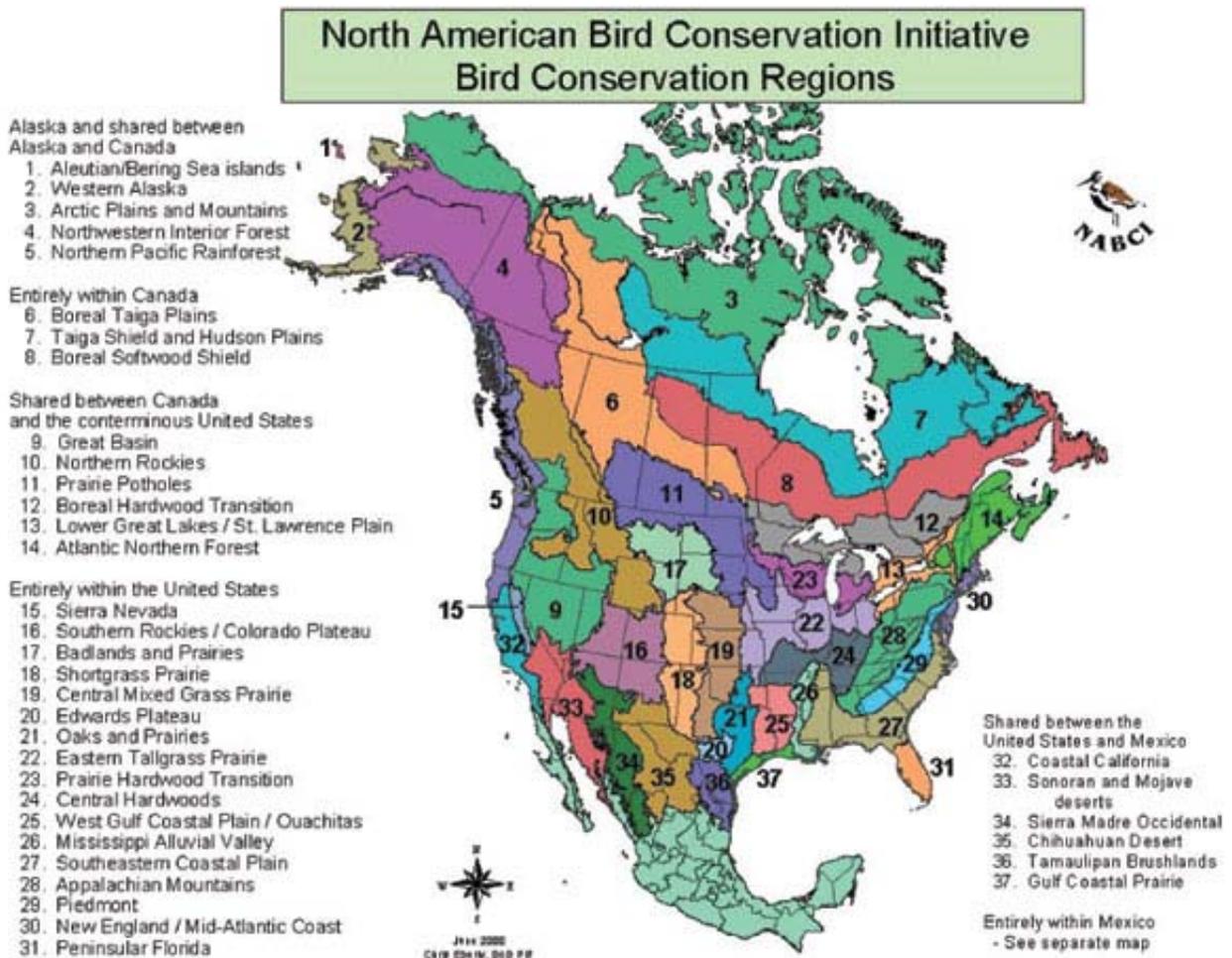


OVERVIEW OF WYOMING

Partners In Flight planning units, called Bird Conservation Regions (BCRs), are defined on the basis of biotic communities and bird distribution. The continental United States is comprised of 37 BCRs, and Wyoming contains portions of four BCRs (Figure 1). Our planning efforts extend beyond our state borders by necessity. To better address species and habitat conservation as a whole, we are working closely with the bordering states of Colorado, Utah, Idaho, and Montana, managing species on a landscape scale rather than a state scale.



Bird Conservation Regions in Wyoming:

- 10 = Northern Rockies
- 16 = Southern Rockies/Colorado Plateau
- 17 = Badlands and Prairies
- 18 = Shortgrass Prairie

Figure 1. Bird Conservation Regions used in bird conservation planning in the United States and Canada.

Elevations in Wyoming range from a low of 3,232 feet (969 m) in the northeast corner of the state to the summit of Gannett Peak in the Wind River Mountains at 13,804 feet (4,207 m) (Knight 1994). The mean elevation is 6,700 feet (2,030 m); 37% of the state consists of elevations greater than 7,000 feet (2,134 m) (Knight 1994).

A multitude of different soils exist, reflecting the influences of geologic substrate, topography, climate, animals, vegetation, and time (Knight 1994). Soils in mountainous areas are often shallow and not well developed; granites, basalts, and quartzites in mountain ranges weather very slowly, resulting in shallow, coarse soils. Deep soils occur where topography is lower. Sedimentary rocks are more frequently exposed in the foothills and lowlands of the state, although sedimentary strata also occur in mountain ranges. Weathering of sandstone contributes to the formation of coarse-textured, sandy soil with a high infiltration rate, while fine-textured and deeper soils often develop from easily eroded shales, mudstones, and siltstones. Organic matter content increases from lowland up to montane grassland, then decreases to the alpine zone. Vegetation patterns in Wyoming are determined by these soil features: infiltration rate, depth, water-holding capacity, salinity, and aeration.

Because of the varied topography of the state, temperatures vary greatly and decrease with increasing elevation (Knight 1994). The mean daily high temperature in July ranges from 90° F (32° C) on the Great Plains and in the Bighorn Basin to less than 75° F (<24° C) in the mountains. The mean frost-free period varies from 125 days on the Great Plains, in the Bighorn Basin, and in the Wind River Basin to fewer than 25 days in the mountains. Freezing temperatures are possible at any time of the year at higher elevations. Especially in the southern part of the state, strong westerly winds frequently blow.

Wyoming is semi-arid; summer drought often occurs, especially in the lowlands (Knight 1994). Mean precipitation varies from 6 to 59 inches (15 to 150 cm) per year, with mountains receiving more precipitation than lowlands. Intermountain basins in the western two-thirds of the state are drier [6 to 12 inches (15 to 30 cm) precipitation per year] than the Great Plains region in the eastern one-third of the state, which averages 12 to 16 inches (30 to 40 cm) per year. Mountains and foothills throughout the state receive 16 to 59 inches (40 to 150 cm) per year. Precipitation is often in the form of snow at higher elevations, especially during winter months.

The variety of avian species in Wyoming is just as diverse as the soils and climate. A total of 413 species of birds have been documented in Wyoming; 84 are year-round residents, 162 are summer residents (typically breeders), 13 are winter residents, 66 are migrants, 87 are of accidental occurrence, and one is extinct (Cerovski et al. 2003). Biologists typically strive to manage habitat for the year-round, summer, winter, and migrant species. This task is not as easy as it first sounds. Much of the most important habitat for these species occurs on private land, or on public land on which other uses

may take precedence. The challenge to biologists, landowners, and land managers alike is to determine and work toward a balance between habitat use and habitat conservation, protection, and restoration on public and private lands for the benefit of both wildlife and humans.

In Wyoming, 49% of the total 62,343,040 acres (25,248,931 ha) of land surface is federally managed (Table 1), 5% is managed by state agencies, and 46% of the land surface is in private ownership.

Table 1. Federal land surface in Wyoming.

Agency	Acres
Bureau of Land Management ^a	18,417,149
U.S. Forest Service	9,254,297
National Park Service	2,408,895
Bureau of Reclamation	572,853
U.S. Fish and Wildlife Service	49,466
Naval Petroleum Reserve	9,481
U.S. Army	9,464
U.S. Air Force	6,091
Bureau of Indian Affairs	1,296
Agricultural Research Service	734
Federal Aviation Administration	591
Veterans' Administration	346
Western Area Power Administration	231
U.S. Postal Service	17
General Services Administration	6
Bonneville Power Administration	4
Energy Research and Development Administration	2
Total	30,729,923

^a Includes some acreage [approximately 500,000 acres (202,500 ha)] assigned to other agencies but administered by the BLM.

The Bureau of Land Management has produced a Surface Management Map that depicts all surface ownership in Wyoming. These can be purchased at any BLM office

in Wyoming. They can be ordered from Bureau of Land Management, Wyoming State Office, P.O. Box 1828, Cheyenne, WY 82003-01828, or by calling (307) 775-6256.

Wyoming GAP Analysis was completed by the Wyoming Cooperative Fish and Wildlife Research Unit and the University of Wyoming in 1996. The GAP Analysis land cover for Wyoming map recognizes 41 different vegetation covers in the state: 12 in the forest type, 7 in the grass type, 12 in the shrub type, 5 in the unvegetated type, and 5 classified as other (USGS 1996) (Figure 2). Using GAP Analysis and Wyoming Game and Fish Department habitat descriptions for avian species in Wyoming (Luce et al. 1999), 18 habitat types were classified in Wyoming for the purpose of assigning a high priority habitat type or types to each priority avian species (Table 2). This allowed for grouping of avian species based on overall habitat type (e.g. montane riparian) and similar habitat requirements within that habitat type (e.g. dense shrub component for nesting), rather than dealing with single species management. By using this “species suite” approach where feasible, the maximum number of species will benefit from management actions specific to that suite. (A “species suite” is a group of species with similar or overlapping habitat requirements that respond similarly to habitat conditions and management actions.)

References and Literature Cited

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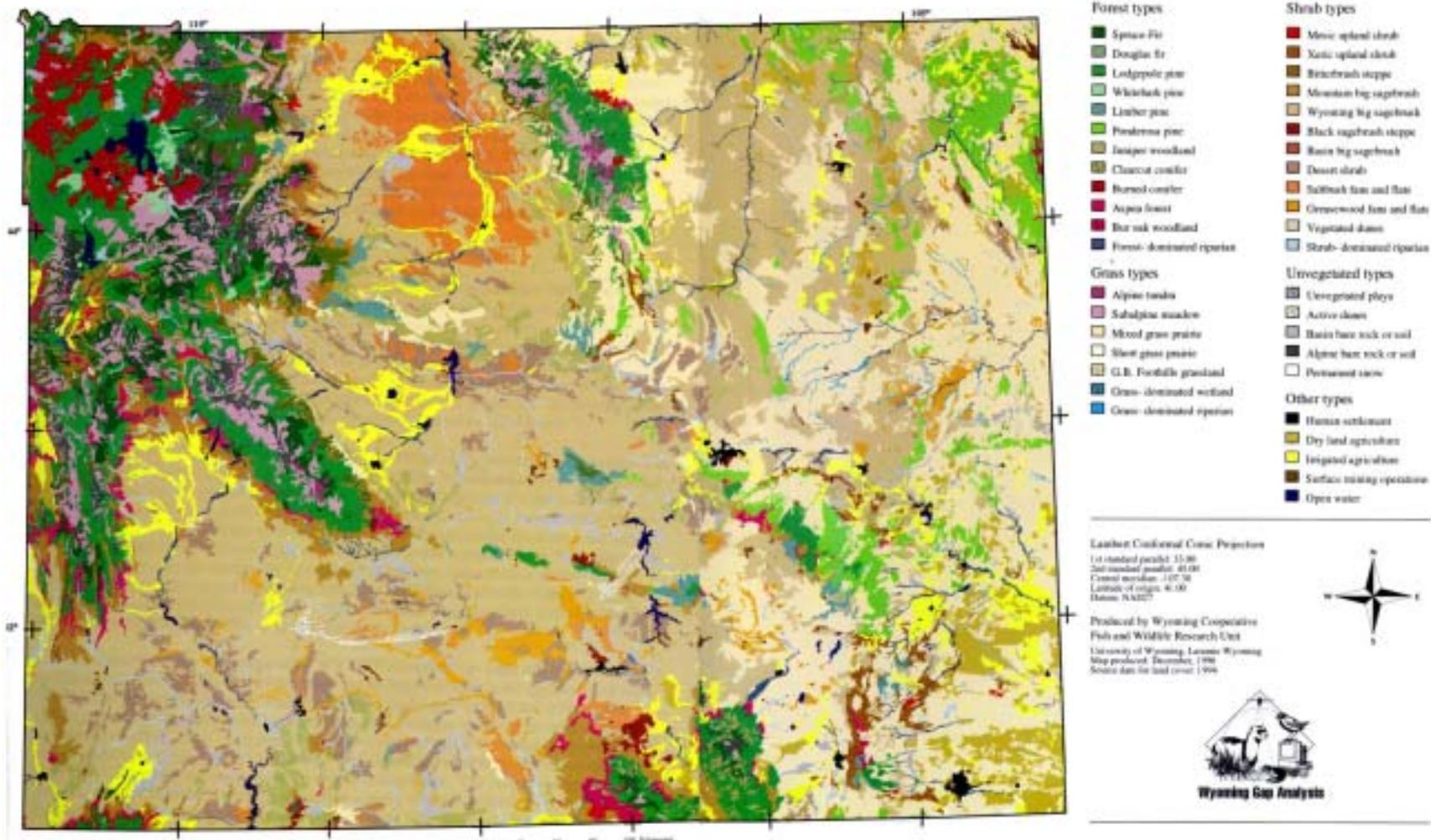


Figure 2. GAP Analysis Map for Wyoming.

Table 2. Wyoming Partners In Flight (underlined) and GAP Analysis habitat groupings in Wyoming, and the percent total land surface each habitat encompasses. ^a

<u>Montane Riparian</u> (1.45%)	<u>High Elevation Conifer</u> (4.79%)	<u>Shrub-steppe</u> (continued)
~ Mesic upland shrub (0.24%)	~ Spruce-fir (2.49%)	~ Greasewood fans and flats (1.50%)
~ Forest-dominated riparian (1.21%)	~ Whitebark pine (0.28%)	<u>Mountain-foothills Shrub</u> (0.87%)
<u>Plains/Basin Riparian</u> (1.48%)	~ Lodgepole pine – in higher elevations (2.02%)	~ Xeric upland shrub (0.75%)
~ Grass-dominated riparian (0.26%)	<u>Mid Elevation Conifer</u> (6.38%)	~ Bur oak woodland (0.11%)
~ Shrub-dominated riparian (1.22%)	~ Limber pine (0.80%)	~ Bitterbrush steppe (0.01%)
<u>Meadows</u> (2.88%)	~ Douglas fir (1.48%)	<u>Agricultural Croplands</u> (7.25%)
~ Subalpine meadows (2.88%)	~ Lodgepole pine – <i>in lower elevations</i> (4.10%)	~ Dryland agriculture (3.05%)
<u>Wetlands</u> (0.05%)	<u>Low Elevation Conifer</u> (2.70%)	~ Irrigated agriculture (4.20%)
~ Grass-dominated wetland (0.05%)	~ Ponderosa Pine (2.70%)	<u>Urban</u> (0.29%)
<u>Aquatic</u> (0.57%)	<u>Aspen</u> (1.33%)	~ Human settlement (0.29%)
~ Open water (0.57%)	~ Aspen forest (1.33%)	<u>Specialized</u> (4.73%)
<u>Shortgrass Prairie</u> (20.28%)	<u>Juniper Woodland</u> (2.01%)	~ Unvegetated playa (0.05%)
~ Mixed grass prairie (20.17%)	~ Juniper woodland (2.01%)	~ Active dunes (0.06%)
~ Short grass prairie (0.04%)	<u>Shrub-steppe</u> (42.74%)	~ Basin bare rock or soil (1.69%)
~ Great Basin Foothills grassland (0.07%)	~ Mountain big sagebrush (3.45%)	~ Alpine bare rock or soil (1.09%)
<u>Alpine Tundra/Grassland</u> (0.38%)	~ Wyoming big sagebrush (30.83%)	~ Permanent snow (0.20%)
~ Alpine tundra (0.38%)	~ Black sagebrush steppe (0.17%)	~ Clearcut conifer (0.33%)
	~ Basin big sagebrush (0.01%)	~ Burned conifer (0.93%)
	~ Desert shrub (4.07%)	~ Vegetated dunes (0.17%)
	~ Saltbush fans and flats (2.71%)	~ Surface mining (0.21%)

^a Total land surface is slightly greater than 100% due to rounding of percentages.