

## Most California Important Bird Areas will protect sensitive bird species against climate change

**F**uture climate change poses an unprecedented threat to birds that will result in a certain amount of bird loss in California<sup>1</sup>. Challenging questions now remain as to where and how we should manage our lands in order to help bird species become more resilient to climate change<sup>2,3</sup>. At least part of the answer is potentially revealed by an analysis of future climate change models that show that most California Important Birds Areas – a network of sites identified by Audubon California as providing essential habitat for birds – will protect sensitive bird species against climate change.

### Important Bird Areas and climate change

In California, Important Bird Areas include sites that support 10 or more sensitive bird species that are of conservation concern<sup>4-6</sup>. Future climate change models developed under high greenhouse gas emissions<sup>7</sup> for many of these sensitive species provide insights into whether each will *disappear* or *persist* in a specific Important Bird Area, or whether the climate change forecast is simply too *inconclusive* to make a sound prediction.

### Sensitive species

Sound stewardship of California's Important Bird Areas will help 16 of 25 sensitive species persist through the year 2100, even in the face of climate change (see Table). Responses of the remaining 10 sensitive species are inconclusive and require further study before we are able to determine an outcome with greater than 50% confidence.

### Regional trends

Of California's 145 Important Bird Areas, 89 protect 50% or more sensitive species by enabling them to persist even in the face of climate change. Most of these resilient Important Bird Areas are located in coastal regions and the Central Valley (see map on reverse side). In contrast, the majority of sensitive species are expected to disappear from 6 Important Bird Areas occurring mostly in the Sonoran and Mojave Deserts of the southeast. Responses of sensitive species to climate change are inconclusive at the remaining 50 Important Bird Areas, which tend to concentrate around the Modoc Plateau in the northeast and in southern California.

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**Table:** Number of California Important Bird Areas where select sensitive species occur now, and where they are predicted to either disappear or persist by the year 2100.

Species <sup>a</sup>	Present now <sup>b</sup>	Disappear in future	Persist in future
Greater Sage-grouse	9	2	1
California Condor	6	0	1
Bald Eagle	19	4	13
Northern Harrier	82	2	72
Golden Eagle	67	19	42
Peregrine Falcon	25	1	22
Prairie Falcon	41	4	27
Clapper Rail (California, Light-footed, Yuma)	18	2	9
Western Snowy Plover (Pacific)	22	0	16
Mountain Plover	14	1	4
Black Skimmer	5	0	1
Burrowing Owl	62	2	44
Black Swift	3	0	1
Willow Flycatcher	23	1	1
Loggerhead Shrike	106	9	89
Bell's Vireo (Least)	25	0	2
Cactus Wren (Coastal)	23	3	19
Marsh Wren (Clark's)	8	0	7
California Gnatcatcher	20	7	3
Le Conte's Thrasher	15	2	10
Sage Sparrow (Coastal)	36	0	28
Savannah Sparrow (Belding's, Large-billed)	16	1	12
Grasshopper Sparrow	40	16	10
Tricolored Blackbird	61	10	34
Red-winged Blackbird (Kern)	1	0	1

<sup>a</sup>Sensitive subspecies given in parentheses.

<sup>b</sup>Some Important Bird Areas were inconclusive in the climate change models.

### References

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# Sensitive bird species' responses to climate change in California Important Bird Areas

