

PART IV

Washington's Statewide System of Natural Areas

In passing the Natural Area Preserves Act in 1972, the Legislature recognized the need for, and benefits of, permanently designating areas explicitly for conservation purposes. The Washington State Department of Natural Resources was authorized to work with federal, state and local agencies and private organizations to establish and manage a statewide system of natural areas. The Natural Heritage Program was given the responsibility of bringing an objective, scientific approach to this effort (see Part III. *The Washington Natural Heritage Program* and Appendix I for a discussion of how conservation priorities for species and ecosystems are established).

The process of evaluating potential natural areas has been designed to ensure that the needs and benefits recognized by the Legislature in 1972 are realized in an efficient and effective manner. The benefits of natural areas, the types of natural areas recognized as being part of the statewide system, and the process used by state agencies for selecting natural areas, are all described below.

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WHAT ARE THE BENEFITS OF NATURAL AREAS?

Maintaining biodiversity is critical to our economic, environmental, and social well-being. The values of biodiversity are briefly summarized in Part II: The Case for Conservation. But what specific benefits are gained by designating lands for the long-term persistence of species and ecosystems? Why designate natural areas? Major benefits provided by natural areas include:

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● **Maintaining habitats for rare species and for conservation of important examples of terrestrial, aquatic, and marine ecosystems.**

More than 150 rare species occur within at least one of the natural areas in Washington. Example: the basalt daisy (shown at left), a candidate for listing under the federal Endangered Species Act, is the primary feature within the Selah Cliffs Natural Area Preserve.

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● **Opportunities for research and education about native species and ecosystems.**

There are more than 60 research, monitoring or inventory projects underway on DNR's natural areas; more than 250 projects have been completed. Projects are undertaken by DNR scientists, researchers, and students. Example: More than 40 projects have been completed at Pinecroft Natural Area Preserve by science students from North Central High School in Spokane.

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● **Baseline reference sites to document environmental change and to learn how ecosystems function.**

Research conducted at natural areas has provided information regarding management of invasive species, use of prescribed fire, and documentation regarding what an ecosystem in a reasonably natural condition looks like. Example: At Rocky Prairie, scientists are gaining valuable information that will help land managers retain prairie ecosystems.

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● **Contributions to our overall quality of life, providing clean air and water, recreational opportunities, scenic diversity, etc.**

Example: DNR manages several large natural areas that contribute to municipal water supplies, such as the NRCAs in the Upper Sultan Basin.

WHAT ARE THE DIFFERENT TYPES OF NATURAL AREAS RECOGNIZED IN THIS PLAN?

In passing the Natural Area Preserves Act, the Legislature emphasized that all lands within the state are "...subject to alteration by human activity..." except those lands that "...are expressly dedicated by law for preservation and protection in their natural condition..."(RCW 79.70.010). That is, most lands are used to meet other objectives, from providing living space, to providing revenue generation, to providing recreation opportunities. On public lands, federal and state agencies have a wide range of land-use designations that provide some level of conservation. But which designations are expressly for "...preservation and protection in their natural condition?" Those designations that emphasize conservation and scientific and educational use are recognized as the core of the natural areas system.

As a result, six land-use designations are recognized as contributing to the statewide system of natural areas: Natural Area Preserves, Natural Resources Conservation Areas, Research Natural Areas, Areas of Critical Environmental Concern, Biological Study Areas, and sites on the Washington Register of Natural Areas. This mix of designations includes federal, state and private lands.

Land-use designations that emphasize conservation and scientific and educational use are recognized as the core of the natural areas system.

Many other land-use designations make significant contributions to the conservation of our native species and ecosystems. National park and wilderness area, for example, are designations for places where human-related impacts are minimized and where native species and ecosystems are maintained in good ecological condition. Their contributions to conservation influence the priorities established in this plan. However, such areas do have major land uses, primarily recreation, in addition to their role in conservation.

Other public land designations, such as DNR-managed lands covered by a Habitat Conservation Plan or national forest, also contribute to species and ecosystem conservation. However, they are also managed for timber, forage for domestic livestock, recreation and a variety of other uses.

NATURAL AREAS DESIGNATIONS

- ▶ Natural Area Preserve (NAP)
- ▶ Natural Resources Conservation Area (NCRA)
- ▶ Research Natural Area (RNA)
- ▶ Areas of Critical Environmental Concern (ACEC)
- ▶ Biological Study Area (BSA)
- ▶ Washington Register of Natural Areas

Sites generally become candidates for natural areas status with the discovery of a place that is either in remarkably good ecological condition or is extremely valuable for the continued existence of a rare species.

HOW ARE POTENTIAL NEW NATURAL AREAS IDENTIFIED?

The process of adding a new natural area to the statewide system is somewhat different for each of the three state agencies that currently manage natural areas. However, all three agencies (State Parks, Department of Fish and Wildlife, and Department of Natural Resources) share the first two steps in the process: (1) candidate sites are reviewed using the selection criteria established in the State of Washington Natural Heritage Plan and (2) sites must be approved by the Natural Heritage Advisory Council.

Each federal agency and private non-profit organization has its own process for establishing new natural areas. Their respective processes are not described in this document.

Sites generally become candidates for natural areas status with the discovery of a place that is either in remarkably good ecological condition or is extremely valuable for the continued existence of a rare species. Some discoveries are made by Natural Heritage scientists during the course of their field work on the priority species and ecosystems. In other cases, a Natural Heritage scientist follows up on a lead provided by another DNR employee, an individual from another agency, or a member of the general public.

Once a prospective natural area has been identified, it is assessed from two different standpoints: the occurrence of priority species and ecosystems within the site, and the site as a whole. This approach ensures that biologically important sites are considered for conservation efforts. The process for assigning priorities to species and ecosystems is presented in Appendix 1.

● SPECIES / ECOSYSTEM OCCURRENCE ANALYSIS

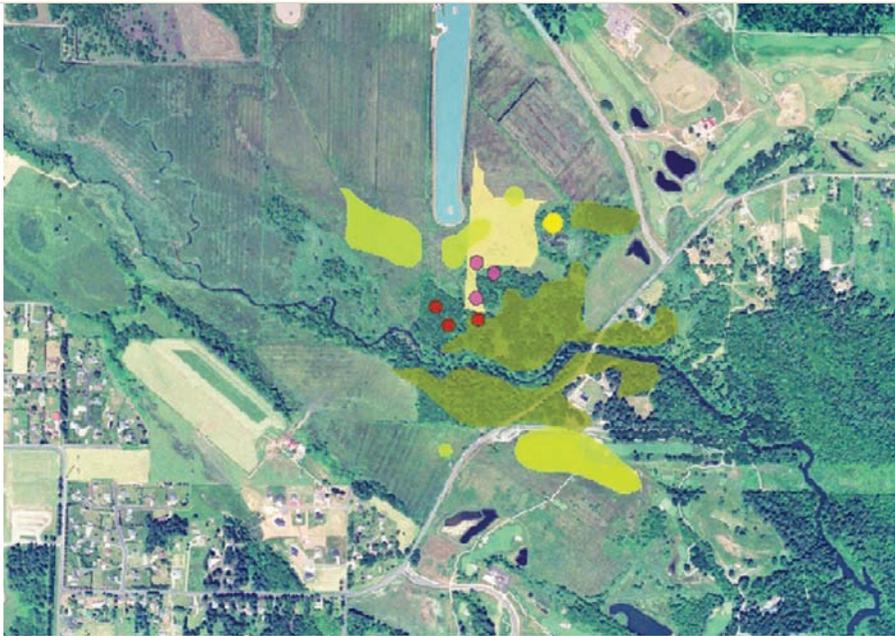
Occurrences of priority species or ecosystems within a prospective site are assessed regarding their overall condition and viability; they are compared to other known examples of the same species or ecosystem. For rare species and rare ecosystems, the goal of designating a natural area is to make a significant contribution to the overall conservation of those species and ecosystems. For common ecosystems, the goal of designating natural areas is to provide protection for the best remaining examples. To that end, the degree to which the occurrence is a good representative example of that ecosystem type is also assessed. Factors considered during the species and/or ecosystems occurrence analysis include:

Size referring to population size for rare species and to the area occupied for ecosystems

Condition referring to the appropriateness or quality of habitat for a species, the species composition of the ecosystem or habitat, the functioning of natural processes within the ecosystem, and the relative maturity of ecosystem development.

Landscape context referring to the condition of the landscape surrounding and affecting the occurrence.

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Potential natural areas are assessed with regard to (1) the presence of priority species and ecosystems and (2) whether the site can be successfully managed through time to maintain the features of interest. The colored polygons represent different priority species and ecosystems. The site analysis consists of looking at the species and ecosystems occurrences within the context of the surrounding landscape.

● SITE ANALYSIS

The site analysis emphasizes ecological quality, diversity and ecological viability as characteristics of the site as a whole. The primary question that must be satisfactorily answered is: can the site be successfully managed through time to maintain the primary species and/or ecosystems? Factors considered and assessed include:

How fragmented is the landscape?

How isolated is the potential natural area from other reasonably intact ecosystems?

Is the site isolated to such a degree that natural processes are disrupted? Can management activities be used to mimic natural processes, such as fire?

Is the site susceptible to changing land uses on adjacent lands? Would development of adjacent lands have a significant negative impact?

What are known management issues for the site?

Are there existing or anticipated weed control challenges?
Is there existing or incompatible human use of the site?

Most prospective natural areas have more than one priority species or ecosystem. It is clearly a more efficient use of public and private resources to select sites with more than one priority feature, thereby potentially reducing the total number necessary to adequately protect the state's biodiversity. However, a single species or ecosystem may be sufficient to warrant establishment of a natural area.

For potential DNR natural areas, the analysis of the priority species and ecosystems is typically conducted by Natural Heritage Program scientists. The analysis of the site as a whole involves staff from the Natural Heritage and Natural Areas programs, as well as appropriate region personnel.

For potential State Parks and Washington Department of Fish and Wildlife natural areas, the analysis is generally conducted jointly by scientists from the individual agency and the Natural Heritage Program.

The primary question that must be satisfactorily answered is: Can the site be successfully managed through time to maintain the primary species and/or ecosystems?

The Natural Heritage Advisory Council advises DNR, WDFW and State Parks regarding selection and management of Natural Area Preserves.

Natural Heritage Advisory Council and DNR staff on field trip to Klickitat Canyon

WHAT IS THE ROLE OF THE NATURAL HERITAGE ADVISORY COUNCIL?

Sites that emerge from the analyses described above are presented to the Natural Heritage Advisory Council (Council), which was established by RCW 79.70.070. The Council advises DNR, WDFW and State Parks regarding implementation of the Natural Area Preserves Act. One of their primary functions is review of potential Natural Area Preserves and Natural Resources Conservation Areas. Based on their evaluation, the Council approves or rejects proposed sites. For sites that are approved by the Council, a recommendation is forwarded to the appropriate state agency head (Commissioner of Public Lands, the Director of the Department of Fish and Wildlife, or the Director of State Parks).

The Council also has two additional major functions:

- ▶ providing guidance regarding management of natural areas
- ▶ directing DNR staff in the revisions to the State of Washington Natural Heritage Plan

The Council has 15 members, including five state agency representatives. Ten members are appointed by the Commissioner of Public Lands and serve four-year terms. Five of the ten members must be recognized experts in the ecology of natural areas. Of the remaining five members, at least one must be or represent a private forest landowner and at least one must be or represent a private agricultural landowner.

The five non-voting ex-officio members are the directors of the Department of Fish and Wildlife and the Department of Ecology; the supervisor of the Department of Natural Resources; and the directors of the State Parks and Recreation Commission and the Interagency Committee for Outdoor Recreation; or their authorized representatives.



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WHAT IS THE PROCESS FOR DESIGNATING DEPARTMENT OF NATURAL RESOURCES NATURAL AREAS?

Upon approval by the Natural Heritage Advisory Council, all potential natural areas to be managed by the Department of Natural Resources must go through the same steps, described below.

Public Hearings and the Commissioner of Public Lands

For those sites that are intended to be acquired and designated as natural areas by DNR, a public hearing must be held in the county where a majority of the land in the proposed natural area is located. The information gained from the public hearing, along with the site recommendation, is forwarded to the Commissioner of Public Lands for review and potential approval.

DNR's Special Lands Acquisition Program

For those sites that are approved by the Council and the Commissioner of Public Lands, and where DNR is the intended managing agency, DNR staff begin the process of acquiring the lands involved. DNR's Special Lands Acquisition Program is responsible for purchasing land that has been approved for Natural Area Preserve (NAP) and Natural Resources Conservation Area (NRCA) status. It is important to make two key points regarding acquisition of land for natural areas:

- ▶ purchases are made only from willing sellers; DNR has no power of eminent domain
- ▶ purchase price is based on market value appraisals.

The program evaluates, prioritizes, coordinates, negotiates, and completes the purchase of special lands properties. Special Lands Acquisition also coordinates the department's applications for state and federal land acquisition grants and administers the grant contracts.

DNR's Natural Areas Program

Upon successful acquisition by DNR, the lands involved are considered part of the natural areas system and become the management responsibility of the Natural Areas Program. The NAPs have been acquired for the protection of the priority species and ecosystems they contain and for research and education. NRCAs also often contain priority species or ecosystems. Regional DNR staff are responsible for on-the-ground activities, while program staff in Olympia provide guidance and scientific expertise and ensure consistency of management. Major management issues are brought before the Natural Heritage Advisory Council.

DESIGNATION PROCESS FOR DNR NATURAL AREA PRESERVES

Candidate sites are identified



NHAC reviews/ approves sites



Public meetings/hearings



Commissioner of Public lands makes decision



Lands acquired (but only if landowners are willing sellers)



Sites managed by Natural Areas Program

MANAGEMENT ISSUES

Fire Suppression

- ▶ Changes in species composition.
- ▶ Changes in ecological processes.
- ▶ Decreased viability of some priority species and ecosystems.
- ▶ Increased likelihood of catastrophic fire.

Non-native Species

Non-native species encroaching upon natural areas results in:

- ▶ Direct competition with the native plant and animal species.
- ▶ Changes in natural ecosystem processes and interactions, such as fire frequency and severity.
- ▶ Pollinator activity.

Public Access

Inappropriate public use has the potential to:

- ▶ Spread non-native and invasive weeds.
- ▶ Impact native species and ecosystems through trampling.
- ▶ Disrupt animals' behavior

WHAT IS THE PROCESS FOR DESIGNATING DEPARTMENT OF FISH AND WILDLIFE AND STATE PARKS NATURAL AREAS?

The process for designating natural areas on Washington Department of Fish and Wildlife and State Parks lands also involves review and approval by the Natural Heritage Advisory Council (Council). Upon approval, the Council sends a letter to the appropriate agency director. In the case of the Department of Fish and Wildlife, the appropriate Region Manager and the Director must approve individual natural area designations.

State Parks designates natural areas as part of their overall management planning process. The Classification and Management Planning (CAMP) process has occurred for Mount Moran, Hope Island North, Riverside and Mount Spokane State Parks.

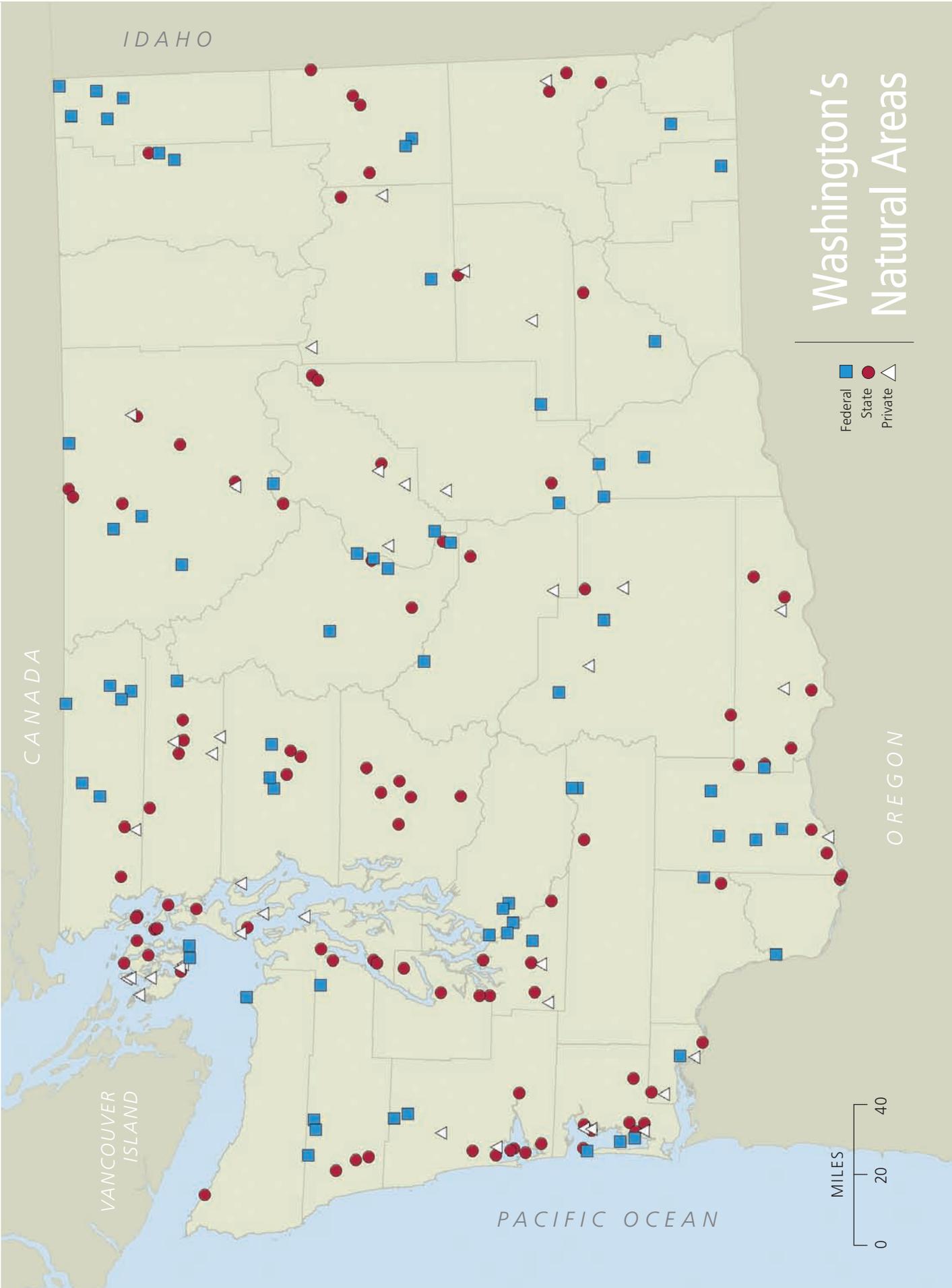
CURRENT STATUS OF THE STATEWIDE SYSTEM OF NATURAL AREAS

The statewide system of natural areas has grown steadily over the years from the first designation of Sand and Goose Islands as Natural Area Preserves (NAPs) in 1973. Today, DNR alone manages 51 NAPs and 31 Natural Resources Conservation Areas (NRCAs). State Parks and WDFW manage an additional 10 natural areas. Washington State University manages 3 Biological Study Areas. Federal agencies manage more than 70 natural areas, including Research Natural Areas (RNAs) and Areas of Critical Environmental Concern (ACECs). Private conservation organizations (primarily The Nature Conservancy) also manage more than 40 natural areas in Washington.

The map on the next page shows the statewide distribution of the more than 200 natural areas recognized in this Plan. Several factors have influenced the number of natural areas in each ecoregion, including the size of the ecoregion and how much of it occurs within Washington, the pattern of land ownership (public vs. private), the degree to which lands within each ecoregion have been converted or degraded, the biotic richness of the ecoregion, and how well the ecoregion has been inventoried.

The natural areas recognized in this Plan are generally in good ecological condition. However, they are not always pristine; in many cases totally undisturbed examples of ecosystems no longer exist or are not available for formal protection. Ideally, natural areas are large enough to protect the priority species and ecosystems present, and to allow the operation of the ecological processes required for their survival.

Active management is required in many natural areas to ensure the long-term viability of the priority species and ecosystems found within them. The management issues are similar regardless of ownership. Major issues include restoring or mimicking natural ecological processes (e.g., fire), control of non-native species, and addressing public access. Each agency participating in the statewide system of natural areas has management responsibility for its individual areas. Management decisions are governed by agency policies, guidelines and regulations.



Western juniper (*Juniperus occidentalis*)

