Important Bird Areas of Washington

Compiled by Tim Cullinan

Audubon WASHINGTON

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Compiled by Tim Cullinan
Produced by Christi Norman and Bríd Nowlan

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Washington Department of FISH and WILDLIFE

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Important Bird Areas of Washington

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Foreword

We're proud to present *Important Bird Areas of Washington*, Audubon's first effort to scientifically identify places throughout our state that are essential to maintaining healthy bird populations. This book represents thousands of hours of work by Audubon chapter members, staff, and volunteers; and by our many partners in the scientific community, government agencies, and other conservation organizations. We especially applaud Tim Cullinan, Audubon Washington's Director of Science and Bird Conservation, whose exceptional skill as both scientist and communicator provided indispensable leadership for this first phase of the IBA project.

With this documentation of our Important Bird Areas (IBAs), Washington joins a worldwide effort to identify key places with significant bird populations. Our state, a vital link on the Pacific Flyway, provides habitat for more than 350 species of birds. Many of our migratory birds depend on small staging areas during their long journeys, like the millions of arctic-bound sandpipers that stop in more than 21 sites now formally identified as IBAs.

In Washington, our native flora and fauna are still fairly widespread and healthy. Yet, our human population is expected to increase by fifty percent in the next fifty years, which will put even greater pressure on habitat. This directory provides a tool for citizen activists, local governments, state and federal agencies, and non-governmental organizations to develop effective conservation strategies. It provides a framework for making decisions today that will protect areas that birds rely on for their well-being now and in the future.

So, in the spirit of John James Audubon, we commend this book to you, and wish you "Good birding!"

Jeff Parsons
Executive Director
Audubon Washington

Helen Engle
Chair
Audubon Washington Stewards

Acknowledgements

The Important Bird Area program would not have been possible without the dedication, commitment, and teamwork of many people and organizations. Audubon Washington happily shares credit for the program's success with hundreds of Audubon members, conservationists, professional biologists, government agency personnel, students, birders, and other volunteers; and with the organizations that provided funding.

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Christi Norman and Bríd Nowlan led the production of this book, enlisting artist Ed Newbold, who painted the color plates; Al Tietjen, who designed the layout and drew the pen-and-ink illustrations; and copy editor Elsa Gruber. We are especially grateful to our chief editor, Hilary Hilscher, who generously donated her time and expertise to the production of this book.

A nod of appreciation goes to staff members at Audubon Washington: Beth Doglio, Jane Hartough, Brenda McMurray, Jeff Parsons, Heath Packard, Kris Schoyen, Ron Shultz, Naki Stevens, Richard Thietje, and Woody Wheeler; and to national staff members Jeff Wells and Dan Niven. We particularly salute Fred Baumgarten, who provided the guidance and inspiration for starting the IBA program in Washington, and supplied much of the information for the introductory sections of this book. Cheers also to Mike Denny, Brenda Senturia, Hal Opperman, and Helen Engle for the advice, encouragement, enthusiasm, and gentle nudges that kept this program moving forward.

As with any endeavor the size of the IBA program, the invaluable contributions of some individuals may not have been documented. We extend our heartfelt thanks to everyone who participated in the IBA program, and offer our sincere apologies to anyone inadvertently omitted from these acknowledgement lists.

This project was made possible by generous grants from the following organizations: The Washington Department of Fish and Wildlife Cooperative Projects Fund, Batdorf and Bronson Coffee Roasters, the Bullitt Foundation, the Greater Wenatchee Community Foundation, the New York Community Trust, Olympia Federal Savings, the Rathmann Family Foundation, the Seattle Foundation, and the Whatcom Community Foundation.

Finally, I thank my wife Val for tolerating my many late nights at the keyboard, and my many weekends away from home during this effort.

Tim Cullinan

Introduction

This publication presents the initial results of the Important Bird Area (IBA) program in Washington. Like IBA programs in other states and countries, ours has two primary and complementary goals: (1) to identify the sites in the state of Washington that are the most essential for long-term conservation of birds, and (2) to take action to ensure the conservation of these sites.

An Important Bird Area is a site that provides essential habitat for one or more species of birds. In most cases, IBAs are discrete sites on the landscape. As with all IBA programs, Washington's sites were chosen carefully, using standard biological criteria and expert ornithologists' review. All sites nominated as potential IBAs were rigorously evaluated to determine whether they met the necessary qualifications. IBAs represent both terrestrial and aquatic sites that are critically important to birds during breeding, wintering and migration.

The purpose of Audubon's nationwide IBA program is to identify in each state a network of sites essential to maintaining naturally occurring populations of birds, and to protect or manage those sites for long-term conservation. Each state has established an IBA program in its own unique way, but the goals, methods and outcomes are consistent across state and national programs.

The basic procedure for any IBA program has six key steps:

1. Establish objective, state-specific criteria for identifying IBAs.
2. Solicit IBA "nominations" from Audubon chapters, birders, scientists, land managers and owners, and other interested parties.
3. Collect data about the sites.
4. Evaluate data from each nomination and determine if the site meets the qualifications necessary to be an IBA.
5. Enter information into a database and report the results of the IBA inventory.
6. Collaborate with local, regional and statewide groups to establish conservation priorities and develop conservation plans for threatened or high-priority IBAs.

This publication contains, in part, the results of the first five steps. The sixth step will be accomplished in the second phase of the program.

This directory contains an accounting of all the IBAs in Washington identified to date. It should be regarded as a status report on the first round of nominations and site selection. The task of gathering credible ornithological and ecological information on all the potential IBAs in a state is enormous. This is especially true in a state as large and diverse as ours. Audubon staff, chapter members, and other dedicated volunteers worked diligently to gather the information necessary to identify and evaluate sites, but it was not possible to create a complete database in the first two years of the program. Consequently, we are aware that there are sites that have been overlooked. These will be inventoried and evaluated in the near future, and those that qualify will be included in a future edition of this publication.

Background

The Important Bird Area program is a global effort. It began in Europe in the mid-1980s, when a committee of scientists from the International Council of Bird Preservation (since renamed BirdLife International) sponsored an intensive inventory of key sites for birds throughout the continent. The scientists used an objective set of criteria to determine whether a site was an "Important Bird Area," focusing on wetlands, aquatic habitats and sites where birds congregated in large numbers.

The initial product of that effort was the book *Important Bird Areas of Europe*, published in 1989. It identified over 2,400 IBAs in 31 countries and provided brief descriptions of each site and its bird life. By the year 2000, the list of IBAs in Europe had grown to 3,600 sites in 51 countries, covering seven percent of the European land mass.

Important Bird Areas of Europe is more than a mere catalogue of key bird habi-

tats. It serves as a blueprint for bird habitat protection throughout the continent. Shortly after the first edition was published, the European Community endorsed the findings of the IBA survey and encouraged its members to give "Special Protection" status to Important Bird Areas. Many countries responded favorably. For example, Denmark has now protected up to 97 percent of the IBAs within its borders. By the mid-1990s, hundreds of sites comprising almost sixteen million acres of habitat in Europe had been given some special protection.

Important Bird Area inventories have been or are now being conducted in 100 countries, on nearly every continent. IBA inventories are complete for Europe, the Middle East, and much of Africa. In North America, a first volume of Important Bird Areas in Canada, Mexico and the United States (50 sites in each country) was published in 1999 by the Commission on Environmental Cooperation, a tri-national body created under the North American Agreement on Environmental Cooperation. As of summer 2001, Canada's Important Bird Areas program has collected data on 600 sites and has initiated conservation planning on about 150 of these. The Mexican IBA program, *Areas de Importancia para la Conservacion de las Aves*, has identified most of the qualifying sites and has established a hierarchy of conservation priorities for that country's IBAs.

The mid-1990s saw the creation of the American Bird Conservancy, the U.S. affiliate of BirdLife International. During the same time period, the National Audubon Society completed a long-range strategic plan, refocusing on its historic mission to conserve birds, other wildlife, and their habitats. Together, the American Bird Conservancy (ABC) and Audubon brought the IBA program to the United States. The ABC took on the task of identifying Important Bird Areas of national significance, while Audubon chose to conduct IBA inventories of individual states.

A pilot project was begun to identify and describe the Important Bird Areas in Pennsylvania in 1995, and a similar project in New York State soon followed.

Since then, most of the remaining states have begun IBA projects. As of summer 2001, IBA inventories are either complete or in progress in 30 states.

In late 1997, Audubon Washington entered into a partnership with the Washington Department of Fish and Wildlife (WDFW) to begin an Important Bird Areas program in our state. Funding came from WDFW's Cooperative Projects Fund to help defray the travel costs of volunteers participating in the program. In 1998, volunteers were trained and data collection began. During the next two years, seventy-five sites were formally nominated and evaluated; additional evaluations are ongoing. This publication describes the first 53 sites selected as IBAs in Washington.

Goals of the IBA Program

The primary goal of the IBA program in Washington is to identify and describe specific places on the landscape that are essential for sustaining wild bird populations in our state. The aim is to provide landowners and managers, planners, developers, regulators, conservationists, and other interested parties with reliable information on where the birds are, in order to support sound land use and management decisions. By establishing science-based priorities for identification and conservation of IBAs, and by creating awareness of the places vital to the survival of bird populations, the IBA program promotes thoughtful, sensible decisions regarding land use and development.

The IBA program is, of course, more than just an information-management exercise. The ultimate goal is to slow the tide of habitat loss and to create safe havens that ensure healthy habitats for productive breeding, wintering and migration. The objective is to foster sound stewardship of vital bird habitats in Washington and to guarantee that the ornithological values of these sites will continue in the future.

Site Identification and Selection

Biological Rationale

The Important Bird Area concept is a site-based approach to wildlife conservation. It recognizes that there are some places on the landscape that provide exceptionally valuable habitat for birds. Enlightened management of these most-critical sites is an important approach to conservation. Many species can be effectively conserved in this manner.

Because of the gregarious nature of some species — such as herons, waterfowl, shorebirds and seabirds — sites with extraordinary values for these species are easily recognizable. In the case of more widely dispersed birds, most rare or declining species are closely associated with a specific habitat type or with a narrow range of habitats. Consequently, by recognizing and identifying the highest-quality examples of such habitats, we can delineate sites that will form the basis of a landscape-level conservation network. In either case, experience has shown that sites with high value for one bird species often support numerous species.

The IBA selection process examines sites based on: (1) the presence and abundance of birds, and/or (2) the condition and quality of the habitat. We seek, primarily, sites that support rare species, or an exceptional abundance of one or more species, or sites that contain large and relatively undisturbed examples of native habitats.

The Selection Process

The IBA program in Washington began in late 1997, when a team of bird experts from across the state developed selection criteria for IBAs. The team of eight people (the Expert Team) included expert birders, ornithologists, wildlife managers, and members of academia from most regions of the state. Using criteria from several eastern states as models, the Expert Team developed a set of draft standards for sites to qualify as Important Bird Areas (see next section).

It was immediately recognized that the criteria developed in the eastern U.S. could not be easily applied here. Therefore, selection criteria were deliberately left in draft form, with the understanding that they would be revised as the Team learned more about the characteristics of key bird areas in Washington. The selection criteria were made final in autumn 2000.

The IBA identification and selection process involved two steps: nomination of sites, and evaluation by the Expert Team. Nominations for IBAs were solicited from Audubon chapters, other bird advocacy groups, landowners and managers, natural resource agency personnel, and other interested parties. A site nomination involves completing a five-page form that provides information about the physical and biological characteristics of a site, its ornithological significance, habitat, land use, ownership, and potential threats to birds and habitat (see Appendix A). The Expert Team assisted in the design of the nomination form.

Audubon Washington began distributing IBA nomination forms in summer 1998. With grant funding from WDFW, we sponsored a two-day training session for our Audubon chapter leaders, to familiarize them with the IBA project and to train them in the identification and nomination of sites as IBAs. Ninety-three people, representing 23 of Washington's 26 local Audubon chapters, attended the training session.

Audubon chapter leaders recommended that the first step in the identification process be a list of potential sites. This list would serve two purposes. First, it would assist the staff in determining the scope of the project; second, it would allow us to coordinate among chapters the task of filling out nomination forms, to prevent duplication of effort. We used two methods to generate the initial list. Participants in the training session drew potential IBAs on a large-scale map of Washington. They then polled chapter members about likely IBAs in their areas and submitted descriptions of potential IBAs on an abbreviated, one-page version of the nomination form. With the use of these methods we identified nearly 160 sites as potential IBAs.

When nominations were received, the IBA coordinator summarized the information and sent it to members of the Expert Team for review. They evaluated the information and recommended that a site be either accepted or rejected as an IBA, or they requested additional information. Nominations and supporting information were kept on file, and summary data about each nominated site were stored in an ArcView database at Evergreen State College.

As of this writing, BirdLife International and the National Audubon Society are making final the American version of the *World Bird Database,* to be used by all states with IBA programs. This data management system is currently in use in most countries with IBA programs. When it becomes available for use by individual states, all of the Washington IBA data will be entered and stored on the *World Bird Database* system, where it will become part of the worldwide system and will be available for retrieval from the BirdLife International web site.

Selection Criteria

An Important Bird Area is a site providing essential habitat for one or more native species of birds in Washington at any time in their annual life cycle. Sites vary in size, and are usually distinguishable from surrounding areas in character, habitat, or ornithological importance. In most cases, sites are delineated by clearly recognizable physical features that separate them from adjacent areas. Boundaries include rivers, roads, ridgelines, abrupt habitat edges, and other clear landmarks. When possible, the boundaries of an IBA are drawn to encompass most of the birds' needs (e.g., feeding and roosting areas) during the seasons for which those are important.

In general, IBAs are predominantly natural areas. Human-made habitats such as landfills and sewage lagoons are generally not considered IBAs. Further, there should be reasonable potential for IBAs to receive additional protection and/or enhanced habitat management in the future, for the benefit of birds.

Location of IBA sites in Washington

Standardized criteria are used to identify and select Important Bird Areas. These criteria are biological in nature and reflect the quantity and/or quality of bird life in given areas. The criteria are not designed to evaluate the educational value or the recreational birding values of sites. While every attempt is made to fulfill one or more of the criteria when nominating sites for IBA designation, the criteria are not absolute and other factors, such as importance relative to other sites, may be taken into account when making final selections.

The criteria are divided into five major categories, described briefly below. Sites meeting one or more of these criteria can qualify as Important Bird Areas. More detailed information about the criteria can be found in Appendix B.

CATEGORY 1: Site for endangered or threatened species, or species of special concern in Washington.

CATEGORY 2: Site for species on the National Partners in Flight WatchList with significant breeding or wintering populations in Washington.

CATEGORY 3: Site containing species assemblages associated with a representative, rare, or threatened natural-community type in Washington.

CATEGORY 4: Site important for long-term avian research or monitoring.

CATEGORY 5: Site where birds regularly concentrate in significant numbers.

Conservation and Management of Important Bird Areas

The ultimate goal of the Important Bird Areas program is to promote the conservation of essential habitats for birds. Because the legal, political, regulatory, and voluntary means of habitat conservation vary widely among jurisdictions, regions, and land ownership, each site must have its own individually tailored conservation strategy. Audubon Washington encourages people interested in helping conserve IBAs to talk with our state office, as well as with landowners and managers, local officials, regulatory and management agencies, and other conservation organizations. Future publications from Audubon Washington will provide a more in-depth discussion of IBA conservation and management.

The Role of Important Bird Areas in Avian Conservation

It is important to note that the IBA program is not a panacea for bird conservation, nor is it one that will work equally well for all species. The IBA site-based approach to bird conservation is not even applicable to some species. For example, territorial species that are widely dispersed at low densities across a breeding range, such as raptors and songbirds, cannot be conserved by protecting a few sites where they are known to occur. Such species require landscape-level or management-based approaches— e.g., designing new land-use techniques that promote successful breeding and survival. *The lack of IBA status for a particular place does not imply that it is unimportant for birds.* Rather, the lack of IBA designation in that specific location may merely mean that a site-based approach to conservation is less effective than another method.

Also, the IBA program seeks to identify the most essential sites statewide. While some sites are not significant on the state level, they may nonetheless be very important for conserving birds on the county or local level. For example, many parks and green spaces in the heavily urbanized parts of western Washington provide the last refuges for birds in an entire city. Likewise, small, remnant

patches of mature or old-growth forest in landscapes dominated by short-rotation industrial forestry provide high-quality habitat for some old-growth associated birds. While such parks and remnant forests are not extraordinary from a statewide perspective—and therefore are not eligible for IBA status—they may be vital on the local level.

Though the IBA Program is not the final word on bird conservation in Washington, it is a substantial and effective tool. IBAs, together with other approaches to safeguarding birds and their habitats, will help ensure that future human generations will be able to experience the same richness and diversity of bird life that current generations now enjoy.

General Guidelines

This publication can be used to help determine local, county, and state conservation priorities. IBA information allows different areas to be compared, using several criteria: the area's importance to birds; the nature and urgency of threats; and the feasibility of successfully implementing conservation actions. To the greatest extent possible, we have used objective, numerical criteria to assess sites. However, our information base is incomplete at this time: Not all potential IBA sites in Washington have yet been evaluated, and there certainly will be more IBA sites identified in the future.

The process of identifying IBAs has also produced data useful for guiding land use planning and habitat management decisions. Information about the species and groups present, their seasonal abundance, and major habitat types can assist landowners and managers in avoiding detrimental impacts. Some IBA descriptions are merely summaries of the data we have collected, and people interested in conservation of a particular site should contact Audubon Washington to see if more information is available.

Because the IBA concept is site-based, conservation strategies will differ from

site to site. For each IBA, owners, managers, and conservationists will need to assess the location, physical and biological characteristics, patterns of current and past land use, habitat and management needs, laws, regulations, and the availability of resources, before proceeding with any conservation strategy. Such assessments must also consider the needs and attitudes of people using the area, because the most successful and enduring conservation arises from cooperative partnerships among private landowners, public land managers, governments, individuals, and non-government organizations. The best conservation planning involves all stakeholders, and private landowners must be given the opportunity to participate in the cooperative planning process.

The Important Bird Area program carries no regulatory authority. Identification of a site as an IBA imposes no legal restrictions or management requirements on any property, public or private. It is our intent that the recognition of an area as important for birds will encourage a sense of stewardship among landowners and managers, and lead them to voluntarily safeguard the habitat and bird life on their lands. Audubon Washington's goal is to achieve—through partnerships, education, and outreach—an environment in which individuals and communities take pride in the knowledge that they are the stewards of extraordinary natural resources, and that their involvement will help ensure a better future for both birds and people.

Site Summaries

A summary of each Important Bird Area appears in this section. The sites are organized geographically, with the state divided into four regions: Pacific Coast, Western Lowlands, Cascade Mountains, and Columbia Basin. Within each of the four areas, the sites are arranged alphabetically by site name. All sites and corresponding page numbers are listed in the index.

The summaries were compiled from information submitted in nomination forms, from published and unpublished literature, and from interviews. Printed sources are listed in the bibliography. The information in the summaries is arranged under the following headings:

- Name of Site
- Geographic Coordinates
- Elevation/Size
- Ownership
- IBA Criteria
- Habitats
- Land Use
- Site Description
- Birds and Habitat
- Conservation Issues

Name of Site

The site name suggested by the nominator. Often, this is a name that appears on U.S. Geological Survey maps. Most site names are based on a natural landmark or geographical feature, or on a land management unit such as a state wildlife area or national wildlife refuge. In cases where a site is known by more than one name, the second is listed in parentheses. Where several geographical locations were combined into a single IBA, the names were combined.

Geographic Coordinates

Latitude and longitude of the approximate center of the IBA.

Elevation/Size

The site's elevation in meters above sea level, and the size of the area in hectares. One hectare (ha) = 2.47 acres; one meter (m) = 3.28 feet.

Ownership

General land ownership categories, listed in order of relative amount from most to least. Additional information about site ownership also appears in some of the site descriptions.

IBA Criteria

The criteria under which the site qualifies as an IBA. Additional information about the site's qualifications is found under the **Birds and Habitat** heading.

Habitats

General categories of major habitats present on the site, listed in order of relative amount, from most to least. In some cases, additional information about habitat appears in site descriptions or under the **Birds and Habitat** heading.

Land Use

General categories of land use, listed in order of amount, from most to least.

Additional information about land use may appear in the site description or conservation issues sections.

Site Description

General description of the location, and the physical and ecological characteristics of the site. Additional information about ownership or management, habitat, and land use may appear under this heading.

Birds and Habitat

Overview of why the site is important to birds. In particular, this section describes the evidence upon which the site's identification as an IBA was based. It includes available information on bird population sizes and the significance of those populations. Where a site qualifies under Category 3, the description lists the habitat and describes the assemblage of species associated with that habitat. In some cases, a separate table lists the important species or groups and estimates of their seasonal abundance, when available.

Conservation Issues

Summary of the existing or potential threats to the birds or habitat on the site.

Key to Codes Used in Site Summaries

IBA Criteria

These are standardized criteria used to identify and select Important Bird Areas. They are divided into the following categories. See Appendix B for a more detailed description of the IBA selection criteria.

CATEGORY 1: Site for endangered or threatened species, or species of special concern in Washington.

CATEGORY 2: Site for species on the National Partners in Flight WatchList with significant breeding or wintering populations in Washington.

CATEGORY 3: Site containing species assemblages associated with a representative, rare, or threatened natural-community type in Washington.

CATEGORY 4: Site important for long-term avian research or monitoring.

CATEGORY 5: Site where birds regularly concentrate in significant numbers.

5a. Over a short period of time during any season: at least 2,000 waterfowl in fresh water habitats; or 5,000 waterfowl in marine/estuarine habitats.

5b. Over a short period of time during any season: at least 50 seabirds, in either marine or terrestrial nesting areas; or 1,000 gulls at inland sites or 5,000 gulls at coastal sites; or 50 terns.

5c. At least 100 shorebirds in fresh water habitats or 1,000 shorebirds in marine/estuarine habitats, over a short period of time during any season; or 12 or more shorebird species over a season (two to three months).

5d. At least 50 Great Blue Heron nests; or any nesting pelicans, egrets, or Black-Crowned Night Herons during breeding season; or 30 Brown Pelicans at any time of the year.

5e. Migratory corridor for at least 1,000 raptors (seasonal total) during

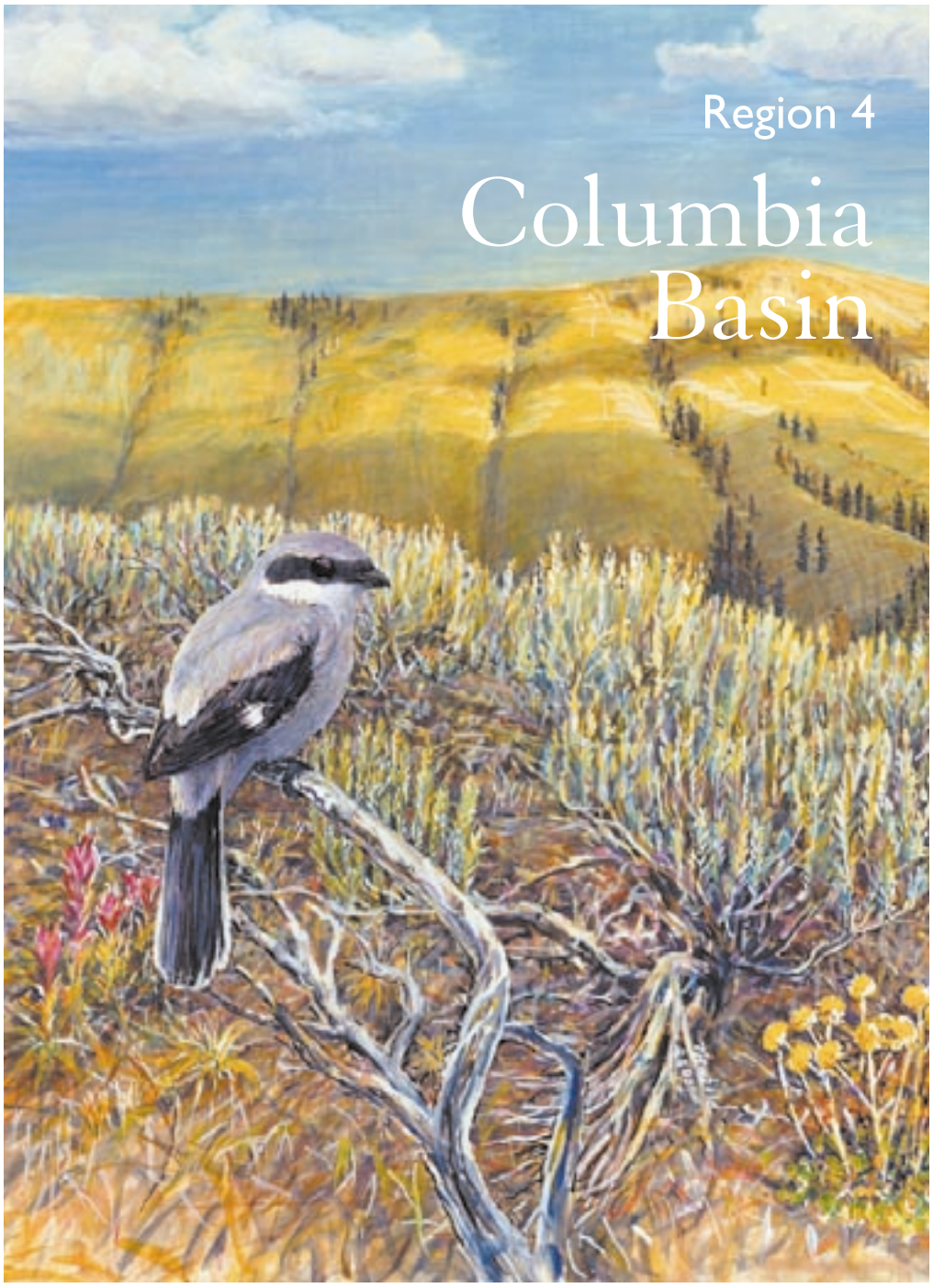
spring or fall migration; or a winter concentration area used by at least 100 raptors.

5f. Significant proportion of a species' statewide or regional population at one time during some part of the year.

5g. Exceptional number or diversity of terrestrial birds during the migration season.

Season Codes

W=winter, **S**=spring, **B**=breeding, **F**=fall, **M**=migration.


Region 4
Columbia
Basin

COLUMBIA BASIN

Calispell Lake

48° 16′ N, 117° 12′ W 640 m/1,700 ha

Ownership	Private
IBA Criteria	5a, 5c, 5f
Habitats	Marsh, agricultural, open fresh water
Land Use	Agriculture, wildlife conservation

Site Description

Calispell Lake is a seasonal lake and wetlands complex consisting primarily of cattail marsh, upland grasslands, and agricultural meadows. It is located in Pend Oreille County, 29 kilometers east of Chewelah, on a tributary of the Pend Oreille River. Withdrawals for irrigation result in seasonally fluctuating water levels and extensive cattail flats. The site is privately owned and is managed for agriculture and waterfowl habitat. It is not open for use by the public; permission to enter must be obtained from the owners.

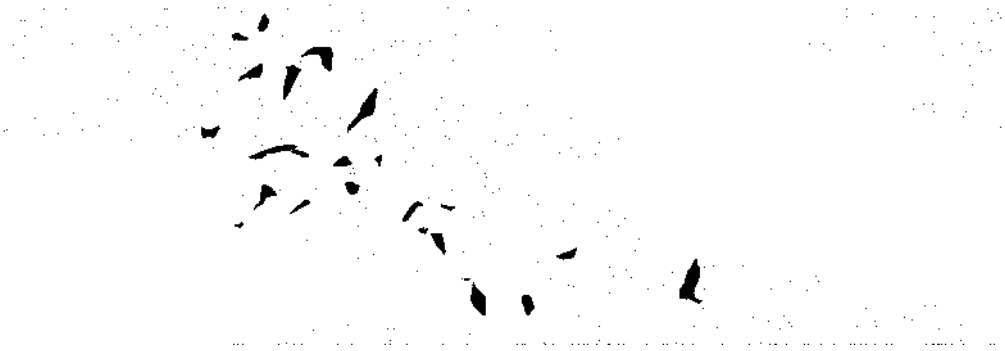
Birds and Habitat

Calispell Lake is very productive and supports rich populations of wetland vegetation and aquatic invertebrates. The lake's primary value to birds is as a migration staging area for waterfowl, Sandhill Cranes, and shorebirds. The Washington Breeding Bird Atlas identifies this as one of only 19 sites in the state with a breeding population of Bobolinks.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
waterfowl	SM	2,290	4,740
Bald Eagle	W	2	5
Sandhill Crane	FM	50	250
shorebirds	FM	300	380
Bobolink	B	10	35

Conservation Issues

The lake and some of the surrounding uplands are managed for waterfowl habitat by a private duck-hunting club, so land uses are fairly compatible with bird conservation objectives. In summer, water is pumped from the lake for irrigation and livestock. Drawdowns may make the lake more vulnerable to invasions by non-native plants.



COLUMBIA BASIN

Columbia Hills

45° 43′ N, 120° 26′ W 49-954 m/50,765 ha

Ownership	Multiple public, private
IBA Criteria	1, 3, 5a, 5e
Habitats	Shrub-steppe, grassland, deciduous forest, agricultural
Land Use	Rangeland/pasture, conservation, recreation

Site Description

The Columbia Hills are a vast and distinct landform spanning 65 kilometers along the Columbia River in southern Klickitat County, extending from the Klickitat River eastward to Rock Creek, and north from the Columbia River approximately 10 kilometers. The south slopes rise abruptly from the Columbia, in places gaining 500 meters of elevation in 1.5 kilometers. The IBA comprises about 25 small tributary drainages of the Columbia River; and 15 northward-flowing streams, mostly tributaries of Swale Creek, which forms part of the northern boundary. The IBA excludes the Dallesport airport and the developed areas around State Route 14. Agriculture is the dominant land use, along with some forestry.

Birds and Habitat

The Columbia Hills IBA supports several assemblages of birds associated with rare habitat that includes Oregon white oak woodlands and riparian deciduous forest. Shrub-steppe, including native grassland, is the dominant habitat of the site, along with oak-pine woods, western juniper savannah, basalt cliffs, and fresh water wetlands. Hundreds of raptors of 13 or more species, including Bald Eagle and Peregrine Falcon, have been recorded in winter. The area supports five

Prairie Falcon aeries, at least three Golden Eagle aeries, Swainson's Hawk nests, nesting and wintering Lewis's Woodpeckers, Grasshopper, Brewer's and Harris's Sparrows, and Long-billed Curlew. Over 2,000 waterfowl have been recorded at Swale Creek wetlands in winter.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
waterfowl	W	3237	5199
Bald Eagle	W	15	20
Northern Goshawk	B,W	--	2
Ferruginous Hawk	SM/B/FM	--	3
Golden Eagle	W	--	13
Golden Eagle	B	6	6
Peregrine Falcon	W	1	3
raptors	W	--	568
Sandhill Crane	SM	--	50
Lewis's Woodpecker	W	6	13

Conservation Issues

Of greatest concern is the proposed development of wind energy facilities in the eastern part of the IBA. Excessive incidental mortality of birds could occur if wind generators are placed in areas used as corridors by migrating birds or as foraging areas by raptors. Conversion of agricultural land to residential uses is another potential threat to habitat quality.

COLUMBIA BASIN

Columbia National Wildlife Refuge

46° 55′ N, 119 °15′ W 290 m/8,499 ha

Ownership	Federal
IBA Criteria	3, 5a, 5f
Habitats	Shrub-steppe, marsh, open fresh water, basalt cliffs
Land Use	Wildlife conservation, recreation/tourism

Site Description

The site in southeastern Washington is a complex of upland shrub-steppe, and interconnected open water and marshes. Ponds and wetlands are created by water from the Columbia Basin irrigation system seeping through underlying basalt into depressions carved by Pleistocene floods. This provides a year-round source of open water in a region that has only 20 centimeters of annual precipitation. The refuge includes 200 lakes and wetlands, 22.5 linear kilometers of Crab Creek, basalt outcrops, and ancient flood channels, and contains more than 6,070 hectares of shrub-steppe habitat.

Birds and Habitat

Columbia NWR supports an assemblage of bird species associated with native shrub-steppe, one of the most threatened habitat types in Washington. The site is primarily important for waterfowl for fall migration staging and wintering, and as a migration staging area for Sandhill Cranes. The area has large nesting populations of local priority species, including Rock Wren, Northern Harrier, Loggerhead Shrike, and Cinnamon Teal. It provides fresh water foraging for American White Pelicans in autumn; and for herons and egrets, including as many as 170 Great Egrets.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
Great Blue Heron	SM, FM	40	70
Great Egret	FM	40	170
Tundra Swan	SM, FM	100	300
Mallard	FM, W	40,000	80,000
Sandhill Crane	SM, FM	2,000	5,000
shorebirds	FM	200	600

Conservation Issues

The area is currently managed for wildlife conservation and wildlife-related recreation. Wetland and upland restorations are in progress. The primary threat is the spread of invasive exotic plants, which preclude recovery of native grasses such as Sandberg's bluegrass, bluebunch, and wheatgrass. Use of pesticides on surrounding agricultural lands may have a detrimental impact on insect populations, which are in decline. Recreational and agricultural developments threaten habitat in inholdings and on adjacent lands. Despite its dependence on water, the refuge does not have secure water rights.

COLUMBIA BASIN

Douglas Creek

47° 29′ N, 119° 54′ W 425-850 m/5,370 ha

Ownership	Federal
IBA Criteria	1, 3, 4
Habitats	Shrub-steppe, riparian, cliffs
Land Use	Wildlife conservation, recreation, watershed protection, scientific research

Site Description

Douglas Creek, which flows in southeasterly through the southern end of the Waterville Plateau in Douglas County, comprises the land in federal ownership in the Douglas Creek canyon and its major tributary, Duffy Creek, along with the surrounding uplands and cliffs. In its lower reaches, the creek flows through a steep canyon flanked by high basalt cliffs. This land is managed by the U.S. Bureau of Land Management primarily for wildlife habitat and wildlife-oriented recreation. An exclosure fence erected in 1980 has prevented cattle grazing and allowed native vegetation to recover.

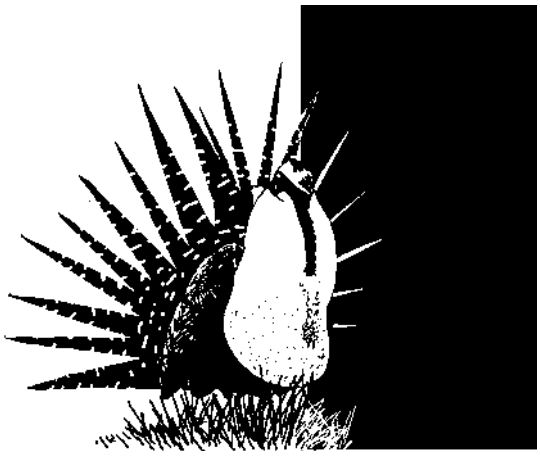
Birds and Habitat

Douglas Creek supports a high diversity of breeding birds, including Golden Eagles, Greater Sage Grouse, and Brewer's Sparrow. Located in dry, intensively farmed landscape, the creek and its riparian zone support an assemblage of birds associated with deciduous riparian habitat. Bird species include a wide variety of songbirds, particularly warblers and sparrows; as well as Lewis's Woodpeckers and Olive-sided Flycatchers. Vagrants recorded here include Black-and-white Warbler, Northern Waterthrush, and American Redstart. Research and monitor-

ing in this IBA, one of eastern Washington's most important songbird migrant traps, began prior to 1980, when the fence was erected to exclude cattle. A MAPS banding station has operated here since 1993.

Conservation Issues

Riparian vegetation can be damaged by flooding. Douglas Creek drains a large area, and water volumes can be very high when spring rains come before the ground has thawed. Consumption of cottonwoods by a rapidly increasing population of beavers may delay establishment of mature trees. The drier portions of the area are vulnerable to invasion by non-native plants, particularly whitetop, knapweed, and toadflax.



COLUMBIA BASIN

Fitzner-Eberhardt Arid Lands Ecology Reserve

46° 25′ N, 119° 25′ W 130-1,060 m/30,845 ha

Ownership	Federal
IBA Criteria	1, 3, 5a, 5c
Habitats	Grassland, shrub-steppe
Land Use	Wildlife conservation, scientific research, utility

Site Description

The Arid Lands Ecology Reserve, in Benton County, is one of the few large, contiguous blocks of shrub-steppe habitat in the Northwest still retaining a dominant pre-European settlement ecology and physical character. The site was closed to public access in the early 1940's, which preserved the native shrub-steppe ecosystem in a quantity and quality not found elsewhere in the Columbia Basin. Managed as a wildlife reserve and environmental research area, this site has a long history of biological and ecological studies, beginning in the 1950's. The area's diversity of habitats—from a windswept treeless sub-alpine ridge at 1,060 meters of elevation, to bunchgrass grassland, shrub-steppe, and riparian habitats at 130 meters—supports a wide array of unique plant and animal species. Biological inventories conducted in the 1990's yielded 20 new plant varieties and 50 species of insects previously unknown in Washington.

Birds and Habitat

The Reserve supports an extraordinary assemblage of breeding birds associated with grassland and shrub-steppe ecosystems, including Ferruginous Hawk, Long-billed Curlew, Burrowing Owl, Loggerhead Shrike, Sage Thrasher, Brewer's Sparrow, Sage Sparrow, and Grasshopper Sparrow. The site supports one of

Washington's largest breeding populations of Sage Sparrows (up to 200 adults), a candidate species for state listing. Breeding populations of Brewer's and Grasshopper Sparrows number as high as 300 and 1,000, respectively. Two other state candidate species, Loggerhead Shrikes and Sage Thrashers, commonly breed here; and as many as six Ferruginous Hawks, a state-listed threatened species, have been recorded during breeding season. Two year-round springs support extensive riparian areas that provide breeding habitat for flycatchers, warblers, orioles, and other neotropical migrants.

Conservation Issues

In late June 2000, a massive wildfire swept through nearly all of the Arid Lands Reserve. In many places, mature sagebrush was destroyed, but native grasses are expected to recover quickly. Disturbance of soil by fire-fighting equipment left the ground vulnerable to invasion by non-native plants. Although infrequent fire is a natural part of the system, there is a concern that cheatgrass will quickly re-colonize some areas, thus leading to more frequent fires which, in turn, limit the growth of sagebrush. Reserve managers have estimated that $600,000 is needed to restore the areas damaged by firefighting equipment and to prevent the rapid spread of invasive exotic plants. Even before the fire, invasive exotics were a conservation threat. Airborne pesticide drift from nearby agricultural land is also a cause for concern.

COLUMBIA BASIN

Fort Simcoe

46° 21′ N, 120° 50′ W 420-442 m/82 ha

Ownership	State
IBA Criteria	1, 2, 3, 5f
Habitats	Oak woodland, shrub-steppe, riparian
Land Use	Recreation

Site Description

A former army post 40 kilometers west of the town of Toppenish, Fort Simcoe is a state park with an extraordinary stand of mature Oregon white oak. The oaks were planted and irrigated in the late nineteenth century, creating an island of oak habitat in a landscape of shrub-steppe. A small creek with a brushy riparian zone runs through the area. The combination of natural and cultivated vegetation provides a rich and diverse mix of habitats in an otherwise dry landscape.

Birds and Habitat

Fort Simcoe is significant because it supports an extremely dense year-round population of Lewis's Woodpecker, a candidate for listing as a threatened species by the Washington Wildlife Commission, and a WatchList species. In a typical year, 100 to 150 woodpeckers occupy the park, and in some years up to 200 have been recorded. The high quality riparian zone has a rich diversity of fruit-bearing shrubs, and supports a diverse songbird population, including some species uncommon in this part of Washington, such as Ash-throated Flycatcher, Bewick's Wren, Black-throated Gray Warbler, and Purple Finch. On average, two or three Prairie Falcons winter here, with as many as five in some years.

Conservation Issues

Removal of oaks, to protect historic buildings from potential falling limbs and wind-thrown trees, diminishes the amount of habitat available to birds. The vegetation in the historic district of the park is intensively managed to maintain lawns and residential landscaping, which may limit the regeneration of oaks and prevent the replacement of the mature trees by new growth.

COLUMBIA BASIN

Hanford Reach

46° 42′ N, 119° 28′ W 110 m/10,430 ha

Ownership	Federal
IBA Criteria	1, 3, 4, 5b
Habitats	Open fresh water, riparian, gravel bars and banks, grassland
Land Use	Wildlife conservation, recreation

Site Description

This IBA comprises the Columbia River, and the near-shore environment extending approximately 0.4 kilometers inland from the shoreline between the Vernita Bridge on State Route 24 and the town of Ringold. The majority of this 56-kilometer stretch of free-flowing river contains islands, gravel bars, and rapids. The water quality through the length of this IBA is designated Class A (excellent) by the State of Washington. The adjacent land is varied habitat containing wetland vegetation as well as grasses, sagebrush, and scattered trees.

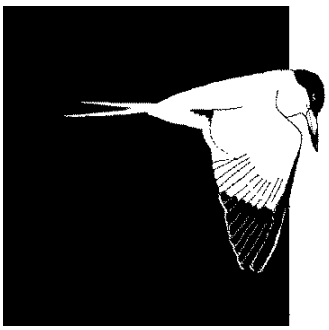
Birds and Habitat

This last free-flowing section of one of the largest rivers in the United States is important for birds that use riverine habitats in the semi-arid West. It supports a high concentration of wintering Bald Eagles and waterfowl. Cliffs provide nesting sites for swallows, owls, hawks, and falcons. The 40 species of fish inhabiting the reach support American White Pelicans, gulls, and cormorants. Lack of accessibility means a low level of disturbance by humans. The site has a long history of ecological studies, dating back to 1950's.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
American White Pelican	all	50	100
Great Blue Heron	B	30 pairs	50 pairs
Bald Eagle	W	35	45
Long-billed Curlew	B	4	4
Ring-billed Gull	B	500	1,000
Common Tern	B	50	100
Burrowing Owl	B	1	1
Loggerhead Shrike	B	4	6
Sage Sparrow	B	2	4

Conservation Issues

The Hanford Reach was declared a National Monument in June 2000; however, in May 2001 the Bush administration was considering revoking this protected status. If protection were removed, the area could become available for agricultural development, which would reduce the available bird habitat, especially for terrestrial species. Additional threats include invasion by non-native plants and increasing adverse impacts from recreational use, particularly motorized boats.



COLUMBIA BASIN

North Potholes Reserve

47° 05′ N, 119° 19′ W 317 m/1,540 ha

Ownership	State, federal
IBA Criteria	1, 3, 5, 5d
Habitats	Shrub-steppe, forested wetland, open fresh water, marsh
Land Use	Wildlife conservation, recreation

Site Description

Located five kilometers southwest of the city of Moses Lake, the North Potholes Reserve is a rich mixture of seasonally fluctuating fresh water wetlands, riparian forests, and mature shrub-steppe uplands. The site has been designated a Watchable Wildlife Area by the U.S. Bureau of Reclamation, which manages most of the land and water in the area. Water levels are regulated to maintain nesting and foraging areas for aquatic birds. Public access is restricted on part of the area in spring to prevent disturbance to nesting birds.

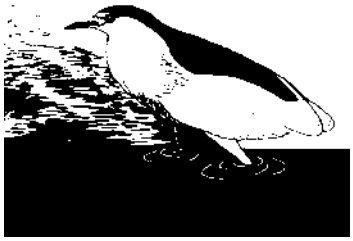
Birds and Habitat

The shallow water ponds and wetlands of the North Potholes Reserve support a rich fishery that provides an important feeding area for pelicans, cormorants, herons, and egrets. The mature willows surrounding the wetlands support large nesting colonies of herons, and the high quality uplands habitat supports a diverse assemblage of species associated with shrub-steppe communities, including Long-billed Curlew, Loggerhead Shrike, Sage Thrasher, and Vesper, Lark, Sage, and Grasshopper Sparrows.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
American White Pelican	SM, FM	200	1,600
Double-crested Cormorant	B	140	--
Great Blue Heron	B	425	--
Great Egret	B	1,300	--
Black-crowned Night Heron	B	1,100	--
Tundra Swan	SM, FM	200	400
Bald Eagle	W	30	35
shorebirds	FM	180	380
Black Tern	B	25	40

Conservation Issues

Invasive non-native plants such as reed canarygrass and purple loosestrife are perhaps the greatest threat to the wetlands. The reserve is adjacent to a popular fishing, hunting, and off-road vehicle recreation area, so the potential for recreational overuse and disturbance to nesting birds is a substantial threat. Water quality and insect populations may suffer detrimental impacts from insecticide applications for mosquito control in the surrounding area.



COLUMBIA BASIN

Potholes Reservoir

47° 00′ N, 119° 15′ W 317 m/11,250 ha

Ownership	Federal, state
IBA Criteria	1, 5a, 5b, 5d
Habitats	Open fresh water, wetlands, riparian, shrub-steppe
Land Use	Water supply, recreation, wildlife conservation

Site Description

The Potholes Reservoir is the largest body of water in the dry interior of the Columbia Plateau. Located nine kilometers south of the city of Moses Lake, the northern two-thirds of the reservoir is dotted with hundreds of sandy islands dominated by willows and other riparian vegetation. The channels between the islands in the northernmost parts of the reservoir contain fresh water marshes. The U.S. Bureau of Reclamation manages the water level, which causes seasonal fluctuation. The reservoir is a popular hunting and fishing area, and receives intense recreational use.

Birds and Habitat

The shallow open water and wetlands provide a rich foraging area for fish-eating birds, and the small islands provide ideal nesting sites for colonial nesting birds, grebes, ducks, and geese. The reservoir is also important as a migration staging area for waterfowl, and as a wintering area for Bald Eagles.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
Western Grebe	B	320	450
American White Pelican	SM, FM	200	1,600
Canada Goose	SM, FM	--	50,000
Canada Goose	B	800	1,000
ducks	SM, FM	--	80,000
Bald Eagle	W	--	30
Ring-billed Gull	B	2,840	5,000
California Gull	B	590	700
Caspian Tern	B	320	450
Forster's Tern	B	150	225

Conservation Issues

Heavy recreational use poses a constant threat of disturbance to breeding birds. There are few restrictions on public access or recreational activities, and insufficient funding of enforcement to prevent dumping, vandalism, disturbance, and illegal hunting. No restrictions are in effect to protect colonial nesting birds from harassment. A reduction in the number of nesting grebes, probably as a result of excessive disturbance, has been recorded in recent years.

COLUMBIA BASIN

Quilomene-Colockum Wildlife Area

47° 06′ N, 120° 08′ W 175-1,990 m/66,800 ha

Ownership	State, federal, private
IBA Criteria	3, 5g
Habitats	Shrub-steppe, coniferous forest, riparian, basalt cliff
Land Use	Wildlife conservation, recreation, agriculture

Site Description

The Quilomene-Colockum IBA, in northeast Kittitas County, is a vast area of shrub-steppe, dry forest, and riparian habitats. The site is bounded by the Columbia River, the Kittitas-Chelan county line, the Vantage Highway, and on the west by Colockum Road, but excluding the irrigated agricultural land along the southern 10 kilometers of the Cooke and Caribou Creek drainages. Though predominantly shrub-steppe, much of the area has been grazed. The higher elevations, comprising 20 percent of the site, are mixed coniferous forest. Numerous streams flowing east to the Columbia River are lined with deciduous trees and shrubs. As streams approach the Columbia, they are increasingly bounded by basalt cliffs and steep rock faces. Between the canyons are high shrub-steppe benches.

Birds and Habitat

The Quilomene-Colockum IBA supports several assemblages of birds associated with rare or threatened plant communities, especially shrub-steppe. The site is thought to contain a significant percentage of Washington's breeding Sage Sparrows, and possibly Loggerhead Shrikes as well as Sage Thrashers. The Quilomene area is an important breeding site for Brewer's Sparrow. Parts of

the area have been suggested as potential recovery sites for Sage Grouse. Other shrub-steppe species in the area include Lark Sparrow, Vesper Sparrow, Western Meadowlark, and Horned Lark. Despite a history of grazing, there are large areas of native bunchgrass interspersed with sagebrush in excellent condition.

Riparian areas provide nesting habitat for American Kestrel, Lewis's Woodpecker, House Wren, and Bullock's Oriole. The basalt cliffs along the Columbia River and in the lower parts of the drainages provide undisturbed nesting sites for Peregrine Falcon (breeding status confirmed in 1999), Prairie Falcon, American Kestrel, Golden Eagle, Common Raven, Canyon and Rock Wrens, White-throated Swift, and Cliff Swallow. The White–headed Woodpecker has been confirmed breeding in the ponderosa pine forest.

Conservation Issues

Most of the area is managed by the Washington Department of Fish and Wildlife for wildlife-oriented recreation, so the habitat is relatively well-protected from development and other incompatible uses. There are no agricultural or industrial activities in the watershed above the site, so runoff and pollution are not a concern. The most serious threat to the habitat is invasion by non-native plants, particularly knapweed. High recreational use of roads in the area facilitates the spread of invasive exotic plants, and also brings the potential for disturbance of nest sites.

COLUMBIA BASIN

Toppenish Creek/ Yakima River Oxbows

46° 19′ N, 120° 26′ W
46° 16′ N, 120° 06′ W

205-460 m/14,020 ha

Ownership	Private, federal, tribal, state
IBA Criteria	1, 5a, 5d
Habitats	Agricultural, marsh, shrub-steppe, riparian, open fresh water
Land Use	Wildlife conservation, rangeland, agriculture

Site Description

This site comprises two separate units that function together as a single system. The Toppenish Creek unit consists of the Toppenish Creek floodplain between Island Road and Slayton Road, six kilometers south of the town of Toppenish, and a 650-hectare patch of shrubbe-steppe between Pumphouse Road and State Route 97 on the north face of Toppenish Ridge. The Yakima Oxbows unit includes the mouth of Toppenish Creek and the Yakima River floodplain between the towns of Granger and Mabton. This IBA includes Toppenish National Wildlife Refuge and the Sunnyside State Wildlife Area. Public access is restricted in most of the area.

Birds and Habitat

The floodplains of this site are rich in natural wetlands, channels, sloughs, and oxbow lakes, providing prime habitat for aquatic birds and raptors. The wetland habitat on the refuge is enhanced by managed water levels in the wetlands. The IBA's primary importance is as a wintering area for waterfowl, and as a breeding area for herons and bitterns. Dominant species of waterfowl are

Mallard, Northern Pintail, American Wigeon, and Green-winged Teal. Breeding shorebirds are predominantly Black-necked Stilt, Long-billed Curlew, and American Avocet. The riparian forests, grasslands, and shrub-steppe flanking the streams and wetlands provide rich foraging areas for birds of prey.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
American Bittern	B	20	40
Great Blue Heron	B	40	80
Black-crowned Night Heron	B	20	40
waterfowl	W	41,000	69,500
Golden Eagle	W	2	5
Merlin	W	2	3
Prairie Falcon	W	10	15
Peregrine Falcon	FM, SM	1	3
shorebirds	B	70	120
Burrowing Owl	B	10	20

Conservation Issues

Runoff of chemicals and organic nutrients from adjacent agricultural lands may result in contamination of water and soils, or cause algae blooms in the smaller ponds and wetlands. Dredging and gravel mining in the river floodplains causes loss of habitat and may alter hydrology. Some additional habitat may be lost because of urban development near the eastern edge of the area. The U.S. Fish and Wildlife Service and the Yakama Indian Nation are actively working to restore habitat along Toppenish Creek.

COLUMBIA BASIN

Turnbull National Wildlife Refuge

47° 26′ N, 117° 34′ W 700 m/6,310 ha

Ownership	Federal
IBA Criteria	5a, 5b, 5d
Habitats	Coniferous forest, grassland, shrub-steppe, open water, marsh
Land Use	Wildlife conservation, recreation

Site Description

Turnbull National Wildlife Refuge, in southwest Spokane County, is a wetland complex situated in a transition zone between the shrub-steppe region of the Columbia Basin and the coniferous forests of the northern Rocky Mountains. The refuge is managed primarily for the benefit of migrating and breeding waterfowl and other aquatic birds. Approximately 14 percent of the refuge is open to the public for wildlife-oriented recreation.

Birds and Habitat

The numerous pothole lakes, sloughs, fresh water marshes, and ponds provide ample aquatic habitat in an otherwise dry environment. The primary value to birds is as a migration staging area in both spring and fall. Dominant species are Northern Pintail, Common Goldeneye, Mallard, and American Wigeon. In most years, more than 1,000 ducks occupy the refuge during breeding season. Dominant breeding species are Mallard, Redhead, Ruddy Duck, and Cinnamon Teal. The wetlands also support breeding populations of Black Terns and Great Blue Herons. The refuge also has high-quality remnants of native sagebrush and perennial grass, and aspen riparian forests. The transition between the shrub-

steppe and forest ecosystems—combined with the wetlands, ravines, and basalt outcrops—provides a rich mix of habitats.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
Great Blue Heron	B	40 pairs	47 pairs
Tundra Swan	FM	226	233
Canada Goose	FM	3,514	5,166
ducks	FM	22,869	32,501
ducks	SM	11,687	15,639
ducks	B	1,375	1,804
Black Tern	B	77 pairs	119 pairs

Conservation Issues

The wetlands on the refuge are maintained by spring rains and snowmelt captured in a shallow aquifer. Increased use of water in the refuge vicinity for residential and agricultural uses may have a detrimental impact on the hydrology of the refuge wetlands. Significant agricultural runoff from nearby lands contains nitrogen and phosphorous, which has caused algae blooms in several wetlands. The proliferation of algae makes it difficult for young waterfowl to reach invertebrate and plant food resources.

COLUMBIA BASIN

Umtanum Creek Valley

46° 32′ N, 120° 40′ W 460-1,190 m/14,500 ha

Ownership	State, private, federal
IBA Criteria	1, 3, 5a, 5c
Habitats	Shrub-steppe, coniferous forest, riparian, basalt cliffs
Land Use	Wildlife conservation, agriculture, recreation

Site Description

Umtanum Creek is an east-flowing tributary of the Yakima River located about 13 kilometers south of Ellensburg. To the south are the high, barren grasslands of Umtanum Ridge. Shrub-steppe occupies the lower valley floor, the north slope of Umtanum Ridge, and Manastash Ridge to the north. A high-quality riparian corridor, containing numerous aspen stands, lines the creek for most of the valley's length, flanked by canyon ledges, basalt cliffs, and rimrock. As the valley narrows into a canyon in the upper part of the watershed, there are ponderosa pines and, higher up, a waterfall and shaded pools. The uppermost reaches of the drainage meet the edge of the Interior Douglas-fir zone.

Birds and Habitat

This site supports several assemblages of birds associated with rare or declining habitat types including shrub-steppe, riparian, and mature coniferous forest. The diverse habitat supports numerous high-priority bird species, including several state or federal candidate species: Golden Eagle, Flammulated Owl (unconfirmed but highly probable), Vaux's Swift, Lewis's Woodpecker, White-headed Woodpecker, Pileated Woodpecker, Sage Thrasher, Northern Goshawk, and Loggerhead Shrike. The latter two are listed as "species of concern" by the U.S.

Fish and Wildlife Service. In winter, Bald Eagles use the area at the mouth of Umtanum Creek along the Yakima River.

The area is also within or at the edge of the historic breeding range of the Ferruginous Hawk, Sage Grouse, Long-billed Curlew, Spotted Owl, and Burrowing Owl, which are no longer here but could repopulate the area. Other species associated with basalt rimrock and cliffs that have healthy populations here include Prairie Falcon, Common Poorwill, White-throated Swift, and Canyon Wren.

Umtanum Creek Valley serves as a corridor between two other IBAs: Yakima Canyon and Wenas Basin/Clemans Mountain.

Conservation Issues

The shrub-steppe of the broad valley floor at the lower end of the watershed is degraded from overgrazing, which has caused erosion of stream banks, invasion of cheatgrass and other exotics, disappearance of many native plants, and soil compaction. Only one county road crosses the area, but potential residential development along this stretch may have detrimental impacts. A significant portion of the remainder of this drainage has relatively intact and functioning natural ecosystems. Sixty-two percent of the drainage is within the boundaries of the L.T. Murray Wildlife Recreation Area, and is managed for wildlife habitat by the Washington Department of Fish and Wildlife.

COLUMBIA BASIN

Walla Walla River Delta

46° 04′ N, 118° 54′ W 104 m/138 ha

Ownership	Federal
IBA Criteria	1, 5a, 5c, 5d
Habitats	Open fresh water, marsh, mudflats, riparian
Land Use	Wildlife conservation, recreation

Site Description

Located at the confluence of the Walla Walla and Columbia Rivers, this site comprises two broad mudflats and associated marshes bisected by the Walla Walla River channel. Although it is part of McNary National Wildlife Refuge, the habitat is strongly influenced by the U.S. Army Corps of Engineers's management of water levels at the McNary Dam downstream. The delta is expanding, as a result of sediment washing down the Walla Walla River. The refuge is open to the public, but vehicle access is prohibited.

Birds and Habitat

This site is a combination of open water and deep silt mudflats with associated marshes and riparian areas. Cottonwoods, willows, and cattails are the dominant vegetation. The IBA is located just north of the Wallula Gap, which is considered a flight corridor for many migratory birds. The delta supports large numbers of pelicans, waterfowl, shorebirds, and gulls, particularly Northern Pintails, Canvasbacks, and Western Sandpipers. The site also supports an extraordinarily high population of Vaux's Swifts during fall migration.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
American White Pelican	W, SM, W	75	150
Northern Pintail	W, SM	8,500	15,000
Canvasback	W	1,200	2,000
Bald Eagle	W	6	8
Merlin	FM, W	4	7
Peregrine Falcon	FM	4	7
shorebirds	FM	2,050	2,880
gulls	FM, W	1,200	2,000
Common Tern	FM	50	66
Vaux's Swift	FM	1,250	1,500

Conservation Issues

Invasive non-native plants—purple loosestrife, *Phragmites*, false indigo, and reed canarygrass—have aggressively colonized the newly-deposited mudflats, and jeopardize the value of these areas for birds. The site is surrounded on three sides by industrial facilities, including a pulp mill, which could be a source of contamination. Hunting season opens the second week of September, a time when shorebirds are still present. Disturbance from hunting interferes with the ability of shorebirds to build sufficient energy reserves for their long migration flights.

COLUMBIA BASIN

Yakima Canyon

46° 50′ N, 120° 28′ W 357-983 m/8,010 ha

Ownership	State, private, federal
IBA Criteria	1, 3, 5e
Habitats	Shrub-steppe, basalt cliffs, riparian, open fresh water
Land Use	Wildlife conservation, agriculture, recreation

Site Description

Yakima Canyon is a deep gorge cut into Columbia Basin basalt by the ancient Yakima River. The IBA includes the river, the steep slopes, and cliffs of the canyon from Thrall Road in Kittitas County at the north end to the confluence of Selah Creek and the Yakima River in Yakima County at the south end. The west side of the river is mostly in public ownership, primarily WDFW, and the east side is largely privately owned.

Birds and Habitat

The extensive cliffs and talus slopes, interspersed with shrub-steppe vegetation, support a diverse assemblage of birds, including White-throated Swift, Cliff Swallow, Rock Wren, Canyon Wren, and 21 species of raptors. Ten of these raptor species breed in and around the canyon, including two pairs of Golden Eagles and five pairs of Prairie Falcons. Up to 20 Bald Eagles winter along the river.

Conservation Issues

Recreational overuse and disturbance of riparian habitats are the greatest threats. Conversion of farmland to residential use on the east side of the canyon could reduce available foraging habitat for raptors.

Yakima River Delta

46° 14′ N, 119° 15′ W 104-110 m/1,135 ha

Ownership	Federal, city
IBA Criteria	1, 5a, 5b, 5c
Habitats	Open fresh water, marsh, mudflat, sand and gravel shore
Land Use	open space, recreation

Site Description

The Yakima River Delta IBA, centered on the confluence of the Yakima and Columbia Rivers at Richland, is bounded by Interstate 82 and Columbia Drive, and extends to the east bank of the Columbia River. It includes Bateman Island, the channel of the Columbia River, and some adjacent uplands from the Interstate 82 bridge to a point 200 meters downstream from Bateman Island. This is a unique setting where two major rivers join in an urban area, yet the site supports a natural environment somewhat isolated from human activities.

Birds and Habitats

This IBA supports five species of state or federal threatened or candidate species, 30 species of waterfowl, 30 species of shorebirds, four tern species, four herons or egrets, and up to 12 species of raptors. Habitat includes semi-arid uplands, open waters of both the Yakima and Columbia Rivers, wetlands, mud flats, and gravelly to sandy shorelines. Bateman Island and some shorelines contain scattered trees, shrubs, and grasses. Mudflats and shallow areas near shore, rare in this part of the state, are critically important habitats. The IBA contains one of only two mudflat/delta habitat complexes in the region. Also important are the riparian forests lining the river, which provide perches for

eagles, cormorants, herons and kingfishers. The Yakima Delta still supports a vigorous fisheries resource. The combination of both warmwater and coldwater fisheries provides an unusually rich food source for fish-eating birds.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
Common Loon	W	2	3
American White Pelican	SM,B,FM	10	44
Great Egret	SM	50	100
waterfowl	FM, W	745	2,770
Bald Eagle	W	2	3
Merlin	W	1	1
Peregrine Falcon	W	1	1
shorebirds	SM, FM	259	1136
gulls	all	60	150
terns	B	17	77

Conservation Issues

The land along the two rivers has been extensively disturbed in the past but is recovering ecologically. It currently faces threats from recreational overuse, and from invasive non-native plants.

Yakima Training Center

46° 45′ N, 120° 10′ W 148-1,200 m/132,340 ha

Ownership	Federal
IBA Criteria	1, 3, 4, 5f
Habitats	Shrub-steppe, riparian
Land Use	Military

Site Description

Located between the Columbia River and Interstate 82 northeast of Yakima, the vast Yakima Training Center is one of the largest remaining expanses of shrub-steppe in the Northwest: 125,450 hectares. The site's four major ridges and valleys comprise more than 20 percent of the publicly owned shrub-steppe in the Columbia Plateau region. The center is a training facility for the U.S. Army. Public access is restricted but not prohibited.

Birds and Habitat

The Yakima Training Center is the only place in Washington where shrub-steppe occurs on a landscape scale— i.e., the shrub-steppe habitat occurs across a series of north- and south-facing slopes and valley bottoms, unbroken by agriculture. A 1999 Nature Conservancy report stated that "the extent…of contiguous high quality, low elevation big sagebrush communities along with the more common high elevation types is unique and of regional importance."

The extensive landscape supports an assemblage of birds associated with the native sagebrush and bunchgrass ecosystem, including Ferruginous Hawk, Greater Sage Grouse, Short-eared Owl, Loggerhead Shrike, Sage Thrasher; and Brewer's, Vesper, and Sage Sparrows. The Training Center supports 158 native

bird species, 68 of which breed there. It is one of only two places in the region that support Greater Sage Grouse—50 percent of the statewide population—and is the only site in this region to support widespread and abundant populations of all the shrub-steppe dependent migrant species.

SPECIES OR GROUP	SEASON	AVERAGE	MAXIMUM
Bald Eagle	W	--	35
Northern Goshawk	FM	--	2
Swainson's Hawk	B	--	25
Ferruginous Hawk	B	--	2
Golden Eagle	B	--	4
Prairie Falcon	B	--	15
Greater Sage Grouse	B	300	500
Burrowing Owl	B	--	10
Vaux's Swift	SM, FM	--	20

Conservation Issues

Because public access and use are prohibited, the Yakima Training Center is relatively well protected against recreational overuse and development. Army training activities, however, have the potential for detrimental impacts. Tanks and other heavy, tracked vehicles destroy vegetation, which leaves soils vulnerable to erosion and invasion by non-native plants.