 3.5 dwelling units per “gross buildable acre”.<sup>14</sup>

The adopted (by the City and County) and acknowledged (by LCDC) findings also assumed that 30% of the gross buildable acreage would be used for public rights-of-way. Thus, the project net residential density, after subtracting for streets, was 5.0 units per “net buildable acre”. For example, UGB expansion Area 1 had 254 total acres, but only 80 gross acres were found to be buildable. Thus, Area 1 was projected to accommodate 280 dwelling units: 3.5 units per “gross buildable acre” or 5.0 units per “net buildable acre”.

Primary and secondary scenic areas are found on both “buildable” and unbuildable” land as defined above. Table II-14-1 on the following page determines how much of the primary and secondary resource areas in overlap with buildable residential land, to see how much “capacity” is lost by fully protecting primary and secondary scenic areas. **The only constraint recognized in the 2002 buildable lands analysis – that overlaps with primary and secondary scenic areas – was slopes of 25% or greater.**

In 2007 Crook County GIS subtracted areas with slopes of 25% or greater within each primary and secondary scenic area to determine the gross buildable area within each scenic overlay. The column third from the right indicates projected residential densities that would occur in each scenic resource area *if* there were no scenic overlay. The column on the far right identifies reduction in projected housing units that would result from allowing no residential development in primary and secondary scenic areas.

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<sup>14</sup> In its analysis, Brooks Resources assumed 8 units per net buildable acre, which is consistent with the maximum allowable density in the R2 zone. (See June 1, 2007 letter from Randy Jones to Deborah McMahan, Community Development Director and Bill Zelenka, Planning Director.) It is recognized that the 3.5 units per gross buildable acre used to justify UGB expansion was low, given the minimum lot size of 5,000 square feet in the underlying R2 zone. On the other hand, the justification for inclusion of Area 2A within the UGB in 2003 was based on this low density assumption.



Continuing with the Area 1 example, the secondary scenic area within Area 1 has one acre with slopes of 25% or less – with a capacity of four dwelling units (at 3.5 du/acre rounded up). Because the full protection option would allow no dwelling units within the secondary scenic area, there would be a net loss of four dwelling units. As shown on Table II-14-1, the residential dwelling “loss” is much greater for the other scenic areas.

**Table II-14-1. Residential Capacity Impacts resulting from Full Protection of Primary and Secondary Scenic Areas**

UGB Expansion Area*	Total Acres	Gross Buildable Acres	DU Capacity at 3.5 DU/Acre	Scenic Area Gross Acres	Gross Buildable Acres in Scenic Area	Base DU Capacity Buildable Scenic Areas	Scenic Area Capacity if Fully Protected	DU Capacity Change
Area 1-S	254	80	280	2	1	4	0	0
Area 2A-P	120	106	371	27	20	70	0	(70)
Area 2A-S				51	39	137	0	(137)
Area 3-S	99	71	249	35	18	63	0	(63)
Area 4-S	47	45	158	47	12	42	0	(42)
Area 5-S	382	208	728	82	42	147	0	(147)
<b>Totals</b>	<b>902</b>	<b>510</b>	<b>1,785</b>	<b>244</b>	<b>132</b>	<b>462</b>	<b>0</b>	<b>(462)</b>

\* The “S” and the “P” stand for “primary” and “secondary” scenic areas, respectively. The only primary scenic resource area that has otherwise “buildable land” is located in Area 2A owned by Brooks Resources. The figure in the right-hand column shows the number of “lost units” under the zero units per gross acre standards that would apply *if* the Planning Commissions were to recommend the full protection option. Apparent arithmetical error in the “Totals” row resulted from rounding.

Table II-14-1 demonstrates that there would be a substantial reduction in dwelling unit potential *if* all buildable land (as defined by 2002 assumptions that justified UGB expansion) within primary and secondary scenic areas were kept “off limits” for residential construction. Of the 462 dwelling units planned (at 3.5 units per gross buildable acre) for “scenic” but otherwise buildable residential land, no units would not be constructed due to scenic protection measures – resulting in a reduced dwelling unit potential of 462 units.

Looking at the bigger picture, when the UGB was expanded in 2003, it was assumed that Areas 1, 2A, 3, 4 and 5 would accommodate approximately 1,785 dwelling units. **The full protection option would decrease the planned number of dwelling units in these expansion areas from 1,785 to 1,323 – a 26 percent reduction. At 3.5 dwelling units per gross buildable acre (and assuming that densities are not increased within the existing UGB through density transfer or other means), there would be a need to add 132 gross buildable acres to the Prineville UGB.**

However, in most cases density can be transferred from scenic areas to non-scenic but buildable areas (on the same site) through the planned unit development process.



Thus, it is likely that much of this theoretical “lost” density could be made up through on-site density transfer.<sup>15</sup>

### ***ESEE Consequences of Recommended Program Outline for Land Use Efficiency***

The *Recommended Program Outline* provides for coordination with ODFW regarding the timing of construction on buildable lands near bird nesting sites, but does not reduce the supply of buildable land. Thus, there is no impact on the buildable land supply resulting from proposed wildlife habitat protection measures.

To address potential impacts on land use efficiency of the *Recommended Program Outline* for primary and secondary scenic resource areas, Winterbrook has modified Table II-14-1 to recognize that limited residential development would be allowed within secondary scenic areas, and possibly within primary scenic areas.

Table II-14-2 on the following page shows the potential impact of the density limitations imposed by the *Recommended Program Outline* in primary and secondary scenic areas on residential land that was added to the Prineville UGB in 2003. As a reminder, the findings supporting the UGB amendment assumed that:

- Slopes of 25% and greater, developed areas, wetlands, floodplains, streams and lakes were considered “unbuildable” in secondary scenic areas;
- After subtracting for these constraints, the remaining “vacant gross buildable area” was assumed to develop at 3.5 dwelling units per acre, or 5.0 units per “net buildable acre”.

Primary and secondary scenic areas are found on both “buildable” and unbuildable” land as defined above. The *Recommended Program Outline* limits residential densities in:

- Primary scenic areas to either (a) zero units per gross acre, or (b) one unit per gross acre (including unbuildable areas), depending on the recommendations of the Planning Commissions; and
- Secondary scenic areas would be limited to two units per gross acre (including unbuildable areas).

Table II-14-2 determines how much of the primary and secondary resource areas in overlap with buildable residential land, to see how much “capacity” is lost after allowing for limited residential development in scenic areas. **Again, the only constraint recognized in the 2002 buildable lands analysis – that overlaps with primary and secondary scenic areas – is slopes of 25% or greater.**

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<sup>15</sup> Using the more realistic density figures of 8 units per net buildable acre put forth by Brooks Resources, the density transfer option becomes correspondingly less realistic. Moreover, the approved Iron Horse ODP does not allow for density transfer from land owned by Brooks Resources in Area 2A.



Using UGB Expansion Area 1 as an example, there would be no net change in density, because four dwelling units were planned within the secondary scenic area and four units would be allowed, even after limiting development within the scenic area to two units per gross acre. Area 2A (Barnes Butte) would have the greatest density reduction. Areas 3-S, 4-S and 5-S (Ochoco Creek and Crooked River Rimrock) have more land with slopes of 25% or greater, so the secondary scenic area density standards would, in theory, allow more housing units than planned at 3.5 dwellings per gross buildable acre.

**Table II-14-2. Residential Capacity Impacts resulting from *Recommended Program Outline* for Primary and Secondary Scenic Areas**

UGB Expansion Area*	Total Acres	Gross Buildable Acres	DU Capacity at 3.5 DU/Acre	Scenic Area Gross Acres	Gross Buildable Acres in Scenic Area	Base DU Capacity Buildable Scenic Areas	Scenic Area DU Capacity Program Outline	DU Capacity Change
Area 1-S	254	80	280	2	1	4	4	0
Area 2A-P	120	106	371	27	20	70	27	(43) or (70)
Area 2A-S				51	39	137	102	(35)
Area 3-S	99	71	249	35	18	63	70	+7
Area 4-S	47	45	158	47	12	42	94	+52
Area 5-S	382	208	728	82	42	147	164	+17
<b>Totals</b>	<b>902</b>	<b>510</b>	<b>1,785</b>	<b>244</b>	<b>132</b>	<b>462</b>	<b>461</b>	<b>(1) or (56)</b>

\* The "S" and the "P" stand for "primary" and "secondary" scenic areas, respectively. The only primary scenic resource area that has otherwise "buildable land" is located in Area 2A owned by Brooks Resources. For secondary scenic resource areas, the permitted density of 2.0 units per gross scenic acre was subtracted from the projected density of 3.5 units per gross buildable acre within the scenic overlay, to determine the resultant dwelling unit reduction. The range shown in the right-hand column shows the number of "lost units" under the zero and one unit per gross acre standards under consideration by the Planning Commissions. Apparent arithmetical error in the "Totals" row resulted from rounding.

Table II-14-2 demonstrates that there would be little to no reduction in dwelling unit potential *if* buildable land (as defined by 2002 assumptions that justified UGB expansion) within primary and secondary scenic areas were allowed to develop on a limited basis. Of the 462 dwelling units planned (at 3.5 units per gross buildable acre) for primary and secondary scenic – but otherwise buildable residential land – from 1 to 56 potential dwelling units would not be constructed due to scenic protection measures. The 55-unit difference depends on whether the Planning Commissions fully protect the Barnes Butte primary scenic area (in Area 2A), or allow residential construction to occur at one unit per gross scenic acre. Thus, on balance, the *Recommended Program Outline* would allow about the same number of dwelling units that were originally planned for the scenic portions of Areas 1, 2A, 3, 4 and 5. By allowing up to one unit per acre within the Barnes Butte primary scenic area, the residential potential is virtually unchanged.



Looking at the bigger picture, when the UGB was expanded in 2003, it was assumed that Areas 1, 2A, 3, 4 and 5 would accommodate a total of 1,785 dwelling units. *If no residential construction were allowed in the Barnes Butte primary scenic area, then the Recommended Program Outline would decrease the potential number of dwelling units in these expansion areas from 1,785 to 1,730 – a three percent reduction. On the other hand, if residential construction were allowed in the Barnes Butte primary scenic area at one unit per gross acre, then the Recommended Program Outline would decrease the potential number of dwelling units in UGB expansion areas from 1,785 to 1,784 – a negligible reduction.*

Under the *Recommended Program Outline*, the Prineville UGB would need to be expanded by as much as 16 gross buildable acres. If the Barnes Butte primary scenic area were allowed to develop at one unit per gross buildable acre, there would be no need to expand the UGB as a result of implementing the *Recommended Program Outline*. As noted above, the City's PUD process allows for density transfer from scenic areas to non-scenic but buildable areas (on the same site) through the planned unit development process. However, because the remainder of the Brooks Resources property has been approved for development through the Iron Horse ODP, density transfer is limited in Area 2A.

### **Goal 14 Conclusion**

The positive ESEE consequences of Prineville's growth management program and limited Goal 5 protection program are addressed in detail in previous sections of this chapter. The *Recommended Program Outline* builds upon and strengthens the positive ESEE consequences of Prineville's and Crook County's joint growth management program. As shown on Table II-14-2, by allowing for limited residential densities in the secondary scenic area, the *Recommended Program Outline* increases land use efficiency and substantially reduces the need for future UGB expansion to meet long-term housing needs. This table also highlights land use efficiency impacts of the Planning Commissions' policy choice with respect to the Barnes Butte primary scenic area located in Area 2A.

**Assuming that the City does not increase densities within the existing UGB (through density transfer or other means), the full protection option for scenic resources would require the UGB to include approximately 132 additional acres on or before the next periodic review of the *Prineville Comprehensive Plan*. On the other hand, the *Recommended Program Outline* would require that the UGB be expanded by from 0-16 gross buildable acres. From a land use efficiency perspective, the *Recommended Program Outline* achieves the balance call for in the *Prineville Comprehensive Plan*.**

