

**Level III (Local Interest)**

Species that Wyoming Partners In Flight may recommend for conservation action (CA) that are not otherwise high priority but are of local interest (LI). Can include monitoring (M).

***Western Grebe***

Primary Habitat Types: Wetlands and Aquatic

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Western Grebe  (WEGR) <i>Aechmophorus occidentalis</i> Level III M	~Lakes bordered by bulrushes or rushes	~Thick clumps of tall emergent vegetation, interspersed with open water  ~Large bulrush "islands" with inner open water areas and channels provide good colony sites	~Large lakes and extensive areas of open water		~Nests in large colonies ~Colony sites are somewhat traditional, but may shift from year to year depending on water conditions ~Sensitive to human disturbance ~Winters south to central Mexico

Scattered across most of Wyoming in marshes and lakes. Inhabits extensive areas of open water bordered by tall emergent vegetation. Nests in large colonies; colony sites are somewhat traditional, but vary widely with water conditions. Ideal nesting areas provide large clumps of emergent vegetation interspersed with open water, so that the vegetation blocks wave action. Large bulrush "islands" with inner open water areas and channels are good nesting sites. Builds a floating platform nest of decayed and fresh aquatic plants, anchored to the submerged roots of bulrushes or other plants. Eggs (2 to 7, 58 mm) are bluish-white, chalky, and nest-stained with buff or brown. Dives from the water's surface to capture mostly fish, but also invertebrates and amphibians. Tends to feed nearer to shore than the Clark's Grebe, suggesting the possibility of a reduced foraging overlap. Winters south to central Mexico. Often nests late in the season, thus is threatened by low water levels in late summer. Entire colonies will leave their nests when approached by humans, leaving them vulnerable to predators; repeated disturbances early in the nesting cycle can cause nest abandonment. Pesticides have affected some populations, and draining lakes for agriculture has reduced nesting habitat. Other species that may benefit from habitat management for

this species include the American Bittern, Clark's Grebe, Franklin's Gull, Forster's Tern, Black Tern, and Marsh Wren.

### Population Objectives

- 1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Western Grebes have been detected on 24 BBS routes in Wyoming, including 10 routes on which they were observed a minimum of 3 years.
  - a) Maintain Western Grebes on the 24 BBS routes on which they were observed (Figure 46).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.
- 3) Maintain existing Western Grebe breeding colonies throughout Wyoming.

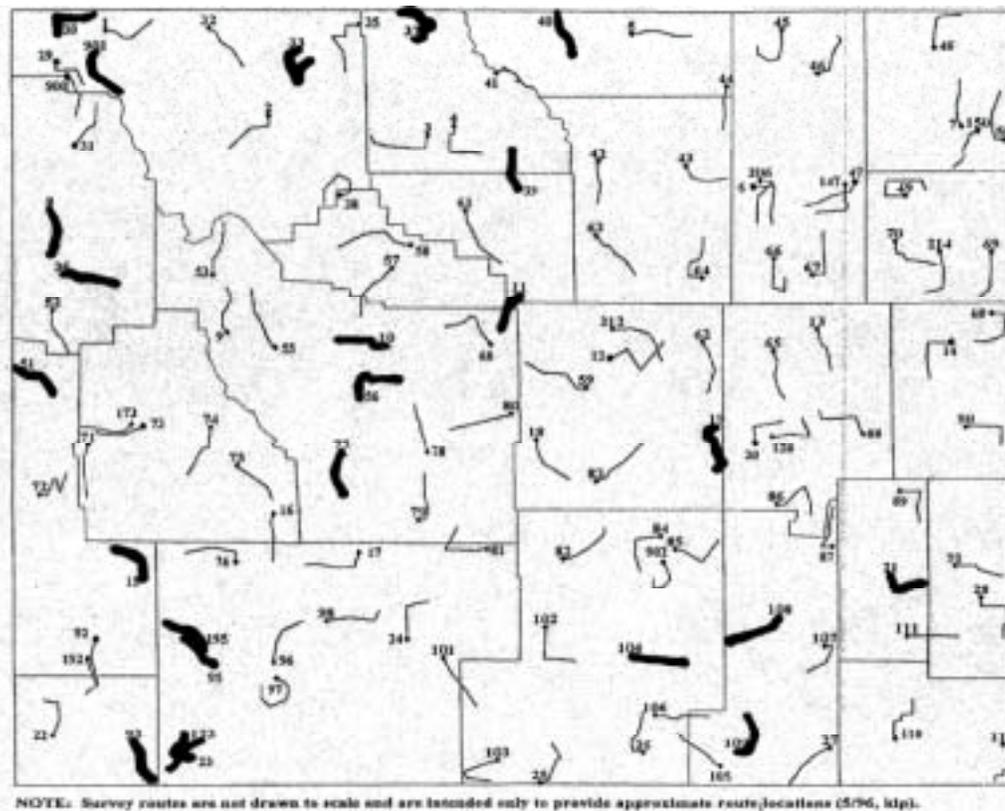


Figure 46. Bold lines indicate Breeding Bird Survey routes on which Western Grebes have been observed from 1968 through 2002.

## **Habitat Objectives**

- 1) Maintain extensive complexes of marshes with stands of emergent vegetation greater than 20 feet (6 m) wide and interspersed with patches of shallow open water.
- 2) Maintain water quality to sustain substantial populations of fish and invertebrates as a food source for Western Grebes.

## **Recommendations**

- 1) Protect large marshes, lakes, and marsh complexes from development or conversion to other habitat types.
- 2) Protect any colony sites currently in use, regardless of the size of the site or the number of grebes present.
- 3) Implement wetland management techniques that provide marshes with clumps of emergent vegetation interspersed with patches of open water.
- 4) Maintain vegetation buffer zones to block siltation, pesticide, and fertilizer runoff into wetlands. This is particularly important where Western Grebe colonies are adjacent to agricultural land, and vulnerable to contamination from agricultural runoff.
- 5) Maintain stable water levels throughout the nesting season in marshes where Western Grebes are breeding. Rising water levels can flood nests, and low water levels may increase the likelihood of nest predation by raccoons and other mammals.
- 6) Avoid disturbing nest sites during the breeding season, as colonies are sensitive to human disturbance. Restrict access during the breeding season at colonies with excessive human disturbance. In some cases, posting signs to discourage visitors may be effective. However, signs may also draw attention to colony sites and may be ineffective when enforcement is not possible. Efforts to educate the public may be the most reasonable method of reducing disturbance.

## ***Clark's Grebe***

Primary Habitat Types: Wetlands and Aquatic

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Clark's Grebe (CLGR) <i>Aechmophorus clarkii</i> Level III M	~Lakes bordered by bulrushes or rushes	~Thick clumps of tall emergent vegetation, interspersed with open water ~Large bulrush "islands" with inner open water areas and channels provide good colony sites	~Large lakes and extensive areas of open water		~Nests in large colonies ~Colony sites are somewhat traditional, but may shift from year to year depending on water conditions ~Sensitive to human disturbance ~Winters south to central Mexico

Scattered across most of the state in marshes and lakes, but breeds primarily in western Wyoming. Inhabits extensive areas of open water bordered by tall emergent vegetation. Nests in large colonies; colony sites are somewhat traditional, but vary widely with water conditions. Ideal nesting areas provide large clumps of emergent vegetation interspersed with open water, so that the vegetation blocks wave action. Large bulrush "islands" with inner open water areas and channels are good nesting sites. Builds a floating platform nest of decayed and fresh aquatic plants, anchored to the submerged roots of bulrushes or other plants. Eggs (2 to 7, 58 mm) are bluish-white, chalky, and nest-stained with buff or brown. Dives from the water's surface to capture mostly fish, but also invertebrates and amphibians. Tends to feed farther from shore than the Western Grebe, suggesting the possibility of a reduced foraging overlap. Winters south to central Mexico. Often nests late in the season, thus is threatened by low water levels in late summer. Entire colonies will leave their nests when approached by humans, leaving them vulnerable to predators; repeated disturbances early in the nesting cycle can cause nest abandonment. Pesticides have affected some populations, and draining lakes for agriculture has reduced nesting habitat. Other species that may benefit from habitat management for this species include the American Bittern, Western Grebe, Franklin's Gull, Forster's Tern, Black Tern, and Marsh Wren.

### **Population Objectives**

1) Breeding Bird Survey (BBS) data from 1968 through 2002 are inadequate to determine population trends for the Clark's Grebe in Wyoming. Determine population trend data

by implementing “Monitoring Wyoming’s Birds: The Plan for Count-based Monitoring”.

### **Habitat Objectives**

- 1) Maintain extensive complexes of marshes with stands of emergent vegetation greater than 20 feet (6 m) wide and interspersed with patches of shallow open water.
- 2) Maintain water quality to sustain substantial populations of fish and invertebrates as a food source for Clark's Grebes.

### **Recommendations**

- 1) Protect large marshes, lakes, and marsh complexes from development or conversion to other habitat types.
- 2) Protect any colony sites currently in use, regardless of the size of the site or the number of grebes present.
- 3) Implement wetland management techniques that provide marshes with clumps of emergent vegetation interspersed with patches of open water.
- 4) Maintain vegetation buffer zones to block siltation, pesticide, and fertilizer runoff into wetlands. This is particularly important where Clark’s Grebe colonies are adjacent to agricultural land, and vulnerable to contamination from agricultural runoff.
- 5) Maintain stable water levels throughout the nesting season in marshes where Clark's Grebes are breeding. Rising water levels can flood nests, and low water levels may increase the likelihood of nest predation by raccoons and other mammals.
- 6) Avoid disturbing nest sites during the breeding season, as colonies are sensitive to human disturbance. Restrict access during the breeding season at colonies with excessive human disturbance. In some cases, posting signs to discourage visitors may be effective. However, signs may also draw attention to colony sites and may be ineffective when enforcement is not possible. Efforts to educate the public may be the most reasonable method of reducing disturbance.

## ***Northern Harrier***

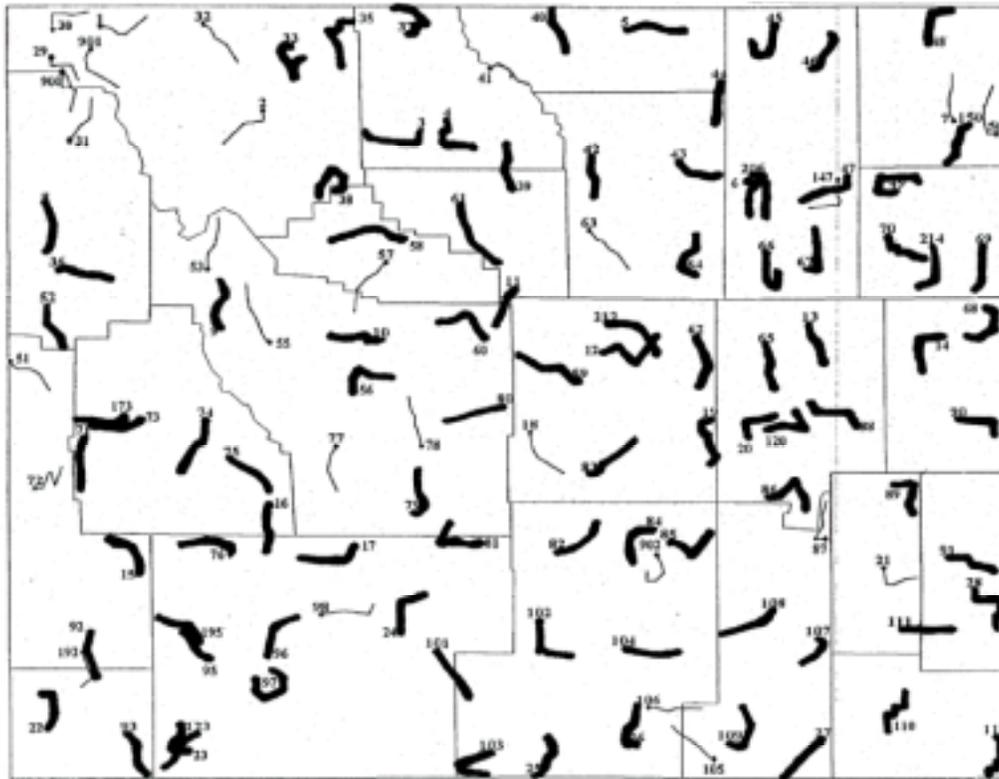
Primary Habitat Types: Wetlands and Meadows

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Northern Harrier (NOHA) <i>Circus cyaneus</i> Level III M	~Nests in vegetation such as cattails or grass	~Inhabits grassy areas, especially those near water (i.e. marshy meadows); wet, lightly grazed pastures; fresh or brackish marshes; prairies; or savannahs ~Nests in dense clumps of vegetation, from 1 to 7 feet tall ~Dead vegetation from the previous growing season is an important component of the nest site		~Prefers large tracts ( $\geq 250$ acres) of undisturbed habitats dominated by thick treeless vegetation	~Nests alone or in loose colonies ~Not very tolerant of human disturbance ~Requires an adequate prey base of small mammals and birds ~Winters south to northern South America, but a few remain in Wyoming

Found throughout Wyoming in marshes, grass and grass-like habitats, and basin-prairie and mountain-foothills shrublands. Typically inhabits dense, grassy areas, especially those near water (e.g. marshy meadows; wet, lightly grazed pastures; fresh or brackish marshes; prairies; and savannahs). Prefers large tracts [at least 250 acres (100 ha)] of undisturbed habitat. Nests on the ground, usually in tall, dense clumps of vegetation, either alone or in loose colonies. Builds a platform nest of thick-stalked plants such as cattail, alder, or willow, and lines it with grasses, sedges, or rushes. Nest is sometimes built up over water on a stick foundation, sedge tussock, or willow clump, or on a knoll of dry ground. Eggs (4 to 9, 47 mm) are bluish-white and usually unmarked, but some are spotted with browns. Seeks prey in a low, searching flight, and quickly swoops down to catch small mammals (especially voles) and other vertebrates, such as birds, snakes, and frogs. Winters south to northern South America, but a few remain in Wyoming. Declining from loss of habitat and the effects of pesticides. Other species that may benefit from habitat management for this species include the Virginia Rail, Sora, Wilson's Snipe, Short-eared Owl, Marsh Wren, Savannah Sparrow, Red-winged Blackbird, and Yellow-headed Blackbird.

## Population Objectives

- 1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Northern Harriers have been detected on 92 BBS routes in Wyoming, including 60 routes on which they were observed a minimum of 3 years.
  - a) Maintain Northern Harriers on the 92 BBS routes on which they were observed (Figure 47).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.



NOTE: Survey routes are not drawn to scale and are intended only to provide approximate route locations (5/96, hlp).

Figure 47. Bold lines indicate Breeding Bird Survey routes on which Northern Harriers have been observed from 1968 through 2002.

## **Habitat Objectives**

- 1) Maintain extensive complexes of marshes, wet meadows, grasslands, and shrublands with tall, dense, grasses and emergent vegetation.
- 2) Maintain vole and other small mammal populations as a food source for Northern Harriers.

## **Recommendations**

- 1) Implement wetland and grassland management techniques that provide extensive areas [at least 250 acres (100 ha)] of tall, dense grasses and emergent vegetation in areas where Northern Harriers occur. Nests have been found in areas where the vegetation ranges in height from 1 to 7 feet (30 cm to 2 m).
- 2) Protect undisturbed habitat in which annual vegetation and successional plants can grow and dead vegetation is not removed.
- 3) Manage grazing in wet meadows and wetland pastures at low levels, especially during dry years, to maintain nesting cover for Northern Harriers. Also, large numbers of livestock permitted to graze in harrier habitat during the breeding season may accidentally trample nests or young. If necessary to prevent trampling, fence off nesting areas from livestock or provide more watering sites to prevent congestion near nests.
- 4) Postpone haying, harrowing, and mowing until nesting is completed, or avoid the area immediately around harrier nests, to avoid destroying nests with agricultural equipment or causing nest abandonment by adults.
- 5) Avoid converting hayfields to cropland so breeding habitat for Northern Harriers is maintained.
- 6) Maintain stable water levels throughout the nesting season in marshes and wet meadows where Northern Harriers nest. Do not allow water levels to rise more than 6 inches (15 cm) during the breeding season, as rising water levels can flood nests.
- 7) Provide abandoned fields and other habitats with dense grasses and weeds to maintain small mammals as a food source for Northern Harriers. Place hedgerows between fields and provide islands of cover, such as shrubs, for prey species. Avoid subjecting croplands and hayfields to several annual cuttings, which may depress small mammal populations. Prescribed burning, grazing, mowing, and disking may be used in patches to improve habitat for small mammals, but avoid these activities during the harrier breeding season, from early April to mid-August.

8) Avoid or minimize pesticide use in areas where Northern Harriers occur. Eggshell thinning due to pesticide ingestion has been implicated in the long-term decline of harrier populations.

9) Maintain vegetation buffer zones to block siltation, pesticide, and fertilizer runoff into wetlands. This is particularly important where Northern Harriers nest adjacent to agricultural land, and are vulnerable to contamination from agricultural runoff.

10) Avoid disturbing nest sites from early April through mid-August, as harriers are very sensitive to human disturbance. Nest abandonment is less likely with young than eggs, but may still occur with repeated disturbances. Nests should be protected from disturbance by recreational activities and unnecessary nest visitations from both researchers and the public. Predation of harrier young has occurred when predators followed humans to nests.

**Golden Eagle**

Primary Habitat Type: Specialized (cliffs)

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Golden Eagle  (GOEA) <i>Aquila chrysaetos</i> Level III CA	~Variety of plant communities with open areas for foraging, including montane meadows, open coniferous forests, prairies, and sagebrush steppe			~Open country, from barren areas to open coniferous forests ~Elevations from 4,000 to 10,000 feet	~Nests on cliffs, or in large trees if cliffs are unavailable ~Pairs often alternate among favored nest sites, which may be used over many years ~Sensitive to extensive human activity around the nest site ~Will use artificial nesting platforms ~Is a year-round resident in Wyoming; may move to lower elevations during winter

Found throughout Wyoming in most habitats with open areas for foraging, from barren areas to open coniferous forests. Nests over a broad altitudinal range, usually on cliff ledges or niches 10 to over 100 feet (3 to >30 m) high overlooking grasslands, but also nests in large trees, on high-power electric poles, or on the ground. Is most likely to use trees for nesting if cliff sites are unavailable. Will use artificial nest platforms. Nest is a large platform of sticks and roots lined with finer materials. Eggs (2, 75 mm) are white/cream-buff and marked with brown; one egg is usually unmarked. Pairs often alternate among favored nest sites, which may be used over many years. Hunts for a variety of prey, mainly small mammals, by soaring over open country and swooping down onto prey from the air or from an elevated perch. Is a year-round resident in Wyoming; may occupy breeding territory or move to lower elevations during winter. Is sensitive to extensive human activity around the nest site; recreational activities (e.g. rock climbing) may result in reduced nesting success or nest abandonment. Widely persecuted in the past for depredations on livestock (primarily lambs). Continues to be threatened by loss of nesting habitat to industrial and urban development, illegal shooting, power line electrocutions, lead poisoning, pesticide contamination, and poisoning by carcasses intended for coyotes. Other species that may benefit from habitat management for this species include the Prairie Falcon, Peregrine Falcon, Great Horned Owl, Common Raven, Rock Wren, and Canyon Wren.

### **Population Objectives**

- 1) Determine statewide population trend data by implementing “Monitoring Wyoming’s Birds: The Plan for Count-based Monitoring”.
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Golden Eagles have been detected on 99 BBS routes in Wyoming, including 61 routes on which they were observed a minimum of 3 years.
  - a) Maintain Golden Eagles on the 99 BBS routes on which they were observed (Figure 48).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

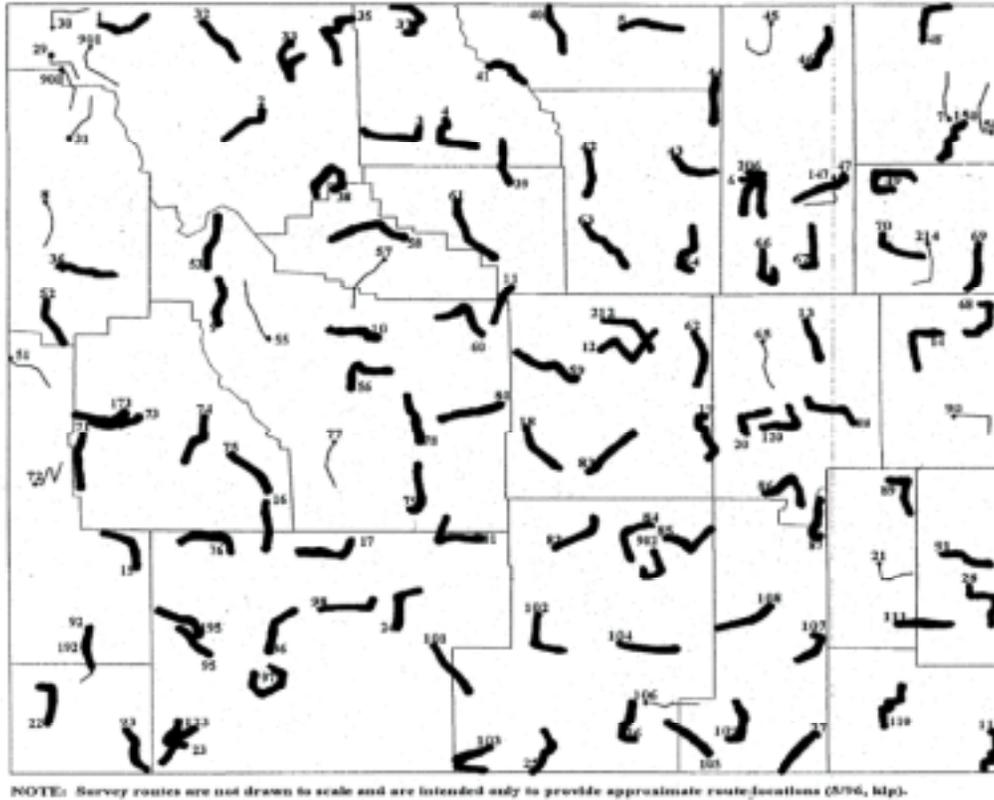


Figure 48. Bold lines indicate Breeding Bird Survey routes on which Golden Eagles have been observed from 1968 through 2002.

### Habitat Objectives

- 1) Minimize loss of suitability of cliffs for nesting Golden Eagles.
- 2) Maintain open country to provide habitat for small mammals as a food source for Golden Eagles.

### Recommendations

- 1) Avoid converting cliff sites to other landforms.
- 2) Use prescribed burning in late summer or early fall to create open habitat and maintain abundant prey. Because Golden Eagles require open areas for hunting, fires that create these open areas would probably be beneficial, provided burning led to an increase in prey.
- 3) Restrict human activities, such as mining and recreation, near Golden Eagle nests during the peak breeding season (February 1 through July 31). Establish buffer zones of ½ mile (0.8 km) from nest sites. Human disturbance near Golden Eagle nest sites

during the breeding season may result in nest abandonment, although prolonged disturbance is more harmful than periodic, short-term disturbance. Adult Golden Eagles tolerate activity in the canyon below the nests, but are very intolerant of human activity on the canyon rim above them, so activity (e.g. off-road vehicle travel) on the canyon rim should be reduced to a minimum during the nesting season.

4) Protect, enhance, and restore prey populations. Avoid large-scale conversion to agriculture, improper livestock grazing, and invasion of exotic vegetation, all of which may reduce prey populations. Limit control of small mammals in areas where Golden Eagles occur. Avoid important prey concentrations, such as ground squirrel colonies, during the development of mining, road construction, campgrounds, etc.

5) Consider constructing, excavating, or blasting artificial nest sites in areas where natural sites are limiting Golden Eagle reproduction but other features of the cliff and the surrounding landscape, particularly the prey base, are suitable.

6) Protect areas traditionally used by Golden Eagles, as their fidelity to nesting territories is high. All known and potential nesting cliffs should be considered for conservation action. Golden Eagles may also have a high fidelity to wintering territories, so identification and proper management of winter sites is also important.

7) Leave mine highwalls and construct rock outcrops during reclamation to provide cliff habitat for nesting sites and cover.

8) Install only raptor protected power lines, and modify existing power lines that are not raptor protected.

**Prairie Falcon**

Primary Habitat Type: Specialized (cliffs)

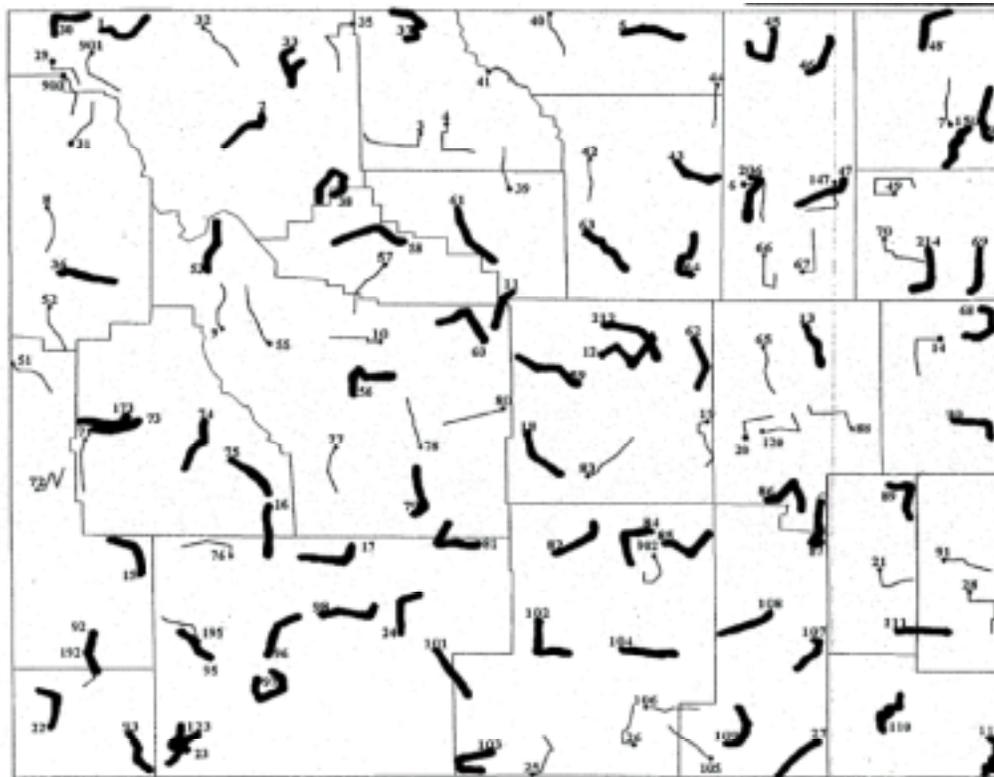
SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Prairie Falcon (PRFA) <i>Falco mexicanus</i> Level III CA	~Grasslands, shrub-steppe, and other treeless areas, including alpine habitats ~Will use a variety of landscapes and vegetation types if suitable nest sites are available	~Early successional stages, low vegetation height, and large percentages of bare ground	~Uses cliffs and large rock outcrops for nesting	~Open country near cliffs and steep canyons ~Home range during the breeding season is 23 to 120 mi <sup>2</sup> ~Home range during winter is about 12 mi <sup>2</sup>	~Limited by suitable nest sites (cliffs), and an adequate prey base, primarily ground squirrels ~Weak nest site tenacity, but fidelity to breeding territory is very high ~Will use artificial cavities on otherwise unsuitable cliffs ~Is a year-round resident in Wyoming; may move to lower elevations during winter

Found throughout Wyoming in grasslands, shrub-steppe, and other open country, including alpine habitats. Will use a variety of landscapes and vegetation types if suitable nest sites are available. Nests in a shallow scrape on protected ledges of cliffs and rock outcrops, 20 to 400 feet (6 to 120 m) high. Nest sites are usually in a crevice or cavity beneath a protective overhang on a sheer cliff. Most eyries face south or east and overlook open habitats. Will use artificial cavities on otherwise unsuitable cliffs. Eggs (4 to 5, 52 mm) are white/pinkish-white and marked with browns. Feeds on a variety of prey, especially ground squirrels in summer and Horned Larks in winter. Flushes prey by flying low over the ground, stoops on flying birds from above, or hunts from tall perches. Is a year-round resident in Wyoming; may move to lower elevations during winter. Limited by suitable nest sites (cliffs), and an adequate prey base. May be threatened by a combination of factors, including pesticide contamination; incompatible grazing; conversion to large-scale agriculture; and disturbances from urban development, mining, and recreation. Other species that may benefit from

habitat management for this species include the Golden Eagle, Peregrine Falcon, Great Horned Owl, Common Raven, Rock Wren, and Canyon Wren.

## Population Objectives

- 1) Determine statewide population trend data by implementing “Monitoring Wyoming’s Birds: The Plan for Count-based Monitoring”.
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Prairie Falcons have been detected on 71 BBS routes in Wyoming, including 26 routes on which they were observed a minimum of 3 years.
  - a) Maintain Prairie Falcons on the 71 BBS routes on which they were observed (Figure 49).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.



NOTE: Survey routes are not drawn to scale and are intended only to provide approximate route locations (S/96, ldp).

Figure 49. Bold lines indicate Breeding Bird Survey routes on which Prairie Falcons have been observed from 1968 through 2002.

## **Habitat Objectives**

- 1) Minimize loss of suitability of cliffs for nesting Prairie Falcons.
- 2) Maintain open country to provide habitat for small birds and mammals as a food source for Prairie Falcons.

## **Recommendations**

- 1) Avoid converting cliff sites to other landforms.
- 2) Use prescribed burning in late summer or early fall to create open habitat and maintain abundant prey. Because Prairie Falcons require open areas for hunting, fires that create these open areas would probably be beneficial, provided burning led to an increase in prey.
- 3) At a landscape level, use grazing as a tool to maintain areas of open habitat, low vegetation height, and patches of open ground. Avoid grazing vegetation that is already sparse and short, especially where precipitation is typically low.
- 4) Restrict human activities, such as mining and recreation, near Prairie Falcon nests during the peak breeding season (March 1 through August 15). Establish buffer zones of ½ mile (0.8 km) from nest sites. Place roads at least a 15- to 30-minute walk from Prairie Falcon nests. Human disturbance near Prairie Falcon nest sites during the breeding season may result in nest abandonment, although prolonged disturbance is more harmful than periodic, short-term disturbance.
- 5) Eliminate the use of pesticides known to be harmful to falcons in foraging areas where falcons nest and winter. Although this may be impractical on a broad basis, it should be pursued where falcons concentrate and where agricultural lands are interspersed with frequently used native vegetation.
- 6) Consider constructing, excavating, or blasting artificial nest sites in areas where natural sites are limiting Prairie Falcon reproduction but other features of the cliff and the surrounding landscape, particularly the prey base, are suitable. Artificial nest sites should be on south-facing exposures and 2/3 of the way up the cliff face. The floor area of the site should be 7.5 ft<sup>2</sup> (7,000 cm<sup>2</sup>), with a 5 to 10% slope toward the front.
- 7) Protect areas traditionally used by Prairie Falcons, as their fidelity to nesting territories is high. All known and potential nesting cliffs should be considered for conservation action. Prairie Falcons may also have a high fidelity to wintering territories, so identification and proper management of winter sites is also important.

8) Protect, enhance, and restore prey populations. Avoid large-scale conversion to agriculture, improper livestock grazing, and invasion of exotic vegetation, all of which may reduce prey populations. Limit control of small mammals in areas where Prairie Falcons occur. Avoid important prey concentrations, such as ground squirrel colonies, during the development of mining, road construction, campgrounds, etc.

9) Use fire management, livestock management, and other actions to slow or stop the spread of invasive exotic plants (e.g. cheatgrass) in Prairie Falcon foraging habitat.

10) Leave mine highwalls and construct rock outcrops during reclamation to provide cliff habitat for nesting sites and cover.

***White-tailed Ptarmigan***

White-tailed Ptarmigan (*Lagopus leucurus*) would appear here based on priority, but this species is currently listed as a game species in Wyoming and will not be addressed in the Wyoming Bird Conservation Plan at this time.

***Blue Grouse***

Blue Grouse (*Dendragapus obscurus*) would appear here based on priority, but this species is currently listed as a game species in Wyoming and will not be addressed in the Wyoming Bird Conservation Plan at this time.

***American Avocet***

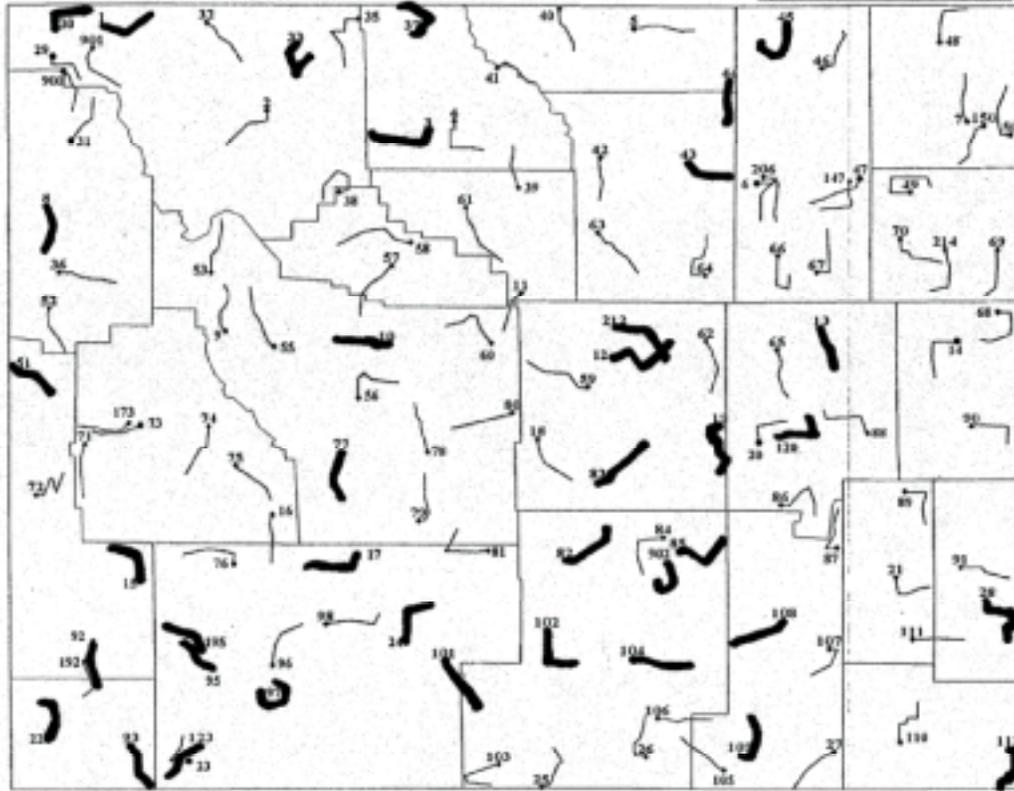
Primary Habitat Type: Wetlands

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
American Avocet (AMAV) <i>Recurvirostra americana</i> Level III M	~Associated with wetlands characterized by cattails, bulrushes, or sedges, but most time is spent in more open areas with no vegetation or with sparse vegetation such as glasswort, saltgrass, or greasewood	~Requires wetlands bordered by open mudflats or areas with scattered tufts of grass ~Nests in sparse vegetation	~Inhabits shallow alkaline lakes, wet meadows, and pastures with scattered open pools ~Usually feeds in water 0 to 8 inches deep, but also swims in water up to 10 inches deep		~Nests in loose colonies ~If water levels rise, may build up nest with sticks and weeds ~Winters on the plains of the southern U.S. and the Pacific coast of Mexico

Found throughout most of Wyoming in marshes, ponds, and shorelines of open country, particularly shallow alkaline lakes, salt ponds, wet meadows, and pastures with scattered open pools. Nests in loose colonies on dry, sun-baked mudflats; or on low, gravelly or sandy islands or sandbars. Nests on the ground near water, among sparse tufts of vegetation. Nest is a scrape with variable lining, often dry grass or mud chips. Eggs (3 to 5, 50 mm) are olive-buff, marked with brown or black. Eats aquatic invertebrates from the water column and sediment; also terrestrial invertebrates, small fish, and seeds. Usually forages by sweeping its bill back and forth beneath the water surface, finding food by feel. Is better able to adapt to water level fluctuations than other waterbirds, as it will build up its nest with vegetation if waters rise. Breeding and staging areas have been lost or degraded due to development, agricultural diversions, and urban water storage and flood control projects. Embryo deformities and decreased hatchability have been associated with selenium contamination in irrigation drainwater. Other species that may benefit from habitat management for this species include the Black-necked Stilt, Willet, and Wilson's Phalarope.

### **Population Objectives**

- 1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate American Avocets have been detected on 38 BBS routes in Wyoming, including 14 routes on which they were observed a minimum of 3 years.
  - a) Maintain American Avocets on the 38 BBS routes on which they were observed (Figure 50).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.



NOTE: Survey routes are not drawn to scale and are intended only to provide approximate route locations (5/96, hlp).

Figure 50. Bold lines indicate Breeding Bird Survey routes on which American Avocets have been observed from 1968 through 2002.

### Habitat Objectives

- 1) Maintain wetland complexes and a variety of wet-meadow and marsh stages and conditions where American Avocets occur.
- 2) Maintain water quality to sustain substantial populations of invertebrates as a food source for American Avocets.

### Recommendations

- 1) Protect wetland complexes with both seasonal and semi-permanent wetlands from development and degradation.
- 2) Prevent the diversion of water from saline lakes and wetlands in breeding and staging areas.

3) Avoid or minimize insecticide use in or near wetlands to maintain a food source for American Avocets (and other insectivores). Postpone all insecticide use until American Avocets and other insectivores have completed their breeding cycle.

4) Maintain vegetation buffer zones to block siltation, pesticide, fertilizer, and other contaminant runoff into wetlands. This is particularly important where American Avocets nest adjacent to agricultural land, and are vulnerable to contamination from agricultural runoff.

**Willet**

Primary Habitat Type: Wetlands

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Willet (WILL) <i>Catoptrophorus semipalmatus</i> Level III M	~Prefers native grass to tame vegetation	~Moist prairies and plains, alkali flats, and grassy dikes ~Nests in open areas on sandy beaches or in short, sparse vegetation ~Broods need taller, denser vegetation than that found at the nest site (>6 inches) ~Prefers areas that provide a mosaic of wet meadows for nesting, shallow open water for foraging, and taller vegetation for brood rearing	~Marshy areas with scattered saline and freshwater lakes and pools ~Generally nests within 650 feet of water ~Forages in water depths ranging from dry mud to 4 inches	~Territory size is about 110 acres, but is rarely found in wetland/grassland blocks <250 acres	~Nests semi-colonially ~Strong fidelity to mate and to feeding territory between years ~Winters south along coast to northern Chile

Found across most of Wyoming in wet-moist meadow grasslands, marshes, irrigated native meadows, and shorelines. Nests semi-colonially near open water in marshes, wet meadows, and prairies with short, sparse vegetation. Forages largely in the shallow water of ponds and wetlands. Broods need taller, denser vegetation [greater than 6 inches (15 cm)] than that found at the nest site. Prefers areas that provide a mosaic of these habitat types (i.e. wet meadows for nesting, shallow open

water for foraging, and taller vegetation for brood rearing) within an area large enough to contain at least one territory [i.e. at least 100 acres (40 ha)]. Nest is a hollow on the ground lined with dry grasses and sedges, in open areas generally within 650 feet (200 m) of water. Eggs (4 to 5, 53 mm) are olive, marked with olive-brown. Feeds primarily by probing for aquatic invertebrates in soft, moist substrates, but also pecks items from the ground or water surface. Winters south along the coast to northern Chile. Other species that may benefit from habitat management for this species include the Wilson's Phalarope, American Avocet, Killdeer, and Savannah Sparrow.

### **Population Objectives**

- 1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Willets have been detected on 29 BBS routes in Wyoming, including 10 routes on which they were observed a minimum of 3 years.
  - a) Maintain Willets on the 29 BBS routes on which they were observed (Figure 51).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

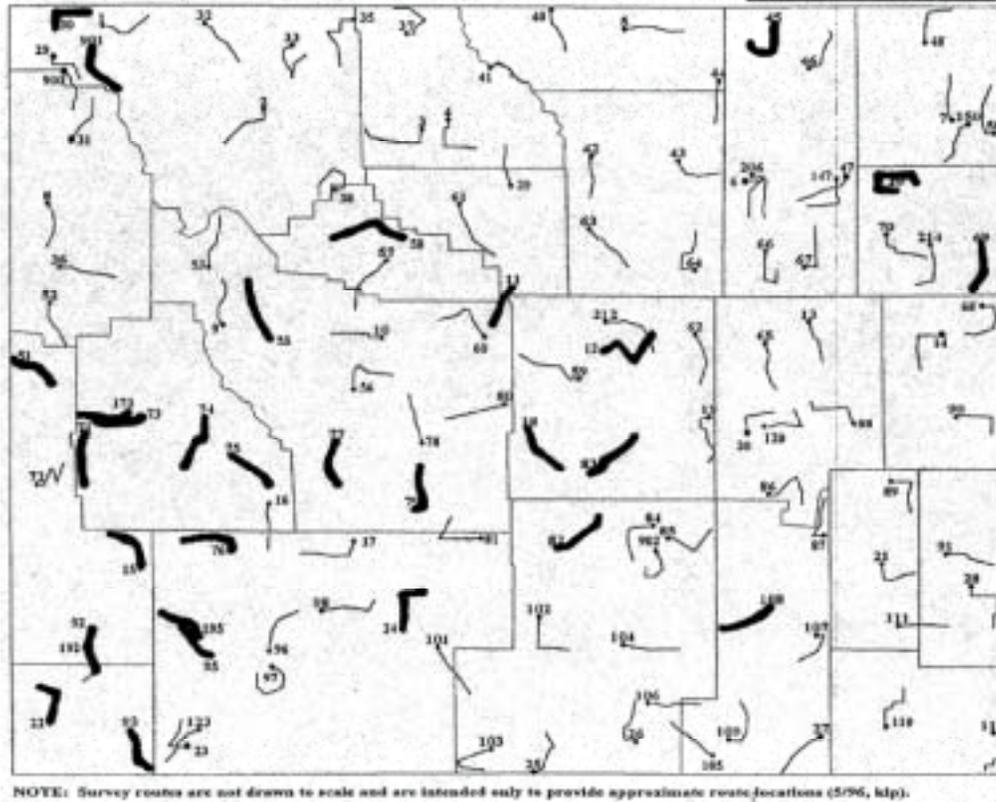


Figure 51. Bold lines indicate Breeding Bird Survey routes on which Willets have been observed from 1968 through 2002.

### Habitat Objectives

- 1) Maintain large grassland and wetland complexes and a variety of wet-meadow and marsh stages and conditions where Willets occur.
- 2) Maintain water quality to sustain substantial populations of invertebrates as a food source for Willets.

### Recommendations

- 1) Provide a mosaic of short to moderate-height native grassland and wetland habitat types (i.e. wet meadows for nesting, shallow open water for foraging [less than 4 inches (10 cm)], and taller vegetation for brood rearing) within an area large enough to contain at least one territory [i.e. at least 100 acres (40 ha)], and preferably in an area larger than 250 acres (100 ha).
- 2) Protect wetland complexes, including seasonal, semipermanent, and permanent wetlands, from development, degradation, and drainage to provide suitable habitat during both wet and dry years.

- 3) Use habitat management tools such as spring flooding, prescribed burning, mowing, and grazing to provide optimum invertebrate populations and the short, sparse vegetation profile preferred by nesting Willets. Fall burning, mowing, or grazing of upland sites and wetland edges can produce suitable cover for the following spring. Moderate to dense regrowth in burned areas may be too dense for nesting, but may provide the denser, taller cover used by broods.
- 4) Refrain from mowing, burning, or heavily grazing Willet nesting habitat during the breeding season. Large numbers of livestock permitted to graze in Willet habitat during the breeding season may accidentally trample nests or young.
- 5) Willets prefer previously grazed uplands that are idle during the current breeding season over permanently idle grasslands. Choose a rotational grazing system such as twice-over deferred grazing (which involves grazing a number of pastures twice per season, with about a 2-month rest between grazing), over a season-long grazing system (which involves leaving cattle on the same pasture for the entire growing season). Short-term grazing [which involves a system of pastures rotated through a grazing schedule of about one week grazed and one month ungrazed, repeated throughout the growing season (usually late May or early June until October)] may be beneficial.
- 6) Avoid tilling native grasslands. Use no-tillage and minimum-tillage practices on cropland. Although Willets usually avoid tilled lands, nests have been reported in hayland and cropland, including small-grain, flax, and stubble fields.
- 7) Avoid or minimize insecticide use in or near wetlands to maintain a food source for Willets (and other insectivores). Postpone all insecticide use until Willets and other insectivores have completed their breeding cycle.
- 8) Maintain vegetation buffer zones to block siltation, pesticide, and fertilizer runoff into wetlands. This is particularly important where Willets nest adjacent to agricultural land, and are vulnerable to contamination from agricultural runoff.
- 9) Protect any known Willet territories, regardless of the size of the site or the number of Willets present, as Willets exhibit strong fidelity to their feeding territories between years.
- 10) Maintain shallow [about 4 inches (10 cm)], stable water levels throughout the nesting season in marshes where Willets occur.
- 11) Avoid disturbing Willet nesting areas before the young have hatched. Since adults will leave their nests readily to distract potential predators, frequent human

disturbance may have significant impacts on breeding success. Limit visitor access to known breeding habitat.

### ***Common Poorwill***

Primary Habitat Types: Mountain-foothills Shrub and Shrub-steppe

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Common Poorwill  (COPO) <i>Phalaenoptilus nuttallii</i> Level III M	~Rocky sagebrush, mountain-foothills shrublands, juniper woodlands, and ponderosa pine woodlands	~Open woodlands ~Dry, brushy areas ~Inhabits all stages of shrub areas, preferring clearings and open stages for foraging ~Nests on ground, often partially shaded by a shrub, tuft of grass, rock, or log	~Elevation <8,000 feet ~Rocky areas and canyons ~Nests on gravelly ground or flat rock	~Forages in grassy meadows, riparian zones, and forest edges within 1/3 mile of the nest	~Feeds exclusively on insects ~Perennial nest site ~Is able to enter torpor to conserve energy resources during cold weather ~Lack of specific information on habitat requirements ~Winters south to central Mexico

Found across most of Wyoming, particularly the drier eastern and southern parts of the state, in a variety of dry, rocky, open habitats below 8,000 feet (2,400 m). Inhabits sparse, rocky sagebrush; open prairies; all stages of mountain-foothills shrublands; juniper woodlands; brushy, rocky canyons; and ponderosa pine woodlands. Prefers clearings and open stages, including grassy meadows, riparian zones, and forest edges for foraging within 1/3 mile (500 m) of the nest. Builds no nest, but lays eggs directly on gravelly ground, flat rock, or litter of woodland floor. Occasionally scrapes a slight depression in the dirt. Nest is often placed near a log, rock, shrub, or tuft of grass for some shade, yet with a wide-angle view of the surroundings. Eggs (2, 26 mm) are pinkish-white or pinkish-cream, darkly mottled with lavender. Feeds exclusively on insects, especially nocturnal insects such as moths and beetles, and occasionally flies, grasshoppers, and flying ants. Catches insects by leaping from the ground or a perch, or by picking them up from the ground. Winters south to central Mexico. Nocturnal or crepuscular (active at dusk and dawn); may increase foraging activity during moonlit nights. Specific habitat requirements and status are poorly understood. Population declines in the West are due to habitat degradation and permanent conversion of shrublands to other cover types. Other species that may benefit from habitat

management for this species include the Wild Turkey, Plumbeous Vireo, Orange-crowned Warbler, Virginia's Warbler, Black-headed Grosbeak, and Green-tailed Towhee.

### Population Objectives

- 1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Common Poorwills have been detected on 20 BBS routes in Wyoming, including 6 on which they were observed a minimum of 3 years.
  - a) Maintain Common Poorwills on the 20 BBS routes on which they were observed (Figure 52).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

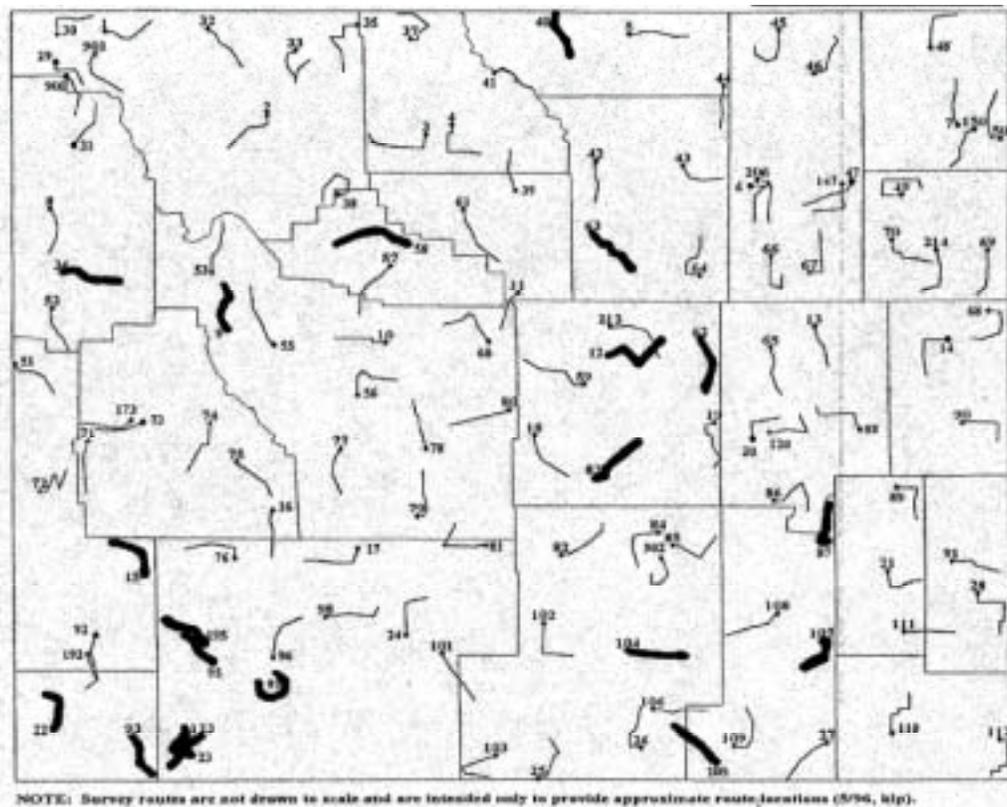


Figure 52. Bold lines indicate Breeding Bird Survey routes on which Common Poorwills have been observed from 1968 through 2002.

## **Habitat Objectives**

- 1) Maintain shrublands where Common Poorwills occur.
- 2) Provide a mosaic of altered and unaltered habitat on a landscape scale.

## **Recommendations**

- 1) Manage for a diversity of shrubby vegetation near clearings and open areas for foraging.
- 2) Limit activities that reduce or remove preferred shrub habitats (e.g. shrub eradication, some grazing, campgrounds, off-road vehicle travel, and urbanization) where Common Poorwills occur.
- 3) Use prescribed burns to prevent the formation of dense stands and promote the regeneration of shrubs. Conduct prescribed burns in early spring before birds begin nesting.
- 4) Prevent the invasion of exotic plants, such as cheatgrass. Select native seed for revegetation.
- 5) Avoid or minimize insecticide use in shrubland habitats to maintain a food source for Common Poorwills (and other insectivores). Postpone all insecticide use until Common Poorwills and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.
- 6) Limit grazing in areas where Common Poorwills are nesting to avoid trampling of nests.

## ***Red-headed Woodpecker***

Primary Habitat Types: Plains/Basin Riparian and Low Elevation Conifer

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Red-headed Woodpecker  (RHWO) <i>Melanerpes erythrocephalus</i> Level III M	~Cottonwood-riparian ~Ponderosa-savannah ~Aspen	~Requires snags or dead portions of living trees for nesting ~Open canopy ~ Low density ground cover		~Park-like open areas with scattered trees ~Open areas ≥100 feet around nest trees ~Attracted to burned forests ~Threatened by loss of woodlands and bottomland forests	~European Starlings compete for nest sites and steal food caches ~May reuse old nest site or excavate a new cavity each year ~Will use natural cavities and sometimes nest boxes ~Winters in southern and eastern U.S.

Scattered throughout Wyoming, but mostly breeds in eastern and north-central Wyoming. Inhabits open and park-like woodlands. Found primarily along major rivers within the associated riparian forest. Also present in open ponderosa pine savannah. Requires an open canopy, low-density ground cover, and adequate snags for nesting. Excavates a cavity or uses a natural cavity in a barkless dead tree or a dead stub on a live tree at least 8 inches (20 cm) dbh, 8 to 80 feet (2 to 24 m) above ground. Lines the cavity with wood chips. Prefers snag densities of at least 4 to 5 per acre (10 to 12 per ha). Eggs (3 to 7, 25 mm) are white. Is an omnivorous and opportunistic forager. Eats insects, eggs, nestlings, mice, corn, berries, and seeds, which it gathers by hawking, swooping, and gleaning from bark, foliage, and the ground. Caches insects and seeds, breaking them to fit natural cavities. Winters in southern and eastern U.S. Is attracted to burned forests. Main threats are declines in the number of available snags, and the loss of open woodlands and riparian forests. European Starlings compete for nest cavities and steal food from caches. Other species that may benefit from habitat management for this species include the Swainson's Hawk, Merlin, Yellow-billed Cuckoo, Eastern Screech-Owl, Lewis' Woodpecker, and Pygmy Nuthatch.

### **Population Objectives**

1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".

2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Red-headed Woodpeckers have been detected on 21 BBS routes in Wyoming, including 7 on which they were observed a minimum of 3 years.

- a) Maintain Red-headed Woodpeckers on the 21 BBS routes on which they were observed (Figure 53).
- b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

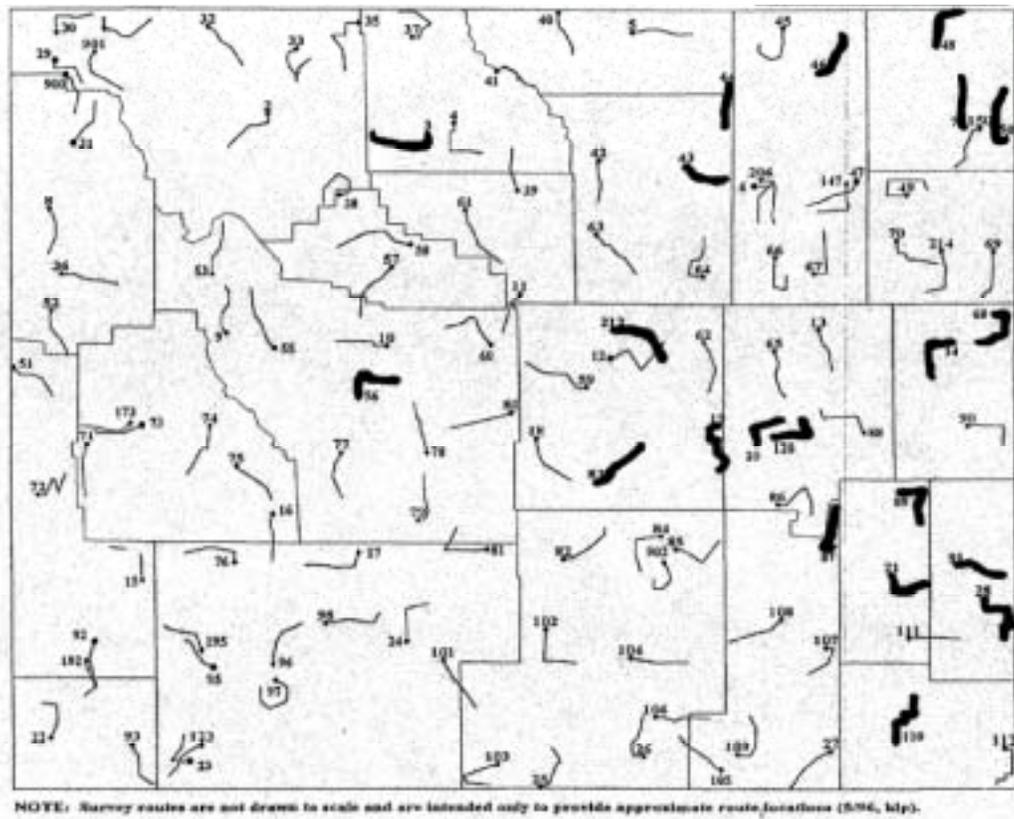


Figure 53. Bold lines indicate Breeding Bird Survey routes on which Red-headed Woodpeckers have been observed from 1968 through 2002.

### Habitat Objectives

- 1) Maintain open riparian and ponderosa pine woodlands and low-density ground cover for aerial and ground foraging.
- 2) Maintain a mosaic of large trees and snags, in clusters, with an open canopy in areas where Red-headed Woodpeckers occur.

## **Recommendations**

- 1) Retain snags, all trees with nest cavities, and dead limbs on living trees, preferably in clusters. Retain mature and decadent trees for future snag production, particularly where existing snags are few.
- 2) Implement woodland management practices that maintain open riparian and ponderosa pine woodlands with mature trees. Preserve fragments greater than 5 acres (2 ha), with a diverse size selection of dead limbs and snags.
- 3) Implement agricultural practices that maintain riparian areas. Avoid removing hedgerows, clearing odd corners of fields, and planting large monocultures.
- 4) Use prescribed fire to maintain open stands of forests and woodlands where Red-headed Woodpeckers occur.
- 5) When planting young trees, stagger them over time to provide replacement trees in areas where natural replacement is reduced.
- 6) Where snags are unavailable and the lack of nest sites is limiting Red-headed Woodpecker reproduction, a well-maintained nest box program may be beneficial. Monitor nest boxes regularly throughout the nesting season to evict European Starlings, House Sparrows, rodents, and insects, and to clean out “dummy” nests built by wrens.
- 7) Avoid or minimize insecticide use in woodland habitats to maintain a food source for Red-headed Woodpeckers (and other insectivores). Postpone all insecticide use until Red-headed Woodpeckers and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.
- 8) Do not encourage European Starlings to nest, and control, reduce, or remove European Starling populations where nest cavity competition is a concern.

## ***Say's Phoebe***

Primary Habitat Type: Shrub-steppe

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Say's Phoebe (SAPH) <i>Sayornis saya</i> Level III LI, CA, M	~Shrub-steppe, grasslands, shrublands, juniper woodlands	~Arid open areas with sparse vegetation		~Open country and badlands ~Nests on cliff ledges, banks, bridges, eaves, road culverts, etc. ~Frequently found well away from water	~Nest site fidelity ~Sometimes uses old nests of Cliff Swallows and Barn Swallows ~Rare cowbird host ~Winters south to Mexico

Found throughout the state, but is much less common in the forested areas of northwestern Wyoming. Inhabits arid, open country with sparse vegetation, including shrub-steppe, grasslands, shrublands, and juniper woodlands. Nests on cliff ledges, banks, bridges, eaves, road culverts, etc.; sometimes uses old nests of Cliff Swallows and Barn Swallows. Builds a cup nest of grasses, moss, and plant fibers, lined with fine materials, especially hair. Eggs (3 to 7, 19 mm) are white, mostly unmarked, some (last laid) with small red spots. Often reuses nest in successive years. Is a rare cowbird host. Eats mostly insects (primarily grasshoppers) and some berries. Flies from perch to catch aerial insects or hovers to glean insects or berries from vegetation. Winters south to Mexico. Has responded favorably to construction of buildings, bridges, and culverts by nesting on them in habitat types that were otherwise favorable, but lacked nesting substrate. Other species that may benefit from habitat management for this species include the Cliff Swallow, Barn Swallow, Northern Rough-winged Swallow, Rock Wren, and Canyon Wren.

### **Population Objectives**

1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".

2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Say's Phoebes have been detected on 90 BBS routes in Wyoming, including 70 routes on which they were observed a minimum of 3 years.

- a) Maintain Say's Phoebes on the 90 BBS routes on which they were observed (Figure 54).
- b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

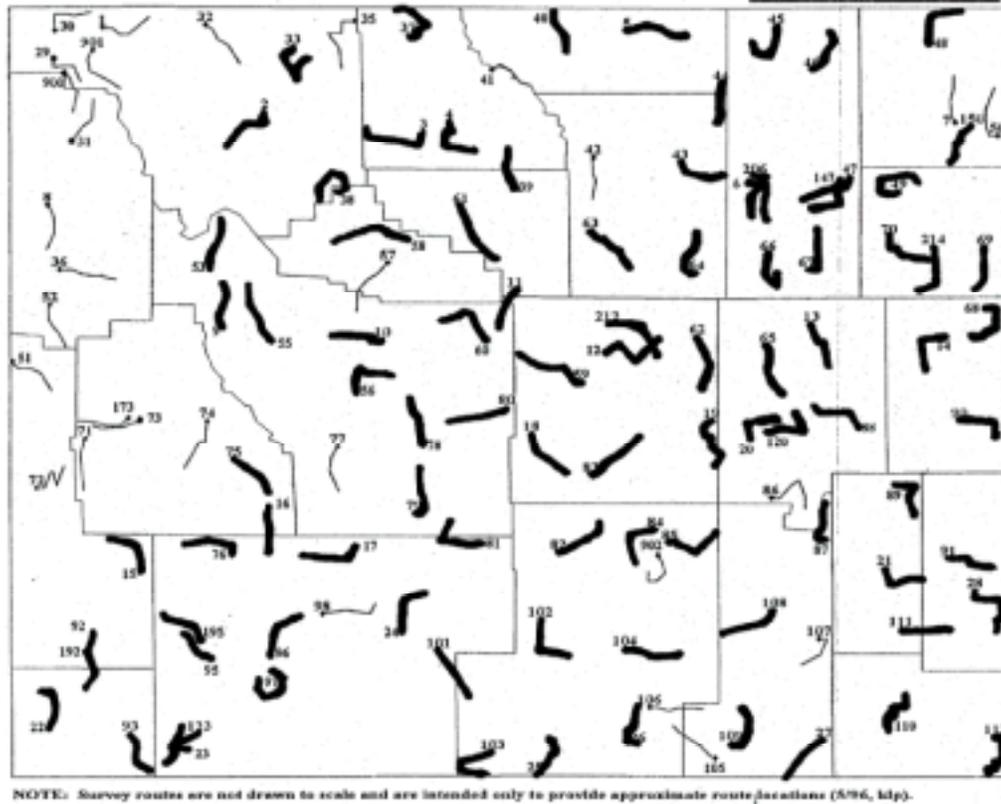


Figure 54. Bold lines indicate Breeding Bird Survey routes on which Say's Phoebes have been observed from 1968 through 2002.

### Habitat Objectives

- 1) Maintain cliffs, banks, canyons, and other areas with natural sheltered nooks for Say's Phoebes to use for nesting.
- 2) Maintain areas of open habitat and sparse vegetation where Say's Phoebes occur.

## **Recommendations**

- 1) Avoid converting cliffs, banks, canyons, or other areas with natural sheltered nooks to other landforms.
- 2) Protect areas traditionally used by Say's Phoebes, as they will return to nesting sites in subsequent years. Avoid removing old buildings, culverts, or bridges where Say's Phoebes are known to nest.
- 3) Limit the number of roads in sagebrush habitat and consider rehabilitating old roads. In addition to habitat loss through additional road construction, traffic volume (e.g. dust and noise), and displacement by other species more adapted to roads and edge (e.g. Horned Larks) also have effects. Even roads and other developments with low traffic densities affect sagebrush obligate passerines.
- 4) Avoid or minimize insecticide use in open shrubland habitats to maintain a food source for Say's Phoebes (and other insectivores). Postpone all insecticide use until Say's Phoebes and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.
- 5) Rotate livestock use during the songbird breeding season in order to rest units from cowbird concentration in alternate years and to give local songbird populations [within a radius of 4 miles (6.5 km)] the opportunity to nest without high parasitism pressure.

## ***Clark's Nutcracker***

Primary Habitat Types: High Elevation Conifer and Mid Elevation Conifer

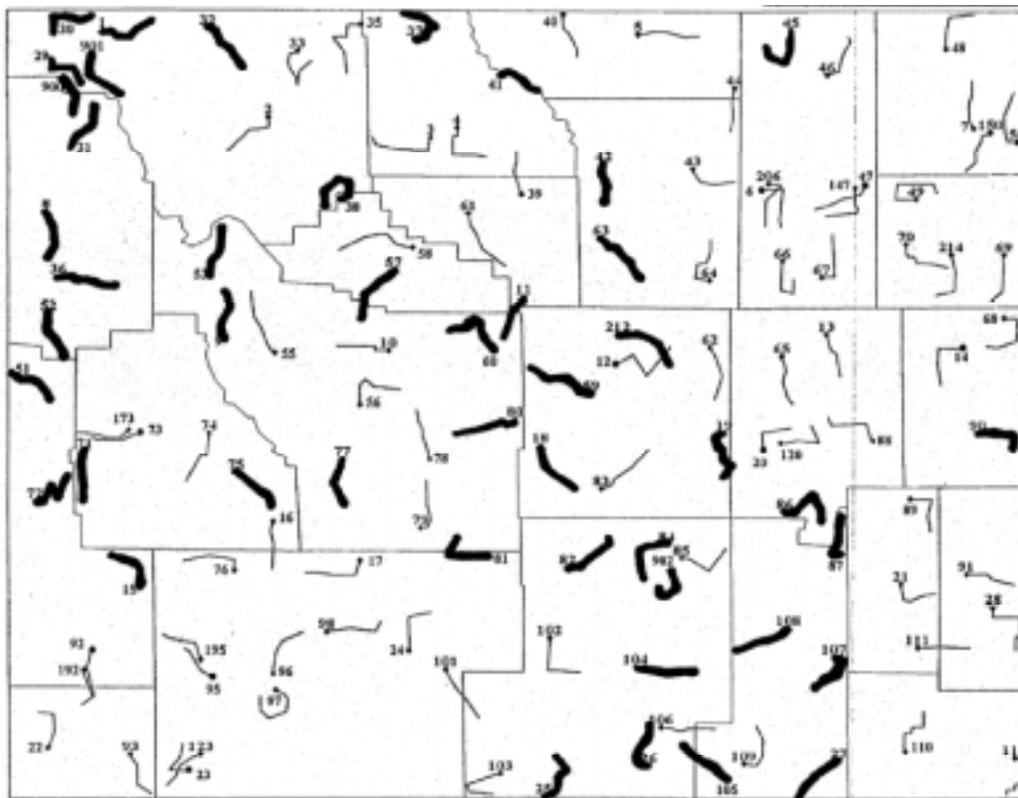
SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Clark's Nutcracker  (CLNU) <i>Nucifraga columbiana</i> Level III M	~Coniferous forests, especially open stands of limber or whitebark pine	~Wide variety of structural stages of forest	~Breeds primarily at higher elevations	~Associated with large tracts of contiguous forest in a naturally patchy coniferous forest mosaic	~Heavily dependent on seeds of whitebark pine and limber pine ~Caches thousands of conifer seeds, on which it depends from winter to mid-summer ~Year-round resident in Wyoming; may move to lower elevations in winter

Found in all the major mountain ranges in Wyoming, especially where there are open stands of whitebark or limber pine. Inhabits a wide variety of structural stages of forest, although it is closely linked to areas of high conifer seed production; its numbers vary with the size of the cone crop. Associated with large tracts of contiguous forest in a naturally patchy coniferous forest mosaic. Breeds primarily in wind-sheltered sites at higher elevations. Nests on a horizontal limb of a mature conifer tree, usually away from the trunk, or in a bushy top 8 to 50 feet (2.5 to 15 m) above ground. Builds a platform of twigs secured with bark strips, which supports an inner cup of fine bark strips, grass, conifer needles, hair, and feathers. Eggs (2 to 6, 32 mm) are pale green, marked with brown, olive, or gray. Depends on whitebark and limber pine nuts for food; may cache 22,000 to 33,000 nuts and seeds on south-facing hills each fall, and retrieve them by memory from winter to mid-summer. Its pointed bill is adapted for opening pinecones to extract seeds. Also forages on the ground and in trees for fruit, insects, small vertebrates, eggs, and nestlings. Scavenges at campsites and picnic areas, and eats suet at feeders. Is a year-round resident in Wyoming. Wanders in small flocks in winter, depending on the status of the cone crop; sometimes descends to the juniper zone or onto plains areas. The most important limiting factor is the long-term viability of whitebark and limber pine forests. Whitebark pine may be dependent on the Clark's Nutcracker for successful regeneration, through the germination of unretrieved caches. Other species that may benefit from habitat management for this species include the

Northern Goshawk, Three-toed Woodpecker, Black-backed Woodpecker, and Hammond's Flycatcher.

### Population Objectives

- 1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Clark's Nutcrackers have been detected on 46 BBS routes in Wyoming, including 30 routes on which they were observed a minimum of 3 years.
  - a) Maintain Clark's Nutcrackers on the 46 BBS routes on which they were observed (Figure 55).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.



NOTE: Survey routes are not drawn to scale and are intended only to provide approximate route locations (5/96, hlp).

Figure 55. Bold lines indicate Breeding Bird Survey routes on which Clark's Nutcrackers have been observed from 1968 through 2002.

## Habitat Objectives

1) Maintain mature whitebark pine and limber pine forests in areas where Clark's Nutcrackers occur.

## Recommendations

1) Implement forest management techniques that favor mature stands of whitebark pine and limber pine to ensure a food source for Clark's Nutcrackers.

## *Northern Rough-winged Swallow*

Primary Habitat Type: Plains/Basin Riparian

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Northern Rough-winged Swallow  (NRWS) <i>Stelgidopteryx serripennis</i> Level III LI, CA, M		~Open areas, including open woodlands, wherever a suitable nest site near water can be found	~Variety of habitats below 8,000 feet	~Nests primarily in stream banks ~Requires nest sites preferably near, but up to ½ mile from, water ~ Sometimes uses rock crevices, culverts, bridges, buildings, or old Bank Swallow or Belted Kingfisher burrows	~Nests singly or in loose colonies ~Winters south to Panama

Found throughout Wyoming in a variety of habitats below 8,000 feet (2,400 m). Nests in open areas, including open woodlands, wherever a suitable nest site near water [within a ½ mile (0.8 km)] can be found. Excavates a burrow in a stream bank; also uses rock crevices, culverts, bridges, buildings, or old Bank Swallow or Belted Kingfisher burrows. Builds a nest of grass, leaves, weed stems, or occasionally moist horse dung. Eggs (4 to 8, 18 mm) are white and unmarked. Nests singly or in very loose colonies, sometimes at the edge of a Bank Swallow colony. Feeds entirely on insects. Forages aerially in prolonged flight, and occasionally takes insects from the ground. Winters south to Panama. Other species that may benefit from habitat management for this species include the Say's Phoebe, Bank Swallow, and Canyon Wren.

## Population Objectives

- 1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Northern Rough-winged Swallows have been detected on 71 BBS routes in Wyoming, including 44 routes on which they were observed a minimum of 3 years.
  - a) Maintain Northern Rough-winged Swallows on the 71 BBS routes on which they were observed (Figure 56).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

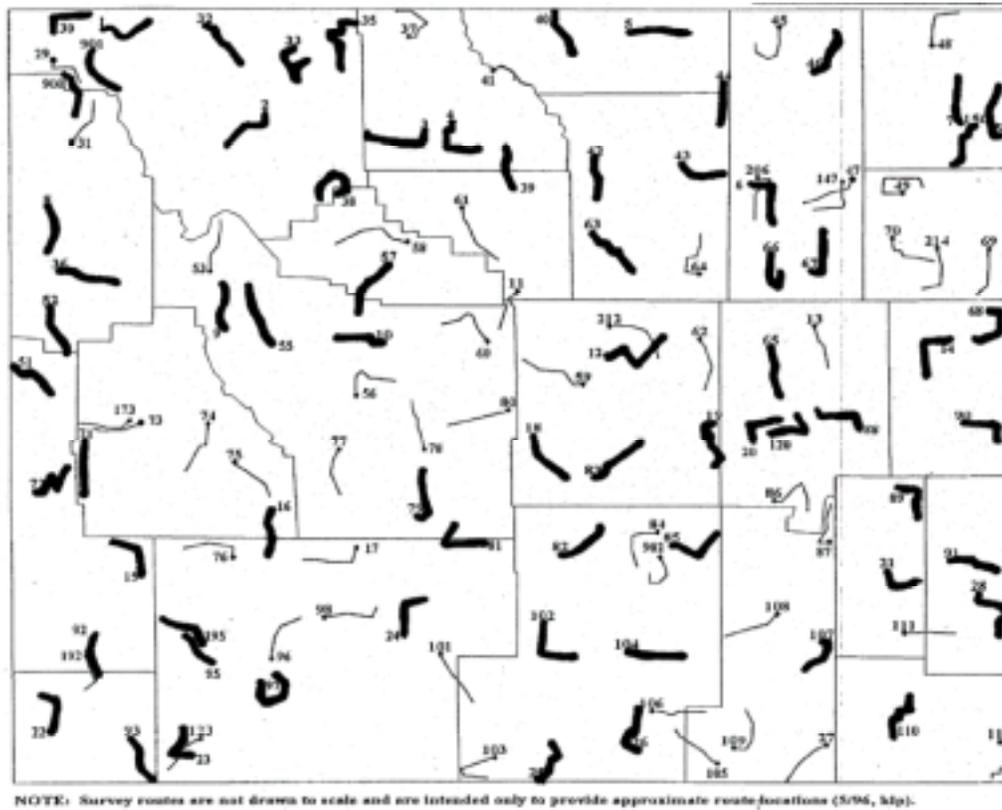


Figure 56. Bold lines indicate Breeding Bird Survey routes on which Northern Rough-winged Swallows have been observed from 1968 through 2002.

## Habitat Objectives

- 1) Maintain open habitat near water, especially areas with steep stream banks or cliffs.

## Recommendations

- 1) Avoid converting cliffs, banks, canyons, or other areas with natural sheltered nooks to other landforms.
- 2) Protect areas traditionally used by Bank Swallows, as Northern Rough-winged Swallows will use old Bank Swallow burrows and will nest at the periphery of Bank Swallow colonies.
- 3) Avoid or minimize insecticide use in open and riparian habitats to maintain a food source for Northern Rough-winged Swallows (and other insectivores). Postpone all insecticide use until Northern Rough-winged Swallows and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.

## Rock Wren

Primary Habitat Type: Specialized (rock outcrops)

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Rock Wren (ROWR) <i>Salpinctes obsoletus</i> Level III CA	~Montane woodlands, pine-juniper, woodland-chaparral, basin-prairie and mountain-foothills shrublands, grasslands ~Higher densities in montane pine-dominated woodlands than low-elevation juniper woodlands	~Sparsely vegetated rocky areas ~Requires open habitat	~Requires rough, rocky canyons; concrete or stone structures with crevices for foraging and cover	~Dry rocky slopes and badlands from the lowlands to above timberline	~Nests in crevices and cavities in rock outcrops, canyons, and small cliffs ~Nest site fidelity ~Occasional cowbird host ~Winters in south and west portions of breeding range (southwest U.S. and Mexico)

Found throughout Wyoming among rock outcrops and rock piles in a variety of habitats and elevations. Primarily inhabits arid and semiarid environments with sparse, open vegetation, including montane woodlands, pine-juniper woodland-chaparral, basin-prairie and mountain-foothills shrublands, and grasslands. Nests in a cavity or crevice in or among rocks, especially cliff walls, talus slopes, and rock outcrops in montane areas, canyons, and badlands. Builds a well-hidden, loose, cup

nest of rootlets, grasses, and plant stems lined with wool, spider's silk, and feathers. Usually builds a pavement or walkway of small, flat stones or pebbles that leads to the nest cavity. Eggs (5 to 6, 18 mm) are white and lightly flecked with reddish-brown. Is an occasional cowbird host. Feeds primarily on insects. Usually forages on the ground in open or uncovered situations, gleaning insects from the soil and rock surfaces and probing into cracks and crevices. Winters in the south and west portions of its breeding range (southwest U.S. and Mexico). Local increases in cowbird parasitism probably due to proximity of breeding areas to grain-fed livestock. Other species that may benefit from habitat management for this species include the Golden Eagle, Peregrine Falcon, Prairie Falcon, White-throated Swift, and Canyon Wren.

### **Population Objectives**

- 1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Rock Wrens have been detected on 99 BBS routes in Wyoming, including 77 routes on which they were observed a minimum of 3 years.
  - a) Maintain Rock Wrens on the 99 BBS routes on which they were observed (Figure 57).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

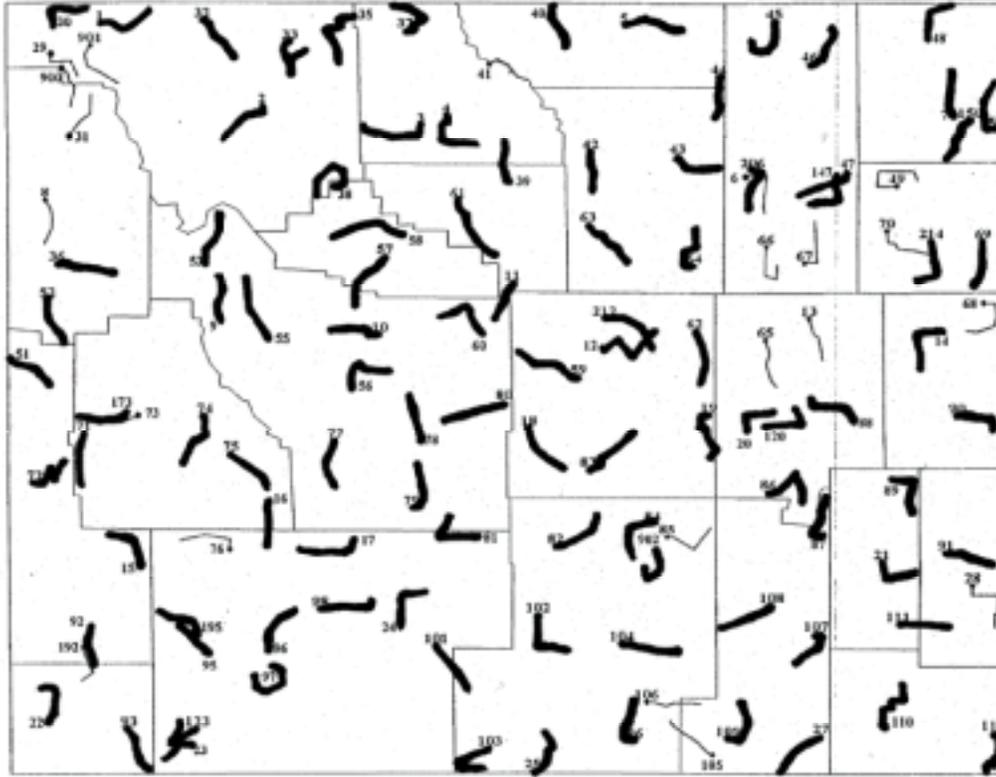


Figure 57. Bold lines indicate Breeding Bird Survey routes on which Rock Wrens have been observed from 1968 through 2002.

### Habitat Objectives

- 1) Maintain open, rocky habitats for Rock Wrens to use for nesting and foraging.

### Recommendations

- 1) Avoid converting cliffs, rock outcrops, and talus slopes to other landforms.
- 2) Protect areas traditionally used by Rock Wrens, as they will return to nesting sites in subsequent years.
- 3) Avoid or minimize insecticide use in rocky habitats to maintain a food source for Rock Wrens (and other insectivores). Postpone all insecticide use until Rock Wrens and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.
- 4) Rotate livestock use during the songbird breeding season in order to rest units from cowbird concentration in alternate years and to give local songbird populations [within a radius of 4 miles (6.5 km)] the opportunity to nest without high parasitism pressure.

## ***Canyon Wren***

Primary Habitat Type: Specialized (canyons)

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Canyon Wren (CANW) <i>Catherpes mexicanus</i> Level III CA	~Pine-juniper, woodland-chaparral, basin-prairie and mountain-foothills shrublands		~Restricted to rocky areas, canyon walls, cliffs, mesas, boulders, and stone buildings ~Especially associated with arid canyons		~Nest site fidelity ~Recreational rock climbers may disturb nesting locally ~Is a year-round resident in Wyoming

Scattered throughout the state, primarily in the arid canyons of southwestern Wyoming. Inhabits small cliffs, steep-sided canyons, rock outcrops, and boulder piles, usually in arid regions. Nests in a rock cavern, crevice, cliff, or bank, protected by a projecting ledge or shelf covering the top, sometimes in a small crevice, cranny, or hole. Nest is a cup of moss, spider silk, leaves, or catkins, on a base of twigs, lined with fine materials. Eggs (5 to 6, 18 mm) are white and lightly flecked with reddish-brown, rarely wreathed. Forages mainly in secluded or covered habitats, gleaning insects and spiders from rock surfaces, the ground, and foliage. Is a year-round resident in Wyoming. Intensive rock climbing could affect local populations. Other species that may benefit from habitat management for this species include the Golden Eagle, Peregrine Falcon, Prairie Falcon, White-throated Swift, and Rock Wren.

### **Population Objectives**

- 1) Determine statewide population trend data by implementing “Monitoring Wyoming’s Birds: The Plan for Count-based Monitoring”.
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Canyon Wrens have been detected on 16 BBS routes in Wyoming, including 9 routes on which they were observed a minimum of 3 years.
  - a) Maintain Canyon Wrens on the 16 BBS routes on which they were observed (Figure 58).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

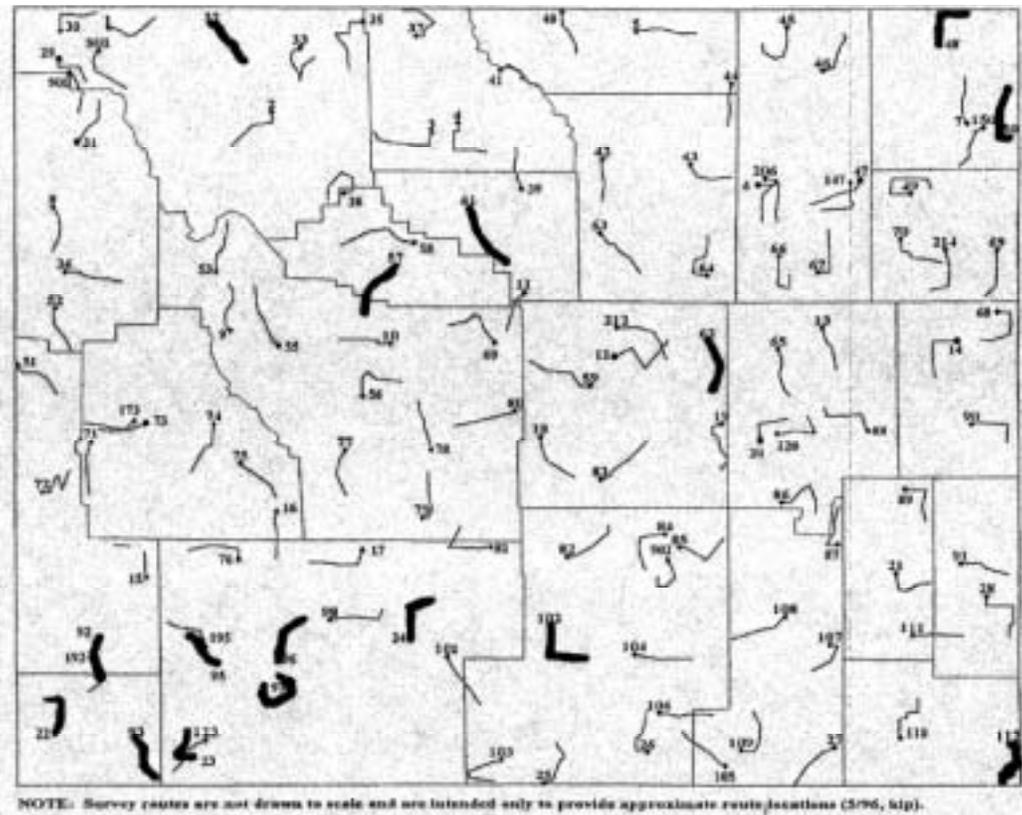


Figure 58. Bold lines indicate Breeding Bird Survey routes on which Canyon Wrens have been observed from 1968 through 2002.

### **Habitat Objectives**

1) Maintain canyons and rocky habitats for Canyon Wrens to use for nesting and foraging.

### **Recommendations**

- 1) Avoid converting canyons and rock outcrops to other landforms.
- 2) Protect areas traditionally used by Canyon Wrens, as they will return to nesting sites in subsequent years.
- 3) Restrict human activities, such as intensive rock climbing, near Canyon Wren nests during the breeding season.
- 4) Avoid or minimize insecticide use in canyon habitats to maintain a food source for Canyon Wrens (and other insectivores). Postpone all insecticide use until Canyon

Wrens and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.

***Bewick's Wren***

Primary Habitat Type: Juniper Woodland

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Bewick's Wren (BEWR) <i>Thryomanes bewickii</i> Level III M	~Pine-juniper woodland chaparral ~Dense growths of alder, cottonwood, and willow	~Requires adequate nest cavities; may rely on mature woodlands for senescent trees used for nest sites ~ Intermediate grass cover, tree height, and moderate amount of juniper regeneration ~Edge habitats		~Prescribed burning or other techniques that maintain early successional stages (open scrub woodland) may be beneficial ~May be limited by the distribution of pinyon pine in southwestern Wyoming	~House Sparrows, European Starlings, and House Wrens compete for nest cavities ~Will use nest boxes ~Uncommon cowbird host ~In winter, largely resident but some move south to central Mexico

Scattered across southern and east-central Wyoming in pine-juniper, woodland-chaparral, and mountain-foothills shrublands. Considered a specialist within the juniper woodland community in Wyoming. Occupies dense, mature woodlands with adequate nesting cavities, intermediate grass cover and tree height, and a moderate amount of juniper regeneration. Prefers broken and rather low, brushy areas, especially where heavier cover is present overhead. Often inhabits edge habitats. Requires a brushy understory and cavities for nesting. Nests 0 to 20 feet (0 to 6 m) above ground in secluded natural tree cavities, old woodpecker cavities, rock crevices, amid roots of upturned trees, or in almost any cavity where a nest can be built. Will use nest boxes. Lines cavity with twigs, grass, and feathers. Eggs (4 to 11, 17 mm) are white, flecked with brown, purple, and occasionally wreathed; occasionally almost unmarked. Uncommon cowbird host. Gleans insects and spiders from the ground, low trunks, and branches of trees and shrubs, usually under dense cover. Is largely a year-round resident of Wyoming, but some winter south to central Mexico. Declines may be due to interspecific competition (i.e. European Starlings, House Sparrows, and House Wrens), habitat changes (i.e. forest regrowth and suburban development), inclement weather, and predators. Prescribed burning or other techniques that maintain shrubby woodlands may be beneficial. Nest box programs may be beneficial if nest sites are a limiting factor. Other species that may benefit from habitat

management for this species include the Gray Flycatcher, Ash-throated Flycatcher, Western Scrub-Jay, Black-throated Gray Warbler, and Scott's Oriole.

### **Population Objectives**

1) Breeding Bird Survey (BBS) data from 1968 through 2002 are inadequate to determine population trends for the Bewick's Wren in Wyoming. Determine population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".

### **Habitat Objectives**

- 1) Maintain large, mature tracts of juniper woodlands.
- 2) Maintain a mosaic of large trees and snags in areas where Bewick's Wrens occur.

### **Recommendations**

- 1) Implement woodland management practices that provide large, mature stands of juniper woodlands where Bewick's Wrens occur.
- 2) Retain snags and all trees with nest cavities. Retain mature and decadent trees for future snag production, particularly where existing snags are few.
- 3) Refrain from salvage logging after burning. If salvage logging is unavoidable (for sanitary or firebreak reasons), then some areas should be left untouched rather than thinning the entire unit.
- 4) Where snags are unavailable and the lack of nest sites is limiting Bewick's Wren reproduction, a well-maintained nest box program may be beneficial. Nest boxes should have a 1.5-inch entrance hole to exclude European Starlings. Place nest boxes low on a tree or post in areas where Bewick's Wrens are known to occur. Monitor nest boxes regularly throughout the nesting season to evict House Sparrows, rodents, and insects, and to clean out "dummy" nests built by wrens.
- 5) Avoid or minimize insecticide use in woodland habitats to maintain a food source for Bewick's Wrens (and other insectivores). Postpone all insecticide use until Bewick's Wrens and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.
- 6) Do not encourage European Starlings or House Sparrows to nest, and control, reduce, or remove European Starling and House Sparrow populations where nesting cavity competition is a concern.

## Veery

Primary Habitat Type: Montane Riparian

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Veery (VEER) <i>Catharus fuscescens</i> Level III CA, LI, M	~ Aspen woodlands, cottonwood and willow riparian areas, and coniferous forests, usually near water	~Sapling stands of deciduous second-growth or open woods with fairly dense understory of shrubs, trees, and herbaceous vegetation ~Damp ravines	~Elevation <9,000 feet	~Probability of occurrence increases with patch size, and is at maximum at 600 acres	~Common cowbird host ~Reduced numbers in grazed areas and campgrounds compared with undisturbed sites ~Winters in northern South America

Scattered throughout most of Wyoming, primarily in the eastern half of the state. Inhabits cottonwood and willow riparian areas, aspen woodlands, and conifer forests below 9,000 feet (2,700 m), usually near water. Prefers sapling stands of deciduous second-growth or open woods with a dense understory of shrubs, trees, and herbaceous vegetation. Nests on or very near the ground at the base of a shrub, on a mossy stump, in a clump of weeds, or occasionally in a low shrub or tree; prefers a moist substrate. Builds a bulky cup nest of weed stems, twigs, and mosses lined with soft bark and grasses on a foundation of dead leaves. Eggs (3 to 5, 23 mm) are pale blue, usually unmarked, but sometimes marked with browns. Is a common cowbird host. Gleans insects, spiders, and fruit from the forest floor and the bark of trees, often overturning leaves on the ground with bill; also swoops from a low perch to capture insects on the ground. Winters in northern South America. Reduced abundance in grazed areas and campgrounds compared to relatively undisturbed sites. However, it may select for disturbed forests where the understory is denser than in undisturbed forests. Its preference for large riparian stands with a dense understory, and its susceptibility to cowbird parasitism, make it vulnerable to landscape changes. Other species that may benefit from habitat management for this species include the Yellow-billed Cuckoo, Willow Flycatcher, MacGillivray's Warbler, and Lazuli Bunting.

### Population Objectives

1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".

2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Veerys have been detected on 27 BBS routes in Wyoming, including 14 routes on which they were observed a minimum of 3 years.

- a) Maintain Veerys on the 27 BBS routes on which they were observed (Figure 59).
- b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

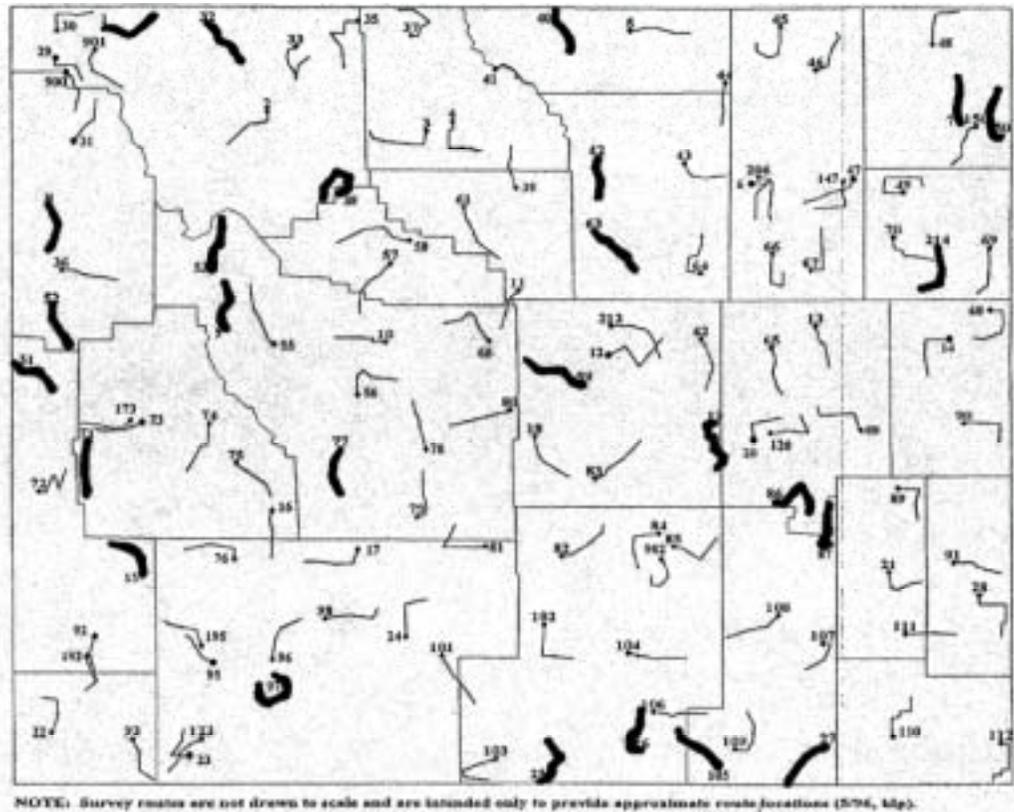


Figure 59. Bold lines indicate Breeding Bird Survey routes on which Veerys have been observed from 1968 through 2002.

### Habitat Objectives

- 1) Provide a dense understory and an abundance of shrubs, low trees, and herbaceous vegetation in areas where Veerys occur.

### Recommendations

- 1) Implement riparian Best Management Practices that emphasize protection and establishment of a dense understory with an abundance of shrubs, low trees, and herbaceous vegetation.

2) Rotate livestock use during the songbird breeding season in order to rest units from cowbird concentration in alternate years and to give local songbird populations [within a radius of 4 miles (6.5 km)] the opportunity to nest without high parasitism pressure.

3) Eliminate incompatible livestock grazing (e.g. summer grazing) and recreation in riparian habitat that adversely impacts the shrub or thicket component.

4) Avoid or minimize insecticide use in riparian habitats to maintain a food source for Veerys (and other insectivores). Postpone all insecticide use until Veerys and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.

***Virginia's Warbler***

Primary Habitat Types: Juniper Woodland and Mountain-foothills Shrub

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Virginia's Warbler  (VIWA) <i>Vermivora virginiae</i> Level III M	~Arid montane woodland, pine-juniper, riparian willow and alder thickets, open spruce-fir forests near shrubby thickets	~Heavy understory ~Older age classes ~Some trees and taller shrubs for singing and foraging posts	~5,500-9,000 feet elevation	~Activities that reduce shrub habitats can be detrimental ~Declines immediately after fire, but benefits from eventual regeneration of shrubs and native understory grasses	~Requires shrubby vegetation for nesting ~Nests are concealed by ground vegetation ~Feeds exclusively on insects ~Rare cowbird host ~Winters in central and southern Mexico

Currently nests only in southern Wyoming. Inhabits arid, brushy slopes and riparian woodlands from 5,500 to 9,000 feet (1,700 to 2,700 m), particularly pine-juniper and woodland chaparral. Utilizes a variety of dry, shrubby habitats, often with some coniferous tree component, and may be dependent on riparian habitats during some seasons. Usually nests in dry gulches. Requires dense undergrowth. Uses trees and taller shrubs for singing and foraging posts, while nests are located at ground level under shrubs. Builds a cup nest of coarse grass and bark strips, lined with fine materials. Locates nest on the ground, among dead leaves or embedded in loose soil, sometimes at the base of a shrub, or hidden under a tussock of grass, but usually

concealed by overhanging vegetation. Eggs (3 to 5, 16 mm) are white to creamy, marked with reddish-brown or brown. Is a rare cowbird host. Feeds exclusively on insects; usually gleans them from the ground, but also hawks and gleans them from foliage. Winters in central and southern Mexico. May be vulnerable due to its narrow geographic distribution on breeding and wintering ranges, and small populations in its breeding range. Declines immediately after fires that remove shrub habitats and brushy understories, but should benefit in the long term from burns that promote regeneration of shrubs and native understory grasses. Intentional alteration of habitat to enhance livestock grazing disturbs nesting, resting, and foraging habitat. Breeding biology needs more study. Other species that may benefit from habitat management for this species include the Common Poorwill, Green-tailed Towhee, Spotted Towhee, Black-headed Grosbeak, and Broad-tailed Hummingbird.

### **Population Objectives**

1) Breeding Bird Survey (BBS) data from 1968 through 2002 are inadequate to determine population trends for the Virginia's Warbler in Wyoming. Determine population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".

### **Habitat Objectives**

- 1) Maintain juniper woodlands and montane shrublands where Virginia's Warblers occur.
- 2) Maintain herbaceous vegetation for nesting cover where Virginia's Warblers occur.
- 3) Produce a mosaic of altered and unaltered habitat on a landscape scale.

### **Recommendations**

- 1) Limit activities that reduce or remove preferred shrub habitats (e.g. shrub eradication, some grazing, campgrounds, off-road vehicle travel, and urbanization) where Virginia's Warblers occur.
- 2) Conduct prescribed burns in early spring before birds arrive, and leave adequate amounts of unburned shrubs to provide breeding habitat. Use burns that promote the regeneration of shrubs and native understory grasses.
- 3) Retain shrubs that are in old growth stages. Managing large acreages of mountain shrubland in young growth stages for deer and elk does not benefit the Virginia's Warbler, which requires larger shrubs.

- 4) Prevent invasion of exotic plants, such as cheatgrass. Select native plant species for revegetation.
- 5) Avoid or minimize insecticide use in woodland habitats to maintain a food source for Virginia's Warblers (and other insectivores). Postpone all insecticide use until Virginia's Warblers and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.
- 6) Exclude grazing until after July 20th in areas where Virginia's Warblers occur to avoid trampling nests.
- 7) Rotate livestock use during the songbird breeding season in order to rest units from cowbird concentration in alternate years and to give local songbird populations [within a radius of 4 miles (6.5 km)] the opportunity to nest without high parasitism pressure.

***Black-throated Gray Warbler***

Primary Habitat Types: Juniper Woodland and Mountain-foothills Shrub

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Black-throated Gray Warbler  (BTGW) <i>Dendroica nigrescens</i> Level III M	~Pine-juniper, woodland-chaparral	~Mature woodland with well-developed understory and high canopy cover ~Open conifer forests that are interspersed with shrubs or forest edges	~Prefers and is perhaps limited to dry slopes	~Northeast aspects of juniper woodland slopes ~May be limited by the distribution of pinyon pine in southwest Wyoming ~Small tracts isolated by more than 5 miles may have sparser populations than those less than 5 miles from larger stands	~Rare cowbird host ~Winters south to southern Mexico

Scattered across central and southwestern Wyoming in pine-juniper, woodland-chaparral, and mountain-foothills shrublands. Considered a specialist within the juniper woodland community in Wyoming. Found in mature woodlands with north and east aspects, in conjunction with low grass cover, low tree height, and high canopy

cover of seedlings and saplings. Prefers, and is perhaps limited to, dry slopes. May be limited by the distribution of pinyon pine in southwest Wyoming. Builds a neat cup nest of weed stalks, grass, and plant fibers, always lined with feathers, and often hair and moss. Usually nests far out on a horizontal branch, generally within 10 feet (3 m) of the ground. Eggs (3 to 5, 16 mm) are white to creamy, marked with browns, and usually wreathed. Is a rare cowbird host. Feeds largely or entirely on insects during nesting. Usually gleans insects from dense terminal foliage, but also hovers and gleans, and hawks. Feeds within the lower 2/3 of the shrub-tree canopy. Winters south to southern Mexico. Impacted by overstory tree removal. Density in small tracts [less than 40 acres (16 ha)] appears to be just as high as it is in large acreages. Small tracts isolated by more than 5 miles (8 km) may have sparser populations than those less than 5 miles (8 km) from larger stands. Breeding biology needs more study. Other species that may benefit from habitat management for this species include the Ash-throated Flycatcher, Mountain Chickadee, Juniper Titmouse, White-breasted Nuthatch, Bewick's Wren, and Chipping Sparrow.

### **Population Objectives**

1) Breeding Bird Survey (BBS) data from 1968 through 2002 are inadequate to determine population trends for the Black-throated Gray Warbler in Wyoming. Determine population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".

### **Habitat Objectives**

- 1) Maintain large, mature tracts of juniper woodlands.
- 2) Maintain pinyon pine stands wherever they occur in southern Wyoming.

### **Recommendations**

- 1) Implement woodland management practices that provide large, mature stands of juniper woodlands where Black-throated Gray Warblers occur. Provide small-scale openings of habitat and maintain overstory trees.
- 2) Implement woodland management practices that encourage pinyon pine survival wherever it occurs.
- 3) Avoid or minimize insecticide use in woodland habitats to maintain a food source for Black-throated Gray Warblers (and other insectivores). Postpone all insecticide use until Black-throated Gray Warblers and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.

4) Exclude grazing until after July 31st in areas where Black-throated Gray Warblers occur.

**Ovenbird**

Primary Habitat Type: Plains/Basin Riparian

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Ovenbird  (OVEN) <i>Seiurus aurocapillus</i> Level III CA, LL, M	~Aspen and cottonwood-riparian forests	~Extensive, mid to late successional stage, closed-canopied, forests ~Limited understory ~Deep litter layer ~Especially north-facing slopes or shady ravines		~Requires large contiguous forest tracts (i.e. >1,200 acres) ~Territory size decreases as prey density increases	~Area-sensitive ~Frequent cowbird host ~Vulnerable to predation ~Nest site fidelity ~Winters south through Central American and northern South America

Found primarily in the eastern half of Wyoming in mature forests with a strong deciduous tree component, including aspen and cottonwood-riparian forests, mixed deciduous/conifer stands, and hardwood draws, especially on north-facing slopes and shady ravines. Prefers habitat without thick brush and tangles, and with an abundance of fallen leaves, logs, and rocks. Nests in a slight depression on open or leaf-covered forest floor. Builds an arched nest resembling a clay oven, of grasses, leaves, moss, and other plant matter, often lined with hair. Nest is always roofed with leaves or branches, and entrance hole is a small slit at or near ground level. Eggs (3 to 6, 20 mm) are white, marked with brown and gray, and usually wreathed. Gleans invertebrate food (e.g. insects, worms, and spiders) from the surface of the litter on the forest floor. Winters south through Central America and northern South America. Is a frequent cowbird host, and is also vulnerable to mammalian predators, especially chipmunks and red squirrels. Is an area-sensitive species; requires large contiguous forest tracts [i.e. at least 1,200 acres (500 ha)] to maintain viable breeding populations, and is very sensitive to fragmentation of forested breeding habitat. Other species that may benefit from habitat management for this species include the Yellow-billed Cuckoo, Red-naped Sapsucker, and Cordilleran Flycatcher.

## **Population Objectives**

1) Breeding Bird Survey (BBS) data from 1968 through 2002 are inadequate to determine population trends for the Ovenbird in Wyoming. Determine population trend data by implementing “Monitoring Wyoming’s Birds: The Plan for Count-based Monitoring”.

## **Habitat Objectives**

- 1) Maintain and recruit large, contiguous stands of mature aspen and cottonwood.
- 2) Maintain a landscape that does not facilitate cowbird parasitism.

## **Recommendations**

- 1) Implement riparian and forest Best Management Practices that emphasize protection and establishment of mature, contiguous tracts of deciduous forest.
- 2) Eliminate fragmentation of deciduous stands in areas where Ovenbirds occur. Set aside large forested tracts, minimize edge-to-interior ratios on small tracts, and protect those small tracts in close proximity to forests that meet or exceed the area requirements for Ovenbirds.
- 3) If timber harvest is necessary in areas occupied by Ovenbirds, use single-tree selection cuts, but limit reduction of the forest canopy.
- 4) Protect areas traditionally used by Ovenbirds, as they will return to nesting sites in subsequent years.
- 5) Rotate livestock use during the songbird breeding season in order to rest units from cowbird concentration in alternate years and to give local songbird populations [within a radius of 4 miles (6.5 km)] the opportunity to nest without high parasitism pressure.
- 6) Avoid or minimize insecticide use in riparian and forest habitats to maintain a food source for Ovenbirds (and other insectivores). Postpone all insecticide use until Ovenbirds and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.

## ***Lazuli Bunting***

Primary Habitat Types: Montane Riparian, Plains/Basin Riparian, and Mountain-foothills Shrub

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Lazuli Bunting  (LAZB) <i>Passerina amoena</i> Level III LI, CA, M	~Cottonwood-riparian thickets and woodlands, dry brushy hillsides, aspen woodlands	~Shrubs, low trees, and herbaceous vegetation ~Patchy cover and plant diversity important ~Early successional and post-fire habitats	~Elevation <9,000 feet	~Open areas, often near water	~Female is territorial ~Often flocks and moves to higher elevations after breeding ~Common cowbird host ~Winters south to southern Mexico

Found throughout Wyoming in diverse, patchy habitats with an abundance of shrubs, low trees, and herbaceous vegetation, such as riparian thickets and woodlands, dry brushy slopes, and aspen woodlands up to about 9,000 feet (2,700 m). Uses early successional and post-fire habitats. Builds a coarsely-woven cup nest of dried grasses and forbs lined with fine grass and hair in a thicket, shrub, or small tree 1 to 10 feet (0.3 to 3 m) above ground. Eggs (3 to 5, 19 mm) are pale bluish-white and unmarked. Forages close to or on the ground for insects and seeds. Winters south to southern Mexico. Is a common cowbird host. Increased abundance this century with the creation of early successional habitat following logging, and increase of riparian thickets formed by irrigation systems. Range now appears to have contracted as a result of increased development and suburbanization. Uncommon in managed forest treatments such as clearcuts, seed tree cuts, and group selection cuts. Other species that may benefit from habitat management for this species include the Mourning Dove, Western Kingbird, Black-billed Magpie, House Wren, Yellow Warbler, MacGillivray's Warbler, and Bullock's Oriole.

### **Population Objectives**

- 1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Lazuli Buntings have been detected on 51 BBS routes in Wyoming, including 32 routes on which they were observed a minimum of 3 years.
  - a) Maintain Lazuli Buntings on the 51 BBS routes on which they were observed

(Figure 60).

- b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

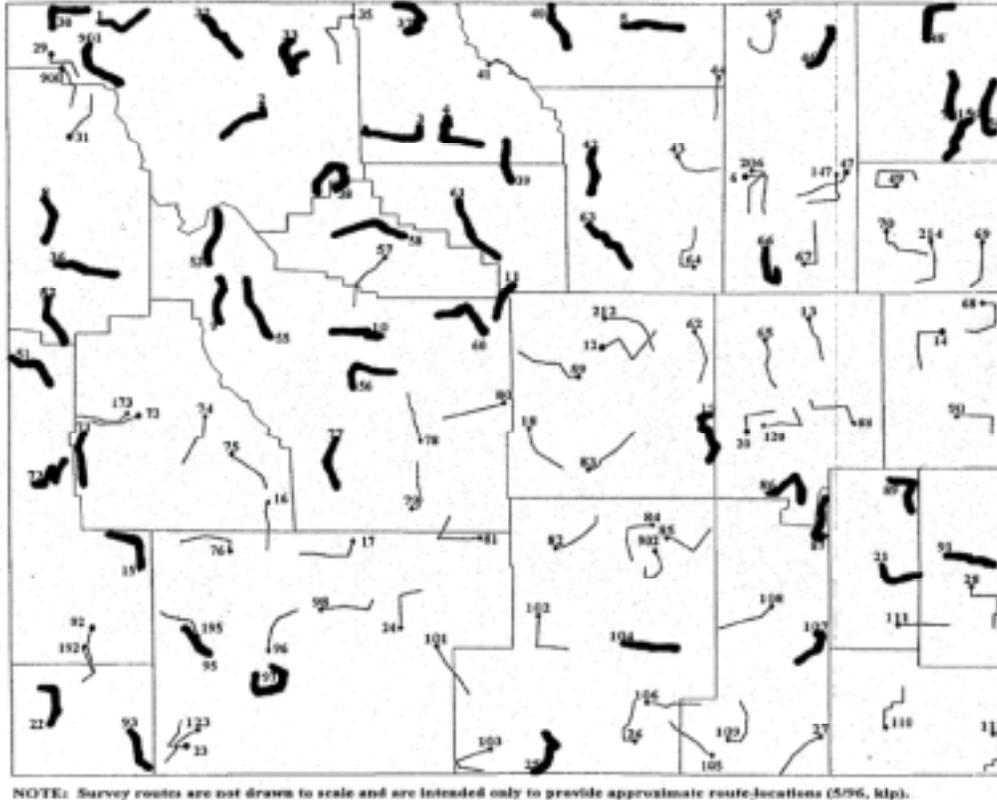


Figure 60. Bold lines indicate Breeding Bird Survey routes on which Lazuli Buntings have been observed from 1968 through 2002.

### **Habitat Objectives**

- 1) Provide dense understory and an abundance of shrubs, low trees, and herbaceous vegetation in areas where Lazuli Buntings occur.

### **Recommendations**

- 1) Implement riparian and shrubland Best Management Practices that emphasize protection and establishment of diverse, patchy habitats with an abundance of shrubs, low trees, and herbaceous vegetation.
- 2) Reduce or eliminate any activities that degrade the structure and quality of riparian or shrubland systems.

- 3) Avoid brush removal, herbicide use, or otherwise controlling shrubs in areas where Lazuli Buntings occur, particularly within 100 feet (30 m) of riparian areas.
- 4) Rotate livestock use during the songbird breeding season in order to rest units from cowbird concentration in alternate years and to give local songbird populations [within a radius of 4 miles (6.5 km)] the opportunity to nest without high parasitism pressure.
- 5) Eliminate incompatible livestock grazing (e.g. summer grazing) and recreation in riparian habitat that adversely impacts the shrub or thicket component.
- 6) Avoid or minimize insecticide use in riparian and shrubland habitats to maintain a food source for Lazuli Buntings (and other insectivores). Postpone all insecticide use until Lazuli Buntings and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.

***Bullock's Oriole***

Primary Habitat Types: Montane Riparian and Plains/Basin Riparian

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Bullock's Oriole (BUOR) <i>Icterus bullockii</i> Level III CA, LI, M	~Wide variety of deciduous trees, particularly cottonwood ~Attracted to trees and shrubs that provide berries, particularly after nesting	~Riparian and other open deciduous woodlands ~Most frequently uses large trees growing in the open		~Areas bordering streams in open country, such as plains/basin riparian areas, cultivated areas, parks, gardens, and roads ~Rarely extends above the lowest elevations in mountains	~Loosely colonial as a result of nest site scarcity ~Will use bird feeders with fruit or sugar solutions ~Uncommon cowbird host; may eject cowbird eggs ~Winters from central Mexico south to northeastern South America

Found throughout Wyoming in open, deciduous woodland, preferably bordering streams or irrigation ditches in open country. Often found near human habitation in parks and gardens, especially where trees and shrubs that provide berries are available. Rarely extends above the lowest elevations in the mountains. Requires tall deciduous trees, such as cottonwoods, for nesting, preferably growing in the open. Builds a hanging pendant nest of plant fibers attached by its rim to the tip of a long, drooping branch, typically 25 to 30 feet (8 to 9 m) high. Eggs (3 to 6, 23 mm) are pale grayish- to

bluish-white, and marked with dark colors. Is an uncommon cowbird host; may eject cowbird eggs. Primarily gleans insects from leaf and twig surfaces; also eats a few spiders, some wild and cultivated fruit, and nectar. Will come to bird feeders with fruit or sugar solutions. Winters from central Mexico south to northeastern South America. Is loosely colonial in riparian woodlands as a consequence of nest site scarcity. Other species that may benefit from habitat management for this species include the Swainson's Hawk, Western Screech-Owl, Eastern Screech-Owl, and Red-headed Woodpecker.

### **Population Objectives**

- 1) Determine statewide population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".
- 2) Breeding Bird Survey (BBS) data from 1968 through 2002 indicate Bullock's Orioles have been detected on 60 BBS routes in Wyoming, including 37 routes on which they were observed a minimum of 3 years.
  - a) Maintain Bullock's Orioles on the 60 BBS routes on which they were observed (Figure 61).
  - b) Maintain the average number of individuals observed per route over the past 5 years at a level equal to or above the average number of individuals observed during all years the route was run.

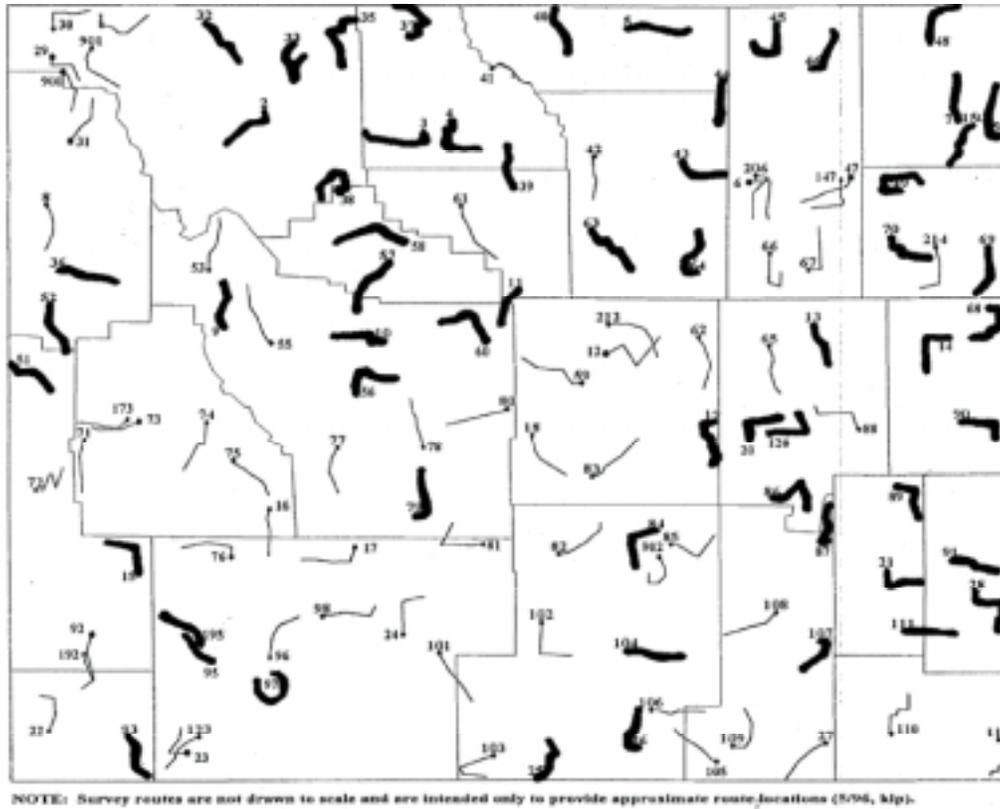


Figure 61. Bold lines indicate Breeding Bird Survey routes on which Bullock's Orioles have been observed from 1968 through 2002.

### Habitat Objectives

- 1) Maintain open riparian woodlands with mature trees.

### Recommendations

- 1) Implement riparian Best Management Practices that emphasize protection and establishment of deciduous tree species, especially cottonwood-riparian habitat.
- 2) Manage for a diversity of deciduous vegetation near water and open stands of cottonwoods.
- 3) Rotate livestock use during the songbird breeding season in order to rest units from cowbird concentration in alternate years and to give local songbird populations [within a radius of 4 miles (6.5 km)] the opportunity to nest without high parasitism pressure.
- 4) Avoid or minimize insecticide use in riparian habitats to maintain a food source for Bullock's Orioles (and other insectivores). Postpone all insecticide use until Bullock's

Orioles and other insectivores have completed their breeding cycle. Where possible, allow insect outbreaks to proceed naturally.

***Black Rosy-Finch***

Primary Habitat Type: Alpine Tundra/Grassland and Specialized (cliffs)

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Black Rosy-Finch  (BLRF) <i>Leucosticte atrata</i> Level III CA, LI, M	~Alpine grasslands, moss-lichen-forb, barren ground	~Low structure vegetation on alpine tundra	~Requires rocks or cliffs for nesting	~Nests above treeline near cliffs, rocks, snowfields, and glaciers	~Nests semi-colonially ~Roosts in caves, mine shafts, tunnels, and abandoned Cliff Swallow nests in winter ~Will come to bird feeders ~Is a year-round resident in Wyoming; moves to a variety of habitats at lower elevations in winter

Scattered throughout most of the mountainous areas of Wyoming, but breeds primarily in northwestern Wyoming. Breeds in barren, rocky, or grassy areas above timberline – cirques, talus slopes, and alpine meadows with nearby cliffs and adjacent snowfields or glaciers. Builds a cup nest of moss, grass, hair, lichens, and rootlets lined with hair, fine grasses, and feathers, placed in rock crevices in talus slopes and cliffs. Eggs (4 to 5, 23 mm) are white and unmarked. Mainly eats seeds of alpine plants; also insects, and some leaves and small fruits. Will come to bird feeders, particularly in winter. Is a year-round resident in Wyoming; moves to a variety of habitats at lower elevations in winter. Forms large communal winter roosts in caves, mine shafts, tunnels, and abandoned Cliff Swallow nests. Limited by the small number of suitable nesting sites, which may be degraded by grazing, mining, recreation, road building, and water storage. Is vulnerable to environmental and human disturbances because breeding habitats are very localized. Other species that may benefit from habitat management for this species include the Horned Lark, American Pipit, White-crowned Sparrow, Gray-crowned Rosy-Finch, and Brown-capped Rosy-Finch.

## **Population Objectives**

1) Breeding Bird Survey (BBS) data from 1968 through 2002 are inadequate to determine population trends for the Black Rosy-Finch in Wyoming. Determine population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".

## **Habitat Objectives**

1) Maintain a high quality and quantity of alpine tundra/grassland habitats in Wyoming.

## **Recommendations**

1) Protect cliffs, talus slopes, and cirques known to have breeding populations of Black Rosy-Finches.

2) Work cooperatively with the U.S. Forest Service and the National Park Service to ensure that the habitat and nesting requirements of the Black Rosy-Finch continue to be met.

3) Ensure that recreationists do not inadvertently disturb or destroy Black Rosy-Finch nesting habitat. Post interpretive signs to educate the public about Black Rosy-Finch habitat requirements. Monitor recreational use to determine the point at which it is best to focus recreational use rather than dispersing it. Where necessary, develop official, well-marked trails to focus the use and draw people out of nesting habitat. Require full control of pets and keep them on the trail. Maintain a disturbance zone that is no greater than 50 yards (45 m) from the trail.

4) Eliminate or restrict livestock grazing in alpine habitats, especially those that have already been degraded.

5) Eliminate off-road vehicles and snowmobiles in alpine habitats except on maintained roads and trails.

6) Carefully evaluate proposed roads, water storage reservoirs, mine sites, ski developments, and other recreational or commercial facilities for potential impacts on Black Rosy-Finches.

7) Restrict access to some winter roosts if they are threatened by urban growth.

8) Determine whether abandoned mine shafts are traditional roost sites before sealing or collapsing them.

***Brown-capped Rosy-Finch***

Primary Habitat Type: Alpine Tundra/Grassland and Specialized (cliffs)

SPECIES & STATUS	VEGETATION COMPOSITION	VEGETATION STRUCTURE	ABIOTIC FACTORS	LANDSCAPE FACTORS	SPECIAL FACTORS
Brown-capped Rosy-Finch  (BCRF) <i>Leucosticte australis</i> Level III CA, LI, M	~Alpine grasslands, moss-lichen-forb, barren ground	~Low structure vegetation on alpine tundra	~Requires rocks or cliffs for nesting	~Nests above treeline near cliffs, rocks, snowfields, and glaciers	~Nests semi-colonially ~Roosts in caves, mine shafts, tunnels, and abandoned Cliff Swallow nests in winter ~Will come to bird feeders ~Is a year-round resident in Wyoming; moves to a variety of habitats at lower elevations in winter

Found almost exclusively in southern Wyoming, and is restricted to Medicine Bow Peak for breeding. Breeds in barren, rocky, or grassy areas above timberline – cirques, talus slopes, and alpine meadows with nearby cliffs and adjacent snowfields or glaciers. Builds a cup nest of moss, grass, hair, lichens, and rootlets lined with hair, fine grasses, and feathers, placed in rock crevices in talus slopes and cliffs. Eggs (4 to 5, 23 mm) are white and unmarked. Mainly eats seeds of alpine plants; also insects, and some leaves and small fruits. Will come to bird feeders, particularly in winter. Is a year-round resident in Wyoming; moves to a variety of habitats at lower elevations in winter. Forms large communal winter roosts in caves, mine shafts, tunnels, and abandoned Cliff Swallow nests. Limited by the small number of suitable nesting sites, which may be degraded by grazing, mining, recreation, road building, and water storage. Is vulnerable to environmental and human disturbances because breeding habitats are very localized. Other species that may benefit from habitat management for this species include the Horned Lark, American Pipit, White-crowned Sparrow, Gray-crowned Rosy-Finch, and Black Rosy-Finch.

## **Population Objectives**

1) Breeding Bird Survey (BBS) data from 1968 through 2002 are inadequate to determine population trends for the Brown-capped Rosy-Finch in Wyoming. Determine population trend data by implementing "Monitoring Wyoming's Birds: The Plan for Count-based Monitoring".

## **Habitat Objectives**

1) Maintain a high quality and quantity of alpine tundra/grassland habitats in Wyoming.

## **Recommendations**

1) Work cooperatively with the U.S. Forest Service to ensure that the Brown-capped Rosy-Finch's habitat and nesting requirements continue to be met on the Medicine Bow-Routt National Forest.

2) Ensure that recreationists do not inadvertently disturb or destroy Brown-capped Rosy-Finch nesting habitat. Post interpretive signs to educate the public about Brown-capped Rosy-Finch habitat requirements. Monitor recreational use to determine the point at which it is best to focus recreational use rather than dispersing it. Develop an official, well-marked trail to Medicine Bow Peak to focus the use and draw people out of nesting habitat. Require full control of pets and keep them on the trail. Maintain a disturbance zone that is no greater than 50 yards (45 m) from the trail.

3) Eliminate or restrict livestock grazing in alpine habitats, especially those that have already been degraded.

4) Eliminate off-road vehicles and snowmobiles in alpine habitats except on maintained roads and trails.

5) Carefully evaluate proposed roads, water storage reservoirs, mine sites, ski developments, and other recreational or commercial facilities for potential impacts on Brown-capped Rosy-Finches.

6) Restrict access to some winter roosts if they are threatened by urban growth.

7) Determine whether abandoned mine shafts are traditional roost sites before sealing or collapsing them.

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