



MONTANA'S COLONIAL WATERBIRDS

Montana is home to 18 species of colonial waterbirds from six families and include American White Pelicans, Franklin's Gulls, and Great Blue Herons.

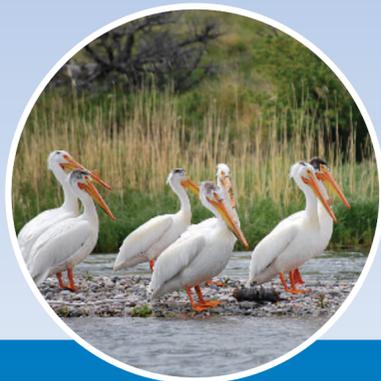
These birds use Montana's marsh vegetation, lush river habitats, trees, islands, and sandbars to nest communally in groupings of a few to a few thousand nests.

KEY COLONIAL NESTING SITES AND IMPORTANT BIRD AREAS

- 1 Arod Lakes NWR*
 - 2 Benton Lakes NWR
 - 3 Bitterroot River
 - 4 Bowdoin NWR*
 - 5 Canyon Ferry WMA*
 - 6 Freezeout Lake WMA
 - 7 Manning Lake NWR
 - 8 Medicine Lake NWR
 - 9 Ninepipe NWR
 - 10 Pablo NWR
 - 11 Red Rock Lakes NWR
- * globally recognized



NWR: National Wildlife Refuge
WMA: Wildlife Management Area



All bird photos by Bob Marinka except American White Pelican by Amy Seaman and Great Blue Heron, stock.



American White Pelican

- Key sites: 1, 4, 5, 8
- Large colonies (many hundreds to thousands of pairs)
- Nest is a shallow, twig and debris lined, depression in the ground
- Climate Endangered – 9% of breeding range is stable

American White Pelicans breed at just four sites in Montana, and all are recognized Important Bird Areas. Nearly 7,000 nests have been recorded in a single year, and though exact colony locations vary year to year, as does the timing of egg-laying, colony sizes are trending upward. Breeding and non-breeding adult pelicans forage widely on large bodies of water and rivers during the breeding season. Birds typically arrive in mid-April, breed late-April to late-May, and migrate by October.

Franklin's Gull (top)

- Key sites: 2, 4, 7, 11
- Large colonies (several thousand pairs)
- Nest is a floating reed platform in shallow water or on the ground
- Climate Threatened – 1% of breeding range is stable

Franklin's Gulls are an abundant colonial nester that account for the majority of individual birds surveyed in a given year in Montana. They also have the largest colony size of any surveyed, with one location having as many as 9,666 breeding individuals. Franklin's Gulls typically nest in prairie marshes in conjunction with many other colonial species, and large population fluctuations at individual colonies are not uncommon. They often arrive in late March and will have bred and migrated by October.

Black-crowned Night Heron

- Key sites: 2, 4, 6, 7, 8, 11
- Small colonies (5–100 pairs)
- Nest is a stick or reed platform in trees or on the ground
- Climate Endangered – 12% of breeding range is stable

Night Herons breed primarily east of the divide in Montana, with the exception of evidence from Warm Springs WMA and Lee Metcalf NWR. Typically 100 – 225 nests total are counted in Montana, and they are commonly located in bulrushes or cattails alongside colonies of Franklin's Gulls, White-faced Ibis, Double-crested Cormorants, Great Blue Herons, and even Forster's Terns or Western Grebes. Night Herons arrive in mid-April, begin nesting in May, migrate out by September, and as their name implies, are more active at night.

Forster's Tern

- Key sites: 4, 6, 7, 9
- Small colonies (less than 50 pairs)
- Nest is on muskrat lodges, old grebe nests, floating vegetation, or unlined scrape
- Climate Threatened – 19% of breeding range is stable

Forster's Terns breed on large lakes and marshes primarily east of the divide in Montana and typically less than 70 total pairs are counted at key sites every year. Forster's Terns are easily confused in appearance with Common Terns, though they have whiter wings and bellies and differences in bill color and voice. This species typically arrives by mid-May, breeds between late May and August, and departs by late September.

Black Tern

- Key sites: 4, 6, 7, 9
- Small colonies (5–50 pairs)
- Nest is floating marsh vegetation on the ground or water's edge
- Climate Threatened – 21% of breeding range is stable

Black Terns nest in permanent and non-permanent prairie marshes with emergent bulrushes or cattail vegetation, and move colony locations more frequently than other waterbirds. Unlike other waterbirds they prefer nesting on marshes without other colonial species present. Range-wide the population has declined along with the loss of wetland habitat in North America. As with other terns, adults regularly forage far from nesting locations. Black Terns typically arrive by mid-May, raise young until mid-August, and leave by mid-September.

Caspian Tern

- Key sites: 4, 5, 6, 9
- Small colonies (less than 50 pairs)
- Nest varies from an unlined ground scrape to floating mat of vegetation
- Climate Threatened – 6% of breeding range is stable

Caspian Terns are an uncommon nesting species but occur most often east of the divide along gravelbars and sandbars associated with rivers and large lakes. Their colonies are often located near other nesting gulls, terns, or Double-crested Cormorants and adults are often seen foraging far from nests. Caspian Terns weren't discovered nesting in Montana until 1982, but typically arrive in mid-May and depart by late September, though there is a wide range in individual timing.

Common Tern

- Key sites: 4, 6, 8
- Small colonies (less than 50 pairs)
- Nest is a scrape lined with vegetation, pebbles, or shell on sand or gravel bars
- Climate Threatened – 20% of breeding range is stable

Common Terns are one of the world's most widely distributed birds, and in Montana breed primarily in the northern half where there are low elevation wetlands. Colony numbers have varied widely over the years and show no clear population trend. West-wide, Montana was the only state to record Common Tern breeding activity during 2009–2012 surveys. Birds typically arrive in mid-April, initiate nests in late May through June, and migrate through September.

Clark's Grebe

- Key sites: 6, 9
- Small to moderate sized colonies (5–10 pairs)
- Nest is a floating platform of vegetation secured in shallow water
- Climate Endangered – 1% of breeding range is stable

Clark's Grebe is the least common colonial waterbird species in Montana, and West-wide, and when detected on large lakes and marshes used for nesting, often only two or three nests are found per site. There is additional evidence for breeding at Lake Helena and Bowdoin NWR, but they have not been recently confirmed. Accurate counts are difficult because of the resemblance to the more abundant Western Grebe. Clark's Grebes typically arrive in Montana mid-April, breed mid-May to July, and migrate by October.

White-faced Ibis

- Key sites: 4, 7, 11
- Small to moderate sized colonies (5–195 pairs)
- Nest is a cupped platform of vegetation in low trees, vegetation, or the ground
- Climate Endangered – 5% of winter range is stable

White-faced Ibis are found nesting in marshy habitats east of the continental divide in Montana and are often observed alongside Franklin's Gull colonies (four sites in Montana). Range-wide their populations are increasing, and in Montana their presence has increased continually since the 50s. Red Rock Lakes NWR is the most-used site in the state, and birds typically arrive by the end of April, lay eggs in May, and migrate by mid-September.

Great Blue Heron

- Key sites: 3, 4, 9, 10
- Small colonies (less than 125 pairs)
- Nest is a stick platform in a tree, or occasionally the ground
- Climate threat is unclear

Great Blue Herons are the most frequently detected colonial nesting waterbird in Montana and West-wide (except for Nevada). They are found along streams, rivers,

lakes, ponds, and marshes, but are a species of concern due to population declines. Their colonies or "rookeries" are often occupied by other breeding herons, gulls, or Double-crested Cormorants. Great Blue Herons rely on healthy cottonwood stands for nesting, and they nest early (April – May). Rookeries are often visible before trees leaf out.



birds and beyond

MONTANA'S COLONIAL WATERBIRDS



Conservation of colonial waterbirds is challenging due to large proportions of the population being concentrated in small areas, their specific wetland and riparian habitats being particularly vulnerable to drought and altered hydrology, and the threat of habitat loss due to climate change.

Colonial Waterbirds' Conservation Status

Of the 18 waterbird species found in Montana, 10 are state species of concern: American White Pelican, Great Blue Heron, Black-crowned Night Heron, Forster's Tern, Franklin's Gull, Black Tern, Caspian Tern, Common Tern, Clark's Grebe, and White-faced Ibis.

The eight other species range from the uncommon Snowy Egret (documented only in 2014 and 2015), to a variety of grebes (Horned, Red-necked, Eared, and Western Grebe) to the abundant Ring-billed Gull, California Gull, and Double-crested Cormorant. Grebes can be difficult to get accurate numbers on during surveys due to the dispersed nature

of their nests, while the two gulls can be very challenging to distinguish in some circumstances.

Though not Species of Concern in Montana, each of these species use many of the key sites and Important Bird Areas preferred by focal species, allowing biologists to collect useful data on all waterbirds simultaneously.

Colonial Waterbirds and Climate Change

Waterbird populations respond rapidly to annual fluctuations in precipitation and entire colonies may respond by altering breeding locations or abandoning sites all together as environmental conditions change. Evidence of these patterns comes from surveys at a given site over time that have shown large annual fluctuations in waterbird numbers.

Predicted changes in precipitation and temperature due to climate change indicate that wetland habitats colonial nesting birds rely upon will be reduced in area. Wetlands will likely become less capable of controlling flood waters, capturing sediment,

and replenishing groundwater resources, which are ecosystem services they naturally provide.

The prairie pothole region, which includes many shallow wetlands in eastern Montana, is expected to endure more frequent drought conditions, with a potentially dramatic loss of wetlands. Further, many wetland systems are seasonal or semi-permanent, so increased rates of evaporation alone can cause these wetlands to decline. Birds dependent on these shallow water sites are particularly vulnerable, such as the White-faced Ibis, Black-crowned Night Heron, and Clark's Grebe.

In 2014 the National Audubon Society conducted a study that revealed 314 North American bird species were "threatened" or "endangered" by climate change, including 16 of Montana's 18 waterbird species. Only two, Great Blue Heron and Snowy Egret could not be categorized because of a lack of specific data.

A "climate threatened" designation means that the species is expected to lose 50% of their range by 2080. "Climate endangered" translates into a 50% loss that could occur as soon as 2050. Six of Montana's colonial waterbirds are threatened, while 10 are endangered by climate change.

Montana Audubon's Survey Effort

Montana Audubon has been involved with colonial waterbird surveys since 2009 when a West-wide effort to determine these species' population numbers began.

This effort involved eight states and lasted until 2012. It was led by the U.S Fish and Wildlife Service (USFWS) to determine the conservation status and distribution

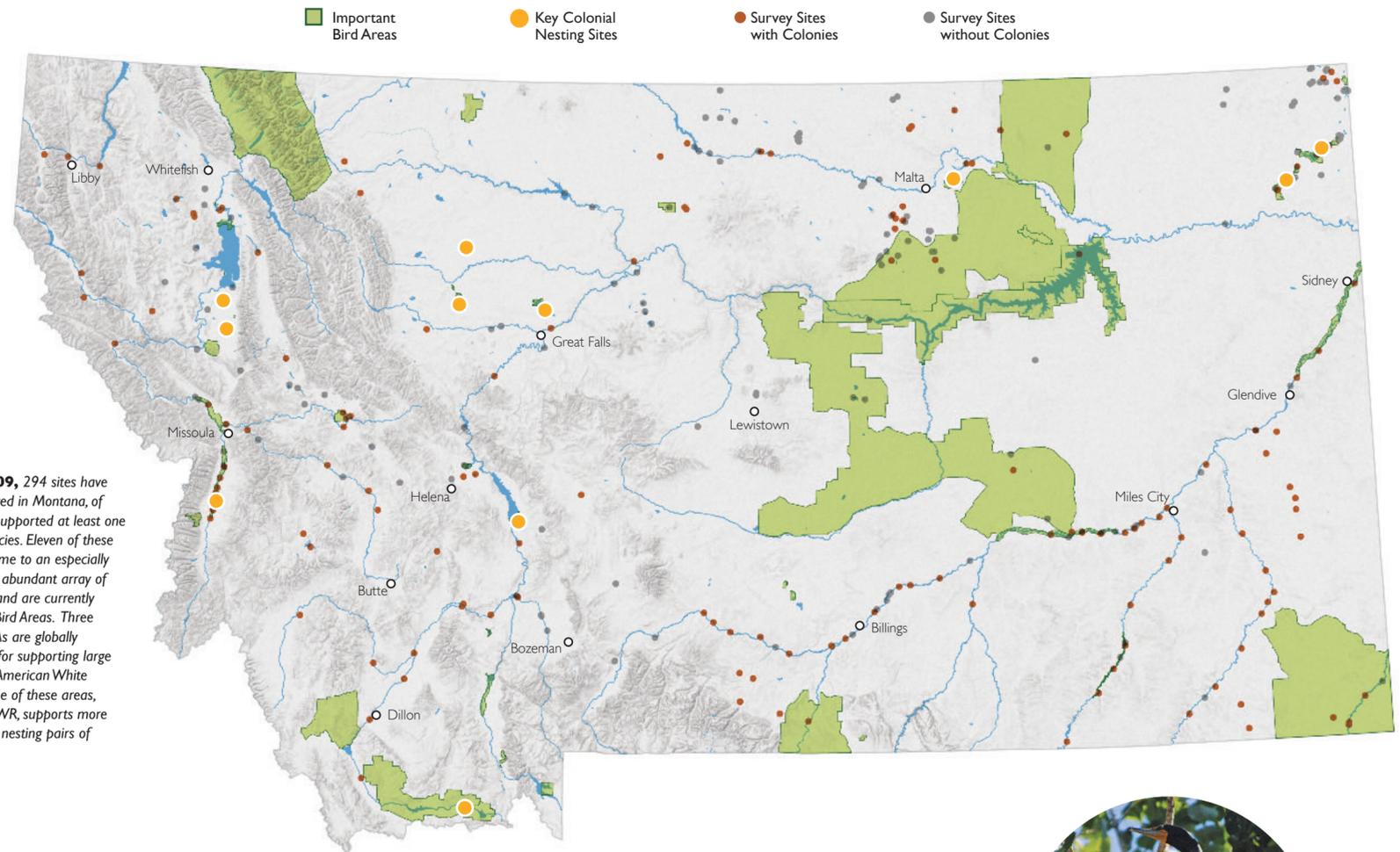
of waterbirds. Montana Fish, Wildlife, & Parks provided coordination for this effort. The goal was to enhance resource biologists' ability to manage these unique species.

The initial effort resulted in the publication of the *Interior West Breeding Colonial Waterbird Atlas*. During the time of these surveys, 285 separate colonies were located in Montana, though many more sites surely exist on private land and isolated or small wetlands.

Of the 18 species surveyed, Franklin's Gulls were the most abundant and Great Blue Herons were the most frequently occurring. The largest individual Franklin's Gull colony was over 4,800 nests.

Montana Audubon has continued to prioritize waterbird monitoring due to the complex management challenges these species face, and has lead efforts since 2012 to survey for focal species every year at key sites and Important Bird Areas.

COLONIAL WATERBIRD SURVEY SITES AND NESTING



Since 2009, 294 sites have been surveyed in Montana, of which half supported at least one colonial species. Eleven of these sites are home to an especially diverse and abundant array of waterbirds and are currently Important Bird Areas. Three of these IBAs are globally recognized for supporting large colonies of American White Pelicans. One of these areas, Bowdoin NWR, supports more than 5,000 nesting pairs of 14 species.



Colonial waterbirds use a variety of nests — from floating platforms of vegetation, to unlined scrapes in the ground, to stick platforms in trees or on the ground. Top: Forster's Tern nest, bottom: Black-crowned Night Heron nestlings.

Double-crested Cormorants nest in stick platforms in trees or on the ground, and regularly nest alongside Great Blue Herons, pelicans, and gulls.

Below: Lower Red Rock Lake



Create your own county-specific Field Guide

The Montana Natural Heritage program provides this free service as a tool for citizens to create their own local community field guides.

Visit mtnhp.org/SpeciesSnapshot. Select "Statewide," and then select the county you would like the search. Be sure to select "Birds" under the "All Species" tab, and you should see the "Download PDF Field Guide" option.