

Appendix II. Colonial Nesting Water Bird Species Accounts for Montana, 2009 - 2010

Target species for 2010 surveys

American White Pelican, AWPE

There are four known breeding locations for AWPE in Montana. Three are major colonies and one is much smaller. There may be an additional small colony at Alkali Lake, but that remains unconfirmed. In 2009 three sites (the major sites) yielded a total count of 5843 nests but at the other site nests were not counted and a total of 190 individuals were associated with this site. A total of 86 individuals were present with no indication of nesting at 8 other sites in the 2009 survey.

Nesting was again documented at 4 sites in the 2010 survey. Three of these yielded a total of 4823 nests but at the other site nests were not counted and a total of 85 individuals were associated with this site. A total of 338 individuals were present with no indication of nesting at 14 other sites in the 2010 survey. Site totals for these non-nesting birds were as high as 150, the average being 24. These could be non-breeding individuals or those from breeding colonies at other sites. The species is known to travel long distances at times to feed during the nesting period. The earliest AWPE survey of an active colony in 2010 was conducted on 5/26 and the latest on 6/16. This was very close to the timing in 2009.

The AWPE typically nests in large colonies on an island or point that is relatively isolated from predators. The nests are shallow depressions scraped in the ground and lined with twigs and other debris. Where available, partial shade afforded by trees is preferred. Colony locations may vary from year to year depending on water levels and other factors. The timing of egg laying may vary among colonies, even those in close proximity. At Medicine Lake NWR during both seasons there were two sub-colonies, one on a large island and one on a long point from which predators were excluded with an electric fence. At the time of the surveys island nesting birds had only eggs while on the point the nests had well-developed chicks, one invariably much larger than the other, in nearly every nest.

Clark's Grebe, CLGR

The Clark's Grebe is an uncommon breeding species in Montana. They nest in colonies on large lakes and marshes. Although colonies may occur in tens or hundreds of nests colonies in Montana are typically small (5 to 10 pairs). The nest is a on a floating platform of vegetation in shallow water.

Unless the bird is well-seen it can be difficult to distinguish from the much more common Western Grebe. This was a problem in the 2009 survey in which a site had breeding CLGR but they were counted together with the WEGR (nest total was 77) as not enough of the birds could be identified to species. In 2010 observers counted 52 pairs of WEGR and 6 pairs of CLGR at that same site. CLGR were

observed courting early in the season and were presumed breeding. Just the one site mentioned had breeding CLGR in 2009 and there were two sites in 2010 with a total of 5 pairs. The total of individuals counted with no nesting confirmed was 3 in 2009 and 1 in 2010.

White-faced Ibis, WFIB

The White-faced Ibis is an uncommon breeding species in Montana and sites are generally east of the Rocky Mountain Front. The WFIB typically nests in marsh habitat and colony size in Montana has ranged from 1 to 195 breeding pairs. The nests may be in low trees, aquatic vegetation or on the ground. The nest consists of a deeply cupped platform of coarse vegetation and sticks. They were found nesting within or near large FRGU colonies in rushes at 4 locations during this study.

Four sites had breeding WFIB in 2009 but one had a reduced count due to an incomplete survey caused by weather conditions. One had no count and another had only a total of individuals without a total nest estimate. This yielded a total count of 106 nests and an additional 9 individuals associated with an undetermined number of nests at one site.

Four sites again had breeding WFIB in 2010 but two had only a total of individuals without a total nest estimate. This yielded a total count of 212 nests and an additional 26 individuals associated with an undetermined number of nests at one site. No WFIB were recorded at sites other than the breeding colony locations in either year of the study. Survey dates at the sites at which WFIB were recorded ranged from 6/15 to 7/14 over the course of the two seasons.

Black Tern, BLTE

The Black Tern is an uncommon but widespread nesting species in Montana. They nest in freshwater marshes, usually in colonies of from 5 to 50 pairs. The nest, typically with 2 to 4 eggs, is either on floating marsh vegetation or on the ground at the water's edge. They feed on fish and insects at or near the surface and catch insects in flight.

Nesting was documented at 13 sites for the BLTE in 2009. Eight of these sites yielded a total count of 71 nests but at 5 of the sites nests were not counted and a total of 51 individuals were associated with these sites. A total of 36 individuals were present with no indication of nesting at 10 other sites in the 2009 survey.

Just 8 sites had nesting BLTE in the 2010 survey. Six of these yielded a total of 65 nests but at one of these sites nests were not counted and a total of 7 individuals were associated with this site. A total of 129 individuals were present with no indication of nesting at 7 other sites in the 2010 survey. This included a July 1st gathering of 100 non-breeding BLTE at Smith Lake in the NW part of the state where a nesting colony of 9 was located in 2009.

A cool wet spring in 2010 may have prevented nesting success in some cases and the resulting high water may have forced some colonies to locate at different sites, perhaps pushing some of these north into Canada. Three sites in Sheridan County (in the Northeast) that had productive colonies in 2009 were empty in 2010 due to low water levels though the general area had normal water levels. All three of these sites are situated within a drainage that has gas drilling.

Survey dates at the sites at which nesting BLTE were recorded ranged from 6/10 to 7/7 over the course of the two seasons.

Caspian Tern, CATE

The Caspian Tern is a very uncommon but widespread nesting species in Montana. They nest on rivers and large lakes in distinct colonies or in mixed colonies with gull and other tern species. In Montana colony size is typically less than 50 breeding pairs. Nests are typically on sand and gravel, or sometimes on vegetation. Eggs number from one to three. The Caspian Tern feeds mainly on fish and is known to fly up to 60 km from the breeding colony to catch fish.

Nesting was documented at 3 sites for the CATE in 2009. These sites yielded a total count of 31 nests. A total of 25 individuals were present with no indication of nesting at 4 other sites in the 2009 survey.

Two sites had nesting CATE in the 2010 survey. These yielded a total of 12 nests. A total of 220 individuals were present with no indication of nesting at 4 other sites in the 2010 survey. This included 200 individuals gathered at a gull colony on a Ft. Peck Lake island on 7/6/2010 that apparently were not nesting. Rising water during the nesting season was a problem there and they were likely flooded out of nests earlier.

Common Tern, COTE

The Common Tern nests on lakes in scattered locations east of the Rocky Mountains in Montana. In Montana colony size is typically less than 50 breeding pairs. Nests are typically on sand and gravel, or sometimes on vegetation. Eggs usually number from two to four. The Common Tern feeds mainly on fish in lakes and large rivers.

Nesting was documented at 2 sites for the COTE in 2009. One of these sites yielded a count of 42 nests while at the other 2 individuals were present but no nest count was made. A total of 69 individuals were present with no indication of nesting at 11 other sites in the 2009 survey.

Two sites had nesting COTE in the 2010 survey. These yielded a total of 23 nests. A total of 95 individuals were present with no indication of nesting at 6 other sites in the 2010 survey.

The cool spring in 2009 and 2010 coupled with generally high water levels in 2010 could have delayed nesting in this species or resulted in nest failures.

Forster's Tern, FOTE

The Forster's Tern nests in marshes in scattered locations east of the Rocky Mountains in Montana. Colony size is typically less than 50 breeding pairs. The nest site can vary from an unlined scrape in mud or sand to a floating mat of vegetation or the top of a muskrat house.

Nests examined at 3 sites on small low islands in eastern Montana during the 2010 survey consisted of well-formed cups about two inches high and 6 inches in diameter woven primarily of dead rush stalks and placed on sandy soil. In two cases they were on a part of the island about 3 to 4 feet above the water level and hidden in small clearings among herbaceous vegetation one foot or less in height. In the other case they were on two very small islands of only 10 to 15 feet in length. They were identical to the others in construction but were placed near the water on sandy soil only about 6 inches above the water level.

Eggs usually number three or more. The Forster's Tern feeds mainly on fish and insects in the marsh.

Nesting was documented at 6 sites for the FOTE in 2009. Three of these sites yielded a count of 32 nests but at 2 of the sites nests were not counted and a total of 68 individuals were associated with these sites. At one of the sites nesting was thought very likely but no FOTE were included in reported counts. A total of 63 individuals were present with no indication of nesting at 7 other sites in the 2009 survey.

Nesting was documented at 6 sites for the FOTE in 2010. Five of these sites yielded a count of 64 nests but at one of the sites nests were not counted and a total of 14 individuals were associated with that site. At 11 other sites in the 2010 survey a total of 56 individuals were present with no indication of nesting.

Franklin's Gull, FRGU

The Franklin's Gull nests in very large colonies in prairie marshes in scattered locations east of the Rocky Mountains in Montana. Colony size is often several thousand breeding pairs. The nest, composed of a floating platform of reeds, is most often in dense reeds or rushes in 2 to 3 feet of water. Nests may be on the ground in some locations or in shallower water. The nest is well-maintained and the coarse vegetation is lined with softer material. Eggs usually number two or three. The Franklin's Gull feeds on insects and other small prey and will scavenge as well.

Nesting was documented at 4 sites, comprising all known nesting colonies in the state, for the FRGU in 2009. These yielded a count of 8247 nests but at one of the sites (a much smaller colony than the other three) the survey was incomplete due to weather factors. Here the total count was 16 versus 87 in 2010 when a complete survey was done. A total of 152 individuals were present with no indication of nesting at 4 other sites in the 2009 survey.

Nesting was again documented at 4 sites for the FRGU in 2010. These sites yielded a count of 7945 nests. One of the three major sites shifted about ten miles to an alternate location in 2010 but the nest total was about the same. At 8 other sites in the 2010 survey a total of 2109 individuals were present with no indication of nesting. The count of non-nesting individuals can vary greatly as the species travels far from the nest colony to feed and staging for migration occurs in July at sites away from the nesting location. The 2010 survey ran well into July but ended by July 1 in 2009.

While the nest total for the two years was fairly close there was an offsetting drop and increase of around 50% in two of the major sites. This may have been caused as much by count inaccuracy as by any fluctuations in the actual number of nests. The counting of FRGU colonies is extremely difficult in most cases due to the dense nature of the rushes in which the nesting usually occurs and the water depth. The nests are very vulnerable to disturbance by a survey crew. To avoid nest disturbance flush counts and post fledging empty nest counts were used in this study but they were all susceptible to problems that resulted in low confidence in count accuracy. Count methodology for this species should be a subject for future water bird work in Montana.

Black-crowned Night Heron, BCNH

The Black-crowned Night Heron in Montana nests in colonies of from 5 to 50 breeding pairs in a variety of locations. The nest, a platform of sticks or reeds, may be on the ground, in the protection of a reed bed or in a group of trees. A protected location such as an island is preferred. Eggs usually number 3 to 8. The Black-crowned Night Heron is most active at dusk and during the night. They feed on a wide variety of small aquatic life forms.

Nesting was documented at 8 sites for the BCNH in 2009. Seven of these sites yielded a count total of 93 nests but at one of the sites nesting was thought very likely but no BCNH were included in reported counts. A total of 11 individuals were present with no indication of nesting at 6 other sites in the 2009 survey.

Nesting was documented at 6 sites for the BCNH in 2010. Five of these sites yielded a count of 121 nests but at one of the sites nests were not counted and a total of 4 individuals were associated with that site. At one other site nesting was thought very likely but no BCNH were included in reported counts. At 5 additional sites in the 2010 survey a total of 9 individuals were present with no indication of nesting.

The difference in the count total between the two years is accounted for by one site (Flat Reservoir in Phillips County) that tallied 32 nests in 2010 but only one in 2009. The 2009 survey was conducted from shore and only documented 1 nest while the 2010 survey involved wading out to the nesting trees for a much closer view of the 32 mostly hidden nests.

Great Blue Heron, GBHE

The Great Blue Heron is a common breeding species on lakes, ponds, marshes and rivers throughout Montana. They breed as early as two years old and nest in large or small colonies. The nest is a platform of sticks, usually in a tree but may be on the ground on an island. The GBHE often nests in colonies with other herons and in Montana with cormorants and occasionally on an island with gulls.

In addition to the 2009 ground and boat surveys of GBHE, a series of known nest locations was checked by air in 2009 along the Clark Fork and Bitterroot River drainages of western Montana. An extensive aerial survey effort in southeast Montana also checked 47 sites that had GBHE nesting in the past and documented 32 active nesting sites.

Nesting was documented at a total of 56 active sites for the GBHE in 2009. Excluding 3 sites which had no nest estimate these sites yielded a total of 721 nests. A total of 5 individuals were present with no indication of nesting at 5 additional sites in the 2009 survey.

Unlike the surveys for most other species for which most of the productive sites were covered during both years, GBHE survey coverage in 2010 differed markedly from that of 2009. Most of the aerial survey sites documented for 2009 in western Montana and all of the 2009 southeast Montana sites were skipped in 2010. Instead, aerial surveys were used to document several new sites in the west and check 18 additional sites in the southeast, 14 of which were active.

Nesting was documented at 29 sites for the GBHE in 2010. Twenty-seven of these sites yielded a count of 339 nests. At one of the sites nests were not counted and a total of 4 individuals were associated with that site. At another of the sites nesting was thought very likely but no GBHE were included in reported counts. At 9 additional sites in the 2010 survey a total of 23 individuals were present with no indication of nesting.

Timing of nesting for this species is usually early and aerial surveys are generally done in April and May before the leaves hide the tree nests. At this time the GBHE are usually occupying the rookeries and have eggs in the nest. Some very late nesting was observed in the 2010 survey at Flat Reservoir in Phillips County where 4 nests were being attended with no young visible on 7/4. Another visit to the site on 7/28 revealed 2 juveniles in one of the nests. The others may have failed or fledged by then.

During the two years of this survey a total of 79 sites were documented with GBHE nesting during at least one of the years.

Double-crested Cormorant, DCCO

The Double-crested Cormorant is a common breeding species on lakes, ponds, marshes and rivers throughout Montana. They generally breed at three years of age and nest in large or small colonies. Nests are a platform of sticks in a tree or on the ground on an island. The DCCO often nests in colonies with gulls or herons.

The DCCO was not a target species for the 2009 survey. Some past breeding data was extracted from the Montana historical data base to aid in survey planning. The information extracted from Montana's historical database indicated confirmed breeding at 10 sites. In 2009, eight of these were checked. Of these, 5 had breeding birds, 2 had no DCCO present and one had individuals present but no active nests were found.

Nesting was documented at a total of 13 sites for the DCCO in 2009. Ten of these sites yielded a count of 895 nests but at one of the sites nests were not counted and a total of 30 individuals were associated with that site. At two other sites nesting was thought very likely but no DCCO were included in reported counts. A total of 73 individuals were present with no indication of nesting at 14 additional sites in the 2009 survey.

Nesting was documented at 13 sites for the DCCO in 2010. Ten of these sites yielded a count of 1041 nests. At two of the sites nests were not counted and a total of 49 individuals were associated with those sites. At another of the sites nesting was thought very likely but no DCCO were included in reported counts. At 13 additional sites in the 2010 survey a total of 251 individuals were present with no indication of nesting.

Survey dates with nests occupied ranged from 5/22 to 7/13 in 2009 and from 5/26 to 7/4 in 2010.

Non-target Species for 2010 surveys

Western Grebe, WEGR

The Western Grebe is a common breeding species in the wetlands of Montana. They nest in colonies on large lakes and marshes. The nest is on a floating platform of vegetation in shallow water. WEGR colonies are often found in dense rush beds along the shore of a large lake but the locations often change from year to year making colonies difficult to find.

Unless the bird is well-seen it can be difficult to distinguish from the much less common Clark's Grebe. This posed a problem at one site in the 2009 survey at one colony where both Clark's and Western Grebes appeared to be nesting in close proximity.

Nesting was documented at just two sites for the WEGR in 2009. One of these sites yielded a count total of 2 nests while at the other site nesting was thought very likely but no WEGR were included in reported counts. A total of 69 individuals were present with no indication of nesting at 8 sites in the 2009 survey. The WEGR was not a target species in the 2009 survey and the species was generally only documented in conjunction with surveys for other species.

Nesting was documented at 4 sites for the WEGR in 2010. Three of these sites yielded a count of 132 nests but at one of the sites nests were not counted and a total of 14 individuals were associated with that site. At 13 additional sites in the 2010 survey a total of 88 individuals were present with no indication of nesting.

Horned Grebe, HOGR

The Horned Grebe is an uncommon breeding species in the wetlands of Montana. They are usually solitary nesters on ponds and marshes. The nest is on a floating platform of vegetation. HOGR nests are often found in or near rush beds along the shore of a pond.

The HOGR was not a target species for the 2009 survey. Nesting was documented at just one site in 2009 and one nest was counted. One individual was present with no indication of nesting at one other site in the 2009 survey.

Nesting was not documented at any sites for the HOGR in 2010. At one site in the 2010 survey 5 individuals were present with no indication of nesting. The HOGR was not a species of special concern for purposes of the 2010 survey but it appears to occur infrequently in the state.

Red-necked Grebe, RNGR

The Red-necked Grebe is an uncommon breeding species on lakes and ponds across northern Montana. They nest in colonies or single pairs on shallow lakes and marshes (rarely less than 10 acres). They are at least two years of age before breeding and groups of non-breeders are found within the species nesting range during the spring and summer. The nest is on a floating platform of vegetation. RNGR colonies are often found in or near dense rush, cattail or sedge beds along the shore of a lake but the locations often change from year to year.

Nesting was documented at 5 sites for the RNGR in 2009. Three of these sites yielded a count total of 7 nests but at two of the sites nests were not counted and a total of 17 individuals were associated

with those sites. A total of 7 individuals were present with no indication of nesting at 3 other sites in the 2009 survey.

Nesting was documented at 3 sites for the RNGR in 2010 and a total of 6 nests were counted. At 4 additional sites in the 2010 survey a total of 18 individuals were present with no indication of nesting.

Eared Grebe, EAGR

The Eared Grebe is a very common breeding species on sheltered shallow areas of lakes, ponds and marshes throughout Montana. They breed as early as one year old and nest in large or small colonies. The nest is on a floating platform of vegetation. EAGR colonies are often found in or near dense rush, cattail or sedge beds along the shore but the locations often change from year to year. Nests of this species are difficult to find without undue disturbance if they are in dense cover as they often are. In most cases EAGR sighted would be counted as individuals and lumped in the “not nesting” category or ignored if only a partial count of the individuals could be made at the site in the time available.

The EAGR was not a target species for the 2009 survey so this common species was ignored at many sites. Nesting was documented at 11 sites for the EAGR in 2009. Eight of these sites yielded a count total of 36 nests but at two of the sites nests were not counted and a total of 496 individuals were associated with those sites. At another of the sites nesting was thought very likely but no EAGR were included in reported counts. A total of 181 individuals were present with no indication of nesting at 10 additional sites in the 2009 survey.

Nesting was documented at 8 sites for the EAGR in 2010. Five of these sites yielded a count of 83 nests but at three of the sites nests were not counted and a total of 258 individuals were associated with those sites. At 13 additional sites in the 2010 survey a total of 315 individuals were present with no indication of nesting. This species was again not a high priority in 2010 and survey effort for the EAGR often depended on time being available.

Like many of the water bird species, the EAGR nests over a wide range of dates. The earliest nesting revealed in this two year survey was the sighting of four pairs of EAGR and one young of the year on 6/5/2009 at Wards Reservoir in Valley County. The latest was the discovery of three active nests with warm eggs on 7/21/2010 at Bowdoin NWR, Phillips County.

Ring-billed Gull, RBGU

The Ring-billed Gull is a common breeding species throughout Montana usually nesting on an island in a large colony and often with the California Gull and sometimes other species. Nests are a shallow cup of vegetation on the ground.

Nesting was documented at a total of 8 sites for the RBGU in 2009. Two of these sites yielded a count of 3871 nests. At four of the sites nests were not counted and a total of 696 individuals were associated with those sites.

Nesting was documented at 9 sites for the RBGU in 2010. Four of these sites yielded a count of 3309 nests. At two of the sites nests were not counted and a total of 1069 individuals were associated with those sites. At another 3 of the sites nesting was thought very likely but no RBGU were included in reported counts. At 3 additional sites in the 2010 survey a total of 259 individuals were present with no indication of nesting.

During the course of this two year survey the totals per nesting colony ranged from 33 to 3519 RBGU nests.

California Gull, CAGU

The California Gull is a common breeding species throughout Montana usually nesting on an island in a large colony and often with the Ring-billed Gull and sometimes other species. Nests are a shallow cup of vegetation on the ground.

Nesting was documented at a total of 9 sites for the CAGU in 2009. Three of these sites yielded a count of 913 nests. At one of the sites nests were not counted and a total of 300 individuals was associated with this site. At another 5 of the sites nesting was thought very likely but no CAGU were included in reported counts. At one additional site in the 2009 survey 1 individual was present with no indication of nesting.

Nesting was documented at 10 sites for the CAGU in 2010. Four of these sites yielded a count of 3309 nests. At 3 of the sites nests were not counted and a total of 1462 individuals were associated with those sites. At another 3 of the sites nesting was thought very likely but no RBGU were included in reported counts. At one additional site in the 2010 survey 57 individuals were present with no indication of nesting.

During the course of this two year survey the totals per nesting colony ranged from 6 to 705 CAGU nests.