STATE OF WASHINGTON **DRAFT** January 2017

Status Report for the Yellow-billed Cuckoo

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Washington Department of FISH AND WILDLIFE
Wildlife Program

The Washington Department of Fish and Wildlife maintains a list of endangered, threatened, and sensitive species (Washington Administrative Codes 232-12-014 and 232-12-011, Appendix B). In 1990, the Washington Wildlife Commission adopted listing procedures developed by a group of citizens, interest groups, and state and federal agencies (Washington Administrative Code 232-12-297, Appendix B). The procedures include how species listings will be initiated, criteria for listing and delisting, public review standards, the development of recovery or management plans, and the periodic review of of listed species.

The first step in the process is to develop a draft species status report. The report includes a review of information relevant to the species' status in Washington and addresses factors affecting its status. The procedures then provide for a 90-day public review opportunity for interested parties to submit new scientific data relevant to the draft status report and classification recommendation. At the close of the comment period, the Department incorporates new information and prepares the final status report and listing recommendation for presentation to the Washington Fish and Wildlife Commission. The final report and recommendations are then released for public review 30 days prior to the Commission presentation.

This draft status report for the Yellow-billed Cuckoo was reviewed by species experts and will be available for a 90-day public comment period from 30 January to 30 April 2017. All comments received will be considered during the preparation of the final status report. The Department intends to present this status report to the Fish and Wildlife Commission at an upcoming meeting. Submit written comments on this report by e-mail by 30 April 2017 to: TandEpubliccom@dfw.wa.gov

Or by mail to:

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On the cover, inset photo of cuckoo by Jerry Oldenettel/Flickr Creative Commons; background photo of riparian habitat in western Washington by Gary Wiles

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Draft Status Report for the Yellow-billed Cuckoo in Washington

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EXECUTIVE SUMMARY

The western Yellow-billed Cuckoo (*Coccyzus americanus*) was designated as a distinct population segment by the U.S. Fish and Wildlife Service in 2013 and was classified as a threatened species under the federal Endangered Species Act in 2014. The population, which is migratory and overwinters in South America, formerly nested across much of the western United States, southern British Columbia, and northwestern Mexico. In the western U.S., nesting is strongly associated with large (usually exceeding 40 ha in size), wide (over 100 m) patches of low to mid-elevation riparian habitat dominated by cottonwoods, willows, and a mix of other species. Historically, Washington birds also nested in brushy habitats and fir forests. Most western birds arrive at their breeding range from early to mid-June and depart from late August to mid-September. Unlike most Old World cuckoos, Yellow-billed Cuckoos usually rear their own broods and rarely parasitize the nests of other birds. One brood is produced in most years, but two or even three broods may be reared in years with abundant prey resources. Diet consists mostly of large insects, especially caterpillars.

The population size and breeding range of western Yellow-billed Cuckoos have greatly declined during the past century, with only 680 to 1,025 breeding pairs estimated to remain. Historical records suggest that the species once nested in at least six areas of western Washington: (1) the vicinity of Bellingham and Marietta in Whatcom County; (2) the Mount Vernon area in Skagit County; (3) the area around Lake Washington and Seattle in King County; (4) the Tacoma area in Pierce County; (5) the vicinity of Grays Harbor in Grays Harbor County; and (6) the lower Columbia River in the vicinity of Vancouver and Ridgefield in Clark County. With the exception of the lower Columbia River, abundance in each of these areas was probably small. Breeding in the state was last fully confirmed in 1923, but likely continued until at least the early 1940s.

Just 20 sightings of Yellow-billed Cuckoos have been documented in Washington since the 1950s, with 19 occurring from 1974 to 2016 at an average rate of one sighting every 2.3 years. Sixteen of the 20 records occurred in eastern Washington. All or nearly all of the birds recorded since the 1950s were very likely non-breeding vagrants or migrants, indicating that cuckoos are now functionally extirpated in the state. Nevertheless, due to a lack of surveys for the species and the presence of small areas of habitat in Washington, the possibility exists that this species may occasionally breed in the state and that these rare breeders are yet to be discovered.

The greatest threat to western Yellow-billed Cuckoos, including those that bred in Washington, has been the loss or degradation of riparian habitats caused by dam construction, flood control practices, commercial and residential development, changes in farming and ranching practices, and nonnative plant invasions. Agricultural pesticide use, which may affect prey abundance as well as the birds' health, is a potential additional threat.

For these reasons and because the western DPS of the species is federally classified as threatened under the Endangered Species Act, it is recommended that the Yellow-billed Cuckoo be listed as a state endangered species in Washington.

INTRODUCTION

This status report summarizes the biology, population status, and threats to Yellow-billed Cuckoos (*Coccyzus americanus*) in Washington and assesses whether the species should be listed as endangered, threatened, or sensitive under state law. Much of the information appearing in this review is drawn from Hughes (2015) and two recently published reports (USFWS 2013, 2014a) describing the conservation status and management needs of the species in western North America, including Washington.

DESCRIPTION, TAXONOMY, AND LEGAL STATUS

Yellow-billed Cuckoos are medium-sized birds featuring unmarked grayish brown upper plumage, white underparts, large reddish brown wing patches, a long brown tail marked with bold white spots, and a mostly yellow, curved bill (Figure 1). Birds measure about 30 cm (12 in) in length and weigh about 60–80 gm (2.1–2.8 oz); females average slightly larger than males (Hughes 2015). Birds in western North America are slightly larger than those in eastern North America (Franzreb and Laymon 1993, Hughes 2015). The species gives a variety of vocalizations, the best known of which is a rapid guttural *ka, ka, ka, ka, ka, kow, kow, kow, kowlp, kowlp, kowlp* (Payne 2005 Hughes 2015). Other calls include a knocking-like *kow, kow, kow, kow* and a series of cooing notes.

Figure 1. Western Yellow-billed Cuckoo (photo by Jerry Oldenettel/Flickr Creative Commons).

Yellow-billed Cuckoos are one of 13 species in the genus *Coccyzus* and belong to the order Cuculiformes and family Cuculidae (Gill and Donsker 2016). Two subspecies of Yellow-billed Cuckoos were generally recognized through the 1970s (e.g., AOU 1957, Oberholser and Kincaid 1974), with *C. a. occidentalis* (also known as the California Cuckoo) breeding in western North America. However, subsequent studies have provided equivocal support for these subspecies designations (Farrell 2013, USFWS 2013). Because of this uncertainty, the USFWS (2014a) determined that the western population is best treated as a distinct population segment (DPS). Birds within the DPS are referred to as western Yellow-billed Cuckoos.

The western DPS of Yellow-billed Cuckoo was listed as threatened under the federal Endangered Species Act in November 2014 (USFWS 2014a). The species also receives protection under the federal Migratory Bird Treaty Act. In Washington, Yellow-billed Cuckoos are classified as "other protected wildlife" under state law (WAC 232-12-011; Appendix E) and became a state candidate species in 1991. The species was placed on WDFW's 2005 and 2015 lists of Species of Greatest Conservation Need (WDFW 2015), but this designation carries no legal status.

DISTRIBUTION

The historical breeding range of the species included most of the continental United States, small areas of southern Canada, and portions of northern Mexico, the Yucatan Peninsula, and the Caribbean (Payne 2005, USFWS 2014a). The species passes through Central America, the Caribbean, and northern South America during migration and overwinters east of the Andes in South America (mainly Bolivia, Paraguay, southern Brazil, and northern Argentina; Payne 2005). The breeding range of the western DPS once extended from southern British Columbia through much of the western U.S. and northwestern Mexico (Figure 2), but current distribution within this region is now largely restricted to a few areas of the Southwest, California, and Mexico (USFWS 2014a).

Figure 2. Historical breeding range of the western Yellow-billed Cuckoo distinct population segment (USFWS 2014a).

Before 1950, records of cuckoos in Washington were limited almost entirely to the western part of the state (Clark, Grays Harbor, King, Mason, Pierce, Skagit, and Whatcom counties) (Figure 3). Just two records, both from Kittitas County, are known from east of the Cascades during this period. By contrast, most sightings since 1950 have occurred in eastern Washington (Adams, Asotin, Benton, Franklin, Grant, Okanogan, Stevens, and Walla Walla counties), with relatively few westside records (Grays Harbor, King, and Snohomish counties) (Figure 3).

NATURAL HISTORY

Habitat requirements. Yellow-billed Cuckoos nest in deciduous habitats with clearings and dense shrubby vegetation, especially those near rivers, streams, and wetlands (Hughes 2015). In eastern North America, this can include hardwood forests, woodlands, swamps, shrubby thickets, and overgrown orchards, but usually excludes extensively forested areas and urban localities. In the western U.S., cuckoos are strongly associated with large patches of low to mid-elevation riparian habitat characterized by high humidity (Gaines and Laymon 1984, USFWS 2013). Most remaining breeding populations now occur in arid regions, but the moister habitats of western Washington, southwestern British Columbia, western Oregon, and northern California were also once occupied. Breeding habitat in the western U.S. is typically dominated by cottonwoods (*Populus* spp.) and willows (*Salix* spp.), which may be mixed with ash (*Fraxinus* spp.), walnut (*Juglans* spp.), mesquite (*Prosopis* spp.), tamarisk (*Tamarix* spp.), and many other species (USFWS 2013). In northwestern Mexico, western Yellow-billed Cuckoos nest in a wider range of habitat, including riparian zones, tropical deciduous forest, scrubby thorn forest, and mesquite shrubland (Russell and Monson 1998, Rohwer et al. 2015).

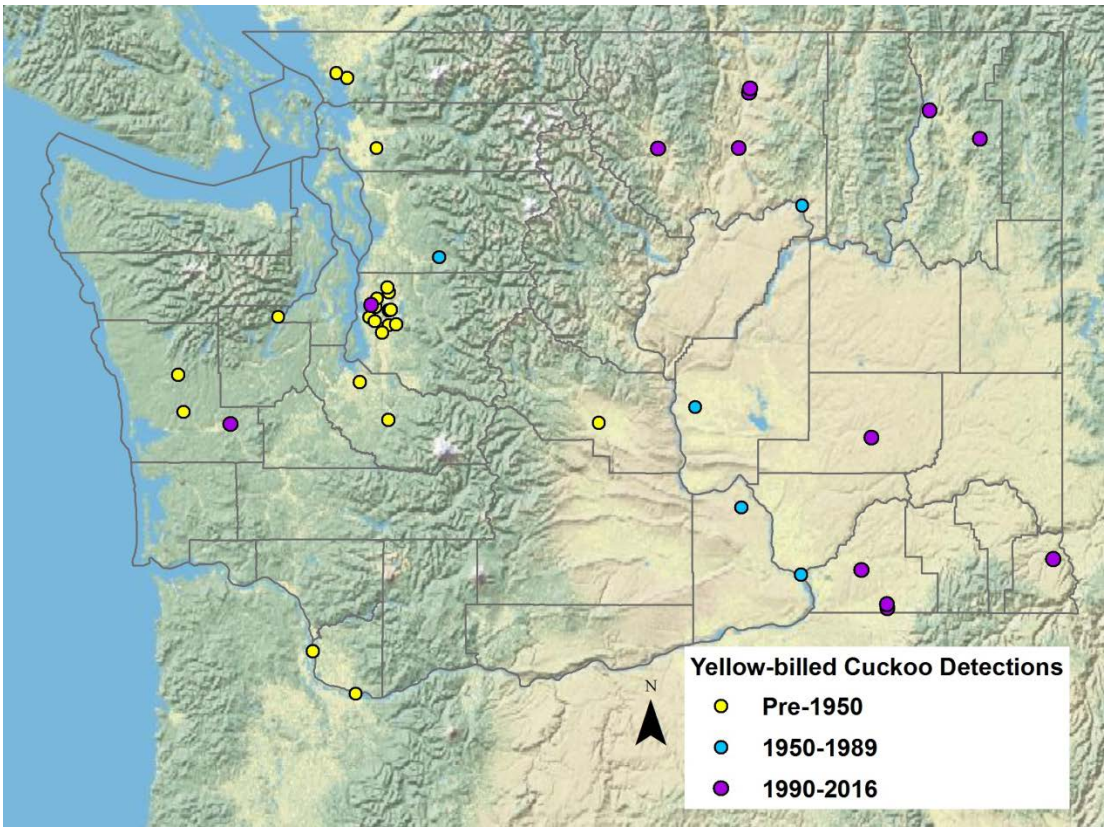

Figure 3. Locations of Yellow-billed Cuckoo records in Washington from before 1950, 1950-1989, and 1990-2016, based on records presented in Appendices A, B, and C.

Patch size is a key feature of breeding habitat for western cuckoo populations, with larger, wider areas of habitat strongly preferred. In California (excluding the lower Colorado River), Laymon and Halterman (1989) reported that sites >80 ha in size and wider than 600 m were optimal for cuckoos, sites 41–80 ha in size and wider than 200 m were suitable, sites 20–40 ha in size and 100–200 m wide were marginal, and sites <15 ha in size and <100 m wide were unsuitable. Cuckoo occupancy in California is associated with extent of riparian habitat within several kilometers and presence of low woody vegetation (Halterman 1991). Along the lower Colorado River in Arizona, California, and Nevada, the amount of habitat at occupied sites was nearly three times greater on average (37.2 ha) than at unoccupied locations (12.8 ha) (McNeil et al. 2013). Along the lower Colorado River, occupied cuckoo sites feature significantly taller, denser overstories dominated by cottonwoods and willows, denser understories comprised mostly of non-native tamarisk, and increased ground forb cover (Johnson et al. 2008, McNeil et al. 2013). Occupied sites also tend to green up later in the year and demonstrate greater vegetation density and health (i.e., "greenness") compared to unused sites (Wallace et al. 2013). Humid microclimates are another key requirement of successful breeding locations (Gaines and Laymon 1984).

Western Yellow-billed Cuckoos most commonly build their nests in willows and cottonwoods, but also make occasional use of other species such as alder (*Alnus* spp.) and tamarisk (Laymon et al. 1997, Laymon 1998, McNeil et al. 2013). Greater canopy closure, interior foliage volume, and

densities of small trees are important characteristics of nest sites and suggest that concealment and perhaps shade are sought (Laymon et al. 1997, Laymon 1998, McNeil et al. 2013). Canopy heights at nest sites commonly average 7–10 m (Laymon et al. 1997, Laymon 1998, McNeil et al. 2013).

Little detailed information is available on nesting habitat in Washington. Dawson and Bowles (1909) stated that cuckoos were most often detected along the edges of swamps bordered by dense shrubbery and a mix of deciduous and small conifer trees. In the Seattle area, the species was most common in patches of swampy forest around the edges of Lake Washington (Burleigh 1929). Historical records indicate that "dry hillsides in open brushy country," "fir forests," and "second-growth vegetation" were also occupied for nesting (Appendices A, B, and C). Use of these habitats may have been facilitated by the more humid conditions characteristic of western Washington.

Habitat use is broader during migration and winter, and consists of thick scrub, open woodlands, tropical deciduous forest, secondary forest, forest edge, and mangroves (Hughes 2015). Areas near fresh water are apparently favored. The species is also found in arid habitats and disturbed vegetation during migration.

Migration and other large-scale movements. Yellow-billed Cuckoos migrate annually between their breeding range in North America and wintering grounds in South America. Migration in eastern North America usually starts in April and peaks between May 15 and early June (Franzreb and Laymon 1993, Rohwer et al. 2012, Hughes 2015). Western birds begin arriving a month or more later than eastern birds, usually in the last half of May, with most individuals not present until early to mid-June. Fall departures of western Yellow-billed Cuckoos are usually in late August to mid-September, 2–3 weeks earlier than eastern birds which depart in late September to early October (Hughes 2015). Stragglers may linger in the West until November. Migration occurs mainly at night. Birds are known to migrate in both small and large groups.

Two recent studies have provided greater insight into the migration routes and wintering range of western Yellow-billed Cuckoos, based on two individuals wearing geolocators (Sechrist et al. 2012, McNeil et al. 2015). Both birds overwintered in the region of Bolivia, southwestern Brazil, Paraguay, and northern Argentina from about mid-November to April. Both also followed loop migration routes, with one traveling south through Central America and returning north via the Caribbean and Mexico, and the other following the opposite pattern. In addition, both cuckoos spent time staging in southern Arizona and northern Mexico before and after breeding. These findings suggest that migration patterns of western Yellow-billed Cuckoos are more complex and flexible than previously known.

Localized movements. Large variation exists among individual home range sizes, with males having significantly larger home ranges than females (Halterman 2009). In the Southwest and California, breeding home ranges average 16–82 ha (range = 4–282 ha; including core areas of 3.4–7.5 ha) (Halterman 2009, Sechrist et al. 2009, 2013, McNeil et al. 2013), but may be as small as 4 ha where habitat is restricted (Laymon 1998). Sechrist et al. (2013) reported average daily travel distances of 786 m (±485 m, range = 204–1,716 m).

Resightings of banded western Yellow-billed Cuckoos suggest that adults and chicks demonstrate moderate fidelity to nest sites between successive years (USFWS 2013). Several studies have reported return rates of 10–31% among banded birds between years in California and Arizona

(Laymon 1998, Halterman 2009, McNeil et al. 2013). Successful nesters are probably more likely to return to previous breeding sites, whereas birds experiencing marginal nesting conditions may readily move to other localities the following year (USFWS 2013). McNeil et al. (2013) reported two females relocating distances of 33 and 37 km from one year to the next along the Colorado River in California and Arizona. Large fluctuations in numbers of breeding pairs at specific locations over periods of a few years also support the contention that cuckoos switch breeding areas to find suitable nesting resources (USFWS 2013). Males appear more likely than females to return to their natal area (Laymon 1998, McNeil et al. 2013).

Breeding biology. Western Yellow-billed Cuckoos begin pair formation soon after their arrival from spring migration. Nesting largely occurs from June to August, often with a peak from late June to early August, but can start as early as late May or last into September (Laymon 1998, Halterman 2009, Rohwer et al. 2012, McNeil et al. 2013, Hughes 2015). The species is considered loosely territorial. Although territories are not defended, nests are regularly spaced and may be built as close as 60 m from those of neighboring pairs (Laymon 1998). About 70% of pairs are monogamous, while remaining pairs have a helper bird that assists in feeding the chicks (Laymon 1998). Helpers may be unrelated males, who will start a new nest with the female once the first nest has fledged (Halterman 2009). Courtship behavior between the breeding pair members often involves the male approaching the female with a food item or twig, which is then given to her during copulation (Hendricks 1975, Laymon 1998).

Unlike many species of cuckoos, Yellow-billed Cuckoos typically build their own nests and care for their own young. Both sexes participate in building the nest, which is a loose platform of twigs lined with a few leaves or other finer materials (Halterman 2009, Hughes 2015). Diameter averages about 21 cm. The main structure usually takes 1–2 days to assemble, but is often supplemented with additional material for several days after the first egg is laid (Johnson et al. 2008, Halterman 2009, Hughes 2015). Nests are typically placed 1–9 m off the ground in a deciduous tree or large shrub, and concealed by foliage (Laymon 1980, 1998, McNeil et al. 2013, Hughes 2015). Most are built on horizontal branches away from the main trunk, but some are placed in the forks or crotches of trunks or major limbs.

Clutch size of western Yellow-billed Cuckoos averages 2–3 eggs (range = 1–5; Laymon 1998, McNeil et al. 2013, Hughes 2015). Egg production may increase during years of higher food availability. Eggs are pale bluish-green and unmarked. Laying typically occurs every second day, although the interval can vary (Hughes 2015). Western birds occasionally conduct communal nesting in which two breeding pairs lay their eggs in the same nest and care for the young (Laymon 1998).

Western Yellow-billed Cuckoos produce one brood in most years, but may successfully rear two or even three broods in years with abundant prey resources (Laymon et al. 1997). These additional broods may be produced with either the same mate or a new male (Halterman 2009). The presence of helper birds may also enhance the ability of pairs to raise multiple broods (Laymon 1998). At one site in California, triple brooding occurred in 1 of 13 study years and double brooding (by about half of all pairs) in 5 of 13 years, including the year of triple brooding (Laymon 1998). Rohwer et al. (2009) postulated that some cuckoos nesting in the western U.S. might renest in northwestern Mexico in late July and August, but further study does not support this hypothesis (Rohwer and Wood 2013).

The entire period from egg laying to fledging is one of the shortest among all bird species and extends only about 17–21 days, with incubation lasting 9–12 days and chicks departing the nest at 5–9 days of age (Laymon 1998, Payne 2005, Johnson et al. 2008, Hughes 2015). Incubation begins after the first egg is laid, resulting in asynchronous hatching and nests with chicks of different ages (Laymon 1998). Nestlings are altricial (i.e., naked and helpless at hatching), but rapidly develop (Laymon 1998). Males conduct the majority of parental care, doing most incubation and provisioning of chicks and all care of fledglings (Halterman 2009). Helper males may also assist with feeding of nestlings. Females typically stop tending the brood several days before fledging occurs (Halterman 2009), which may allow them to start another nest. Cuckoos may terminate incubation of the youngest egg or practice infanticide by removing the youngest chick if food resources are limited or to induce females to renest sooner (Hamilton and Hamilton 1965, Laymon et al. 1997, Halterman 2009).

Care of fledglings lasts 2–3 weeks after departure from the nest (Johnson et al. 2008, Halterman 2009). Initially, young are able to move about only by climbing through the canopy vegetation, but they become capable of limited flight at about 14-21 days of age (Laymon 1998, Hughes 2015).

Yellow-billed Cuckoos occasionally lay their eggs in the nests of other Yellow-billed Cuckoos as well as other species, a behavior known as brood parasitism (Hughes 2015). This behavior apparently has not been reported among western birds. Brood parasitism may increase during years of high prey abundance (Nolan and Thompson 1975). The species is very rarely parasitized by Black-billed Cuckoos (*C. eryhthropthalmus*) and cowbirds (*Molothrus* spp.) (Hughes 2015).

Relatively little information is available on the breeding biology of Yellow-billed Cuckoos in Washington. Ten of the 11 state records of nests with eggs were made between 16 June and 18 July (Appendix A). There is also a record of a nest with 2 slightly incubated eggs on 1 June, indicating that nesting was sometimes initiated as early as late May. The only report of juveniles was made on 18 July (Appendix A). Clutch size averaged 3.0 eggs (n = 11), with a range of 1–4 eggs. Getty (1916) published the only known photograph of a cuckoo nest in Washington. Nests were generally placed 1–4 m off the ground in fir or willow trees on horizontal branches near or against the trunks (Appendices A and C). The use of firs as nesting sites is a significant difference from the sites selected by western cuckoos in other parts of their range.

Population demography. High rates of nesting success (≥70%; defined as nests producing at least one young) have been reported in western Yellow-billed Cuckoos (McNeil et al. 2013, USFWS 2013). Halterman (2009) noted higher nesting success for first broods than second broods (75% vs. 58%, respectively; n = 12 birds). Other parameters of nesting productivity include egg hatching rate (87%, Laymon et al. 1997; 75%, McNeil et al. 2013), egg to fledgling rate (67%, M. Halterman, in Laymon 1998; 74%, Laymon et al. 1997; 62%, McNeil et al. 2013), and average number of young fledged per nest (2.14, Laymon et al. 1997; 1.5, M. Halterman, in Laymon 1998; 1.6, McNeil et al. 2013). Nesting productivity varies among years and can increase greatly during years in which double or triple brooding occurs (Laymon et al. 1997, Laymon 1998).

Mortality rates among adult and juvenile Yellow-billed Cuckoos, average life expectancy, and population sex ratios are all unknown, in part because of the low rates of recapture among banded birds (Laymon 1998). Banding records indicate that western populations contain more males than

females (Laymon 1998, Halterman 2009, McNeil et al. 2013), although Halterman (2009) clarified that her sample of banded birds may not reflect true sex ratio. Maximum life span reaches at least four years of age (Hughes 2015).

Nest failures result from a variety of causes, including predation on eggs and nestlings by snakes, various raptors, and possibly jays, egg punctures by passerine birds (e.g., wrens, orioles, chats), storms, and parental desertion of nests due to human disturbance (Laymon 1998, McNeil et al. 2013). Cooper's Hawks (*Accipiter cooperi*) may be the only regular predator of adults (Laymon 1998). A Peregrine Falcon (*Falco peregrinus*) killed a cuckoo in Seattle in 1997 (Appendix A).

Little information is available on the diseases of Yellow-billed Cuckoos (Hughes 2015), although West Nile virus has been detected in the species (USFWS 2013). The species is host to several blood parasites and nematodes, as well as ectoparasites (Greiner et al. 1975, Hughes 2015).

Diet and foraging behavior. Adequate prey availability is considered a key feature of breeding habitat for Yellow-billed Cuckoos. The species feeds mostly on large insects (Beal 1898, Bent 1940, Payne 2005, Halterman 2009, Hughes 2015), with caterpillars often preferred, especially during periodic outbreaks. Other insect prey includes grasshoppers, katydids, crickets, cicadas, beetles, and true bugs. Fruit, berries, small lizards, frogs, and bird eggs and nestlings are also eaten, but usually in smaller amounts.

Relatively little detailed information is available on the diet of western Yellow-billed Cuckoos. In Kern County, California, nestling diet was comprised mainly of green caterpillars (predominately sphinx moth larvae; 44.9%), tree frogs (23.8%), katydids (21.8%), and grasshoppers (8.7%) (n = 2,420; Laymon et al. 1997). Along the Sacramento River Valley, California, katydid consumption increased from 7% to 70% over the course of the summer (Laymon 1980). Cicadas, grasshoppers, and mantids are major components of the diet in Arizona (Rosenberg et al. 1982, Halterman 2009). Three feeding records exist for Washington and include a bird with multiple caterpillar remains in its stomach (Lawrence 1892b), another seen giving its mate a "large green worm" during courtship (Dawson and Bowles 1909), and a collected specimen whose stomach was packed with tent caterpillars (*Malacosoma* sp.; Appendix A).

While foraging, the species often employs a "sit and wait" strategy in which it perches inconspicuously and watches nearby vegetation for moving prey (Hughes 2015). Prey are commonly taken from foliage and stems by gleaning, either while perched or hovering. Birds also hunt for prey by hopping from branch to branch or by walking or running along limbs. Prey are secured more infrequently by aerial flycatching, or by hopping pursuit and capture on the ground.

POPULATION STATUS AND TREND

Global. Range-wide population levels and trends for the western Yellow-billed Cuckoo can be surmised from local and regional information as well as a comparison of historical and current distributions. Breeding distribution of the DPS has retracted dramatically and is now restricted to small isolated areas from southeastern Idaho and northern California to northwestern Mexico and western Texas (Figure 4; Gaines and Laymon 1984, Laymon and Halterman 1987, Wiggins 2005, USFWS 2013). Based on available information from known nesting areas, the western DPS is estimated to contain a total of 680 to 1,025 breeding pairs, with 350 to 495 pairs occurring north of

the Mexico border (USFWS 2013). This number should be considered conservative as there were different survey methods used and a potential for double counting between the U.S. and Mexico. The current low population is believed to be several orders of magnitude below its historical size (USFWS 2013).

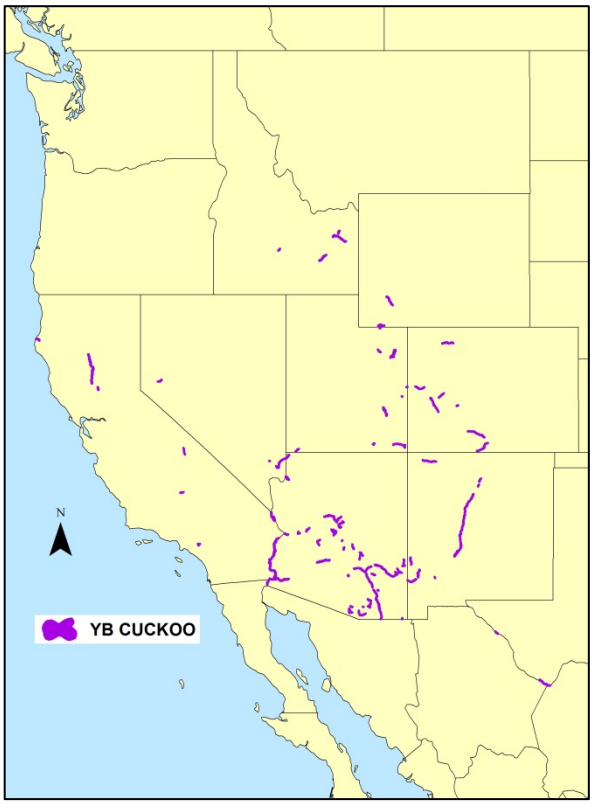

Figure 4. Current breeding range of western Yellow-billed Cuckoos north of Mexico, based on the areas occupied at the time of federal listing (adapted from USFWS 2014a).

Washington past. The western Yellow-billed Cuckoo was described as "abundant" along the lower Columbia River near Vancouver from 1834 to 1836 by early naturalist John K. Townsend, who regularly heard its vocalizations (Jobanek and Marshall 1992). However, most subsequent observers considered the species to be rare or uncommon in western Washington (Lawrence 1892a, Rathbun 1902, Bowles 1906, Edson 1908, 1926, 1935, Dawson and Bowles 1909, Lord 1913, Seattle Audubon Society 1924, Hoffman 1927, Kitchin 1934, 1949). Burleigh (1929) reported it as "fairly common" in the riparian habitats along Lake Washington in 1919, but as "scarce" elsewhere.

Available historical records through 1941 suggest that the species once nested in at least six areas of western Washington: (1) the vicinity of Bellingham and Marietta in Whatcom County; (2) the Mount Vernon area in Skagit County; (3) the area around Lake Washington and Seattle in King County; (4) the Tacoma area in Pierce County; (5) the vicinity of Grays Harbor in Grays Harbor County; and (6) the lower Columbia River in the vicinity of Vancouver and Ridgefield in Clark County (Appendices A, B, and C). It is unknown whether an August 1917 record from Eldon, Mason County, represented an additional breeding location. Observations in western Washington declined greatly after 1925, with the exception of western Whatcom County, where sightings persisted until 1941 (Appendices A and B). The last confirmed nesting record in the state occurred in Seattle in 1923, although Kitchin (1949) published a record from near Renton, King County, that probably dated from the late 1920s (Appendix A). Based on continued sightings of birds in Whatcom County until 1941 (Appendix B), it seems likely that nesting continued in the Bellingham area until at least the early 1940s.

A pair of cuckoo observations from the vicinity of Ellensburg, Kittitas County, in 1897 and sometime from 1918 to 1935 are the only confirmed records from eastern Washington before 1950 (Appendix A). The first of these occurred late in the breeding season (August) and suggests the possibility of nesting in this area. Two potential encounters in Okanogan or Chelan counties by Dawson (1897), who heard the "unmistakable" calls of cuckoos in 1895–1896, but treated these as hypothetical records (Appendix D), suggest the possibility that cuckoos once occurred in this region as well.

The timing of the cuckoo's decline in most of western Washington appears to resemble similar declines in British Columbia and Oregon, where records of continuing presence and presumed breeding ended by the 1920s (Campbell et al. 1990, 2014, Iten et al. 2001, Marshall 2003, Toochin and Cecile 2014).

Washington present. Twenty confirmed sightings of Yellow-billed Cuckoos exist for Washington since the 1950s, none of which involved confirmed or probable breeding (Appendix A). These records were likely of vagrants or migrants, with the possible exception of two individuals seen in successive summers (1991 and 1992) at locations separated by only 1.6 km near Tonasket, Okanogan County (Appendix A). Of the 20 sightings, 19 occurred from 1974 to 2016, representing an average of one record every 2.3 years. Observations peaked from 1987 to 2002, when 12 were made. Three records have occurred in the last decade, with the most recent being in June 2015 (Appendix A). The increase in records in recent decades probably reflects in part the expanded presence of birdwatchers and other observers across the state during this period.

In strong contrast to the predominance of records from western Washington before 1950, 16 of the 20 post-1950 observations have been in eastern Washington, further supporting that these birds were mostly vagrants. Records after 1950 are widely distributed among counties in this portion of the state, as follows: Okanogan (5 records), Walla Walla (3), Stevens (2), Grant (2), Adams (1), Benton (1), Franklin (1), and Asotin (1) (Figure 3). Western Washington county records for this same period are from King (2 records), Snohomish (1), and Grays Harbor (1) counties.

While incidental observations are helpful in assessing the population, no surveys for this species have been conducted in Washington despite the likelihood of suitable habitat existing in the state. Therefore, although cuckoos currently appear to be functionally extirpated in Washington, the possibility exists that very small numbers of breeding pairs may still exist in the state and are yet to be discovered. This species vocalizes infrequently, with a background call rate of 1 call/hour (Halterman 2009). Call playback surveys result in about a tenfold increase in detection rates of Yellow-billed Cuckoos, and would be the best way to determine if cuckoos are present at a site (Halterman et al. 2016).

FACTORS AFFECTING CONTINUED EXISTENCE

Adequacy of regulatory mechanisms. The western Yellow-billed Cuckoo in Washington is protected under the federal Migratory Bird Treaty Act and Endangered Species Act. The Migratory Bird Treaty Act prohibits "take" of any migratory bird species covered under the Act. "Take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect," but does not protect any habitat (USFWS 2013). The Endangered Species Act provides additional protections, but these are contingent upon areas with known locations of the species and/or identified critical habitat, neither of which currently exist in Washington. Washington was excluded from the U.S. Fish and Wildlife Service's proposal to designate critical habitat for the western DPS in 2014 because of the long absence of a breeding population in the state and the lack of recent sightings in habitat for the species (USFWS 2014b).

As a state protected species in Washington, protections (RCW 77.15.130) for Yellow-billed Cuckoos resemble those offered by federal law. Results of this listing process could provide any cuckoos

present in the state with some additional legal protection under RCW 77.15.120. Classification as a state endangered species would (1) increase the legal penalties associated with unlawful taking, (2) result in the preparation and implementation of a state recovery plan having conservation actions that benefit the species, (3) make cuckoos a higher priority conservation target within WDFW, and (4) bring greater public recognition to the imperiled status of the species in Washington.

In addition, Yellow-billed Cuckoos are designated a "priority species" under WDFW's Priority Habitat and Species (PHS) program. This provides important wildlife and habitat information and management recommendations to agencies, landowners, municipalities, and consultants for land use planning. Specific management recommendations have not been developed for cuckoos.

Washington's Growth Management Act requires local governments to develop critical area ordinances that address development impacts to important wildlife habitats. The specifics and implementation of critical area ordinances vary somewhat by county. If cuckoos are discovered nesting in the state, the habitat at those locations would be protected through county or municipal critical area ordinances. These ordinances require environmental review and habitat management plans for development proposals that affect state-listed and candidate species.

Habitat loss, degradation, and altered hydrology. The greatest factor leading to the decline of the western Yellow-billed Cuckoo has been loss of habitat in its breeding range (USFWS 2013). Its affinity for riparian habitats was particularly impactful as streamside areas in the West have been severely altered by dams and their associated impoundments, flood control practices, commercial and residential development, changes in farming and ranching practices, and nonnative plant invasions. There has been a 90–99% loss of habitat in the core of the species' historical range in California, Arizona, and New Mexico (USFWS 2013). Human activities have broadly impacted riparian zones in Washington as well, with at least 70% of these habitats in lowlands lost through different types of conversion (Canning and Stevens 1989, Knutson and Naef 1997). Losses have been highest in heavily urbanized areas (e.g., Lake Washington), reaching nearly 100% in some locations. Because most historical cuckoo occurrences in Washington were in riparian areas, it is reasonable to assume that human-caused losses and alteration of these habitats were a major factor in the decline of cuckoos in Washington. For example, the lack of cuckoo records in the Seattle and Lake Washington area after the mid-1920s corresponds to a period of major human population growth and development in that area.

Riparian habitats not permanently lost through human development have experienced long-term impacts in other ways. Altered hydrology of riverine systems from channelization through the installation of levees and other hardened structures further impacted the habitat by making systems less dynamic. This allowed access to streamsides for farming and grazing, and prevented the regeneration of preferred vegetation and habitat with a complex structure through natural flooding processes (USFWS 2013). Construction of dams and reservoirs has also changed river flow patterns important to the maintenance of riparian systems.

Efforts to restore riparian habitats within the recent breeding range of the western DPS have in some cases failed to result in population increases of cuckoos (e.g., Dettling et al. 2015). This suggests that non-habitat-related factors may be involved in the population's decline or are limiting its recovery.

Pesticide use. The preferred habitats of western Yellow-billed Cuckoo are often in close proximity to agricultural activities, directly and indirectly exposing the birds to the effects of pesticide use. In countries south of the U.S., the species experiences exposure to harmful pesticides (e.g., DDT) that could result in mortality or have carryover physiological effects on breeding birds (Laymon and Halterman 1987, USFWS 2013). Pesticide spraying (including use of the bacteria *Bacillus thuringiensis* [*Bt*]) in the breeding range can reduce invertebrate abundance, possibly causing lower food availability for cuckoos during the nesting period and perhaps resulting in lower productivity and smaller populations over time (USFWS 2013). No studies have yet shown population level effects of pesticide use on the species, although the threat is large enough that it continues to warrant concern (USFWS 2013).

Climate change. Climate change is expected to have an overall negative effect throughout the range of the Yellow-billed Cuckoo (Post et al. 2009, USFWS 2013). In the Pacific Northwest, it is predicted that there will be changes in year-round precipitation and run-off patterns and warmer, drier summers, leading to lower stream levels and increased fire risk that could reduce the amount and quality of habitat for cuckoos (USFWS 2013). These climate change scenarios could also negatively impact the timing of emergence of important food resources (e.g., invertebrates) such that a mismatch could develop between when food is available and when it is critically needed during the nesting season (USFWS 2013). Nevertheless, there remains reasonable uncertainty with regard to the overall impact that climate change may have on the species. Washington could perhaps play a role in providing climate refugia for this species if climate change makes conditions in the Southwest increasingly inhospitable (Friggins and Finch 2015) and populations there seek suitable conditions to the north.

MANAGEMENT ACTIVITIES

Aside from the federal threatened listing in 2014, no federal conservation actions have been specifically directed at Yellow-billed Cuckoos in Washington. A federal recovery plan has not yet been prepared for the western DPS.

At the state level, Yellow-billed Cuckoos are on WDFW's list of Priority Habitats and Species (PHS) and are therefore afforded some, but likely limited, conservation attention. Due to the lack of nesting since probably the early 1940s, it is unreasonable to identify specific sites for management of the species, thus broadly defined areas, at the scale of counties, are best targeted for consideration. WDFW has not yet developed specific PHS management recommendations for cuckoos in Washington and is not aware of any PHS-related conservation measures that have been implemented for the species by local governments to date. Designation of the cuckoo as a Species of Greatest Conservation Need by WDFW also directs potential conservation actions toward it that are eligible for State Wildlife Grant funding from the U.S. Fish and Wildlife Service. However, because of the cuckoo's rarity in Washington, no work has yet been initiated through this funding source.

The species is included in Washington's riparian plan (Knutson and Naef 1997), which includes the following recommendations for protection of cuckoo habitat:

- Do not remove riparian vegetation, avoid bank stabilization and channelization projects, and exclude livestock from areas used by cuckoos.

- Do not use insecticides near riparian areas occupied by cuckoos.

Both recommendations, however, are contingent upon identification of areas used by Yellow-billed Cuckoos. Despite the lack of specificity in these recommendations, the overall riparian plan and its management recommendations should be beneficial to cuckoo habitat. Similarly, the many efforts to conserve and recover riparian habitats to assist with salmon recovery in Washington should also result in improved habitat conditions for cuckoos.

CONCLUSIONS AND RECOMMENDATION

The western DPS of the Yellow-billed Cuckoo underwent a dramatic decline in abundance and breeding distribution in western North America during the 20th century. The population is now distributed in a relatively small number of riverine drainages located primarily in the southwestern U.S. and northwestern Mexico at the core of its historical distribution. The species probably nested in Washington until at least the early 1940s, but is now considered functionally extirpated in the state. The nearest nesting populations presently occur in northern California and southern Idaho. Incidental observations of Yellow-billed Cuckoos continue in Washington, with 19 records made from 1974 to 2016 (including three in the last decade), corresponding to one record every 2.3 years. None of these records have involved either confirmed or probable breeders. Nevertheless, due to a lack of surveys for the species and the presence of small areas of habitat in Washington, the possibility exists that this species may occasionally breed in the state and that these rare breeders are yet to be discovered.

Continued incidental observations of cuckoos in Washington, together with riparian conservation efforts in the state and elsewhere in the range, support the possibility of re-establishing a future breeding population in Washington provided that conditions are suitable. Three main factors are needed for this to occur. The first is ensuring there is available habitat to be colonized in Washington. This can possibly be accomplished through existing efforts to improve riparian habitat, such as WDFW's riparian plan that is currently being revised. The second factor is the health and condition of breeding and overwintering populations of cuckoos to the south. If conservation efforts elsewhere in the range are successful, it is reasonable to assume that there may be more individuals available to recolonize areas formerly occupied, such as Washington. The final factor is climate change. While few analyses have been done to examine the effects of climate change on the western DPS, it is possible that Washington could retain conditions more favorable to the species and become a climate refuge in the future.

For these reasons and because the western DPS of the species is federally classified as threatened under the Endangered Species Act, it is recommended that the Yellow-billed Cuckoo be listed as a state endangered species in Washington.

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Appendix A. List of 57 known detection and specimen records of Yellow-billed Cuckoos in Washington dating from the 1830s to the present. These records exclude the unpublished observations of John M. Edson and Jennie V. Getty, which are reported in Appendices B and C, respectively.

Date	Location	County	Notes[a]
summers of 1834–1836	Vancouver area	Clark	J. K. Townsend reported the species as "abundant during the summer" along the Columbia River, where it was "heard repeatedly along the banks of the river" (Jobanek and Marshall 1992).
15, 27 September 1890	E. Humptulips River	Grays Harbor	One bird heard on 15 September and another seen high in a dead fir on 27 September (Lawrence 1892a). Reported as a "summer resident" and as "uncommon" in the Grays Harbor area.
June 1891	Wishkah River	Grays Harbor	One bird heard (Lawrence 1892a).
8–19 July 1892	Ridgefield	Clark	R. H. Lawrence saw an adult flying from a strip of small firs on 8 July, then heard one calling the next night from the same site (Lawrence 1892b). On 18 July, H. L. Gilbert discovered two adults with three juveniles at this location and shot the adults (male, AMNH 57699) and one juvenile. He caught another of the juveniles on 19 July.
20 June 1894	South Park, Seattle	King	One female (UWBM 5792) collected by L. M. Turner. Record accepted by the WBRC (YBCU-1894–1; Tweit and Skriletz 1996).
28–29 June 1897	Mount Vernon	Skagit	One bird seen and several heard by E. A. Preble (papers of S. F. Rathbun, UWBM).
12–13 August 1897	Ellensburg	Kittitas	One bird seen and another was heard by A. K. Fisher (Jewett et al 1953; S. Jewett, card files held at the PSM).
25 June 1899	Puyallup Valley	Pierce	One male (MVZ 32399) collected from a willow swamp by C. W. Bowles.
1 June 1905	near Tacoma	Pierce	Nest with 2 slightly incubated eggs collected by C. W. Bowles (Bowles and Bowles 1905). Nest was "large and well made, being constructed of course crab-apple twigs, and lined with moss and fir needles. Placed [2.4 m] up in small fir in dense mixed fir and deciduous growth." Disposition of the nest and eggs is unknown.
21 June 1905	Tacoma	Pierce	Nest and 2 eggs (MCZ 359672) collected by C. W. Bowles. Incubation had commenced. The nest was 2.4 m high and placed against the trunk of a 4.6-m tall fir in a "bushy patch of firs and deciduous growth" 30 m from nearby houses (MCZ catalog notes). The nest was composed of "coarse twigs, lined with dead fir twigs of which some had the leaves on." Despite the discrepancy in dates, the similarity in descriptions between this record and the one above for 1 June 1905 suggests the two may represent the same nest and eggs. However, as noted by Dawson and Bowles (1909), the Bowles brothers knew of multiple cuckoo breeding pairs in Tacoma, therefore it is possible that C. W. Bowles collected two nests in June 1905.
16 June 1907	Seattle	King	Egg set (3 eggs; WFVZ 34172) collected by J. H. Bowles. The nest was 3.7 m high and placed against the trunk of a 6.1-m tall fir tree in dense brush near a freshwater swamp.

Date	Location	County	Notes[a]
4 July 1907	Kirkland	King	Nest and 3 eggs (DMNS Egg/Nest 768) well advanced in incubation collected by D. E. Brown. The nest was described as being "only [1.2 m] from the ground in a small bush on a dry hillside, and in open brushy country……the bird was on the nest and could be seen for at least [24 m] in one direction" (Brown 1923). Rathbun listed the location as Kirkland (papers of S. F. Rathbun, UWBM).
23 July 1908	Kirkland	King	Egg set (3 eggs, UWBM 5609) collected by J. V. Getty. See Appendix C for additional details.
pre-1909	Tacoma	Pierce	Dawson and Bowles (1909) reported that the only location they knew of in Washington where the species could be found with certainty was "in a small area well within the city limits [of Tacoma] and surrounded by houses. In this small space four or five pairs may be found at any time during the summer."
3 May 1909	Tacoma	Pierce	A record by J. H. Bowles (Jewett et al 1953). No other details provided.
7 July 1909	Kirkland	King	Nest and 3 eggs (MCZ 359671) collected by J. V. Getty. Eggs were fresh and partially incubated. The nest occurred "in an open space in a fir forest in low ground, which was dotted with a second growth of fir and some *Osmaronia* [*Oemleria cerasiformis*] and *Spiraea*; it was placed on a fir branch on the exposed side of the tree, [2.7 m] from the ground; it was made of old fir twigs and lined with fresh fir twigs. I have heard of other Washington nests in fir trees" (Bent 1940; MCZ catalog notes). See Appendix C for additional details.
18 July 1909	Seattle	King	Nest and 1 egg (SBMNH 23116) from a clutch of 2, both slightly incubated, collected by D. E. Brown (Brown 1923). Nest was found 3.7 m "from the ground on horizontal branch of a willow tree growing in a large swamp. Bird sat very close, only left the nest when I had nearly climbed to it" (SBMNH card files).
18 July 1909	Kirkland	King	Nest with 1 well incubated egg was found 1.2 m "from the ground and in a wild rose bush near the edge of a large willow swamp" (Brown 1923). Rathbun listed the location as Kirkland (papers of S. F. Rathbun, UWBM).
9 July 1910	Kirkland	King	Egg set (4 eggs, PSM Bird-14855) collected by J. V. Getty. Incubation had commenced. Nest located 4 m high in clump of firs (PSM card files). See Appendix C for additional details.
23 July 1915	Bellingham	Whatcom	One bird (UWBM 17995) collected by J. M. Edson. Record accepted by the WBRC (YBCU-1915–1; Tweit and Skriletz 1996).
16 July 1916	Seattle	King	One adult female (UCLA 20943) collected by D. E. Brown (card files for D. E. Brown, PSM).
10 June 1917	Lake Washington near Renton	King	One bird seen by D. E. Brown (card files for D. E. Brown, PSM; papers of S. F. Rathbun, UWBM).
5 August 1917	Eldon	Mason	One bird heard by S. F. Rathbun (papers of S. F. Rathbun, UWBM).
20–24 June 1919	Between Seattle and Steilacoom	King or Pierce	One or more birds detected during a 5-day Seattle Audubon Society field trip (papers of Seattle Audubon Society, Special Collections library, University of Washington).

Date	Location	County	Notes[a]
8 June 1920 through a few days later	Lake Washington	King	"This species was fairly plentiful in the scattered short stretches of thick swampy woods bordering Lake Washington, but scarce elsewhere [at other sites visited in western Washington]. I saw it for the first time in the spring on 8 June, a rather late date in my opinion for the first record for the spring migration. Within a few days however single birds were frequently seen or heard about the Lake" (Burleigh 1929).
20 June 1920	-	King	One bird seen in a large willow swamp (card files for D. E. Brown, PSM).
27 June 1920	Duwamish River Valley, Seattle/Tukwila	King	One or more birds detected during a Seattle Audubon Society field trip that visited the area from Duwamish Station to Allentown (papers of Seattle Audubon Society, Special Collections library, University of Washington).
5 June 1921	-	King	One bird heard in a willow swamp (card files for D. E. Brown, PSM).
9 June 1921	Bellingham	Whatcom	One adult male (UCLA 20944) collected by J. M. Edson.
19 June 1921	Duwamish River Valley, Seattle	King	One or more birds detected during a Seattle Audubon Society field trip that visited the area from South Park to Duwamish Station (papers of Seattle Audubon Society, Special Collections library, University of Washington).
19 June 1923	-	King	Nest with 2 slightly incubated eggs recorded (Brown 1923; card files for D. E. Brown, PSM). Nest was located 2.1 m high "on a horizontal branch of a small tree in quite a dark clump of bushes near a swamp" (Brown 1923).
24 June 1923	Seattle	King	Nest and egg set (4 eggs, PSM Bird-14854) collected by D. E. Brown (Brown 1923; card files for D. E. Brown, PSM). Eggs slightly incubated. Nest was located 2.4 m high where the branches of two trees were interwoven; found on the edge of a willow slough (PSM specimen card files).
31 May 1925	Foster Island, Lake Washington, Seattle	King	One or more birds recorded by W. Hagenstein (papers of W. Hagenstein, Special Collections library, University of Washington).
~1929	near Renton	King	A nest and eggs held in the personal collection of E. A. Kitchin were obtained from a willow swamp (Kitchin 1949). The final disposition of these specimens is unknown. The date of this record is unclear and was vaguely noted by Kitchin (1949) as being from "twenty years ago," which would place it at about 1929. Kitchin remarked that this represented the last Washington record of the species that he knew of, adding further support that the nest was probably collected in the late 1920s.
4 November, year unknown	Ellensburg	Kittitas	A record by I. N. Gabrielson (Jewett et al. 1953). No other details provided. This record probably occurred between 1918 and 1935, when Gabrielson worked in the western U.S. (primarily in Oregon; Gabrielson and Jewett 1970).
-	Tacoma	Pierce	Kitchin (1949) noted two breeding pairs found on the outskirts of Tacoma by J. H. Bowles. No other details provided, but discovery of the nests would have preceded Bowles' death in 1934.

Date	Location	County	Notes[a]
1937	Vancouver	Clark	One bird seen by A. Oakes (Jewett et al 1953; S. Jewett, card files held at the PSM). Jewett's note card for this record gives the unusually early date of 18 April, but this was omitted from Jewett et al. (1953), suggesting the authors were possibly unsure of its accuracy. We also treat this date as questionable.
21 June 1956	north of Coulee Dam	Okanogan	One bird seen 31 km north of Coulee Dam by H. Cogswell (Rogers 1956, Mattocks et al. 1976, Roberson 1980; WDFW card files). Bird was calling in "open to moderately dense conifer and deciduous forest with patches of shrubs and herbs" (WDFW card files).
10 July 1974	Beaux Arts	King	One bird (UWBM 28705) flew into a window 90 m from Lake Washington; found by G. Durr (Mattocks 1974, Mattocks et al. 1976, Roberson 1980, Tweit and Skriletz 1996, Tweit 2005; WDFW card files). Record accepted by the WBRC (YBCU-1974-1).
1976	Hanford Reservation	Benton	One bird recorded in a canyon by D. Fitzner (WDG 1976; WDFW card files).
21 June 1978	George	Grant	One bird flew into a house window and was collected by J. Tellinghuisen and B. Jahn (Mattocks 1978, Rogers 1978, Roberson 1980, Tweit 2005; WDFW card files). Bird was mounted and is still on display at the WDFW Region 2 office in Ephrata as of 9 October 2013. Date listed as 11 June by Tweit (2005).
26 July-1 August 1979	Sultan	Snohomish	One bird recorded on 3 dates by multiple observers (Mattocks 1979, Harrington-Tweit et al. 1979, Roberson 1980, Manolis et al. 1986, Tweit and Skriletz 1996, Smith et al. 1997, Tweit 2005; WBRC observation forms; WDFW card files). First found on 26 July while calling just south of the Skykomish River 400 m south of Sultan by K. Brunner, D. Wechsler, S. Sweeney, M. Kenney, and P. Miller. The area contained a small pond (about 0.4 ha) surrounded by a mix of cottonwoods (about 18 m tall), alders (all sizes up to 11 m tall), and riparian shrubs. The observers first heard it call near the pond, then saw it about 5 m up in a small alder in a relatively dense area of forest. On 27 July, it was found in the same area by E. Hunn and others, who heard responses to taped calls and saw the bird several times. On 1 August, it was found again in the same area (just south of the bridge over the Skykomish River) by P. Mattocks and R. Hudson, who obtained responses to a taped call and saw the bird in a willow thicket and then near the pond. Record accepted by the WBRC (YBCU-1979-1). The area was surveyed with playback calls in subsequent years without further detections (Harrington-Tweit et al. 1980; P. Mattocks, pers. comm., in Manolis et al. 1986).

Date	Location	County	Notes[a]
20 September 1987	Sacajawea State Park near Pasco	Franklin	One bird seen by A. R. Johnson as it flew southeast between two rows of cottonwoods near and along the Snake River; it disappeared from view but may have crossed the river (Greager 1987, Rogers 1988, Tweit 2005; WDFW card files; A. R. Johnson, pers. comm. to G. Wiles in 2013). Reports that the bird was sighted later in the day near the headquarters of McNary National Wildlife Refuge in Burbank, Walla Walla County (Greager 1987; WDFW card files), were not corroborated by the purported observer, who never positively identified the bird (B. Woodley, pers. comm. to G. Wiles in 2013).
21 May 1990	Ayers Gulch	Asotin	One adult seen in riparian habitat by C. Christenson (an Army Corps of Engineers biologist) and another biologist (Mike Denny, pers. comm. to G. Wiles in 2013). The observers were highly confident in their identification.
5 June 1990	south of College Place	Walla Walla	One bird seen along the Old Milton-Freewater Highway 30 m north of the Washington-Oregon state line by MerryLynn Denny (Tweit et al. 1990, Tweit and Paulson 1994, Tweit 2005; WBRC observation form; WDFW card files; Mike Denny, pers. comm. to G. Wiles in 2013). It was first seen perched in heavy foliage about 12 m high in a large deciduous tree, then flew across the road to a locust tree while chased by American Robins (*Turdus migratorius*), and finally flew to some large sycamore trees. Habitat was riparian with large old deciduous trees. Record accepted by the WBRC (YBCU-1990-1).
5 November 1990	Omak	Okanogan	One bird found dead and photographed by R. Wilkinson and J. Wilkinson (Tweit and Fix 1991, Tweit and Skriletz 1996, Tweit 2005). Record accepted by the WBRC (YBCU-1990-2).
19 June 1991	Kettle Falls	Stevens	One bird recorded by L. Sharp (Mlodinow and Aanerud 2006). Record accepted by the WBRC (YBCU-1991-2).
7–20 July 1991	Tonasket	Okanogan	On 20 July, one bird heard calling from a birch tree in the front yard of a house just south of Tonasket by D. Swedberg, K. Swedberg, F. Ping, D. Verbeck, and M. Verbeck (Tweit and Johnson 1991, Aanerud and Mattocks 1997, Tweit 2005; WBRC observation form). It was then chased by a kingbird (*Tyrannus* sp.) to a nearby sycamore tree, where it was viewed while perched. A few minutes later, it was heard calling 23–30 m away in a cottonwood stand along the Okanogan River and then flew to another cottonwood stand. F. Ping reported that the bird had been heard calling in the area for the previous two weeks. Record accepted by the WBRC (YBCU-1991-1).
11 June 1992	Tonasket	Okanogan	One bird first seen perched on an elevated wire along Highway 97 about 1 km north of Tonasket by K. Woodruff (WDFW WSDM database). K. Woodruff (pers. comm. to G. Wiles in 2013) reported that he watched it for about three minutes and observed enough features to be fully confident of its identity before it flew into a large sugar maple in the yard of a home. The bird was not relocated during subsequent visits to the site. Its location was about 1.6 km north of the 1991 Tonasket sighting (K. Woodruff, pers. comm.). The WBRC did not accept this record (YBCU-1992-1) because the submitted description was too brief (Aanerud 2011).

Date	Location	County	Notes[a]
3 August 1996	Elma	Grays Harbor	One bird first seen in overhanging willows by a pond at Vance Creek County Park by S. Giles (Rogers 1997, Smith et al. 1997, Tweit and Gilligan 1997, Aanerud and Mattocks 2000, Tweit 2005; WBRC observation forms). It was seen again nearby later the same day by B. Morse as it flew from an area of 5-m-tall willows (in response to a taped call) to a dense thicket of willow trees on the other side of a clearing. Bird was not relocated during a follow-up visit on 7 August. Record accepted by the WBRC (YBCU-1996-1).
14 June 1997	Seattle	King	B. Rulon photographed a dead bird being eaten by an adult Peregrine Falcon at its nest on the former Washington Mutual Tower in downtown Seattle (Hadley 1997, Aanerud and Mattocks 2000, Tweit 2005). Record accepted by the WBRC (YBCU-1997-1).
15 August 1999	Moses Lake?	Grant?	The mostly dried carcass of a bird was found on a neighborhood street in Moses Lake by WDFW biologists R. Friesz and J. Tabor (WDFW WSDM database). They speculated that the bird had perhaps been struck and killed by a vehicle at an unknown location and then transported to the recovery site where it fell to the ground (M. Monda, pers. comm. to G. Wiles in 2013). The carcass was held at the WDFW Region 2 office in Ephrata (WDFW WSDM database), but its final disposition is unknown.
2001	near Lind	Adams	A wing (PSM Bird-23423) and tissue (UWBM 90212) from a female were collected 8 km south and 13 km east of Lind (T16N, R35E, Sec. 8 NE NE) by T. Smith (Mlodinow et al. 2004). Based on condition of the gonads (ovary: 18 x 10 mm; largest follicles: 8, 5, 3, and 3 mm) and incubation patch, it was an incubating bird or a recently failed breeding female (G. Shugart, pers. comm.).
31 May 2002	College Place	Walla Walla	One bird heard calling several times in a narrow riparian strip along Garrison Creek in Lions City Park by R. Moyer, who was fully confident of the bird's identification (LaFramboise 2002; R. Moyer, pers. comm. to G. Wiles in 2013).
25 June 2007	southeast of Eureka	Walla Walla	One bird heard calling in a stand of large black cottonwoods with a dense understory of poison hemlock north of the Luckenbill Road bridge over the Touchet River by Mike Denny (Mlodinow et al. 2007, Aversa 2008; Mike Denny, pers. comm. to G. Wiles in 2013).
21 June 2012	Little Pend Oreille Natl. Wildlife Refuge	Stevens	One bird heard, then seen in a string of riparian habitat comprised of cottonwood and willow between McDowell Lake and a ponderosa pine stand by biologist M. Munts (Merrill 2013, Mlodinow and Bartels 2016; WBRC observation form; M. Munts, pers. comm. to G. Wiles in 2013). Bird was not relocated during multiple follow-up visits. Record accepted by the WBRC (YBCU-2012-1).

Date	Location	County	Notes[a]
4 June 2015	Methow Valley	Okanogan	One female heard, then seen perched and flying from a large cottonwood (48.514ºN, 120.280ºW) 8 km northwest of Winthrop by V. Glick and L. Schreiner (V. Glick, pers. comm. to G. Wiles). The tree was about 260 m from the Methow River in mixed cottonwood-ponderosa pine forest with a dense understory and was along the edge of a hay field. An audio recording confirmed the species' identification and sex (M. Halterman, pers. comm.). Record accepted by the WBRC (YBCU-2015-1).

[a] List of museum and other abbreviations: AMNH, American Museum of Natural History, New York, New York; DMNS, Denver Museum of Nature & Science, Denver, Colorado; MCZ, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts; MVZ, Museum of Vertebrate Zoology, University of California, Berkeley, Berkeley, California; PSM, James R. Slater Museum of Natural History, University of Puget Sound, Tacoma, Washington; SBMNH, Santa Barbara Museum of Natural History, Santa Barbara, California; UCLA, Dickey Collection, University of California, Los Angeles, Los Angeles, California; UWBM, Burke Museum of Natural History, University of Washington, Seattle, Washington; WBRC, Washington Bird Records Committee; WDFW, Washington Department of Fish and Wildlife; WFVZ, Western Foundation of Vertebrate Zoology, Camarillo, California.

Appendix B. List of 41 detection and specimen records of Yellow-billed Cuckoos in the vicinity of Bellingham and Marietta, Whatcom County, Washington, between 1888 and 1945, as reported in the unpublished notes of John M. Edson (held at the Special Collections Library, University of Washington, Seattle, Washington).

Date	Location	Notes[a]
22 June 1894	Marietta	Six or 7 birds seen and heard at Slater's Slough. One female was collected (Edson's personal collecting number 71), but disposition of the specimen is unknown.
29 June 1894	Marietta	Three to four birds seen and heard at Smuggler's Slough.
3 July 1898	Bellingham	One bird heard calling repeatedly at rear of Edson's ranch near Bellingham.
18 July 1915	Bellingham	One bird heard calling repeatedly in second-growth vegetation near the Peters place east of Winn Road. Edson remarked that it was the first cuckoo he had heard "in many years."
23, 29 July 1915	Bellingham	One bird heard calling across the street from Edson's house and was eventually collected (UWBM 17995) about 200 m away on July 23. Another was heard and seen in a maple tree in Edson's yard on July 29.
23 July 1915	Bellingham	One bird heard calling by Will "in the direction of the cement plant."
19 June 1916	Bellingham	One bird heard twice by Will.
20 June 1917	Bellingham	One bird heard calling across the road from Edson's house.
~23 July 1917	Bellingham	One or more birds heard calling fairly often on a daily basis for several days or longer before this date.
18 June 1918	Bellingham	One bird heard for several days across the road from Edson's house.
26 May 1919	Bellingham	One bird heard from Edson's house.
4, 7 June 1920	Bellingham	One bird heard near Edson's house, including in second-growth vegetation to the southeast.
6–8 June 1921	Bellingham	One bird heard daily from Edson's house. A male was collected (UCLA 20944) nearby in shrubby vegetation near a creek on June 8. Its stomach was full of tent caterpillars (*Malacosoma* sp.).
6, 15 July 1921	Bellingham	Birds heard calling on a daily basis as of July 6, but the calls were becoming less frequent. On July 15, two birds were seen across the street from Edson's house and calling had decreased even more.
28 May 1922	Bellingham	One bird heard as Edson was milking his livestock. It then moved to the school grounds and beyond.
16–24 June 1922	Bellingham	Birds heard calling daily across the road from Edson's house.
8 July 1923	Bellingham	One bird heard calling repeatedly in the McAlpine tract near Edson's house.
8 July 1923	Marietta	One bird heard calling in the logged off region north of Spearina in Marietta Township.
11 June 1924	Bellingham	One bird heard calling.
5 Aug 1924	Bellingham	One bird heard calling and then seen perched in a large maple tree.
24 June 1925	Bellingham	One bird heard near the Bennett school.
25 June 1925	Bellingham	One bird heard near Edson's house.
18 July 1925	Bellingham	One bird heard calling.
12, 16 July 1928	Bellingham	One bird heard calling both days from Edson's house.
20–21 June 1929	Bellingham	One bird heard from Edson's house.

Date	Location	Notes[a]
29 June 1929	Bellingham	One bird heard calling on multiple days by B. M. Davenport in his neighborhood.
3 June 1930	Bellingham	One bird heard from Edson's house.
20 June 1930	Bellingham	One or two birds heard repeatedly at Bayside Park.
16–17 June 1931	Bellingham	One bird heard near Edson's house.
20 May 1932	Marietta	One bird heard on the Zane place at Marietta.
~14–21, 28 June 1932	Bellingham	One bird heard from Edson's house on June 28, as well as 1–2 weeks earlier.
10 July1932	Bellingham	One bird heard near Edson's house.
29 June 1933	Bellingham	One bird heard from Edson's house.
~20 May 1934	Bellingham	One bird heard from Edson's house.
5–6, 12 June 1934	Bellingham	One bird heard near Edson's house.
13–15 June 1934	Bellingham	Single birds heard on opposite sides of Hyatt Slough on June 13 and June 15, respectively.
4–7 Aug 1934	Bellingham	One bird heard repeatedly daily and seen 2–3 times near Edson's house.
23 Aug 1934	Bellingham	After a multi-day hiatus, one bird heard near Edson's house.
~4, 13 June 1935	Bellingham	Single birds heard from Edson's house on about June 4 and in the woodland behind his garden on June 13.
22 June 1936	Bellingham	One bird heard from Edson's house.
25 June 1941	Bellingham	A bird that died from colliding with a monkey tree was brought to Edson by a Mr. and Mrs. Kramer, who had Edson stuff it for them. The final disposition of this specimen is unknown. This record is also noted in Wahl (1995) and the WDFW card files.

[a] See Appendix A for abbreviations.

Appendix C. List of 15 detection and specimen records of Yellow-billed Cuckoos in the vicinity of Kirkland, King County, Washington, between 1908 and 1913, as reported in the unpublished field notes of Jennie V. Getty (held at the Burke Museum, University of Washington, Seattle, Washington) and Getty (1916).

Date	Location	Notes[a]
23 June 1908	Kirkland	Nest with 3 eggs collected, although only the egg set remains (UWBM 5609). A parent bird was also seen incubating and later heard. Nest was located 3.4 m high. Getty (1916) described the nest as being shallow and poorly built of loose sticks with a "scanty" lining of lichens, and included a photo of it. Rathbun incorrectly listed the nest location as Seattle (papers of S. F. Rathbun, UWBM).
25 June 1908	Bellevue	At least one bird detected at Mercer Slough.
28 June 1908	Kirkland	One bird heard.
7 July 1909	Kirkland	Nest with 3 eggs (MCZ 359671) collected, with a parent bird seen. Getty wrote that the nest was found in "a low rather open place in the woods….. The plot is surrounded on three sides by dense firs, fourth side a dense hedge of wild roses. Plot dotted with low fir, *Osmaronia* [*Oemleria cerasiformis*], and *Spiraea*. The nest was about [2.7 m] from the ground on a branch of a young fir. The nest was on the open side of the tree and the bird was in plain sight."
15–19 July 1909	Kirkland	One bird heard calling on at least 3 days. On 18 July, Getty searched for the bird on a hill densely covered with raspberry and blackberry vines, salal (*Gaultheria shallon*), Oregon grape (*Mahonia aquifolium*), and fallen timber.
7 June 1910	Kirkland	One bird seen and heard.
1–10 July 1910	Kirkland	Two cuckoo nests were monitored for eggs. One nest was located in a clump of firs (PSM card files) and was placed 4 m high in a fir tree, with an egg set (4 eggs, PSM Bird-14855) collected on 9 July. The second nest apparently remained empty.
16 July 1910	Kirkland	One bird heard and followed in a slough.
28 June 1911	Kirkland	One bird apparently detected; a search for its nest failed.
25, 28 June 1912	Kirkland	Two birds detected in a thicket at Juanita.
29 June-2 July 1912	Kirkland	One bird heard on 29 June. One nest with a dead, well-feathered chick was found in a rose bush on 2 July, with at least 2 birds close by. The dead chick was soaking wet, causing Getty to speculate that it died during recent rains.
14 July 1912	Kirkland	One bird seen strongly defending an area.
23, 26 July 1912	Kirkland	One or possibly two nests were found near the steelworks. One nest was 1.8 m high in a fir tree located in a dense fir and fern thicket.
9 June 1913	Kirkland	One bird heard.
17 June 1913	Kirkland	A partial nest comprised of a few sticks was found.

[a] See Appendix A for abbreviations.

Appendix D. List of nine hypothetical or rejected reports of Yellow-billed Cuckoos for Washington dating from the 1890s to the present. Most of these reports lacked sufficient documentation for confirming the species or were rejected for other reasons.

Date	Location	County	Notes[a]
1895–1896	-	Okanogan, Chelan	Dawson (1897) heard the "unmistakable" calls of Yellow-billed Cuckoos twice, but did not see the birds and therefore reported them as hypothetical detections. Specific locations, dates, and habitat were not reported. At the time of Dawson's visit, Okanogan County included much of modern-day Chelan County.
14 April 1938	Joint Base Lewis-McChord	Pierce	One bird heard at Talb Marsh by J. W. Slipp (card files for J. W. Slipp, PSM). We rejected this record because (1) it was based only on an audio detection, (2) the bird in question was originally identified as a Pied-billed Grebe (*Podilymbus podiceps*), (3) no other corroborating information was given to support the identification, and (4) the date of 14 April is unusually early for migrant cuckoos to occur in western North America.
4 June 1983	Turnbull Natl. Wildlife Refuge	Spokane	The WBRC did not accept a record (YBCU-1983-1) of an unseen calling bird because of insufficient documentation (Aanerud and Mattocks 1997; WBRC observation form).
1–5 June 1992	Fields	(Oregon)	The Center for Biological Diversity (1998) reported the following record from Washington: "East of the Cascades, 1 yellow billed cuckoo was observed near the town of Fields….." The record came from Oregon, not Washington (Tweit and Johnson 1992).
28 June 1998	Republic	Ferry	No other details exist for a bird reported by D. McKnight (R. Merrill, pers. comm. to G. Wiles in 2013).
27–29 August 1999	Fort Simcoe State Park	Yakima	One bird being chased by a group of Lewis's Woodpeckers (*Melanerpes lewis*) was briefly seen in riparian habitat by J. Broadus (Stepniewski 1999). He viewed head, body, and flight characteristics consistent with *Coccyzus americanus*, but did not see enough other features to confirm the bird's identification (J. Broadus, pers. comm., to G. Wiles in 2014).
11 July 2000	Mountlake Terrace	Snohomish	The WBRC did not accept a record (YBCU-2000-1) of a bird reported along a freeway on-ramp because of insufficient documentation, the brevity of the sighting, and the fact that the observer was driving at the time (Mlodinow et al. 2000, Rogers 2001, Aanerud 2002; WBRC observation form; WDFW WSDM database). The sighting occurred in an urban area with patches of conifer/deciduous forest and open fields, with sizeable numbers of tent caterpillars present.
12 July 2012	Richland	Benton	A second-hand report of a bird seen in a north Richland residential area has yielded no additional information to date (L. Salzer, pers. comm. to G. Wiles in 2013).
11 July 2016	Brown (White's) Island	Wahkiakum	A bird heard calling several times from a cottonwood tree on the east side of the island was identified as a possible cuckoo (M. Warren, pers. comm.). The observer was a trained biologist and was familiar with cuckoo vocalizations from the eastern U.S., but did not view the bird and therefore considered the record as hypothetical.

[a] See Appendix A for abbreviations.

Appendix E. Washington Administrative Code:

232-12-011. Wildlife classified as protected shall not be hunted or fished;
232-12-014. Wildlife classified as endangered species;
232-12-297. Endangered, threatened and sensitive wildlife species classification.

WAC 232-12-011 Wildlife classified as protected shall not be hunted or fished. Protected wildlife are designated into three subcategories: threatened, sensitive, and other.
(1) Threatened species are any wildlife species native to the state of Washington that are likely to become endangered within the foreseeable future throughout a significant portion of their range within the state without cooperative management or removal of threats. Protected wildlife designated as threatened include:

Common Name	Scientific Name
Mazama pocket gopher	*Thomomys mazama*
western gray squirrel	*Sciurus griseus*
North American lynx	*Lynx canadensis*
ferruginous hawk	*Buteo regalis*
marbled murrelet	*Brachyramphus marmoratus*
green sea turtle	*Chelonia mydas*
loggerhead sea turtle	*Caretta caretta*
greater sage-grouse	*Centrocercus urophasianus*
sharp-tailed grouse	*Phasianus columbianus*

(2) Sensitive species are any wildlife species native to the state of Washington that are vulnerable or declining and are likely to become endangered or threatened in a significant portion of their range within the state without cooperative management or removal of threats. Protected wildlife designated as sensitive include:

Common Name	Scientific Name
gray whale	*Eschrichtius gibbosus*
common Loon	*Gavia immer*
peregrine falcon	*Falco peregrinus*
bald eagle	*Haliaeetus leucocephalus*
Larch Mountain salamander	*Plethodon larselli*
pygmy whitefish	*Prosopium coulteri*
margined sculpin	*Cottus marginatus*
Olympic mudminnow	*Novumbra hubbsi*

(3) Other protected wildlife include:

Common Name	Scientific Name
cony or pika	*Ochotona princeps*
least chipmunk	*Tamius minimus*
yellow-pine chipmunk	*Tamius amoenus*
Townsend's chipmunk	*Tamius townsendii*
red-tailed chipmunk	*Tamius ruficaudus*
hoary marmot	*Marmota caligata*
Olympic marmot	*Marmota olympus*
Cascade golden-mantled ground squirrel	*Spermophilus saturatus*
golden-mantled ground squirrel	*Spermophilus lateralis*
Washington ground squirrel	*Spermophilus washingtoni*
red squirrel	*Tamiasciurus hudsonicus*
Douglas squirrel	*Tamiasciurus douglasii*
northern flying squirrel	*Glaucomys sabrinus*
Wolverine	*Gulo gulo*
painted turtle	*Chrysemys picta*
California mountain kingsnake	*Lampropeltis zonata*

All birds not classified as game birds, predatory birds or endangered species, or designated as threatened species or sensitive species; all bats, except when found in or immediately adjacent to a dwelling or other occupied building; mammals of the order Cetacea, including whales, porpoises, and mammals of the order Pinnipedia not otherwise classified as endangered species, or designated as threatened species or sensitive species. This section shall not apply to hair seals and sea lions which are threatening to damage or are damaging commercial fishing gear being utilized in a lawful manner or when said mammals are damaging or threatening to damage commercial fish being lawfully taken with commercial gear.

[Statutory Authority: RCW 77.12.047, 77.12.020. 08-03-068 (Order 08-09), § 232-12-011, filed 1/14/08, effective 2/14/08; 06-04-066 (Order 06-09), § 232-12-011, filed 1/30/06, effective 3/2/06. Statutory Authority: RCW 77.12.047, 77.12.655, 77.12.020. 02-11-069 (Order 02-98), § 232-12-011, filed 5/10/02, effective 6/10/02. Statutory Authority: RCW 77.12.047. 02-08-048 (Order 02-53), § 232-12-011, filed 3/29/02, effective 5/1/02; 00-17-106 (Order 00-149), § 232-12-011, filed 8/16/00, effective 9/16/00. Statutory Authority: RCW 77.12.040, 77.12.010, 77.12.020, 77.12.770. 00-10-001 (Order 00-47), § 232-12-011, filed 4/19/00, effective 5/20/00. Statutory Authority: RCW 77.12.040, 77.12.010, 77.12.020, 77.12.770, 77.12.780. 00-04-017 (Order 00-05), § 232-12-011, filed 1/24/00, effective 2/24/00. Statutory Authority: RCW 77.12.020. 98-23-013 (Order 98-232), § 232-12-011, filed 11/6/98, effective 12/7/98. Statutory Authority: RCW 77.12.040. 98-10-021 (Order 98-71), § 232-12-011, filed 4/22/98, effective 5/23/98. Statutory Authority: RCW 77.12.040 and 75.08.080. 98-06-031, § 232-12-011, filed 2/26/98, effective 5/1/98. Statutory Authority: RCW 77.12.020. 97-18-019 (Order 97-167), § 232-12-011, filed 8/25/97, effective 9/25/97. Statutory Authority: RCW 77.12.040, 77.12.020, 77.12.030 and 77.32.220. 97-12-048, § 232-12-011, filed 6/2/97, effective 7/3/97. Statutory Authority: RCW 77.12.020. 93-21-027 (Order 615), § 232-12-011, filed 10/14/93, effective 11/14/93; 90-11-065 (Order 441), § 232-12-011, filed 5/15/90, effective 6/15/90. Statutory Authority: RCW 77.12.040. 89-11-061 (Order 392), § 232-12-011, filed 5/18/89; 82-19-026 (Order 192), § 232-12-011, filed 9/9/82; 81-22-002 (Order 174), § 232-12-011, filed 10/22/81; 81-12-029 (Order 165), § 232-12-011, filed 6/1/81.]

WAC 232-12-014 Wildlife classified as endangered species. Endangered species include:

Common Name	**Scientific Name**
pygmy rabbit	*Brachylagus idahoensis*
fisher	*Martes pennanti*
gray wolf	*Canis lupus*
grizzly bear	*Ursus arctos*
sea otter	*Enhydra lutris*
sei whale	*Balaenoptera borealis*
fin whale	*Balaenoptera physalus*
blue whale	*Balaenoptera musculus*
humpback whale	*Megaptera novaeangliae*
black right whale	*Balaena glacialis*
sperm whale	*Physeter macrocephalus*
killer whale	*Orcinus orca*
Columbian white-tailed deer	*Odocoileus virginianus leucurus*
woodland caribou	*Rangifer tarandus caribou*
American white pelican	*Pelecanus erythrorhynchos*
sandhill crane	*Grus canadensis*
snowy plover	*Charadrius alexandrinus*
upland sandpiper	*Bartramia longicauda*
tufted puffin	*Fratercula cirrhata*
spotted owl	*Strix occidentalis*
streaked horned lark	*Eremophila alpestris strigata*
western pond turtle	*Clemmys marmorata*
leatherback sea turtle	*Dermochelys coriacea*
mardon skipper	*Polites mardon*
Oregon silverspot butterfly	*Speyeria zerene hippolyta*
Taylor's checkerspot	*Euphydryas editha taylori*
Oregon spotted frog	*Rana pretiosa*
northern leopard frog	*Rana pipiens*

[Statutory Authority: RCW 77.12.047, 77.12.655, 77.12.020. 06-04-066 (Order 06-09), § 232-12-014, filed 1/30/06, effective 3/2/06. Statutory Authority: RCW 77.12.047, 77.12.655, 77.12.020. 02-11-069 (Order 02-98), § 232-12-014, filed 5/10/02, effective 6/10/02. Statutory Authority: RCW 77.12.040, 77.12.010, 77.12.020, 77.12.770, 77.12.780. 00-04-017 (Order 00-05), § 232-12-014, filed 1/24/00, effective 2/24/00. Statutory Authority: RCW 77.12.020. 98-23-013 (Order 98-232), § 232-12-014, filed 11/6/98, effective 12/7/98; 97-18-019 (Order 97-167), § 232-12-014, filed 8/25/97, effective 9/25/97; 93-21-026 (Order 616), § 232-12-014, filed 10/14/93, effective 11/14/93. Statutory Authority: RCW 77.12.020(6). 88-05-032 (Order 305), § 232-12-014, filed 2/12/88. Statutory Authority: RCW 77.12.040. 82-19-026 (Order 192), § 232-12-014, filed 9/9/82; 81-22-002 (Order 174), § 232-12-014, filed 10/22/81; 81-12-029 (Order 165), § 232-12-014, filed 6/1/81.]

WAC 232-12-297 Endangered, threatened, and sensitive wildlife species classification.

PURPOSE

1.1 The purpose of this rule is to identify and classify native wildlife species that have need of protection and/or management to ensure their survival as free-ranging populations in Washington and to define the process by which listing, management, recovery, and delisting of a species can be achieved. These rules are established to ensure that consistent procedures and criteria are followed when classifying wildlife as endangered, or the protected wildlife subcategories threatened or sensitive.

DEFINITIONS

For purposes of this rule, the following definitions apply:

2.1 "Classify" and all derivatives means to list or delist wildlife species to or from endangered, or to or from the protected wildlife subcategories threatened or sensitive.

2.2 "List" and all derivatives means to change the classification status of a wildlife species to endangered, threatened, or sensitive.

2.3 "Delist" and its derivatives means to change the classification of endangered, threatened, or sensitive species to a classification other than endangered, threatened, or sensitive.

2.4 "Endangered" means any wildlife species native to the state of Washington that is seriously threatened with extinction throughout all or a significant portion of its range within the state.

2.5 "Threatened" means any wildlife species native to the state of Washington that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range within the state without cooperative management or removal of threats.

2.6 "Sensitive" means any wildlife species native to the state of Washington that is vulnerable or declining and is likely to become endangered or threatened in a significant portion of its range within the state without cooperative management or removal of threats.

2.7 "Species" means any group of animals classified as a species or subspecies as commonly accepted by the scientific community.

2.8 "Native" means any wildlife species naturally occurring in Washington for purposes of breeding, resting, or foraging, excluding introduced species not found historically in this state.

2.9 "Significant portion of its range" means that portion of a species' range likely to be essential to the long-term survival of the population in Washington.

LISTING CRITERIA

3.1 The commission shall list a wildlife species as endangered, threatened, or sensitive solely on the basis of the biological status of the species being considered, based on the preponderance of scientific data available, except as noted in section 3.4.

3.2 If a species is listed as endangered or threatened under the federal Endangered Species Act, the agency will recommend to the commission that it be listed as endangered or threatened as specified in section 9.1. If listed, the agency will proceed with development of a recovery plan pursuant to section 11.1.

3.3 Species may be listed as endangered, threatened, or sensitive only when populations are in danger of failing, declining, or are vulnerable, due to factors including but not restricted to limited numbers, disease, predation, exploitation, or habitat loss or change, pursuant to section 7.1.

3.4 Where a species of the class Insecta, based on substantial evidence, is determined to present an unreasonable risk to public health, the commission may make the determination that the species need not be listed as endangered, threatened, or sensitive.

DELISTING CRITERIA

4.1 The commission shall delist a wildlife species from endangered, threatened, or sensitive solely on the basis of the biological status of the species being considered, based on the preponderance of scientific data available.

4.2 A species may be delisted from endangered, threatened, or sensitive only when populations are no longer in danger of failing, declining, are no longer vulnerable, pursuant to section 3.3, or meet recovery plan goals, and when it no longer meets the definitions in sections 2.4, 2.5, or 2.6.

INITIATION OF LISTING PROCESS

5.1 Any one of the following events may initiate the listing process.

5.1.1 The agency determines that a species population may be in danger of failing, declining, or vulnerable, pursuant to section 3.3.

5.1.2 A petition is received at the agency from an interested person. The petition should be addressed to the director. It should set forth specific evidence and scientific data which shows that the species may be failing, declining, or vulnerable, pursuant to section 3.3. Within 60 days, the agency shall either deny the petition, stating the reasons, or initiate the classification process.

5.1.3 An emergency, as defined by the Administrative Procedure Act, chapter 34.05 RCW. The listing of any species previously classified under emergency rule shall be governed by the provisions of this section.

5.1.4 The commission requests the agency review a species of concern.

5.2 Upon initiation of the listing process the agency shall publish a public notice in the Washington Register, and notify those parties who have expressed their interest to the department, announcing the initiation of the classification process and calling for scientific information relevant to the species status report under consideration pursuant to section 7.1.

INITIATION OF DELISTING PROCESS

6.1 Any one of the following events may initiate the delisting process:

6.1.1 The agency determines that a species population may no longer be in danger of failing, declining, or vulnerable, pursuant to section 3.3.

6.1.2 The agency receives a petition from an interested person. The petition should be addressed to the director. It should set forth specific evidence and scientific data which shows that the species may no longer be failing, declining, or vulnerable, pursuant to section 3.3. Within 60 days, the agency shall either deny the petition, stating the reasons, or initiate the delisting process.

6.1.3 The commission requests the agency review a species of concern.

6.2 Upon initiation of the delisting process the agency shall publish a public notice in the Washington Register, and notify those parties who have expressed their interest to the department, announcing the initiation of the delisting process and calling for scientific information relevant to the species status report under consideration pursuant to section 7.1.

SPECIES STATUS REVIEW AND AGENCY RECOMMENDATIONS

7.1 Except in an emergency under 5.1.3 above, prior to making a classification recommendation to the commission, the agency shall prepare a preliminary species status report. The report will include a review of information relevant to the species' status in Washington and address factors affecting its status, including those given under section 3.3. The status report shall be reviewed by the public and scientific community. The status report will include, but not be limited to an analysis of:

7.1.1 Historic, current, and future species population trends.

7.1.2 Natural history, including ecological relationships (e.g. food habits, home range, habitat selection patterns).

7.1.3 Historic and current habitat trends.

7.1.4 Population demographics (e.g. survival and mortality rates, reproductive success) and their relationship to long term sustainability.

7.1.5 Historic and current species management activities.

7.2 Except in an emergency under 5.1.3 above, the agency shall prepare recommendations for species classification, based upon scientific data contained in the status report. Documents shall be prepared to determine the environmental consequences of adopting the recommendations pursuant to requirements of the State Environmental Policy Act (SEPA).

7.3 For the purpose of delisting, the status report will include a review of recovery plan goals.

PUBLIC REVIEW

8.1 Except in an emergency under 5.1.3 above, prior to making a recommendation to the commission, the agency shall provide an opportunity for interested parties to submit new scientific data relevant to the status report, classification recommendation, and any SEPA findings.

8.1.1 The agency shall allow at least 90 days for public comment.

FINAL RECOMMENDATIONS AND COMMISSION ACTION

9.1 After the close of the public comment period, the agency shall complete a final status report and classification recommendation. SEPA documents will be prepared, as necessary, for the final agency recommendation for classification. The classification recommendation will be presented to the commission for action. The final species status report, agency classification recommendation, and SEPA documents will be made available to the public at least 30 days prior to the commission meeting.

9.2 Notice of the proposed commission action will be published at least 30 days prior to the commission meeting.

PERIODIC SPECIES STATUS REVIEW

10.1 The agency shall conduct a review of each endangered, threatened, or sensitive wildlife species at least every five years after the date of its listing. This review shall include an update of the species status report to determine whether the status of the species warrants its current listing status or deserves reclassification.

10.1.1 The agency shall notify any parties who have expressed their interest to the department of the periodic status review. This notice shall occur at least one year prior to end of the five year period required by section 10.1.

10.2 The status of all delisted species shall be reviewed at least once, five years following the date of delisting.

10.3 The department shall evaluate the necessity of changing the classification of the species being reviewed. The agency shall report its findings to the commission at a commission meeting. The agency shall notify the public of its findings at least 30 days prior to presenting the findings to the commission.

10.3.1 If the agency determines that new information suggests that classification of a species should be changed from its present state, the agency shall initiate classification procedures provided for in these rules starting with section 5.1.

10.3.2 If the agency determines that conditions have not changed significantly and that the classification of the species should remain unchanged, the agency shall recommend to the commission that the species being reviewed shall retain its present classification status.

10.4 Nothing in these rules shall be construed to automatically delist a species without formal commission action.

RECOVERY AND MANAGEMENT OF LISTED SPECIES

11.1 The agency shall write a recovery plan for species listed as endangered or threatened. The agency will write a management plan for species listed as sensitive. Recovery and management plans shall address the listing criteria described in sections 3.1 and 3.3, and shall include, but are not limited to:

11.1.1 Target population objectives.

11.1.2 Criteria for reclassification.

11.1.3 An implementation plan for reaching population objectives which will promote cooperative management and be sensitive to landowner needs and property rights. The plan will specify resources needed from and impacts to the department, other agencies (including federal, state, and local), tribes, landowners, and other interest groups. The plan shall consider various approaches to meeting recovery objectives including, but not limited to regulation, mitigation, acquisition, incentive, and compensation mechanisms.

11.1.4 Public education needs.

11.1.5 A species monitoring plan, which requires periodic review to allow the incorporation of new information into the status report.

11.2 Preparation of recovery and management plans will be initiated by the agency within one year after the date of listing.

11.2.1 Recovery and management plans for species listed prior to 1990 or during the five years following the adoption of these rules shall be completed within 5 years after the date of listing or adoption of these rules, whichever comes later. Development of recovery plans for endangered species will receive higher priority than threatened or sensitive species.

11.2.2 Recovery and management plans for species listed after five years following the adoption of these rules shall be completed within three years after the date of listing.

11.2.3 The agency will publish a notice in the Washington Register and notify any parties who have expressed interest to the department interested parties of the initiation of recovery plan development.

11.2.4 If the deadlines defined in sections 11.2.1 and 11.2.2 are not met the department shall notify the public and report the reasons for missing the deadline and the strategy for completing the plan at a commission meeting. The intent of this section is to recognize current department personnel resources are limiting and that development of recovery plans for some of the species may require significant involvement by interests outside of the department, and therefore take longer to complete.

11.3 The agency shall provide an opportunity for interested public to comment on the recovery plan and any SEPA documents.

CLASSIFICATION PROCEDURES REVIEW

12.1 The agency and an ad hoc public group with members representing a broad spectrum of interests, shall meet as needed to accomplish the following:

12.1.1 Monitor the progress of the development of recovery and management plans and status reviews, highlight problems, and make recommendations to the department and other interested parties to improve the effectiveness of these processes.

12.1.2 Review these classification procedures six years after the adoption of these rules and report its findings to the commission.

AUTHORITY

13.1 The commission has the authority to classify wildlife as endangered under RCW 77.12.020. Species classified as endangered are listed under WAC 232-12-014, as amended.

13.2 Threatened and sensitive species shall be classified as subcategories of protected wildlife. The commission has the authority to classify wildlife as protected under RCW 77.12.020. Species classified as protected are listed under WAC 232-12-011, as amended.

[Statutory Authority: RCW 77.12.047, 77.12.655, 77.12.020. 02-02-062 (Order 01-283), § 232-12-297, filed 12/28/01, effective 1/28/02. Statutory Authority: RCW 77.12.040. 98-05-041 (Order 98-17), § 232-12-297, filed 2/11/98, effective 3/14/98. Statutory Authority: RCW 77.12.020. 90-11-066 (Order 442), § 232-12-297, filed 5/15/90, effective 6/15/90.]