

Common Black Hawk, photo by ©George Andrejko

# **Conservation Profile**

Spec	ies Concerns		
Climate Change (drought, habitat shifting)			
Conservation Status Lists			
USFWS <sup>1</sup>	BCC List (BCR 34)		
AZGFD <sup>2</sup>	Tier 1C		
DoD <sup>3</sup>	No		
BLM <sup>4</sup>	No		
PIF Watch List <sup>5b</sup> PIF Regional Concern <sup>5a</sup>	No BCR 33,34		
Ť	y Bird Treaty Act		
Covered			
PIF Breeding Population Size Estimates <sup>6</sup>			
Arizona	400 (200 pairs <sup>10)</sup>		
Global	2,000,000 ^		
Percent in Arizona	.02%		
PIF Population Goal⁵⁵			
	Maintain		
Trend	ds in Arizona		
Historical (pre-BBS)	Unknown		
BBS <sup>7</sup> (1968 – 2013)	Not given		
PIF Urgenc	PIF Urgency/Half-life (years)⁵⁵		
Insufficient data			
Monitoring Coverage in Arizona			
BBS <sup>7</sup>	Not adequate		
AZ CBM	Not covered		
Associated Breeding Birds			
Black-chinned Hummingbird, Brown-crested Flycatcher, Cassin's Kingbird, Yellow Warbler, Summer Tanager, Hooded Oriole, Bullock's Oriole			

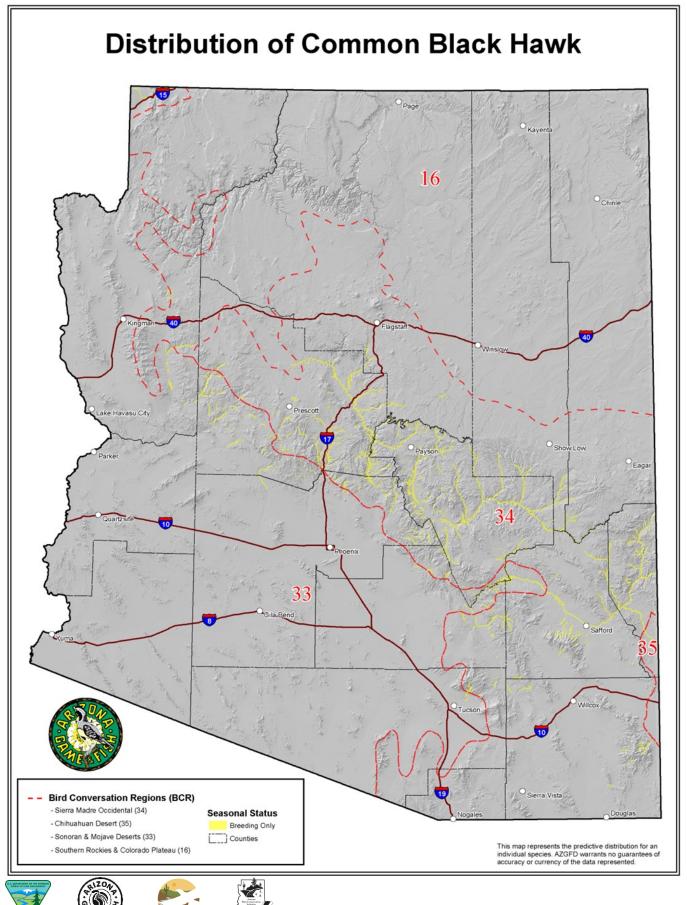




# Confidence in Available Data: High Moderate Low Not provided

Habitats Used in Arizona		
Primary: Montane Riparian Woodlands Secondary: Lowland Riparian Woodlands		
Key Habitat Parameters		
Plant Composition	Sycamore or cottonwood gallery forests; including walnut, alder, or cypress at higher elevations; Goodding's willow, velvet ash, or mesquite at lower elevations <sup>8</sup>	
Plant Density and Size	Extensive riparian forest with nest trees 75 – 100 feet tall and 16 – 95 inches DBH; stream nearby <sup>9</sup>	
Microhabitat Features	Perennial stream < 12 inches deep, with numerous foraging perches (boulders, logs, branches) <sup>9</sup>	
Landscape	Nests ≤ 900 yards of stream, ≥ 1,100 yards of nearest road; large riparian forest patch- es preferred <sup>9</sup>	
Elevation Range in Arizona		
1,800 – 6,200 feet <sup>8</sup>		
Density Estimate		
Territory Size: 0.5 – 1.5 miles linear stream length <sup>9</sup> Density: 1.5 – 5 pairs/square mile <sup>9</sup>		
Natural History Profile		

Seasonal Distribution in Arizona		
Breeding	March – early August <sup>8</sup>	
Migration	Late February – April; late August – mid- October	
Winter	Typically absent November – mid-February	
Nest and Nesting Habits		
Type of Nest	Stick nest <sup>9</sup>	
Nest Substrate	Tall sycamore, cottonwood, or other larger riparian trees <sup>9</sup> ; rarely cliff <sup>10</sup>	
Nest Height	28 – 100 feet <sup>8,9</sup>	
Food Habits		
Diet/Food	Aquatic invertebrates (exotic crayfish), frogs, fish, snakes, terrestrial vertebrates <sup>9</sup>	
Foraging Substrate	Shallow drainage or ground; hunts from perch, often close to ground/water edge <sup>9</sup>	



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# **General Information**

### **Distribution in Arizona**

Approximately 220 – 250 pairs of Common Black Hawks nest in central to southeastern Arizona and southwestern New Mexico, and 80 – 90% of these occur in Arizona (Wheeler and Economidy 2003). They nest primarily along the rivers and creeks draining the Mogollon Rim from the Verde River to the Blue and San Francisco Rivers in Greenlee County. Low-elevation areas used by Common Black Hawks include the Virgin River in the northwest, Aravaipa and Sonoita creeks, and the lower San Pedro, Upper Salt, Agua Fria, Big Sandy, Santa Maria, and Bill Williams rivers and their tributaries (Corman 2005). Common Black Hawks typically reach their northern-most global breeding range in Arizona (Schnell 1994), although they recently expanded their range sparingly north to include southern Nevada and southwestern Utah. They winter almost exclusively south of the U.S.-Mexico border. However, one individual successfully wintered near the Page Springs Fish Hatchery during the winter of 2010-2011(T. Corman pers. comm.)

### **Habitat Description**

Common Black Hawks are obligate riparian nesters that prefer perennial drainages with mature gallery forests of broadleaf deciduous trees along continuous streams with low or moderate gradients (Schnell 1994). In Arizona, they typically occur in Arizona sycamore-dominated drainages with Arizona alder, Arizona cypress, willow, Arizona walnut, velvet ash, and Fremont cottonwood (Corman 2005).

### **Microhabitat Requirements**

Common Black Hawks nest along perennial streams with riffles, exposed boulders, and water depths of < 12 inches. Riparian vegetation in nesting areas includes trees that are 75 – 100 feet tall with DBHs of 16 – 95 inches that can serve as nest sites (Schnell 1994). Most nests are found in cottonwoods and sycamore in Arizona, and remote groves of large trees are preferred over disturbed areas with isolated trees (Schnell 1994). Nests in Arizona have also been reported in ash, walnut, alder, willow, pine, and fir (Schnell 1994), and twice on a cliff (Fowler 1903, Licence and McCarty 2015). Common Black Hawks hunt for aquatic and terrestrial vertebrate and invertebrate prey species from perches above and along riparian corridors. They require water quality that supports abundant aquatic fauna (Schnell 1994, Latta et al. 1999).

### Landscape Requirements

Most Common Black Hawks nest near rocky streams with a combination of riffles, runs, and pools. They prefer locations away from roads and within large patches of riparian gallery forest, often dominated by sycamores (Sadoti 2012, Duffy 2013). This landscape is positively correlated with nest success (Sadoti 2012). However, specific area requirements and responses to other landscape disturbances have not been studied for Common Black Hawks.









# **Conservation Issues and Management Actions**

## **Threats Assessment**

This table is organized by Salafsky et al.'s (2008) standard lexicon for threats classifications. Threat level is based on expert opinion of Arizona avian biologists and reviewers. We considered the full lexicon but include only medium and high threats in this account.

Threat	Threat Level
Agriculture	Medium
Livestock farming and ranching	
Natural System Modifications	High
Fire and fire suppression	_
Dams and water management/use	
Invasive and Problematic Species	High
<ul> <li>Invasive non-native/alien plants and animals</li> </ul>	
Climate Change	Medium
Ecosystem encroachment	
Changes in temperature regimes	
Changes in precipitation and hydrological regimes	

In the following section we provide more detail about threats, including recommended management actions. Threats with similar recommended actions are grouped.

## Natural System Modifications:

Dams and water management/use

Some of the most important factors in past net losses of streams and riparian gallery forests have been surface water diversions, ground water pumping, and associated infrastructure used for agricultural and urban development over the past century. New water diversions should be carefully considered for additional impacts to in-stream flow, riparian habitat including gallery forests, and impacts to native species. In addition, regulation of dams and other diversion structures should be examined to optimize water releases or withdrawals to benefit recruitment of native riparian trees and prevent losses of trees to droughts.

## Recommended Actions:

- 1. Pursue in-stream flow water rights to benefit native riparian plant communities and associated native wildlife, including Common Black Hawk, and their prey.
- 2. Encourage and implement water efficiency measures to reduce water diversion needs as human populations increase.
- 3. Provide for naturally-timed spring flows in dam-controlled drainages to increase dispersal and germination of native riparian trees and seeds as existing priority water rights (e.g. urban or agricultural) and overall water availability allow.







#### Agriculture:

Livestock farming and ranching

Unsustainable livestock grazing degrades riparian areas by reducing cottonwood and other riparian plant recruitment, increasing stream sedimentation, reducing water quality from runoff and increased temperature exposure, and leading to widening and downcutting of channels. Latta et al. (1999) estimate that it takes 30 – 40 years to recruit trees mature enough to serve as Common Black Hawk nest sites, and continuous tree recruitment is necessary to maintain sufficient tree cover for this species.

#### **Recommended Actions:**

- 1. Evaluate livestock use in riparian areas on public lands, particularly as it impacts channel integrity, water quality, and tree recruitment. In areas occupied by Common Black Hawk, consider winter season grazing only, or full cattle exclusion with water provided for livestock outside the riparian area.
- 2. Create conservation easements and implement other programs for exclusion or reduction of livestock in sensitive Common Black Hawk areas on private lands.

#### **Natural System Modifications:**

- Fire and fire suppression
- Other ecosystem modifications

#### Invasive and Other Problematic Species:

Invasive non-native/alien plants and animals

Losses of streams and riparian areas that started in the late 1800s throughout the southwest reduced areas in Arizona that were historically occupied by Common Black Hawks (Schnell 1994). Therefore, protection and restoration of large areas of riparian habitat in Arizona are critical for stability of the current U.S. population. Ongoing threats to Common Black Hawk populations include loss of tall nesting trees in riparian areas to wildfires (some fueled by invasive shrubs, such as tamarisk, and non-native grasses and forbs) and groundwater withdrawal. Scour flood events following forest wildfires have also contributed to the loss or extreme alteration of foraging habitat. Exotic crayfish contribute to the decline of several native aquatic species of fish, frogs, and garter snakes upon which this raptor regularly preys (AZGF 2012). Although crayfish have become a regular prey species in some drainages where they are abundant and former prey has declined, it is unknown how the change of diet influences nesting success (Etzel et al. 2014).

#### Recommended Actions:

- 1. Restore streams and riparian gallery forests to expand potential areas for Common Black Hawk.
- 2. Work with landowners to restore, establish, and maintain riparian habitat, particularly riparian gallery forests, through conservation easements, incentive programs, and similar programs and opportunities.

#### **Climate Change:**

- Ecosystem encroachment
- Changes in temperature regimes
- Changes in precipitation and hydrological regimes







Most of the U.S. population of Common Black Hawks nests in Arizona, which results in a high stewardship responsibility for the state for maintaining the presence of the species in the country. Increased drought threatens water availability that is critical for prey species of Common Black Hawks and threatens loss of mature riparian forests in the long-term (Duffy 2013).

### Recommended Actions:

- 1. Protect riparian gallery forests and perennial streams from further loss and degradation, with the goal of no loss of Common Black Hawk habitat.
- 2. Restore degraded streams and large patches of riparian gallery forests in remote areas to expand currently occupied areas as buffers for population decline and mitigation for future losses.
- 3. Create agreements among agencies that ensure sufficient base flows in streams currently occupied by Common Black Hawks.
- 4. Maximize water conservation and efficiency measures in streams currently occupied by Common Black Hawks.

# **Research and Monitoring Priorities**

- 1. Encourage agency biologists and others to report Common Black Hawk nest locations (as well as productivity, if noted) to the Heritage Data Management System.
- 2. Conduct occasional full Common Black Hawk inventories to determine population status and trends in Arizona.
- 3. Determine effects of other human-mediated disturbance, such as machinery, livestock, and vehicle traffic, on nesting Common Black Hawks. Disturbance distances for these factors are currently poorly understood.
- 4. Determine minimum patch size requirements and minimum viable population for Common Black Hawk.
- 5. Determine factors that affect suitable prey availability and maximum distance from the nest that prey can be accessed.
- 6. Determine location of Common Black Hawk wintering grounds.
- 7. Determine whether artificial measures to increase habitat suitability, such as creation of small impoundments during drought conditions, artificial perch sites along streams, and grazing exclosures, increase habitat quality for Common Black Hawk.

# **Literature Cited**

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<sup>10</sup>Wheeler, B. K., and J. M. Economidy. 2003. Raptors of western North America. Princeton University Press, Princeton, NJ.

## **Recommended Citation**

Arizona Bird Conservation Initiative and Sonoran Joint Venture. 2023. Common Black Hawk (*Buteogallus anthracinus*) Species Account. Available at https://sonoranjv.org/accounts/common-black-hawk.pdf







