

Natural Resources

Climate, geology, soils, and other environmental factors combine to make the Gorge rich in natural resources. For this chapter, natural resources mean wetlands, streams, ponds and lakes, riparian areas, wildlife and wildlife habitat, rare plants, and natural areas.

The diverse climate of the Gorge fosters nearly 1,000 native species of wildflowers, including many species that are listed as endangered, threatened, or sensitive. Sixteen species do not occur outside the Gorge region (endemic).

In addition to rare plants, many significant plant communities, or natural areas, occur in the Gorge. Forty-five natural areas were identified: 24 in Oregon and 21 in Washington. Table 4 describes the size and characteristics of each natural area. They range from old growth forests in Multnomah Basin in Multnomah County to bunchgrass prairies in the Columbia Hills of Klickitat County.

SCENIC AREA ACT PROVISIONS

The Scenic Area Act directs the Gorge Commission and the Forest Service to inventory, protect, and enhance natural resources. New residential and commercial development, mineral operations, and other development may

not adversely affect natural resources [Section 6(d)(3)].

The Scenic Area Act also requires the Management Plan to protect and enhance open spaces [Section 6(d)(3)]. Open spaces include "fish and wildlife habitat; lands which support plant species that are endemic to the scenic area or which are listed as rare, threatened, or endangered species pursuant to State or Federal Endangered Species Acts; ecologically and scientifically significant natural areas; . . . water areas and wetlands . . ." [Section 2(l)].

KEY ISSUES

Many natural resources can be destroyed by development or overuse. Grading a building site may fill a wetland, add sediment to nearby streams or lakes, or uproot rare plants. Siting new structures too close to wildlife sites can cause sensitive species to abandon nests and feeding areas. Improperly designed fences hinder deer and elk movement.

Existing federal, state, and local laws provide uneven protection to natural resources. Rare plants, natural areas, and many sensitive wildlife species on private land are simply not protected. At least eight federal and state laws affect activities in wetlands. However, most of

these laws do not focus on the protection of wetlands as their primary purpose. Consequently, many activities that destroy wetlands are not currently regulated. Little or no protection is afforded to associated riparian areas.

Many natural resources are inadvertently harmed. Landowners and developers may be unaware that sensitive natural resources exist within a project area. Rare plants, wildlife sites, and other natural resources are often difficult for the layperson to identify.

Careful planning can often protect natural resources, while allowing reasonable development. However, many local planning departments lack adequate inventories and protection standards to identify potential conflicts between development and natural resources. Expertise is also an issue.

Mitigating the effects of development on natural resources may require assistance from qualified professionals, such as wildlife biologists and botanists.

OVERVIEW OF NATURAL RESOURCES PROVISIONS

The natural resource objectives, policies, and guidelines for the GMA are divided into five sections: wetlands; streams, ponds, lakes, and riparian areas; wildlife habitat; rare plants; and natural areas. They regulate most uses, except low-intensity activities and forest practices.

The SMA provisions regulate most activities, including forest practices. Goals and policies for water resources are followed by those for wildlife and plants. Guidelines for water resources

and for wildlife and plants complete the SMA natural resources provisions.

A variety of tools is used to protect natural resources in the GMA and SMA. The guidelines require leaving a natural buffer zone around wetlands, streams, ponds, lakes, and riparian areas. In the GMA, exceptions are made for several uses, including low-intensity activities and water-related and water-dependent uses, if adequate protection of the resource is provided.

Site-specific management plans are required for development proposed near sensitive wildlife sites. If habitat would be altered by new development, resource rehabilitation and enhancement are required.

The guidelines protect sensitive plant species by ensuring that new development and uses avoid plant sites and their adjacent habitat. A buffer would generally be created around plant sites. Within this buffer, low-intensity uses are generally allowed outright. Other development is prohibited in the buffer area. Exceptions may be made in the GMA if the buffer would deny all reasonable use of a parcel.

Most natural areas are designated Open Space; guidelines for this designation are found in Part II, Chapter 3: Open Space. In the GMA, several natural areas are designated Agriculture-Special. In this designation, existing livestock grazing is allowed, new grazing must be reviewed, and cultivation is prohibited to protect plant communities. Guidelines for the Agriculture-Special designation are found in Part II, Chapter 1: Agricultural Land.

GMA PROVISIONS

WETLANDS

GMA Goals

1. Achieve no overall net loss of wetlands acreage and functions.
2. Increase the quantity and quality of wetlands.

GMA Objective

Promote public programs that offer incentives to landowners who protect and enhance wetlands. The Gorge Commission shall notify landowners whose property has been designated Large-Scale or Small-Scale Agriculture, Commercial Forest Land or Large or Small Woodland and contains wetlands. It shall inform landowners about the values of wetlands and the rationale for regulating new uses in wetlands and wetlands buffer zones, including cultivation.

GMA Policies

1. The wetlands goals, policies, and guidelines in the Management Plan shall not apply to the main stem of the Columbia River. The Gorge Commission will rely on the applicable federal and state laws to protect wetlands in the Columbia River, including the U.S. Clean Water Act, Washington State Environmental Policy Act, Washington Hydraulic Code, and Oregon Removal-Fill Act.

The main stem of the Columbia River is depicted on the map titled "Boundary Map, Columbia River Gorge National Scenic Area," numbered NSA-001, and dated September 1986. (This map is available at county planning departments and Commission and Forest Service offices.) The boundaries of the main stem appear as a heavy black line that generally follows the shoreline. For the Management Plan, backwaters and isolated water bodies created by roads and railroads are not part of the main stem of the Columbia River.

2. All wetlands, regardless of their size or functions, warrant protection from new uses that may alter or destroy wetlands functions.
3. The National Wetlands Inventory (U.S. Department of the Interior 1987) and the list of hydric soils shall be used as a general guide to the location of wetlands; additional wetlands are assumed to exist and shall be protected.
4. The exact location of wetlands boundaries shall be delineated using the procedures specified in *Corps of Engineers Wetlands Delineation Manual*

(Wetlands Research Program Technical Report Y-87-1, on-line edition, updated through March 21, 1997).

5. An undisturbed buffer should be preserved around wetlands to protect and enhance wetlands functions and associated uplands.
6. Low-intensity uses may be allowed in wetlands and wetlands buffer zones without review. Uses that may impact wetlands acreage and functions may be allowed in wetlands or wetlands buffer zones, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and the approval criteria in this section.
7. New uses that are not water-dependent or water-related shall be allowed in wetlands when less environmentally damaging practicable alternatives do not exist.
8. Impacts to wetlands shall be allowed only when all practicable measures have been applied to minimize those impacts that are unavoidable and in the public interest.
9. A project applicant shall be required to offset unavoidable impacts to wetlands that result from his/her actions by restoring, creating, or enhancing wetlands and by providing appropriate wetlands buffer zones as specified in the Management Plan.
10. Project proposals affecting wetlands shall be coordinated with federal and state agencies that regulate new uses in wetlands.
11. Within 6 months of the date that the State of Oregon or Washington adopts a comprehensive wetlands ordinance, the Gorge Commission shall complete an evaluation that compares the state ordinance to the wetlands policies and guidelines in the Management Plan.

If the Gorge Commission determines that the state ordinance provides equal or greater protection to wetlands than the policies and guidelines in the Management Plan, local governments may adopt the state ordinance in lieu of the wetlands policies and guidelines in the Management Plan.

12. Enhancement of wetlands not associated with any other project proposal may be allowed, if such efforts comply with the wetlands provisions in the Management Plan. Enhancement efforts shall be conducted pursuant to a wetlands compensation plan, as described in this section.

All enhancement plans must be approved by the local government, after consultation with federal and state agencies with jurisdiction over wetlands.

GMA Guidelines

Review Uses

1. The following uses may be allowed in wetlands and wetland buffer zones, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and "Approval Criteria for Modifications to Serviceable Structures and Minor Water-Dependent and Water-Related Structures in Wetlands" in this section.
 - A. The modification, expansion, replacement, or reconstruction of serviceable structures, if such actions would not (1) increase the size of an existing structure by more than 100 percent, (2) result in a loss of wetlands acreage or functions, and (3) intrude further into a wetland or wetlands buffer zone.

New structures shall be considered intruding further into a wetland or wetlands buffer zone if any portion of the structure is located closer to the wetland or wetlands buffer zone than the existing structure.
 - B. The construction of minor water-related recreation structures that are available for public use. Structures in this category shall be limited to boardwalks; trails and paths, provided their surface is not constructed of impervious materials; observation decks; and interpretative aids, such as kiosks and signs.
 - C. The construction of minor water-dependent structures that are placed on pilings, if the pilings allow unobstructed flow of water and are not placed so close together that they effectively convert an aquatic area to dry land. Structures in this category shall be limited to public and private docks and boat houses, and fish and wildlife management structures that are constructed by federal, state, or tribal resource agencies.
2. Except uses allowed outright and review uses in Guidelines 1A through 1C, above, proposed uses may be allowed in wetlands and wetlands buffer zones subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and "Approval Criteria for Other Review Uses in Wetlands" in this section.

Site Plans for Review Uses in Wetlands

1. In addition to the information required in all site plans, site plans for proposed uses in wetlands or wetlands buffer zones shall include: a site plan map prepared at a scale of 1 inch equals 100 feet (1:1,200), or a scale providing greater detail; the exact boundary of the wetland and the wetlands buffer zone; and a description of actions that would alter or destroy the wetland.

Approval Criteria for Modifications to Serviceable Structures and Minor Water-Dependent and Water-Related Structures in Wetlands

1. The uses identified in Guideline 1 under "Review Uses," above, may be allowed only if they meet all of the following criteria:
 - A. Practicable alternatives for locating the structure outside of the wetland or wetland buffer zone and/or minimizing the impacts of the structure do not exist.
 - B. All reasonable measures have been applied to ensure that the structure will result in the minimum feasible alteration or destruction of the wetland's functions, existing contour, vegetation, fish and wildlife resources, and hydrology.
 - C. The structure will be constructed using best management practices.
 - D. Areas disturbed during construction of the structure will be rehabilitated to the maximum extent practicable.
 - E. The structure complies with all applicable federal, state, and local laws.

Approval Criteria for Other Review Uses in Wetlands

1. The uses identified in Guideline 2 under "Review Uses," above, may be allowed only if they meet all of the following criteria:
 - A. The proposed use is water-dependent, or is not water-dependent but has no practicable alternative as determined by the practicable alternative test in this section.
 - B. The proposed use is in the public interest as determined by the public interest test in this section.
 - C. Measures will be applied to ensure that the proposed use results in the minimum feasible alteration or destruction of the wetland's functions, existing contour, vegetation, fish and wildlife resources, and hydrology.
 - D. Groundwater and surface-water quality will not be degraded by the proposed use.
 - E. Those portions of a proposed use that are not water-dependent or that have a practicable alternative will not be located in wetlands or wetlands buffer zones.
 - F. The proposed use complies with all applicable federal, state, and local laws.

- G. Areas that are disturbed during construction of the proposed use will be rehabilitated to the maximum extent practicable.
- H. Unavoidable impacts to wetlands will be offset through the deliberate restoration, creation, or enhancement of wetlands. Wetlands restoration, creation, and enhancement are not alternatives to the guidelines listed above; they shall be used only as a last resort to offset unavoidable wetlands impacts.

The following wetlands restoration, creation, and enhancement guidelines shall apply:

- (1) Impacts to wetlands shall be offset by restoring or creating new wetlands or by enhancing degraded wetlands. Wetlands restoration shall be the preferred alternative.
- (2) Wetlands restoration, creation, and enhancement projects shall be conducted in accordance with a wetlands compensation plan.
- (3) Wetlands restoration, creation, and enhancement projects shall use native vegetation.
- (4) The size of replacement wetlands shall equal or exceed the following ratios. The first number specifies the required acreage of replacement wetlands, and the second number specifies the acreage of wetlands altered or destroyed.

Restoration: 2:1

Creation: 3:1

Enhancement: 4:1

- (5) Replacement wetlands shall replicate the functions of the wetlands that will be altered or destroyed such that no net loss of wetlands functions occurs.
- (6) Replacement wetlands should replicate the type of wetland that will be altered or destroyed. If this standard is not feasible or practical because of technical constraints, a wetland type of equal or greater benefit may be substituted, provided that no net loss of wetlands functions occurs.
- (7) Wetlands restoration, creation, or enhancement should occur within 1,000 feet of the affected wetland. If this guideline is not practicable because of physical or technical constraints, replacement shall occur within the same watershed and as close to the altered or destroyed wetland as practicable.

- (8) Wetlands restoration, creation, and enhancement efforts should be completed before a wetland is altered or destroyed. If it is not practicable to complete all restoration, creation, and enhancement efforts before the wetland is altered or destroyed, these efforts shall be completed before the new use is occupied or used.
- (9) Five years after a wetland is restored, created, or enhanced, at least 75 percent of the replacement vegetation must survive. The project applicant shall monitor the hydrology and vegetation of the replacement wetland and shall take corrective measures to ensure that it conforms with the approved wetlands compensation plan and this guideline.

Wetlands Buffer Zones

- 1. The width of wetlands buffer zones shall be based on the dominant vegetation community that exists in a buffer zone.
- 2. The dominant vegetation community in a buffer zone is the vegetation community that covers the most surface area of that portion of the buffer zone that lies between the proposed activity and the affected wetland. Vegetation communities are classified as forest, shrub, or herbaceous.
 - A. A forest vegetation community is characterized by trees with an average height equal to or greater than 20 feet, accompanied by a shrub layer; trees must form a canopy cover of at least 40 percent and shrubs must form a canopy cover of at least 40 percent. A forest community without a shrub component that forms a canopy cover of at least 40 percent shall be considered a shrub vegetation community for purposes of the Management Plan.
 - B. A shrub vegetation community is characterized by shrubs and trees that are greater than 3 feet tall and form a canopy cover of at least 40 percent.
 - C. A herbaceous vegetation community is characterized by the presence of herbs, including grass and grasslike plants, forbs, ferns, and non-woody vines.
- 3. Buffer zones shall be measured outward from a wetlands boundary on a horizontal scale that is perpendicular to the wetlands boundary. The following buffer zone widths shall be required:

Forest communities:	75 feet
Shrub communities:	100 feet
Herbaceous communities:	150 feet

4. Except as otherwise allowed, wetlands buffer zones shall be retained in their natural condition. When a buffer zone is disturbed by a new use, it shall be replanted with native plant species.

Rules for Delineating Wetlands Boundaries

1. The approximate location and extent of wetlands in the Scenic Area is shown on the National Wetlands Inventory (U.S. Department of the Interior 1987). In addition, the list of hydric soils and the soil survey maps shall be used as an indicator of wetlands.

Some wetlands may not be shown on the wetlands inventory or soil survey maps. Wetlands that are discovered by the local planning staff during an inspection of a potential project site shall be delineated and protected.

2. The project applicant shall be responsible for determining the exact location of a wetlands boundary. Wetlands boundaries shall be delineated using the procedures specified in the *Corps of Engineers Wetlands Delineation Manual* (Wetlands Research Program Technical Report Y-87-1, on-line edition, updated through March 21, 1997.)

All wetlands delineations shall be conducted by a professional who has been trained to use the federal delineation procedures, such as a soil scientist, botanist, or wetlands ecologist.

3. The local government may verify the accuracy of, and render adjustments to, a wetlands boundary delineation. If the adjusted boundary delineation is contested by the project applicant, the local government shall obtain professional services to render a final delineation, at the applicant's expense.

Practicable Alternative Test

1. An alternative site for a proposed use shall be considered practicable if it is available and the proposed use can be undertaken on that site after taking into consideration cost, technology, logistics, and overall project purposes.

A practicable alternative does not exist if a project applicant satisfactorily demonstrates all of the following:

- A. The basic purpose of the use cannot be reasonably accomplished using one or more other sites in the vicinity that would avoid or result in less adverse effects on wetlands.
- B. The basic purpose of the use cannot be reasonably accomplished by reducing its proposed size, scope, configuration, or density, or by changing

the design of the use in a way that would avoid or result in less adverse effects on wetlands.

- C. Reasonable attempts were made to remove or accommodate constraints that caused a project applicant to reject alternatives to the proposed use. Such constraints include inadequate infrastructure, parcel size, and land use designations. If a land use designation or recreation intensity class is a constraint, an applicant must request a Management Plan amendment to demonstrate that practicable alternatives do not exist.

Public Interest Test

- 1. The following factors shall be considered when determining if a proposed use is in the public interest:
 - A. The extent of public need for the proposed use.
 - B. The extent and permanence of beneficial or detrimental effects that the proposed use may have on the public and private uses for which the property is suited.
 - C. The functions and size of the wetland that may be affected.
 - D. The economic value of the proposed use to the general area.
 - E. The ecological value of the wetland and probable effect on public health and safety, fish, plants, and wildlife.

Wetlands Compensation Plans

- 1. Wetlands compensation plans shall be prepared when a project applicant is required to restore, create, or enhance wetlands. They shall satisfy the following guidelines:
 - A. Wetlands compensation plans shall be prepared by a qualified professional hired by the project applicant. They shall provide for land acquisition, construction, maintenance, and monitoring of replacement wetlands.
 - B. Wetlands compensation plans shall include an ecological assessment of the wetland that will be altered or destroyed and the wetland that will be restored, created, or enhanced. The assessment shall include information on flora, fauna, hydrology, and wetlands functions.
 - C. Compensation plans shall also assess the suitability of the proposed site for establishing a replacement wetland, including a description of the water

source and drainage patterns, topography, wildlife habitat opportunities, and value of the existing area to be converted.

- D. Compensation plans shall provide plan view and cross-sectional, scaled drawings; topographic survey data, including elevations at contour intervals no greater than 1 foot, slope percentages, and final grade elevations; and other technical information in sufficient detail to explain and illustrate:
 - (1) Soil and substrata conditions, grading, and erosion and sediment control needed for wetland construction and long-term survival.
 - (2) Planting plans that specify native plant species, quantities, size, spacing, or density; source of plant materials or seeds; timing, season, water, and nutrient requirements for planting; and where appropriate, measures to protect plants from predation.
 - (3) Water quality parameters, water source, water depths, water control structures, and water level maintenance practices needed to achieve the necessary hydrologic conditions.
- E. A 5-year monitoring, maintenance, and replacement program shall be included in all plans. At a minimum, a project applicant shall provide an annual report that documents milestones, successes, problems, and contingency actions. Photographic monitoring stations shall be established and photographs shall be used to monitor the replacement wetland.
- F. A project applicant shall demonstrate sufficient fiscal, technical, and administrative competence to successfully execute a wetlands compensation plan.

STREAMS, PONDS, LAKES, AND RIPARIAN AREAS

GMA Goals

- 1. Protect water quality, natural drainage, and fish and wildlife habitat of streams, ponds, lakes, and riparian areas.
- 2. Enhance aquatic and riparian areas.

GMA Objective

Through the Gorge Commission and local governments, encourage the use of existing public programs and incentives to rehabilitate and enhance streams, ponds, lakes, and riparian areas that have been disturbed.

GMA Policies

1. The stream, pond, lake, and riparian area goals, policies, and guidelines in the Management Plan shall not apply to those portions of the main stem of the Columbia River that adjoin the Urban Areas. The Gorge Commission will rely on the applicable federal and state laws to protect those portions of the Columbia River that adjoin the Urban Areas.
2. Proposed uses adjacent to streams, ponds, and lakes should preserve an undisturbed buffer zone that is wide enough to protect aquatic and riparian areas.
3. Low-intensity uses may be allowed outright in streams, ponds, lakes, and their buffer zones. Uses that may affect water quality, natural drainage, or wildlife habitat may be allowed in streams, ponds, lakes, and their buffer zones, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and the approval criteria in this section.
4. New uses that are not water-dependent or water-related shall be allowed in streams, ponds, lakes, and riparian areas if they are in the public interest and less environmentally damaging practicable alternatives do not exist.
5. Practicable measures shall be applied to minimize unavoidable impacts to aquatic and riparian areas.
6. A project applicant shall offset unavoidable impacts to aquatic areas and their buffer zones that result from his/her actions by rehabilitating or enhancing aquatic and riparian areas.
7. When uses are authorized in degraded aquatic and riparian areas, rehabilitation shall return the project area to its natural condition to the maximum extent practicable.
8. Enhancement of streams, ponds, lakes, and riparian areas not associated with any other development proposal may be allowed, if such efforts comply with the streams, ponds, lakes, and riparian area provisions in this Management Plan. Enhancement efforts shall be conducted pursuant to a rehabilitation and enhancement plan, as described in this section.

All enhancement plans shall be approved by the local government, after consultation with federal and state agencies with jurisdiction over streams, ponds, lakes, and riparian areas.

GMA Guidelines

Review Uses

1. The following uses may be allowed in streams, ponds, lakes, and riparian areas, subject to compliance with guidelines for the protection of scenic, natural, cultural and recreation resources and "Approval Criteria for Modifications to Serviceable Structures and Minor Water-Dependent and Water-Related Structures in Aquatic and Riparian Areas" in this section.
 - A. The modification, expansion, replacement, or reconstruction of serviceable structures, provided that such actions would not (1) increase the size of an existing structure by more than 100 percent, (2) result in a loss of water quality, natural drainage, and fish and wildlife habitat, or (3) intrude further into a stream, pond, lake, or buffer zone. New structures shall be considered intruding further into a stream, pond, lake, or buffer zone if any portion of the structure is located closer to the stream, pond, lake, or buffer zone than the existing structure.
 - B. The construction of minor water-related recreation structures that are available for public use. Structures in this category shall be limited to boardwalks; trails and paths, provided their surface is not constructed of impervious materials; observation decks; and interpretative aids, such as kiosks and signs.
 - C. The construction of minor water-dependent structures that are placed on pilings, if the pilings allow unobstructed flow of water and are not placed so close together that they effectively convert an aquatic area to dry land. Structures in this category shall be limited to public and private docks and boat houses, and fish and wildlife management structures that are constructed by federal, state, or tribal resource agencies.
2. Except uses allowed outright and review uses in Guidelines 1.A through 1.C, above, proposed uses may be allowed in streams, ponds, lakes, and riparian areas, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and "Approval Criteria for Other Review Uses in Aquatic and Riparian Areas" in this section.

Site Plans for Review Uses in Aquatic and Riparian Areas

1. In addition to the information required in all site plans, site plans for proposed uses in streams, ponds, lakes, and their buffer zones shall include: a site plan map prepared at a scale of 1 inch equals 100 feet (1:1,200), or a scale providing greater detail; the exact boundary of the ordinary high watermark or normal pool elevation and the prescribed buffer zone; and a description of actions that would alter or destroy the stream, pond, lake, or riparian area.

Approval Criteria for Modifications to Serviceable Structures and Minor Water-Dependent and Water-Related Structures in Aquatic and Riparian Areas

1. The uses identified in Guideline 1 under "Review Uses," above, may be allowed only if they meet all of the following criteria:
 - A. Practicable alternatives for locating the structure outside of the stream, pond, lake, or buffer zone and/or minimizing the impacts of the structure do not exist.
 - B. All reasonable measures have been applied to ensure that the structure will result in the minimum feasible alteration or destruction of water quality, natural drainage, and fish and wildlife habitat of streams, ponds, lakes, and riparian areas.
 - C. The structure will be constructed using best management practices.
 - D. Areas disturbed during construction of the structure will be rehabilitated to the maximum extent practicable.
 - E. The structure complies with all applicable federal, state, and local laws.

Approval Criteria for Other Review Uses in Aquatic and Riparian Areas

1. The uses identified in Guideline 2 under "Review Uses," above, may be allowed only if they meet all of the following criteria:
 - A. The proposed use is water-dependent, or is not water-dependent but has no practicable alternative. A local government may conclude that a practicable alternative to the proposed use does not exist if the "Practicable Alternative Test" in the "Wetlands" section of this chapter is satisfied, substituting the term "stream, pond, lake, or riparian area" as appropriate.
 - B. The proposed use is in the public interest. In determining if a proposed use is in the public interest, the guidelines under "Public Interest Test" in the "Wetlands" section of this chapter shall be considered, substituting the term "stream, pond, lake, or riparian area" as appropriate.
 - C. Measures have been applied to ensure that the proposed use results in minimum feasible impacts to water quality, natural drainage, and fish and wildlife habitat of the affected stream, pond, lake, and/or buffer zone. As a starting point, the following mitigation measures shall be considered when new uses are proposed in streams, ponds, lakes, and buffer zones:
 - (1) Construction shall occur during periods when fish and wildlife are least sensitive to disturbance. In Oregon, work in streams, ponds, and lakes

shall be conducted during the periods specified in *Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources* (Oregon Department of Fish and Wildlife 2000), unless otherwise coordinated with and approved by the Oregon Department of Fish and Wildlife. In Washington, the Washington Department of Fish and Wildlife shall evaluate specific proposals and specify periods for in-water work.

- (2) All natural vegetation shall be retained to the greatest extent practicable, including aquatic and riparian vegetation.
 - (3) Nonstructural controls and natural processes shall be used to the greatest extent practicable.
 - (4) Bridges, roads, pipeline and utility corridors, and other water crossings shall be minimized and should serve multiple purposes and properties.
 - (5) Stream channels shall not be placed in culverts unless absolutely necessary for property access. Bridges are preferred for water crossings to reduce disruption to streams, ponds, lakes, and their banks. When culverts are necessary, oversized culverts with open bottoms that maintain the channel's width and grade should be used.
 - (6) Temporary and permanent control measures shall be applied to minimize erosion and sedimentation when riparian areas are disturbed, including slope netting, berms and ditches, tree protection, sediment barriers, infiltration systems, and culverts.
- D. Groundwater and surface water quality will not be degraded by the proposed use.
- E. Those portions of a proposed use that are not water-dependent or that have a practicable alternative will be located outside of stream, pond, and lake buffer zones.
- F. The proposed use complies with all applicable federal, state, and local laws.
- G. Unavoidable impacts to aquatic and riparian areas will be offset through rehabilitation and enhancement.

Rehabilitation and enhancement shall achieve no net loss of water quality, natural drainage, and fish and wildlife habitat of the affected stream, pond, lake, and/or buffer zone. When a project area has been disturbed in the past, it shall be rehabilitated to its natural condition to the maximum extent practicable.

When a project area cannot be completely rehabilitated, such as when a boat launch permanently displaces aquatic and riparian areas, enhancement shall also be required.

The following rehabilitation and enhancement guidelines shall apply:

- (1) Rehabilitation and enhancement projects shall be conducted in accordance with a rehabilitation and enhancement plan.
- (2) Natural hydrologic conditions shall be replicated, including current patterns, circulation, velocity, volume, and normal water fluctuation.
- (3) Natural stream channel and shoreline dimensions shall be replicated, including depth, width, length, cross-sectional profile, and gradient.
- (4) The bed of the affected aquatic area shall be rehabilitated with identical or similar materials.
- (5) Riparian areas shall be rehabilitated to their original configuration, including slope and contour.
- (6) Fish and wildlife habitat features shall be replicated, including pool-riffle ratios, substrata, and structures. Structures include large woody debris and boulders.
- (7) Stream channels and banks, shorelines, and riparian areas shall be replanted with native plant species that replicate the original vegetation community.
- (8) Rehabilitation and enhancement efforts shall be completed no later than 90 days after the aquatic area or buffer zone has been altered or destroyed, or as soon thereafter as is practicable.
- (9) Three years after an aquatic area or buffer zone is rehabilitated or enhanced, at least 75 percent of the replacement vegetation must survive. The project applicant shall monitor the replacement vegetation and take corrective measures to meet this guideline.

Stream, Pond, and Lake Buffer Zones

1. Buffer zones shall generally be measured landward from the ordinary high watermark on a horizontal scale that is perpendicular to the ordinary high watermark. On the main stem of the Columbia River above Bonneville Dam, buffer zones shall be measured landward from the normal pool elevation of the Columbia River. The following buffer zone widths shall be required:

- A. Streams used by anadromous or resident fish (tributary fish habitat), special streams, intermittent streams that include year-round pools, and perennial streams: 100 feet.
 - B. Intermittent streams, provided they are not used by anadromous or resident fish: 50 feet.
 - C. Ponds and lakes: Buffer zone widths shall be based on the dominant vegetative community and shall use the same guidelines as in the "Wetlands Buffer Zones" section of this chapter, substituting the term "pond or lake" as appropriate.
- 2. Except as otherwise allowed, buffer zones shall be retained in their natural condition. When a buffer zone is disturbed by a new use, it shall be replanted with native plant species.
 - 3. The project applicant shall be responsible for determining the exact location of the ordinary high watermark or normal pool elevation. The local government may verify the accuracy of, and render adjustments to, an ordinary high watermark or normal pool delineation. If the adjusted boundary delineation is contested by the project applicant, the local government shall obtain professional services to render a final delineation, at the project applicant's expense.

Rehabilitation and Enhancement Plans

- 1. Rehabilitation and enhancement plans shall be prepared when a project applicant is required to rehabilitate or enhance a stream, pond, lake, and/or buffer zone. They shall satisfy the following guidelines:
 - A. Rehabilitation and enhancement plans are the responsibility of the project applicant; they shall be prepared by qualified professionals, such as fish or wildlife biologists.
 - B. All plans shall include an assessment of the physical characteristics and natural functions of the affected stream, pond, lake, and/or buffer zone. The assessment shall include hydrology, flora, and fauna.
 - C. Plans shall include plan view and cross-sectional, scaled drawings; topographic survey data, including elevations at contour intervals of at least 2 feet, slope percentages, and final grade elevations; and other technical information in sufficient detail to explain and illustrate:
 - (1) Soil and substrata conditions, grading and excavation, and erosion and sediment control needed to successfully rehabilitate and enhance the stream, pond, lake, and buffer zone.

- (2) Planting plans that specify native plant species, quantities, size, spacing, or density; source of plant materials or seeds; timing, season, water, and nutrient requirements for planting; and where appropriate, measures to protect plants from predation.
 - (3) Water-quality parameters, construction techniques, management measures, and design specifications needed to maintain hydrologic conditions and water quality.
- D. A 3-year monitoring, maintenance, and replacement program shall be included in all rehabilitation and enhancement plans. At a minimum, a project applicant shall prepare an annual report that documents milestones, successes, problems, and contingency actions. Photographic monitoring shall be used to monitor all rehabilitation and enhancement efforts.
- E. A project applicant shall demonstrate sufficient fiscal, administrative, and technical competence to successfully execute and monitor a rehabilitation and enhancement plan.

WILDLIFE HABITAT

GMA Goals

1. Ensure that new uses do not adversely affect sensitive wildlife areas and sites. "Sensitive wildlife areas" means the 17 land and water areas that are included in the wildlife inventory. (See Table 2.)

"Sensitive wildlife sites" is used here in a generic sense to refer to sites that are used by species that are (1) listed as endangered or threatened pursuant to federal or state endangered species acts, (2) listed as endangered, threatened, sensitive, or candidate by the Washington Wildlife Commission, (3) listed as sensitive by the Oregon Fish and Wildlife Commission, or (4) considered to be of special interest to the public (limited to great blue heron, osprey, golden eagle, and prairie falcon). Updated lists of species included in (1), (2), and (3) above can be found on the websites for the Washington Department of Fish and Wildlife (Species of Concern list) and the Wildlife Division of Oregon Department of Fish and Wildlife. A list also is maintained by the USDA Forest Service – Scenic Area Office and available at the Gorge Commission office and on its website.

2. Enhance wildlife habitat that has been altered or destroyed by past uses.

GMA Objectives

1. Update the wildlife inventory as new areas and sites are discovered and federal or state wildlife lists are revised. This update will be conducted by the Gorge Commission.

2. Promote public programs that offer incentives to landowners who protect and enhance sensitive wildlife habitat. The Gorge Commission shall notify landowners whose property has been designated Large-Scale or Small-Scale Agriculture, Commercial Forest Land, or Large or Small Woodland and contains a sensitive wildlife area or site. It shall inform landowners about the rationale for regulating new uses near sensitive wildlife habitat, including cultivation.

GMA Policies

1. Newly discovered sensitive wildlife areas and sites and wildlife species that are added to federal or state wildlife lists shall be protected.
2. To help ensure that wildlife species are not disturbed, the wildlife inventory shall be kept confidential.
3. Habitat areas of animal species that are classified as endangered or threatened by federal or state endangered species acts or the Washington Wildlife Commission may be designated Open Space. The guidelines in this chapter shall be used to protect other sensitive wildlife areas and sites.
4. New dwellings, fences, and land divisions shall be limited in deer and elk winter range and turkey habitat.
5. New and replacement fences in deer and elk winter range should be constructed so they do not present a major hazard to deer and elk.
6. On lands designated Large-Scale or Small-Scale Agriculture, Commercial Forest Land, or Large or Small Woodland that include deer and elk winter range or turkey habitat, new parcels shall be 40 acres or larger in the west end of the Scenic Area and 80 acres or larger in the east end of the Scenic Area. In Oregon, the division between the west and east end of the Scenic Area is the Hood River. In Washington, the White Salmon River is the line of division.
7. Proposed uses that would adversely affect sensitive wildlife areas or sites shall be prohibited. Uses adversely affect wildlife sites and areas when they compromise the integrity of an area or site, or occur during a time of the year when affected wildlife species are sensitive to disturbance.
8. Adequate buffer zones shall be maintained to protect sensitive wildlife areas or sites from new uses. The width of wildlife buffer zones shall be determined on a case-by-case basis and shall reflect the biology of the affected species and the characteristics of the project site and the proposed use.
9. The size, scope, configuration, density, and timing of new uses within wildlife buffer zones shall be regulated to protect sensitive wildlife species.

10. Site-specific management plans shall be required before most new uses will be allowed within wildlife buffer zones.
11. Rehabilitation and/or enhancement shall be required to offset unavoidable impacts to wildlife habitat that result from new uses.

GMA Guidelines

Review Uses

1. Except uses allowed outright, proposed uses may be allowed within 1,000 feet of a sensitive wildlife area or site, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and "Approval Criteria for Review Uses Near Sensitive Wildlife Areas and Sites" in this section. Updated lists of species included in sensitive wildlife sites can be found on the websites for the Washington Department of Fish and Wildlife (Species of Concern list) and the Wildlife Division of Oregon Department of Fish and Wildlife. A list also is maintained by the USDA Forest Service – Scenic Area Office and available at the Gorge Commission office and on its website.

Site Plans and Field Surveys for Review Uses Near Sensitive Wildlife Areas and Sites

1. In addition to the information required in all site plans, site plans for uses within 1,000 feet of a sensitive wildlife area or site shall include a map prepared at a scale of 1 inch equals 100 feet (1:1,200), or a scale providing greater detail.
2. A field survey to identify sensitive wildlife areas or sites shall be required for (1) land divisions that create four or more parcels, (2) recreation facilities that contain parking areas for more than 10 cars, overnight camping facilities, boat ramps, or visitor information and environmental education facilities, (3) public transportation facilities that are outside improved rights-of-way, (4) electric facilities, lines, equipment, and appurtenances that are 33 kilovolts or greater, and (5) communications, water and sewer, and natural gas transmission (as opposed to distribution) lines, pipes, equipment, and appurtenances and other project related activities, except when all of their impacts will occur inside previously disturbed road, railroad or utility corridors, or existing developed utility sites, that are maintained annually.

Field surveys shall cover all areas affected by the proposed use or recreation facility. They shall be conducted by a professional wildlife biologist hired by the project applicant. All sensitive wildlife areas and sites discovered in a project area shall be described and shown on the site plan map.

Approval Criteria for Review Uses Near Sensitive Wildlife Areas and Sites

1. Uses that are proposed within 1,000 feet of a sensitive wildlife area or site shall be reviewed by the Oregon Department of Fish and Wildlife or the Washington Department of Fish and Wildlife. The approximate locations of sensitive wildlife areas and sites are shown in the wildlife inventory. State wildlife biologists will help determine if a new use would adversely affect a sensitive wildlife area or site.
2. The local government shall submit site plans to the Oregon Department of Fish and Wildlife or Washington Department of Fish and Wildlife. State wildlife biologists shall review the site plan and their field survey records. They shall (1) identify/verify the precise location of the wildlife area or site, (2) ascertain whether the wildlife area or site is active or abandoned, and (3) determine if the proposed use may compromise the integrity of the wildlife area or site or occur during the time of year when wildlife species are sensitive to disturbance, such as nesting or rearing seasons. In some instances, state wildlife biologists may conduct field surveys to verify the wildlife inventory and assess the potential effects of a proposed use.
3. The following factors may be considered when site plans are reviewed:
 - A. Biology of the affected wildlife species.
 - B. Published guidelines regarding the protection and management of the affected wildlife species. The Oregon Department of Forestry has prepared technical papers that include management guidelines for osprey and great blue heron. The Washington Department of Fish and Wildlife has prepared similar guidelines for a variety of species, including the western pond turtle, the peregrine falcon, and the Larch Mountain salamander (Rodrick and Milner 1991).
 - C. Physical characteristics of the subject parcel and vicinity, including topography and vegetation.
 - D. Historic, current, and proposed uses in the vicinity of the sensitive wildlife area or site.
 - E. Existing condition of the wildlife area or site and the surrounding habitat and the useful life of the area or site.
4. The wildlife protection process may terminate if the local government, in consultation with the state wildlife agency, determines (1) the sensitive wildlife area or site is not active, or (2) the proposed use would not compromise the integrity of the wildlife area or site or occur during the time of year when wildlife species are sensitive to disturbance.

5. If the local government, in consultation with the state wildlife agency, determines that the proposed use would have only minor effects on the wildlife area or site that could be eliminated through mitigation measures recommended by the state wildlife biologist, or by simply modifying the site plan or regulating the timing of new uses, a letter shall be sent to the project applicant that describes the effects and measures needed to eliminate them. If the project applicant accepts these recommendations, the local government shall incorporate them into its development review order and the wildlife protection process may conclude.
6. The project applicant shall prepare a wildlife management plan if the local government, in consultation with the state wildlife agency, determines that the proposed use would adversely affect a sensitive wildlife area or site and the effects of the proposed use cannot be eliminated through site plan modifications or project timing.
7. The local government shall submit a copy of all field surveys and wildlife management plans to the Oregon Department of Fish and Wildlife or Washington Department of Fish and Wildlife. The state wildlife agency will have 20 days from the date that a field survey or management plan is mailed to submit written comments to the local government.

The local government shall record and address any written comments submitted by the state wildlife agency in its development review order.

Based on the comments from the state wildlife agency, the local government shall make a final decision on whether the proposed use would be consistent with the wildlife policies and guidelines. If the final decision contradicts the comments submitted by the state wildlife agency, the local government shall justify how it reached an opposing conclusion.

8. The local government shall require the project applicant to revise the wildlife management plan as necessary to ensure that the proposed use would not adversely affect a sensitive wildlife area or site.

Wildlife Management Plans

1. Wildlife management plans shall be prepared when a proposed use is likely to adversely affect a sensitive wildlife area or site. Their primary purpose is to document the special characteristics of a project site and the habitat requirements of affected wildlife species. This information provides a basis for the project applicant to redesign the proposed use in a manner that protects sensitive wildlife areas and sites, maximizes his/her development options, and mitigates temporary impacts to the wildlife area or site and/or buffer zone.
2. Wildlife management plans shall comply with the following guidelines:

- A. Wildlife management plans shall be prepared by a professional wildlife biologist hired by the project applicant.
- B. All relevant background information shall be documented and considered, including biology of the affected species, published protection and management guidelines, physical characteristics of the subject parcel, past and present use of the subject parcel, and useful life of the wildlife area or site.
- C. The core habitat of the sensitive wildlife species shall be delineated. It shall encompass the sensitive wildlife area or site and the attributes, or key components that are essential to maintain the long-term use and integrity of the wildlife area or site.
- D. A wildlife buffer zone shall be employed. It shall be wide enough to ensure that the core habitat is not adversely affected by new uses, or natural forces, such as fire and wind. Buffer zones shall be delineated on the site plan map and shall reflect the physical characteristics of the project site and the biology of the affected species.
- E. The size, scope, configuration, or density of new uses within the core habitat and the wildlife buffer zone shall be regulated to protect sensitive wildlife species. The timing and duration of all uses shall also be regulated to ensure that they do not occur during the time of year when wildlife species are sensitive to disturbance. The following guidelines shall apply:
 - (1) New uses shall generally be prohibited within the core habitat. Exceptions may include uses that have temporary and negligible effects, such as the installation of minor underground utilities or the maintenance of existing structures. Low-intensity, nondestructive uses may be conditionally authorized in the core habitat.
 - (2) Intensive uses shall be generally prohibited in wildlife buffer zones. Such uses may be conditionally authorized when a wildlife area or site is inhabited seasonally, provided they will have only temporary effects on the wildlife buffer zone and rehabilitation and/or enhancement will be completed before a particular species returns.
- F. Rehabilitation and/or enhancement shall be required when new uses are authorized within wildlife buffer zones. When a buffer zone has been altered or degraded in the past, it shall be rehabilitated to its natural condition to the maximum extent practicable. When complete rehabilitation is not possible, such as when new structures permanently displace wildlife habitat, enhancement shall also be required. Enhancement shall achieve no net loss of the integrity of the wildlife area or site.

Rehabilitation and enhancement actions shall be documented in the wildlife management plan and shall include a map and text.

- G. The project applicant shall prepare and implement a 3-year monitoring plan when the affected wildlife area or site is occupied by a species that is listed as endangered or threatened pursuant to federal or state wildlife lists. At a minimum, the project applicant shall prepare an annual report and shall track the status of the wildlife area or site and the success of rehabilitation and/or enhancement actions.

At the end of 3 years, rehabilitation and enhancement efforts may conclude if they are successful. In instances where rehabilitation and enhancement efforts have failed, the monitoring process shall be extended until the applicant satisfies the rehabilitation and enhancement guidelines.

Approval Criteria for Fences in Deer and Elk Winter Range

New fences in deer and elk winter range shall comply with the following guidelines:

1. New fences in deer and elk winter range shall be allowed only when necessary to control livestock or exclude wildlife from specified areas, such as gardens or sensitive wildlife sites. The areas fenced shall be the minimum necessary to meet the immediate needs of the project applicant.
2. New and replacement fences that are allowed in winter range shall comply with the guidelines in *Specifications for Structural Range Improvements* (Sanderson et al. 1990), as summarized below, unless the project applicant demonstrates the need for an alternative design:
 - A. To make it easier for deer to jump over the fence, the top wire shall not be more than 42 inches high.
 - B. The distance between the top two wires is critical for adult deer because their hind legs often become entangled between these wires. A gap of at least 10 inches shall be maintained between the top two wires to make it easier for deer to free themselves if they become entangled.
 - C. The bottom wire shall be at least 16 inches above the ground to allow fawns to crawl under the fence. It shall consist of smooth wire because barbs often injure animals as they crawl under fences.
 - D. Stays, or braces placed between strands of wire, shall be positioned between fence posts where deer are most likely to cross. Stays create a more rigid fence, which allows deer a better chance to wiggle free if their hind legs become caught between the top two wires.

3. Woven wire fences may be authorized only when a project applicant clearly demonstrates that such a fence is required to meet his/her specific and immediate needs, such as controlling hogs and sheep.

RARE PLANTS

GMA Goals

1. Ensure that new uses do not adversely affect plant species that are (1) endemic to the Columbia River Gorge and vicinity (see Table 3), (2) listed as endangered or threatened pursuant to federal or state endangered species acts, or (3) listed as endangered, threatened, or sensitive by the Oregon or Washington Natural Heritage Program. For brevity, these species will be referred to as "sensitive" plant species. Updated lists of sensitive plant species included in (2) and (3) above can be found on the websites for the Oregon or Washington Natural Heritage Program. A list also is maintained by the USDA Forest Service – Scenic Area Office and available at the Gorge Commission office and on its website.
2. Encourage the protection of plant species that are classified as "List 3 (Review)" or "List 4 (Watch)" by the Oregon Natural Heritage Program or "Monitor" by the Washington Natural Heritage Program.
3. Enhance the natural habitat of rare plant species.

GMA Objectives

1. Update the rare plant species inventory as new plant sites are discovered and federal or state rare plant lists are revised. The update will be conducted by the Gorge Commission.
2. Promote public programs that offer incentives to landowners who protect and enhance sensitive plants. The Gorge Commission shall notify landowners whose property has been designated Large-Scale or Small-Scale Agriculture, Commercial Forest Land, or Large or Small Woodland and contains sensitive plant species. It shall inform landowners about the values of sensitive plants and the rationale for regulating new uses near sensitive plant sites, including cultivation.

GMA Policies

1. Newly discovered rare plant sites and plant species that are added to federal or state rare plant lists shall be protected. Species that are deleted from federal or state rare plant lists will not require further protection.
2. The rare plant species inventory shall be used to identify possible conflicts between proposed uses and rare plant sites. Project applicants should consult the

local government early in the planning process to help determine if rare plants exist in the project area.

3. When new uses are proposed near a sensitive plant site that appears in the rare plant species inventory, the field survey records shall be used to determine the precise location of the plant population in relation to the proposed use. If the field survey records are inadequate, a field survey shall be conducted to delineate the boundaries of the sensitive plant population.
4. Buffer zones shall be used to ensure that new uses do not adversely affect sensitive plant species.
5. Except for uses allowed outright, new uses shall be prohibited within sensitive plant species buffer zones.
6. Landowners and agency officials shall be encouraged to avoid siting new uses on lands containing plant species listed as "Review," "Watch," or "Monitor" by the Oregon or Washington Natural Heritage Program.

GMA Guidelines

Review Uses

1. Except uses allowed outright, proposed uses may be allowed within 1,000 feet of a sensitive plant, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and "Approval Criteria for Review Uses Near Sensitive Plants" in this section. Updated lists of sensitive plant species can be found on the websites for the Oregon or Washington Natural Heritage Program. A list also is maintained by the USDA Forest Service – Scenic Area Office and available at the Gorge Commission office and on its website.

Site Plans and Field Surveys for Review Uses Near Sensitive Plants

1. In addition to the information required in all site plans, site plans for uses within 1,000 feet of a sensitive plant shall include a map prepared at a scale of 1 inch equals 100 feet (1:1,200), or a scale providing greater detail.
2. A field survey to identify sensitive plants shall be required for (1) land divisions that create four or more parcels; (2) recreation facilities that contain parking areas for more than 10 cars, overnight camping facilities, boat ramps, or visitor information and environmental education facilities; (3) public transportation facilities that are outside improved rights-of-way; (4) electric facilities, lines, equipment, and appurtenances that are 33 kilovolts or greater; and (5) communications, water and sewer, and natural gas transmission (as opposed to distribution) lines, pipes, equipment, and appurtenances and other project related activities, except when all

of their impacts will occur inside previously disturbed road, railroad or utility corridors, or existing developed utility sites, that are maintained annually.

Field surveys shall cover all areas affected by the proposed use or recreation facility. They shall be conducted by a person with recognized expertise in botany or plant ecology hired by the project applicant. Field surveys shall identify the precise location of the sensitive plants and delineate a 200-foot buffer zone. The results of a field survey shall be shown on the site plan map.

Approval Criteria for Review Uses Near Sensitive Plants

1. Uses that are proposed within 1,000 feet of a sensitive plant shall be reviewed by the Oregon or Washington Natural Heritage Program. The approximate locations of sensitive plants are shown in the rare plant species inventory. State heritage staffs will help determine if a new use would invade the buffer zone of sensitive plants.
2. The local government shall submit site plans to the state heritage program. The state heritage staffs will review the site plan and their field survey records. They will identify the precise location of the affected plants and delineate a 200-foot buffer zone on the project applicant's site plan.

If the field survey records of the state heritage program are inadequate, the project applicant shall hire a person with recognized expertise in botany or plant ecology to ascertain the precise location of the affected plants.

3. The rare plant protection process may conclude if the local government, in consultation with the state heritage program, determines that the proposed use would be located outside of a sensitive plant buffer zone.
4. New uses shall be prohibited within sensitive plant species buffer zones, except for those uses that are allowed outright.
5. If a proposed use must be allowed within a sensitive plant buffer zone in accordance with the provisions in "Variances for Setbacks and Buffers" in Part II, Chapter 7: General Policies and Guidelines, the project applicant shall prepare a protection and rehabilitation plan that complies with the guidelines in "Protection and Rehabilitation Plans" in this section.
6. The local government shall submit a copy of all field surveys and protection and rehabilitation plans to the Oregon or Washington Natural Heritage Program. The state heritage program will have 20 days from the date that a field survey is mailed to submit written comments to the local government.

The local government shall record and address any written comments submitted by the state heritage program in its development review order.

Based on the comments from the state heritage program, the local government will make a final decision on whether the proposed use would be consistent with the rare plant policies and guidelines. If the final decision contradicts the comments submitted by the state heritage program, the local government shall justify how it reached an opposing conclusion.

Sensitive Plant Buffer Zones

1. A 200-foot buffer zone shall be maintained around sensitive plants. Buffer zones shall remain in an undisturbed, natural condition.
2. Buffer zones may be reduced if a project applicant demonstrates that intervening topography, vegetation, manmade features, or natural plant habitat boundaries negate the need for a 200-foot radius. Under no circumstances shall the buffer zone be less than 25 feet.
3. Requests to reduce buffer zones shall be considered if a professional botanist or plant ecologist hired by the project applicant (1) identifies the precise location of the sensitive plants, (2) describes the biology of the sensitive plants, and (3) demonstrates that the proposed use will not have any negative effects, either direct or indirect, on the affected plants and the surrounding habitat that is vital to their long-term survival.

All requests shall be prepared as a written report. Published literature regarding the biology of the affected plants and recommendations regarding their protection and management shall be cited. The report shall include detailed maps and photographs.

4. The local government shall submit all requests to reduce sensitive plant species buffer zones to the Oregon or Washington Natural Heritage Program. The state heritage program will have 20 days from the date that such a request is mailed to submit written comments to the local government.

The local government shall record and address any written comments submitted by the state heritage program in its development review order.

Based on the comments from the state heritage program, the local government will make a final decision on whether the reduced buffer zone is justified. If the final decision contradicts the comments submitted by the state heritage program, the local government shall justify how it reached an opposing conclusion.

Protection and Rehabilitation Plans

1. Protection and rehabilitation plans shall minimize and offset unavoidable impacts that result from a new use that occurs within a sensitive plant buffer zone as the result of a variance. All plans shall meet the following guidelines:

- A. Protection and rehabilitation plans shall be prepared by a professional botanist or plant ecologist hired by the project applicant.
- B. Construction, protection, and rehabilitation activities shall occur during the time of year when ground disturbance will be minimized and protection, rehabilitation, and replacement efforts will be maximized.
- C. Sensitive plants that will be destroyed shall be transplanted or replaced, to the maximum extent practicable. Replacement is used here to mean the establishment of a particular plant species in areas of suitable habitat not affected by new uses. Replacement may be accomplished by seeds, cuttings, or other appropriate methods.

Replacement shall occur as close to the original plant site as practicable. The project applicant shall ensure that at least 75 percent of the replacement plants survive 3 years after the date they are planted.

- D. Sensitive plants and their surrounding habitat that will not be altered or destroyed shall be protected and maintained. Appropriate protection and maintenance techniques shall be applied, such as fencing, conservation buffers, livestock management, and noxious weed control.
 - E. Habitat of a sensitive plant that will be affected by temporary uses shall be rehabilitated to a natural condition.
 - F. Protection efforts shall be implemented before construction activities begin. Rehabilitation efforts shall be implemented immediately after the plants and their surrounding habitat are disturbed.
2. Protection and rehabilitation plans shall include maps, photographs, and text. The text shall:
- A. Describe the biology of sensitive plant species that will be affected by a proposed use.
 - B. Explain the techniques that will be used to protect sensitive plants and their surrounding habitat that will not be altered or destroyed.
 - C. Describe the rehabilitation and enhancement actions that will minimize and offset the impacts that will result from a proposed use.
 - D. Include a 3-year monitoring, maintenance, and replacement program. The project applicant shall prepare and submit to the local government an annual report that documents milestones, successes, problems, and contingency actions.

SMA PROVISIONS

WATER RESOURCES (WETLANDS, STREAMS, PONDS, LAKES, AND RIPARIAN AREAS)

SMA Goal

1. Protect and enhance the quantity and quality of water resources and their functions.

SMA Policies

1. All wetlands, regardless of their size or functions, warrant protection from new uses that may alter or destroy wetlands functions.
2. The National Wetlands Inventory (U.S. Department of the Interior 1987) and the list of hydric soils shall be used as a general guide to the location of wetlands; additional wetlands are assumed to exist and shall be protected.
3. The exact location of wetlands boundaries shall be delineated using the procedures specified in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1987 Corps of Engineers Wetland Delineation Manual, on-line edition).
4. An undisturbed buffer should be preserved around wetlands, streams, ponds, and lakes to protect and enhance their functions and associated uplands.
5. Uses that may impact wetland, streams, ponds, lakes, and riparian areas acreage and functions, water quality, natural drainage, or wildlife habitat may be allowed in their buffer zones, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and the approval criteria in this section.
6. A project applicant shall minimize and offset unavoidable impacts to aquatic areas and their buffer zones that result from his/her actions by rehabilitating or enhancing aquatic and riparian areas or by restoring, creating, and enhancing wetlands.
7. When uses are authorized in degraded aquatic and riparian areas, rehabilitation shall return the project area to its natural condition to the maximum extent practicable.
8. Project proposals affecting wetlands shall be coordinated with federal and state agencies that regulate new uses in wetlands.
9. Enhancement of wetlands, streams, ponds, lakes, and riparian areas not associated with any other project proposal may be allowed, if such efforts comply with the wetlands, streams, ponds, lakes, and riparian areas provisions in the

Management Plan. Enhancement efforts shall be conducted pursuant to a mitigation plan, as described in this section.

10. All mitigation plans must be approved by the local government, after consultation with federal and state agencies with jurisdiction over wetlands.
11. Partnerships with public agencies, conservation groups, and individuals are encouraged to increase public awareness, understanding, and stewardship of natural resources.
12. The Special Management Area water resource buffer widths shall be applied to National Forest System lands in the General Management Area.

WILDLIFE AND PLANTS

SMA Goals

1. Protect (ensure that new uses do not adversely affect, including cumulative effects) and enhance the wildlife and plant diversity of the Gorge.
2. Encourage the protection of plant species that are classified as "List 3 (Review)" or "List 4 (Watch)" by the Oregon Natural Heritage Program or "Monitor" by the Washington Natural Heritage Program.
3. Ensure that new uses do not adversely affect natural areas that are potentially eligible for the Oregon Register of Natural Heritage Resources or the Washington Register of Natural Areas Program.

SMA Policies

1. Natural resources existing on a site proposed for a new development or land use, and/or natural resources in danger of degradation or destruction from individual or cumulative off-site impacts, shall be protected from adverse effects.
2. Significant ecosystems such as natural areas, wetlands, ponds, lakes, riparian areas, old growth forests, islands, and areas of special importance such as botanical areas, sensitive wildlife and fishery habitats, or oak woodlands shall be protected from adverse effects.
3. Existing habitat quality, viable populations, and long-term productivity of natural resources and ecosystem diversity shall be maintained.
4. County, state, and federal regulations for air and water quality and for pesticide use shall be followed.

5. Newly discovered sensitive wildlife and plant species, areas and sites that are added to federal or state wildlife and plant lists shall be protected. Species that are deleted from federal or state wildlife and plant lists will not require further protection. Updated lists of sensitive wildlife and plant species can be found on websites for the Washington Department of Fish and Wildlife, the Wildlife Division of Oregon Department of Fish and Wildlife, and the Oregon or Washington Natural Heritage Programs. A list also is maintained by the USDA Forest Service – Scenic Area Office and available at the Gorge Commission office and on its website.
6. To help ensure that sensitive wildlife and plant species are not disturbed, the sensitive wildlife and plant inventory shall be kept confidential.
7. Habitat areas of animal species that are classified as endangered or threatened by federal or state endangered species acts or the Washington Wildlife Commission may be designated Open Space; the guidelines in this chapter shall be used to protect other sensitive wildlife areas and sites.
8. Proposed uses that would adversely affect sensitive wildlife or plant areas or sites shall be prohibited. Uses adversely affect wildlife or plant sites and areas when they compromise the integrity of an area or site, or occur during a time of the year when affected wildlife or plant species are sensitive to disturbance.
9. Adequate buffer zones shall be maintained to protect sensitive wildlife and plant areas or sites from new uses. The width of wildlife buffer zones shall be determined on a case-by-case basis and shall reflect the biology of the affected species and the characteristics of the project site and the proposed use. The width of the plant buffer zone shall be 200 ft.
10. The size, scope, configuration, density, and timing of new uses within wildlife and plant buffer zones shall be regulated to protect sensitive wildlife species.
11. Site-specific plans shall be required before most new uses will be allowed within wildlife and plant buffer zones.
12. Rehabilitation and/or enhancement shall be required to offset unavoidable impacts to wildlife and plant habitat that result from new uses.
13. Natural areas that are potentially eligible for the Oregon Register of Natural Heritage Resources or the Washington Register of Natural Areas Program shall be designated as Open Space in the SMA.
14. Partnerships with public agencies, conservation groups, and individuals are encouraged to increase public awareness, understanding, and stewardship of natural resources.
15. Air quality shall be protected and enhanced, consistent with the purposes of the Scenic Area Act. The States of Oregon and Washington and the U.S. Forest Service shall:

- (1) Continue to monitor air pollution and visibility levels in the Gorge;
- (2) Conduct an analysis of monitoring and emissions data to identify all sources, both inside and outside the Scenic Area, that significantly contribute to air pollution. Based on this analysis, the States shall develop and implement a regional air quality strategy to carry out the purposes of the Scenic Area Act, with the U.S. Forest Service, the Southwest Air Pollution Control Authority and in consultation with affected stakeholders.

The States and the Forest Service shall together provide annual reports to the Commission on progress made regarding implementation of this policy. The first report shall include a workplan and timeline for gathering/analyzing data and developing and implementing the strategy. The workplan and strategy shall be submitted to the Commission for approval.

SMA Guidelines

1. All new developments and uses, as described in a site plan prepared by the applicant, shall be evaluated using the following guidelines to ensure that natural resources are protected from adverse effects. Comments from state and federal agencies shall be carefully considered. (Site plans are described under “Review Uses” in Part II, Chapter 7: General Policies and Guidelines.)
2. Water Resources (Wetlands, Streams, Ponds, Lakes, and Riparian Areas)
 - A. All Water Resources shall, in part, be protected by establishing undisturbed buffer zones as specified in 2.A.(2)(a) and 2(b) below. These buffer zones are measured horizontally from a wetland, stream, lake, or pond boundary as defined below.
 - (1) All buffer zones shall be retained undisturbed and in their natural condition, except as permitted with a mitigation plan.
 - (2) Buffer zones shall be measured outward from the bank full flow boundary for streams, the high water mark for ponds and lakes, the normal pool elevation for the Columbia River, and the wetland delineation boundary for wetlands on a horizontal scale that is perpendicular to the wetlands, stream, pond or lake boundary. On the main stem of the Columbia River above Bonneville Dam, buffer zones shall be measured landward from the normal pool elevation of the Columbia River. The following buffer zone widths shall be required:
 - (a) A minimum 200 foot buffer on each wetland, pond, lake, and each bank of a perennial or fish bearing stream, some of which can be intermittent.

- (b) A 50-foot buffer zone along each bank of intermittent (including ephemeral), non-fish bearing streams.
 - (c) Maintenance, repair, reconstruction and realignment of roads and railroads within their rights-of-way shall be exempted from the wetlands and riparian guidelines upon demonstration of all of the following:
 - (i) The wetland within the right-of-way is a drainage ditch not part of a larger wetland outside of the right-of-way.
 - (ii) The wetland is not critical habitat.
 - (iii) Proposed activities within the right-of-way would not adversely affect a wetland adjacent to the right-of-way.
- (3) The buffer width shall be increased for the following:
- (a) When the channel migration zone exceeds the recommended buffer width, the buffer width shall extend to the outer edge of the channel migration zone.
 - (b) When the frequently flooded area exceeds the recommended riparian buffer zone width, the buffer width shall be extended to the outer edge of the frequently flooded area.
 - (c) When an erosion or landslide hazard area exceeds the recommended width of the buffer, the buffer width shall be extended to include the hazard area.
- (4) Buffer zones can be reconfigured if a project applicant demonstrates all of the following: (1) the integrity and function of the buffer zone is maintained, (2) the total buffer area on the development proposal is not decreased, (3) the width reduction shall not occur within another buffer, and (4) the buffer zone width is not reduced more than 50% at any particular location. Such features as intervening topography, vegetation, man made features, natural plant or wildlife habitat boundaries, and flood plain characteristics could be considered.
- (5) Requests to reconfigure buffer zones shall be considered if an appropriate professional (botanist, plant ecologist, wildlife biologist, or hydrologist) hired by the project applicant (1) identifies the precise location of the sensitive wildlife/plant or water resource, (2) describes the biology of the sensitive wildlife/plant or hydrologic condition of the water resource, and (3) demonstrates that the proposed use will not have any negative effects, either direct or indirect, on the affected wildlife/plant

and their surrounding habitat that is vital to their long-term survival or water resource and its long-term function.

- (6) The local government shall submit all requests to re-configure sensitive wildlife/plant or water resource buffers to the Forest Service and the appropriate state agencies for review. All written comments shall be included in the project file. Based on the comments from the state and federal agencies, the local government will make a final decision on whether the reconfigured buffer zones are justified. If the final decision contradicts the comments submitted by the federal and state agencies, the local government shall justify how it reached an opposing conclusion.
- B. When a buffer zone is disturbed by a new use, it shall be replanted with only native plant species of the Columbia River Gorge.
 - C. The applicant shall be responsible for identifying all water resources and their appropriate buffers (see above).
 - D. Wetlands Boundaries shall be delineated using the following:
 - (1) The approximate location and extent of wetlands in the Scenic Area is shown on the National Wetlands Inventory (U.S. Department of the Interior, 1987). In addition, the list of hydric soils and the soil survey maps shall be used as an indicator of wetlands.
 - (2) Some wetlands may not be shown on the wetlands inventory or soil survey maps. Wetlands that are discovered by the local planning staff during an inspection of a potential project site shall be delineated and protected.
 - (3) The project applicant shall be responsible for determining the exact location of a wetlands boundary. Wetlands boundaries shall be delineated using the procedures specified in the '1987 Corps of Engineers Wetland Delineation Manual (on-line edition)'.
 - (4) All wetlands delineations shall be conducted by a professional who has been trained to use the federal delineation procedures, such as a soil scientist, botanist, or wetlands ecologist.
 - E. Stream, pond, and lake boundaries shall be delineated using the bank full flow boundary for streams and the high water mark for ponds and lakes. The project applicant shall be responsible for determining the exact location of the appropriate boundary for the water resource.
 - F. The local government may verify the accuracy of, and render adjustments to, a bank full flow, high water mark, normal pool elevation (for the Columbia

River), or wetland boundary delineation. If the adjusted boundary is contested by the project applicant, the local government shall obtain professional services, at the project applicant's expense, or the local government will ask for technical assistance from the Forest Service to render a final delineation.

G. Buffer zones shall be undisturbed unless the following criteria have been satisfied:

(1) The proposed use must have no practicable alternative as determined by the practicable alternative test.

Those portions of a proposed use that have a practicable alternative will not be located in wetlands, stream, pond, lake, and riparian areas and/or their buffer zone.

(2) Filling and draining of wetlands shall be prohibited with exceptions related to public safety or restoration/enhancement activities as permitted when all of the following criteria have been met:

(a) A documented public safety hazard exists or a restoration/enhancement project exists that would benefit the public and is corrected or achieved only by impacting the wetland in question, and

(b) Impacts to the wetland must be the last possible documented alternative in fixing the public safety concern or completing the restoration/enhancement project, and

(c) The proposed project minimizes the impacts to the wetland.

(3) Unavoidable impacts to wetlands and aquatic and riparian areas and their buffer zones shall be offset by deliberate restoration and enhancement or creation (wetlands only) measures as required by the completion of a mitigation plan.

3. Wildlife and Plants

A. Protection of sensitive wildlife/plant areas and sites shall begin when proposed new developments or uses are within 1000 ft of a sensitive wildlife/plant site and/or area.

Sensitive Wildlife Areas are those areas depicted in the wildlife inventory and listed in Table 2, including all Priority Habitats listed in this Chapter. The approximate locations of sensitive wildlife and/or plant areas and sites are shown in the wildlife and rare plant inventory.

- B. The local government shall submit site plans (of uses that are proposed within 1,000 feet of a sensitive wildlife and/or plant area or site) for review to the Forest Service and the appropriate state agencies (Oregon Department of Fish and Wildlife or the Washington Department of Wildlife for wildlife issues and by the Oregon or Washington Natural Heritage Program for plant issues).
- C. The Forest Service wildlife biologists and/or botanists, in consultation with the appropriate state biologists, shall review the site plan and their field survey records. They shall:
 - (1) Identify/verify the precise location of the wildlife and/or plant area or site,
 - (2) Determine if a field survey will be required,
 - (3) Determine, based on the biology and habitat requirements of the affected wildlife/plant species, if the proposed use would compromise the integrity and function of or result in adverse effects (including cumulative effects) to the wildlife or plant area or site. This would include considering the time of year when wildlife or plant species are sensitive to disturbance, such as nesting and rearing seasons, or flowering season, and
 - (4) Delineate the undisturbed 200 ft buffer on the site plan for sensitive plants and/or the appropriate buffer for sensitive wildlife areas or sites, including nesting, roosting and perching sites.
 - (a) Buffer zones can be reconfigured if a project applicant demonstrates all of the following: (1) the integrity and function of the buffer zones is maintained, (2) the total buffer area on the development proposal is not decreased, (3) the width reduction shall not occur within another buffer, and (4) the buffer zone width is not reduced more than 50% at any particular location. Such features as intervening topography, vegetation, man made features, natural plant or wildlife habitat boundaries, and flood plain characteristics could be considered.
 - (b) Requests to reduce buffer zones shall be considered if an appropriate professional (botanist, plant ecologist, wildlife biologist, or hydrologist), hired by the project applicant, (1) identifies the precise location of the sensitive wildlife/plant or water resource, (2) describes the biology of the sensitive wildlife/plant or hydrologic condition of the water resource, and (3) demonstrates that the proposed use will not have any negative effects, either direct or indirect, on the affected wildlife/plant and their surrounding habitat that is vital to their long-term survival or water resource and its long-term function.

- (c) The local government shall submit all requests to re-configure sensitive wildlife/plant or water resource buffers to the Forest Service and the appropriate state agencies for review. All written comments shall be included in the record of application and based on the comments from the state and federal agencies, the local government will make a final decision on whether the reduced buffer zone is justified. If the final decision contradicts the comments submitted by the federal and state agencies, the local government shall justify how it reached an opposing conclusion.

- D. The local government, in consultation with the State and federal wildlife biologists and/or botanists, shall use the following criteria in reviewing and evaluating the site plan to ensure that the proposed developments or uses do not compromise the integrity and function of or result in adverse affects to the wildlife or plant area or site:
 - (1) Published guidelines regarding the protection and management of the affected wildlife/plant species. Examples include: the Oregon Department of Forestry has prepared technical papers that include management guidelines for osprey and great blue heron; the Washington Department of Wildlife has prepared similar guidelines for a variety of species, including the western pond turtle, the peregrine falcon, and the Larch Mountain salamander.
 - (2) Physical characteristics of the subject parcel and vicinity, including topography and vegetation.
 - (3) Historic, current, and proposed uses in the vicinity of the sensitive wildlife/plant area or site.
 - (4) Existing condition of the wildlife/plant area or site and the surrounding habitat and the useful life of the area or site.
 - (5) In areas of winter range, habitat components, such as forage and thermal cover, important to the viability of the wildlife must be maintained or, if impacts are to occur, enhancement must mitigate the impacts so as to maintain overall values and function of winter range.
 - (6) The site plan is consistent with the "Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources" (Oregon Department of Fish and Wildlife 2000) and the Washington guidelines when they become finalized.
 - (7) The site plan activities coincide with periods when fish and wildlife are least sensitive to disturbance. These would include, among others,

nesting and brooding periods (from nest building to fledgling of young) and those periods specified.

- (8) The site plan illustrates that new developments and uses, including bridges, culverts, and utility corridors, shall not interfere with fish and wildlife passage.
- (9) Maintain, protect, and enhance the integrity and function of Priority Habitats (such as old growth forests, talus slopes, and oak woodlands) as listed on the following Priority Habitats Table. This includes maintaining structural, species, and age diversity, maintaining connectivity within and between plant communities, and ensuring that cumulative impacts are considered in documenting integrity and function.

PRIORITY HABITATS TABLE	
Priority Habitats	Criteria
Aspen stands	High fish and wildlife species diversity, limited availability, high vulnerability to habitat alteration.
Caves	Significant wildlife breeding habitat, limited availability, dependent species.
Old-growth forest	High fish and wildlife density, species diversity, breeding habitat, seasonal ranges, and limited and declining availability, high vulnerability.
Oregon white oak woodlands	Comparatively high fish and wildlife density, species diversity, declining availability, high vulnerability.
Prairies and steppe	Comparatively high fish and wildlife density, species diversity, important breeding habitat, declining and limited availability, high vulnerability.
Riparian	High fish and wildlife density, species diversity, breeding habitat, movement corridor, high vulnerability, dependent species.
Wetlands	High species density, high species diversity, important breeding habitat and seasonal ranges, limited availability, high vulnerability.
Snags and logs	High fish and wildlife density, species diversity, limited availability, high vulnerability, dependent species.
Talus	Limited availability, unique and dependent species, high vulnerability.
Cliffs	Significant breeding habitat, limited availability, dependent species.
Dunes	Unique species habitat, limited availability, high vulnerability, dependent species.

- E. The wildlife/plant protection process may terminate if the local government, in consultation with the Forest Service and state wildlife agency or Heritage program, determines (1) the sensitive wildlife area or site is not active, or (2) the proposed use is not within the buffer zones and would not compromise the integrity of the wildlife/plant area or site, and (3) the proposed use is within the buffer and could be easily moved out of the buffer by simply modifying the project proposal (site plan modifications). If the project applicant accepts these recommendations, the local government shall incorporate them into its development review order and the wildlife/plant protection process may conclude.
- F. If the above measures fail to eliminate the adverse affects, the proposed project shall be prohibited, unless the project applicant can meet the Practicable Alternative Test and prepare a mitigation plan to offset the adverse effects by deliberate restoration and enhancement.
- G. The local government shall submit a copy of all field surveys (if completed) and mitigation plans to the Forest Service and appropriate state agencies. The local government shall include all comments in the record of application and address any written comments submitted by the state and federal wildlife agency/heritage programs in its development review order.

Based on the comments from the state and federal wildlife agency/heritage program, the local government shall make a final decision on whether the proposed use would be consistent with the wildlife/plant policies and guidelines. If the final decision contradicts the comments submitted by the state and federal wildlife agency/heritage program, the local government shall justify how it reached an opposing conclusion.

- H. The local government shall require the project applicant to revise the mitigation plan as necessary to ensure that the proposed use would not adversely affect a sensitive wildlife/plant area or site.

4. Soil Productivity

- A. Soil productivity shall be protected using the following guidelines:
 - (1) A description or illustration showing the mitigation measures to control soil erosion and stream sedimentation.
 - (2) New developments and land uses shall control all soil movement within the area shown on the site plan.
 - (3) The soil area disturbed by new development or land uses, except for new cultivation, shall not exceed 15 percent of the project area.

- (4) Within 1 year of project completion, 80 percent of the project area with surface disturbance shall be established with effective native ground cover species or other soil-stabilizing methods to prevent soil erosion until the area has 80 percent vegetative cover.

Practicable Alternative Test

1. An alternative site for a proposed use shall be considered practicable if it is available and the proposed use can be undertaken on that site after taking into consideration cost, technology, logistics, and overall project purposes.

A practicable alternative does not exist if a project applicant satisfactorily demonstrates all of the following:

- A. The basic purpose of the use cannot be reasonably accomplished using one or more other sites in the vicinity that would avoid or result in less adverse effects on wetlands, ponds, lakes, riparian areas, wildlife or plant areas and/or sites.
- B. The basic purpose of the use cannot be reasonably accomplished by reducing its proposed size, scope, configuration, or density, or by changing the design of the use in a way that would avoid or result in less adverse effects on wetlands, ponds, lakes, riparian areas, wildlife or plant areas and/or sites.
- C. Reasonable attempts were made to remove or accommodate constraints that caused a project applicant to reject alternatives to the proposed use. Such constraints include inadequate infrastructure, parcel size, and land use designations. If a land use designation or recreation intensity class is a constraint, an applicant must request a Management Plan amendment to demonstrate that practicable alternatives do not exist.

Mitigation Plan

1. Mitigation Plans shall be prepared when:
 - A. The proposed development or use is within a buffer zone (wetlands, ponds, lakes, riparian areas, wildlife or plant areas and/or sites).
 - B. There is no practicable alternative (see the “practicable alternative” test).
2. In all cases, Mitigation Plans are the responsibility of the applicant and shall be prepared by an appropriate professional (botanist/ecologist for plant sites, a wildlife/fish biologist for wildlife/fish sites, and a qualified professional for water resource sites).

3. The primary purpose of this information is to provide a basis for the project applicant to redesign the proposed use in a manner that protects sensitive water resources and wildlife/plant areas and sites, that maximizes his/her development options, and that mitigates, through restoration, enhancement, and replacement measures, impacts to the water resources and/or wildlife/plant area or site and/or buffer zones.
4. The applicant shall submit the mitigation plan to the local government. The local government shall submit a copy of the mitigation plan to the Forest Service, and appropriate state agencies. If the final decision contradicts the comments submitted by the state and federal wildlife agency/heritage program, the local government shall justify how it reached an opposing conclusion.
5. A project applicant shall demonstrate sufficient fiscal, technical, and administrative competence to successfully execute a mitigation plan involving wetland creation.
6. Mitigation plans shall include maps, photographs, and text. The text shall:
 - A. Describe the biology and/or function of the sensitive resources (e.g. wildlife/plant species or wetland) that will be affected by a proposed use. An ecological assessment of the sensitive resource to be altered or destroyed and the condition of the resource that will result after restoration will be required. Reference published protection and management guidelines.
 - B. Describe the physical characteristics of the subject parcel, past, present, and future uses, and the past, present, and future potential impacts to the sensitive resources. Include the size, scope, configuration, or density of new uses being proposed within the buffer zone.
 - C. Explain the techniques that will be used to protect the sensitive resources and their surrounding habitat that will not be altered or destroyed (for example, delineation of core habitat of the sensitive wildlife/plant species and key components that are essential to maintain the long-term use and integrity of the wildlife/plant area or site).
 - D. Show how restoration, enhancement, and replacement (creation) measures will be applied to ensure that the proposed use results in minimum feasible impacts to sensitive resources, their buffer zones, and associated habitats.
 - E. Show how the proposed restoration, enhancement, or replacement (creation) mitigation measures are NOT alternatives to avoidance. A proposed development/use must first avoid a sensitive resource, and only if this is not possible should restoration, enhancement, or creation be considered as mitigation. In reviewing mitigation plans, the local government, appropriate state agencies, and Forest Service shall critically examine all proposals to ensure that they are indeed last resort options.

7. At a minimum, a project applicant shall provide to the local government a progress report every 3 years that documents milestones, successes, problems, and contingency actions. Photographic monitoring stations shall be established and photographs shall be used to monitor all mitigation progress.
8. A final monitoring report shall be submitted to the local government for review upon completion of the restoration, enhancement, or replacement activity. This monitoring report shall document successes, problems encountered, resource recovery, status of any sensitive wildlife/plant species and shall demonstrate the success of restoration and/or enhancement actions. The local government shall submit copies of the monitoring report to the Forest Service; who shall offer technical assistance to the local government in helping to evaluate the completion of the mitigation plan. In instances where restoration and enhancement efforts have failed, the monitoring process shall be extended until the applicant satisfies the restoration and enhancement guidelines.
9. Mitigation measures to offset impacts to resources and/or buffers shall result in no net loss of water quality, natural drainage, fish/wildlife/plant habitat, and water resources by addressing the following:
 - A. Restoration and enhancement efforts shall be completed no later than one year after the sensitive resource or buffer zone has been altered or destroyed, or as soon thereafter as is practicable.
 - B. All natural vegetation within the buffer zone shall be retained to the greatest extent practicable. Appropriate protection and maintenance techniques shall be applied, such as fencing, conservation buffers, livestock management, and noxious weed control. Within five years, at least 75 percent of the replacement vegetation must survive. All plantings must be with native plant species that replicate the original vegetation community.
 - C. Habitat that will be affected by either temporary or permanent uses shall be rehabilitated to a natural condition. Habitat shall be replicated in composition, structure, and function, including tree, shrub and herbaceous species, snags, pool-riffle ratios, substrata, and structures, such as large woody debris and boulders.
 - D. If this standard is not feasible or practical because of technical constraints, a sensitive resource of equal or greater benefit may be substituted, provided that no net loss of sensitive resource functions occurs and provided the local government, in consultation with the appropriate State and Federal agency, determine that such substitution is justified.
 - E. Sensitive plants that will be destroyed shall be transplanted or replaced, to the maximum extent practicable. Replacement is used here to mean the establishment of a particular plant species in areas of suitable habitat not

affected by new uses. Replacement may be accomplished by seeds, cuttings, or other appropriate methods.

Replacement shall occur as close to the original plant site as practicable. The project applicant shall ensure that at least 75 percent of the replacement plants survive 3 years after the date they are planted

- F. Nonstructural controls and natural processes shall be used to the greatest extent practicable.
- (1) Bridges, roads, pipeline and utility corridors, and other water crossings shall be minimized and should serve multiple purposes and properties.
 - (2) Stream channels shall not be placed in culverts unless absolutely necessary for property access. Bridges are preferred for water crossings to reduce disruption to hydrologic and biologic functions. Culverts shall only be permitted if there are no practicable alternatives as demonstrated by the 'Practicable Alternative Test'.
 - (3) Fish passage shall be protected from obstruction.
 - (4) Restoration of fish passage should occur wherever possible.
 - (5) Show location and nature of temporary and permanent control measures that shall be applied to minimize erosion and sedimentation when riparian areas are disturbed, including slope netting, berms and ditches, tree protection, sediment barriers, infiltration systems, and culverts.
 - (6) Groundwater and surface water quality will not be degraded by the proposed use. Natural hydrologic conditions shall be maintained, restored, or enhanced in such a manner that replicates natural conditions, including current patterns (circulation, velocity, volume, and normal water fluctuation), natural stream channel and shoreline dimensions and materials, including slope, depth, width, length, cross-sectional profile, and gradient.
 - (7) Those portions of a proposed use that are not water-dependent or that have a practicable alternative will be located outside of stream, pond, and lake buffer zones.
 - (8) Streambank and shoreline stability shall be maintained or restored with natural vegetation.
 - (9) The size of restored, enhanced, and replacement (creation) wetlands shall equal or exceed the following ratios. The first number specifies the

required acreage of replacement wetlands, and the second number specifies the acreage of wetlands altered or destroyed.

Restoration: 2: 1

Creation: 3: 1

Enhancement: 4: 1

- G. Wetland creation mitigation shall be deemed complete when the wetland is self-functioning for 5 consecutive years. Self-functioning is defined by the expected function of the wetland as written in the mitigation plan. The monitoring report shall be submitted to the local government to ensure compliance. The Forest Service, in consultation with appropriate state agencies, shall extend technical assistance to the local government to help evaluate such reports and any subsequent activities associated with compliance.
- H. Wetland restoration/enhancement can be mitigated successfully by donating appropriate funds to a non-profit wetland conservancy or land trust with explicit instructions that those funds are to be used specifically to purchase protection easements or fee title protection of appropriate wetlands acreage in or adjacent to the Columbia River Gorge meeting the ratios given above in Guideline 9.F.(9). These transactions shall be explained in detail in the Mitigation Plan and shall be fully monitored and documented in the monitoring report.

Table 2

**Types of Wildlife Areas and Sites
Inventoried in the Columbia Gorge**

Areas	Sites
Bald eagle habitat	Golden eagle
Deer and elk winter range	Great blue heron
Elk habitat	Larch Mountain salamander
Mountain goat habitat	Northern spotted owl
Peregrine falcon habitat	Osprey
Pika colony area	Peregrine falcon
Pileated woodpecker habitat	Purple martin
Pine marten habitat	Western pond turtle
Shallow water fish habitat (Columbia River)	
Special streams	
Special habitat area	
Spotted owl habitat	
Sturgeon spawning area	
Tributary fish habitat	
Turkey habitat	
Waterfowl area	
Western pond turtle habitat	

Table 3

**Columbia Gorge and Vicinity
Endemic Plant Species**

Common Name	Scientific Name
Howell's bentgrass	<i>Agrostis howellii</i>
Northern wormwood	<i>Artemisia campestris</i> var. <i>wormskioldii</i>
Hood River milk-vetch	<i>Astragalus hoodianus</i>
Howell's reedgrass	<i>Calamagrostis howellii</i>
Smooth-leaf douglasia	<i>Douglasia laevigata</i> var. <i>laevigata</i>
Howell's daisy	<i>Erigeron howellii</i>
Columbia Gorge daisy	<i>Erigeron oregonus</i>
Long-beard hawkweed	<i>Hieracium longiberbe</i>
Smooth desert parsley	<i>Lomatium laevigatum</i>
Suksdorf's desert parsley	<i>Lomatium suksdorfii</i>
Columbia Gorge broad-leaf lupine	<i>Lupinus latifolius</i> var. <i>thompsonianus</i>
Barrett's penstemon	<i>Penstemon barrettiae</i>
Pacific bluegrass	<i>Poa gracillima</i> var. <i>multnomae</i>
Obscure buttercup	<i>Ranunculus reconditus</i>
Oregon sullivantia	<i>Sullivantia oregana</i>
Columbia kittentails	<i>Synthyris stellata</i>

Table 4**Natural Areas**

Area	Acres	Vegetation/Terrain
<u>Oregon:</u>		
Angels Rest**	350	Excellent example of basalt cliffs in west end of Gorge; rare plants
Bridal Veil Creek**	320	High-quality, low-elevation riparian forest community
Celilo Ridge*	35	Basalt cliffs and tables with east-end vegetation; rare plants
Chenoweth Table*	300	Mound/swale topography, grassland with bitterbrush, vernal ponds
Columbia Oaks*	420	Oak savanna, native grasses, old-growth fir/pine; rare plants
Crates Point+	340	Grassland, pine-oak savanna, coniferous forest
Elowah Falls**	160	Habitats ranging from Douglas-fir forests to waterfall spray zones; rare plants
Forest Service Waterfalls**	320	Wetlands and waterfall spray zones with Douglas-fir forest and rare plants
Former Mouth of Sandy River**	500	Islands, shorelines and sand/silt bars containing largest population of <i>Rorippa columbiae</i> , a rare plant
Hood River Mountain*	240	Meadow with showy wildflowers; pine/oak woodland
Horsetail Creek Wetlands**	790	Wetlands and lowland deciduous forest communities
Kaser Ridge Dunes*	310	Largest sand dune in Gorge; rare plants
Memaloose State Park+	200	Riparian habitat; plateau and cliffs with rare plants
McCord Creek Meadows**	800	Full spectrum of wet meadow plant communities
Mosier Ponds**	40	Several seasonal ponds, wetlands
Multnomah Basin**	5,600	Wetlands, extensive old-growth communities, meadows, rock garden communities
Rooster Rock**	570	Wetlands and shorelines with rare marsh plant community and riparian forest
Rowena Plateau+	1,700	Grassland, vernal ponds, oak woodland
Ruckel Creek**	650	High gradient watershed with mix of west-end and east-end forest communities
Squally Point+	50	Remnant sand dune with diverse plants, native grasses
Starvation Creek State Park**	12	Some of largest waterfalls in eastern half of Gorge; rare plants
Tanner Creek**	1,000	Old-growth forest; rare plants
Warren Creek**	115	Waterfall spray zones, riparian areas, Douglas-fir / Oregon oak woodland, grassy meadow
Waterfalls State Parks**	80	Waterfall spray zones with associated plant communities; rare plants

Table 4 (cont'd)**Natural Areas**

Area	Acres	Vegetation/Terrain
<u>Washington:</u>		
Beacon Rock State Park**	35	Douglas-fir/red alder forest with open areas; rare plants
Burdoin Mountain**	60	Old-growth Douglas-fir with scattered ponderosa pine
Cape Horn**	55	Topographic bench, basalt cliffs and slopes; rare plants
Columbia Falls**	765	Basalt cliffs, valleys and ridges with 120-175 foot waterfalls; old-growth Douglas-fir, grand fir, and red cedar; rare plants
Columbia Hills*	2,600	Ridge with moist draws, bunch grass prairies, scablands; rare plants
Columbia Tunnels*	15	High-quality oak woodland with native grasses
Dog Mountain**	2,700	East-west transition; fir and hemlock, oak, and ponderosa pine forests, with talus slopes and grasslands
East Fork of Major Creek**	640	Intact, original forest in eastern Gorge; Douglas-fir, ponderosa pine, grand fir, scattered old-growth trees
Hamilton Creek**	1,280	Old-growth patches of Douglas-fir and riparian communities
Horsethief Ponds*	280	Mound/swale topography with ponds; rare plants
Little Wind River**	1,150	Drainage basin, including riparian areas and steep slopes; Douglas-fir and western hemlock forest with old-growth stands and rare plants
Lower Klickitat River Canyon*	145	Oak woodland with native grasses; rare plants
Lower Major & Catherine Creeks**	3,000	Oregon white oak/ponderosa pine forests, with grassland and riparian areas; rare plants
Miller Island**	130	Sand dunes and basalt cliffs; rare plants
Mosley Lakes*	110	Wetlands
Pierce Island**	200	One of the least-disturbed Columbia River islands; cottonwood-Oregon ash and shoreline plant communities; rare plants
Prindle Mountain**	130	Douglas-fir forests, meadows; rare plants
Table Mountain/Greenleaf Basin**	2,300	Bluffs, meadows, wetlands, old-growth forest; rare plants
Underwood Mountain*	120	Douglas-fir forest with rare plants
West Fork of Sasquatch Creek**	430	Remnant old-growth stand of Douglas-fir; rare plants
Wind Mountain**	290	Intact, original Douglas-fir and Oregon white oak forests

* Natural areas in General Management Area (GMA)

** Natural areas in Special Management Area (SMA)

+ Natural areas that include land in GMA and SMA

Source: Washington Natural Heritage Program and Oregon Natural Heritage Database. *Identification of Representative Plant Communities and Botanically Significant Sites in the Columbia River Gorge National Scenic Area*. Washington Department of Natural Resources, Washington Natural Heritage Program; Oregon State Land Board, Oregon Natural Heritage Data Base, The Nature Conservancy, 1989.

