

# Wisconsin 2022 Purple Martin Season Report

Dick Nikolai

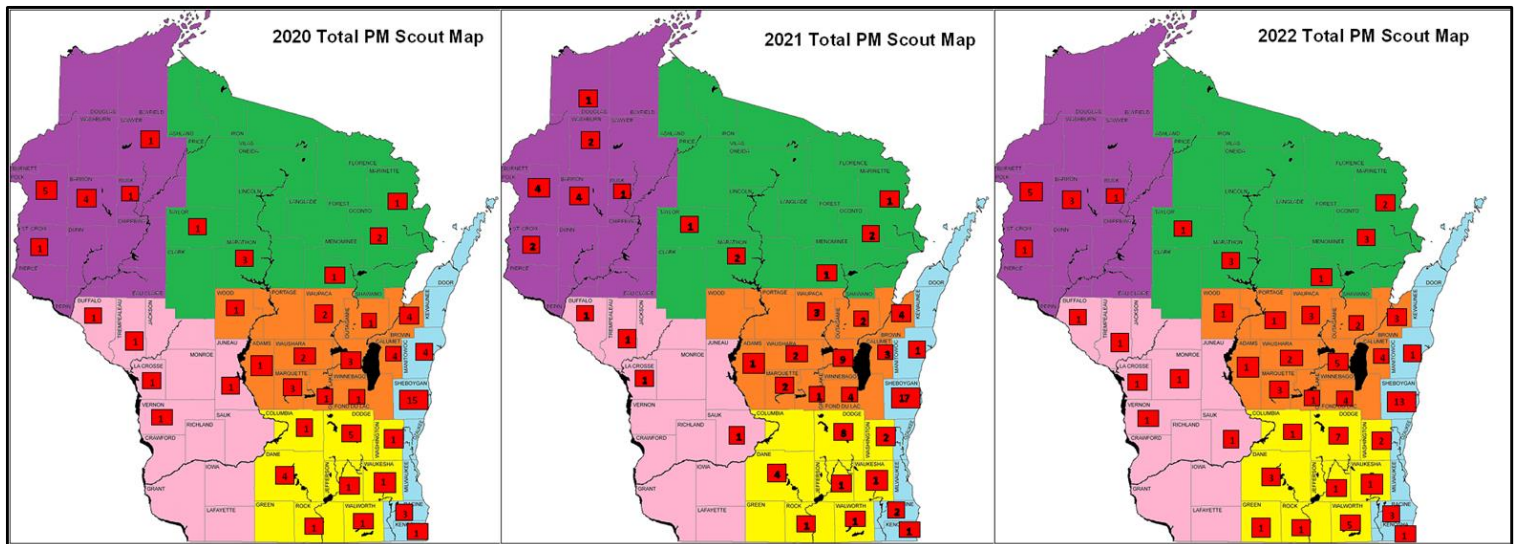


Two items I always look forward each year are the beginning of the Purple Martin season which is around April 1 and the ending date around September 1. Ending gives me a long-needed rest away from our favorite bird species with time to recover both mentally and physically from Purple Martins.

That is five months of intensive work at our colonies at or near High Cliff State Park plus other colonies throughout Wisconsin. Time in August is wrapping up nesting, banding, and actual viewing concentrations of roosting Purple Martins from around the state in areas near the Fox Cities. This concentration of Purple Martins numbers in the tens of thousands through estimates along with other aerial insectivores numbering nearly a quarter of a million. Over those 150 days are contained many types of feelings from inspiration, desperation, awe, camaraderie, lots of highs and of course lots of adversity. Each of those adults and their offspring that we are caretakers for represent the future for Wisconsin's purple martins the following year or someone else's within the United States or Canada. Without our support with housing there is basically no Purple Martins. Each Purple Martin represents your effort and their acceptance of your presence in their life cycle. Be proud of what you do so others can enjoy the next generation of Purple Martins along with their antics. With that goes my summation of the 2022 Purple Martin season in the following paragraphs, maps, charts, landlord comments, forecasts, and other musings that I have derived from all relevant information. Most of all I want to thank the many people who sent in their data collections to me or even your comments with only partial data. Without those numbers we would not be able to get an idea of what was happening in Wisconsin for our Purple Martin's presence during 2022. I wanted those numbers of basic data for total number of pairs, total eggs laid, total numbers for hatching, and finally the total numbers fledging. Our extended family is sorely missed now but I have memories and pictures to bring solace to my being.

Our 2022 Purple Martin season came early in my estimation throughout Wisconsin with the first martins arriving on March 30, 2022 in Dane, Jefferson, and Dodge Counties in southcentral areas of the state. No records came on the last day of March but

on April 1 martins arrived in Calumet, Oconto/Marinette line and Portage Counties in the east and central portions of Wisconsin. Finally on April 8, martins arrived near Cumberland in Polk County covering the northwestern part of Wisconsin. The final reports covered through May 9 and May 13 in Vernon and Calumet County for a total of **94 reports in 39 counties** across the state. Comparison to 2020 we had **86 reports from 38 counties** arriving first on April 2 in Polk, Green Lake and Marquette counties and ending on May 24, 2020 in Vernon County. In 2021 we had martins arriving on March 23 in Jefferson County and on March 26 in Winnebago County with a culmination of **95 reports in 36 counties** finishing on May 13, 2021 in Winnebago County (see Figure 1).

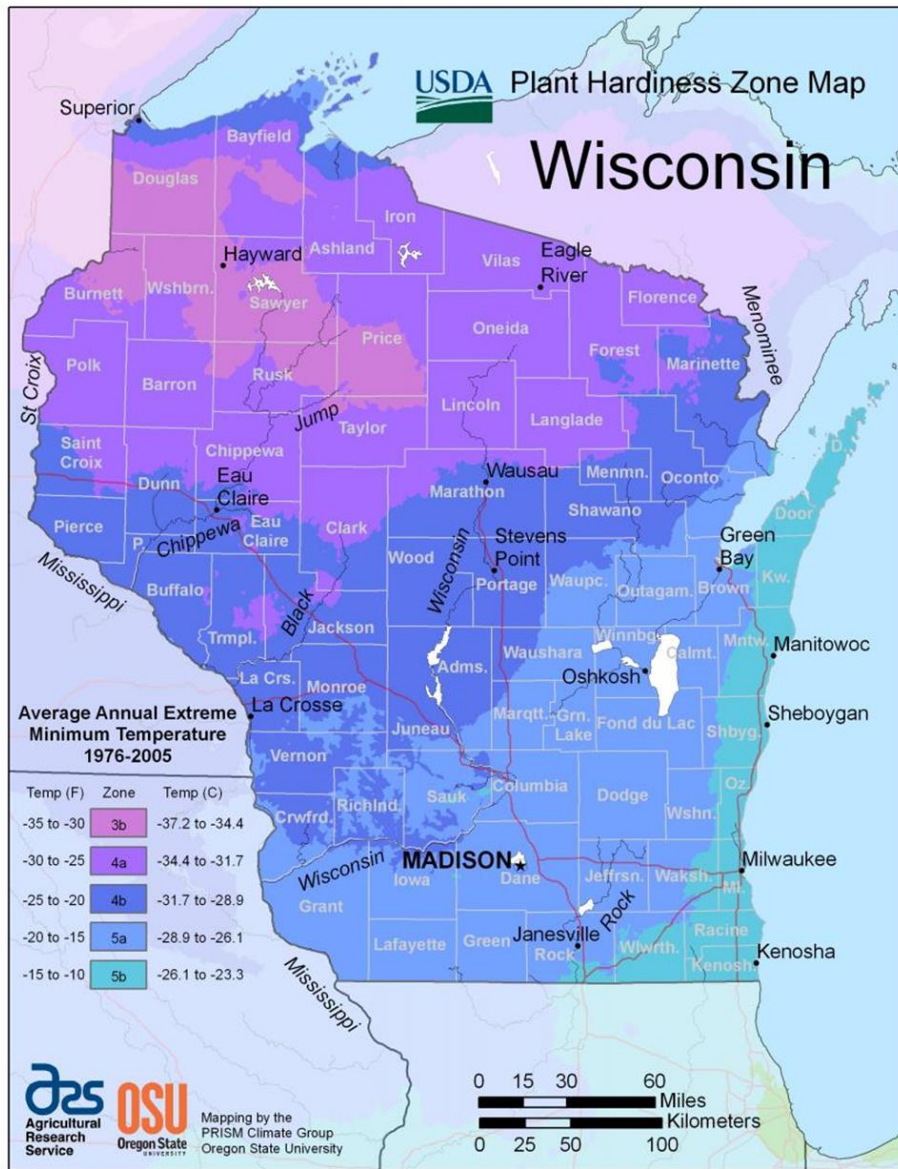


**Figure 1:** Scout Map for Years 2020, 2021 and 2022 Showing Reports to the Purple Martin Conservation Association.

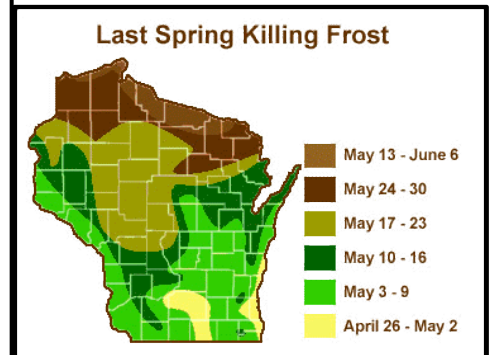
Overall, the scout report gives us a continued insight on where colonies occur within Wisconsin much affirming what the Breeding Bird Atlas 2 indicated with its roughly 160 reported colonies during 2015-19. Few colonies exist north of Highway 64 with the bulk of colonies in the central, southeast and along Lake Michigan. Key items are wetlands and open landscapes that are in large complexes like Lake Winnebago watershed lakes, Lake Michigan, and Horicon Marsh. These areas early in the season are much cooler due to the amount of water, depth of water or even frozen ground and sod thawing or ice thawing which keeps temperatures down. These are also areas where insects are located trying to emerge from the soil or water where Purple Martins can forage to maintain their daily diet. That is the main reason why I have provided **Figure 2** and **Figure 3** to keep you thinking like Purple Martins of what they go through during arrival from South America. **Figure 2** shows a map of Wisconsin for plant hardiness that is produced by the United States Department of Agriculture (USDA) with cooperating agencies. Note in the lower left part of the map where it indicates the Average Annual Extreme Minimum Temperature from 1976 to 2005.

This is reflective of climate, soils, topography, vegetation, and many other habitat factors. Inclusions of human elements like agriculture, urban impacts, roads, and industrial aspects all add to the complexity of climate. Toss in the dynamics of types of housing for Purple Martins which further impacts our friends from South America. Note insects need heat to be able to fly. Generally, a rough temperature for insects is around a minimum of 50 degrees Fahrenheit for them to move or fly. Solar impacts from the sun being out, provide added circumstances where temperature can be under 50 degrees allowing insects to be warm. Water can heat up too with solar radiation allowing microhabitats to provide conditions for those flying insects but the ambient temperature after the sun goes down provides little assistance unless cloud cover holds temperatures. Add some moisture in this whole mix along with windy conditions and you can see disaster happening.

There are reasons why Purple Martins generally do not exist above Highway 64, breed later along Lake Michigan, and arrive early in Wisconsin near large shallow wetlands. Hopefully this gives you more of my reasons for having anxiety about our Purple Martins during their stay. One last item to mention is when the last spring killing frost occurs in **Figure 3**. If young or eggs are in any nests during that crucial time, they need to be warmed to a greater degree using lots of calories of the adults. Any time off the nest by the adults means colder eggs or chilled young. Results are addled eggs, more energy used by feathered young or death of young in the pink stage. The biggest concern I want to relay is pay attention to the climate details for daily, weekly, and monthly changes during those 120+ days of their stay. Extremes of weather are never good, especially for our Purple Martins that depend on flying insects even if they last only for a day.



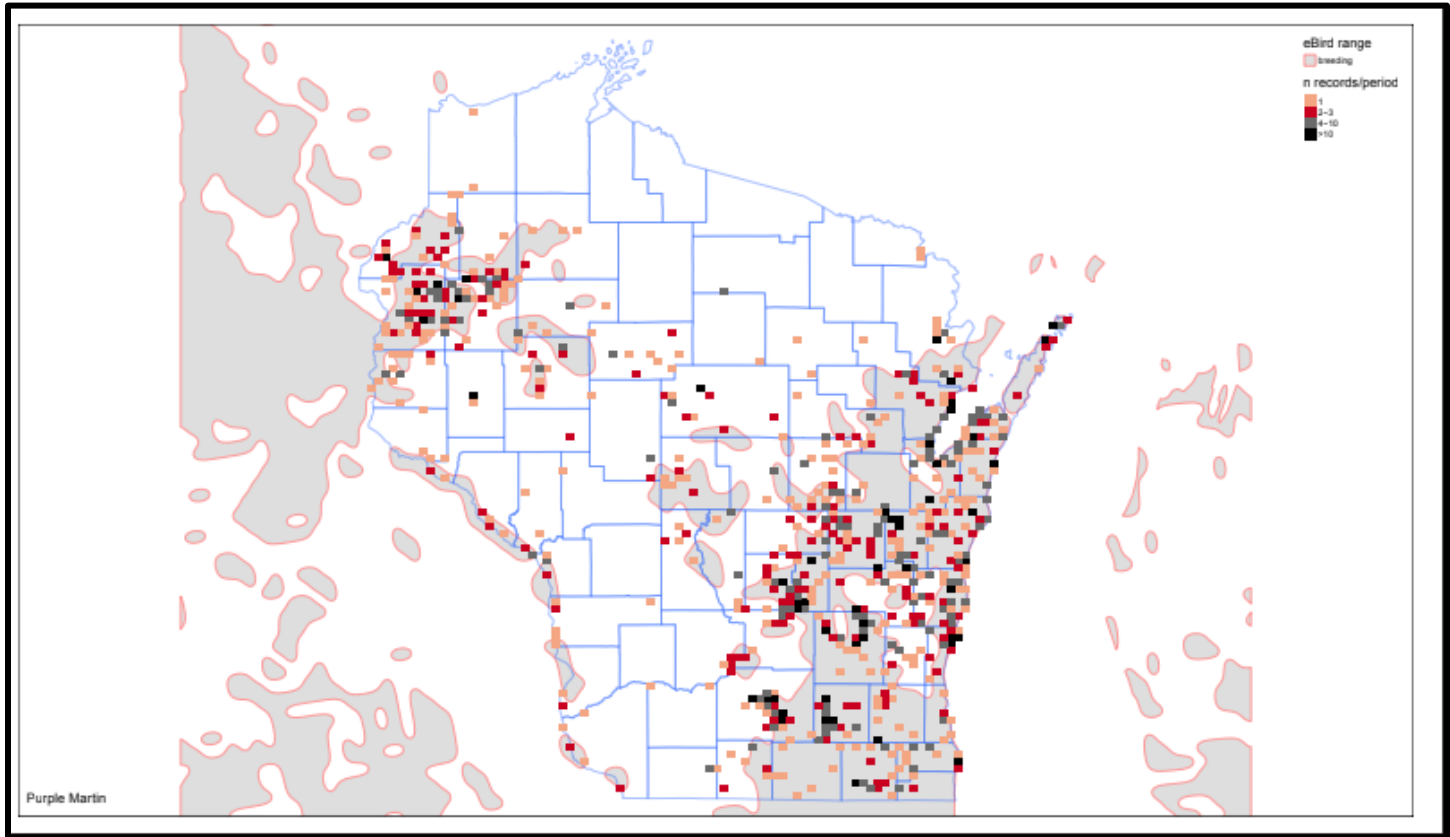
**Figure 2:** United States Department of Agriculture (USDA) Wisconsin Plant Hardiness Zones indicating the Average Annual Extreme Minimum Temperature from 1976 to 2005.



**Figure 3:** USDA Map of Wisconsin showing Last Spring Killing Frost.

New maps were released in 2022 from E-bird that created what they called breeding range for several hundred species of birds, of which Purple Martins were included in their series (**Figure 4**). Like the Breeding Bird Atlas 2 project we are receiving another indication of where it is viable to place housing for Purple Martins. As noted previously there were approximately 160 recorded colonies within Wisconsin. Note I indicated recorded or documented. From a personal view from my travels, we probably have near 300 colonies in the state but that is my estimate. Most of those are where the squares are located or within the grayish areas. The map is based upon reports submitted to E-bird by citizens over the past up to 2022 during the nesting season from April to August. Lots of those squares in the white area are no longer viable colonies or hanging by a thread. Our landlords have passed away or the weather conditions over the past five years have dictated losses of both young and adults. These areas do express hope to rebuild populations and that is where all of you can help. Pass on your knowledge to others so those new colonies can connect. Better yet become a member of the Wisconsin Purple Martin Association and be an officer in our

organization. We are an aging group and without offspring or new members or newer purple Martin landlords our numbers will dwindle just like the areas that have few colonies or numbers of birds on the map.

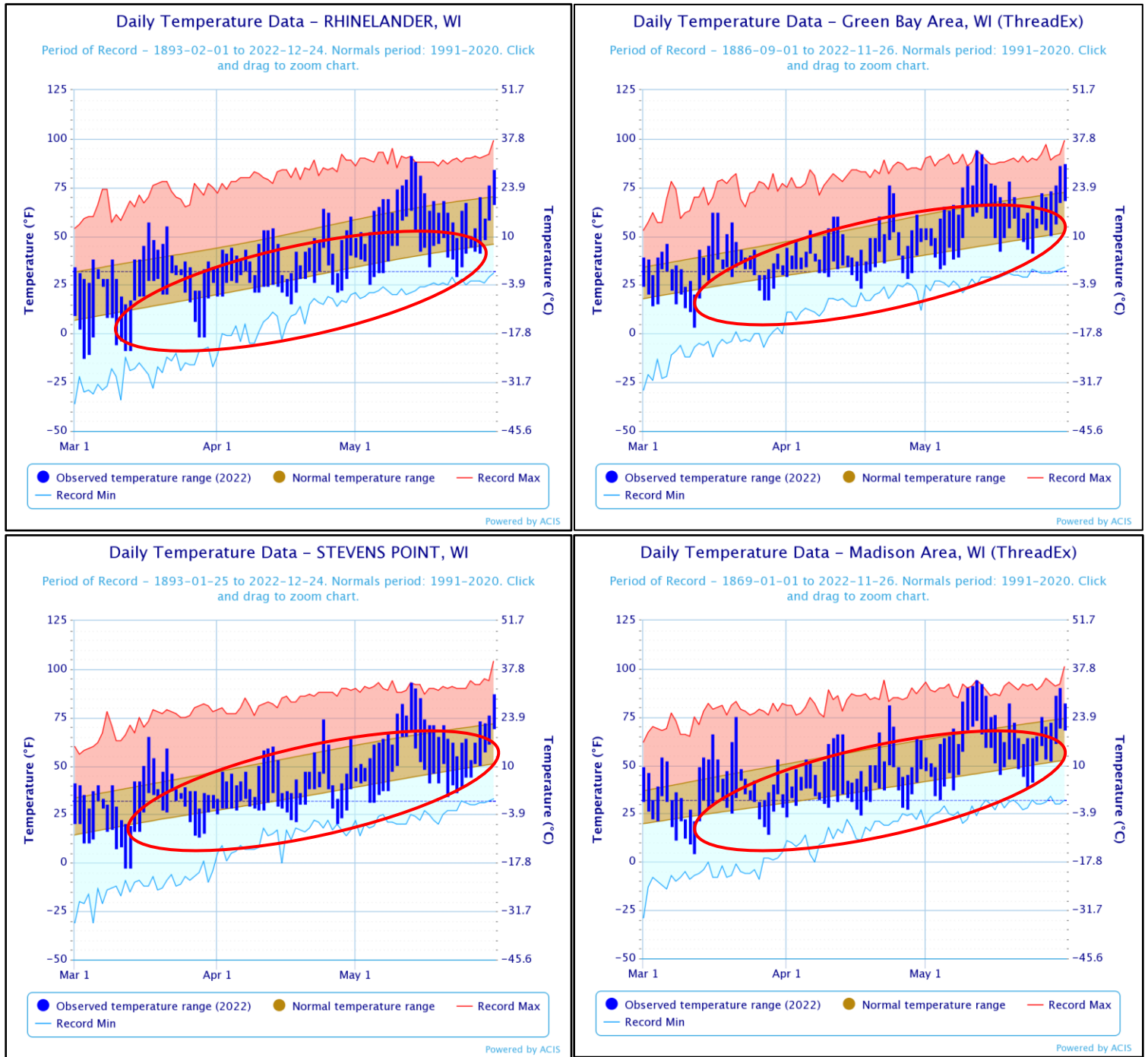


**Figure 4:** E-Bird reports from 2007-2021 showing where Purple Martins Breed in Wisconsin. (Cornell Lab of Ornithology, 159 Sapsucker Woods Rd., Ithaca, NY 14850).

Over the course of the past four to five months I have been receiving full reports from purple Martin landlords primarily from southeastern Wisconsin. A few of the other reports were scattered throughout the remaining portion with some having limited details due to data collection and time these individuals had. Collecting data is a process of finding details. Details take time and effort like resolutions that people do as the new year begins. When we have many things in our lives over the past several years doing data collection is indeed on the bottom of importance. That is why all of those who have contributed are like a New Year's resolution for it is repetitive and ingrained so it gets done regardless. For the others their resolution has been broken but their heart is still in the care of Purple Martins at their colonies and their wellbeing exist to take care of themselves, family or even friends when time is at a premium. My hat is off to all for your contributions along the way. My apologies for pressing anyone for their data. Your data for 2022 contributed to 43 full reports exceeding the past several years. These reports comprised information within *four regions* containing *18 counties* having a report mostly in southeastern Wisconsin. The two regions not having a complete report are the **Driftless** in southwestern Wisconsin and the **Northwestern Barrens and Forest**. See **Figure 6** to see the map of Wisconsin with location points for colonies reporting all data requested.

The lone report for the Northwestern Barrens and Forest near Cumberland came from Barry Wallace who stated he had 114 pairs of Purple Martins that carried on breeding activity with arrival of the first scouts coming on April 8. Barry stated that "he did spot checks during the summer on his colony with one complete lowering of everything in July to treat for mites." Barry also indicated he "had a miserable April and May that required feeding Purple Martins every day with results of having a great summer with his birds." Barry when completing his clean outs in mid-September stated that "this was the first time all cavities were filled having a 100% occupancy in all the years of doing this." He made also the comment that he downsized by twenty cavities in 2022 finding very few dead young or unhatched eggs with not many jumpers. Barry also mentioned his fellow purple Martin landlords had a rough April and early May as he did with losses of adults due to starvation but succeeded getting birds to accept supplemental feeding in Polk and Barron Counties.

On the opposite area of Wisconsin in the northeast in Oconto County, the Alden's purple martin colony had their first martins appear on April 21. For 11 of those days afterwards temperatures were below 60 degrees with 9 of those days being cloudy or rainy. Not very good for those Purple Martins trying to survive on insects. See (Figures 5a, 5b, 5c, and 5d) temperature charts for Spring showing Rhinelander, Green Bay, Stevens Point, and Madison. Note the blue bars dipping below the normal areas



**Figure 5a, 5b, 5c, & 5d:** Going from top left to right and down and then left are the charts for Spring (March, April, May and June 2022 for Rhinelander, Green Bay, Madison, and Stevens Point) Temperature from the National Oceanic and Atmospheric Administration (NOAA) National Weather Service, Department of Commerce.

shown in a color of gold for all charts down into the light blue areas where it is colder than normal. Overall, it was cooler spring for Wisconsin with more moisture in the north like the Green Bay area but a lot drier than normal in the south like the Madison area. Cooler temperatures and more rain mean cloudy days preventing insects from flying. This sequence, along with wind created opportunities for losses of scouts throughout Wisconsin. See Figure 7a & 7b. Some of the notes from others across the state relayed the problems encountered due to weather or thought weather was a non-factor.



while there we added mealworms, crickets, and scrambled eggs to her porch which she soon ate. Fed again at 4:00 PM and ate on the porch soon after. Went back on perch pole then entered compartment at 6:50 PM.”

E. Svetich comments: “Weather was a non-issue this year when martins were arriving. In contrast to previous years, the coldest temperature here was 41 degrees and there was no snow after arrival on April 10 when an ASY-M arrived.”

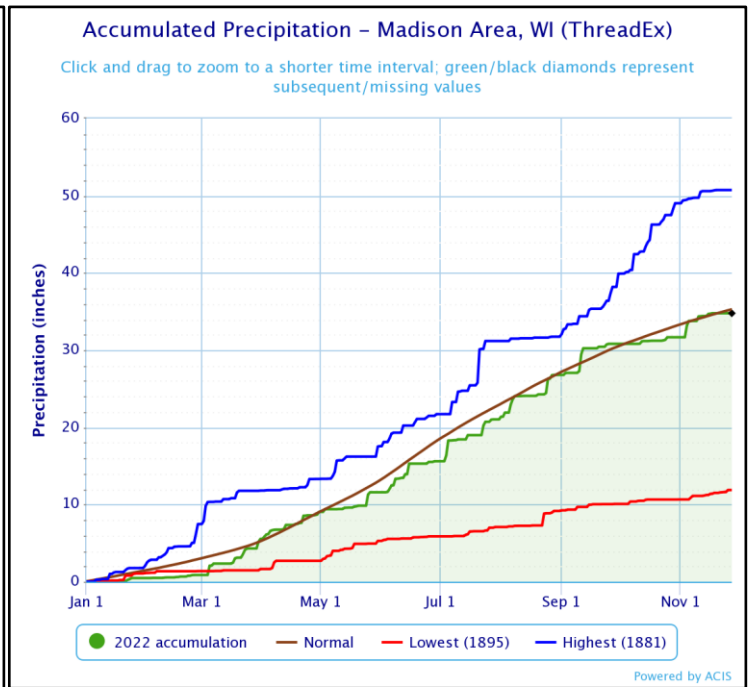
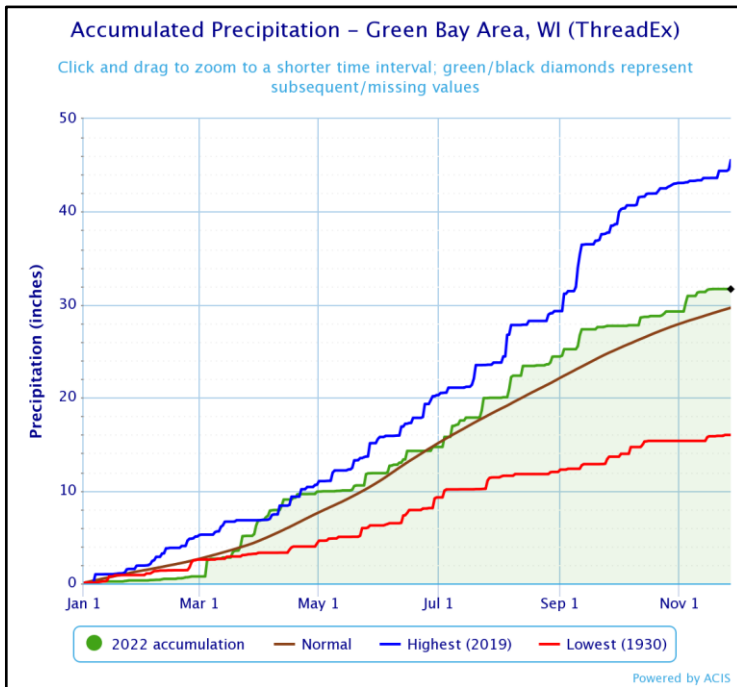
M Collar comments: “First martins showed up on April 10 and many followed shortly after. Had an owl problem before nesting began. I purchased a Dancing Man and ran it all night long as well as some solar lights. That took care of the problem.”

B. Thays comments: “My number of nesting pairs was down slightly from 2021. I averaged around 53 pairs in 2021. This season averaged at 50 pairs. The number of SY birds in May was down, with SY birds trickling in one at a time over a several week period. The traditional wave of SY birds just never seemed to hit my colony. In addition, my colony was also stressed from weekly hawk attacks that started in mid-June and continued through most of the nesting season”.

J. Thays comments: “The nesting season was relatively good as far as weather in Wisconsin. Birds started arriving early but it was only necessary to supplement feeding crickets on a few occasions. It was disappointing to find out after birds fledged that I found four fully developed martins in the T-14 (one in each tower)”.

J. Frisque comments: “First time house erected on April 19<sup>th</sup>. Nine PM’s seen that day.”

NJ Stetzel comments: “Seen 1<sup>st</sup> martin on April 11 in Middleton. On May 2<sup>nd</sup> it was 48 degrees at noon. 45 degrees on May 3<sup>rd</sup> when 14 martins were seen in one gourd and 6 in another. May 5<sup>th</sup> found 3 dead adults of which one was on the ground and another 2 found in a gourd with pine needles. Had 2 3/8” of rain on June 15 in one hour”.



**Figure 7a & 7b:** Precipitation from March through September was above normal in the north and central areas as shown by the Green Bay location and below normal in the south as shown by the Madison area. Precipitation from the National Oceanic and Atmospheric Administration (NOAA) National Weather Service, Department of Commerce.

M Neppl from Crivitz comments: “Eight of the old pairs never hatched the early eggs and tried to renest. Four were successful but with lower numbers of eggs and young. It seemed that the early eggs were not fertile due to a lot of interference from males.”

B Leonard from Lake Geneva comments: “Reported great success with at least 115 new babies this year. Houses that were empty last year were full this year. Despite the record number of Martin babies Gallo was upset that the Martins on the west end neat the boat piers disappeared right after they fledged. Rodriguez suggested they moved further down along the lake-path. Maybe we need bigger perches.....maybe we should leave the houses open a little longer to aid in their journey.”

Dick Nikolai's personal comments from 2022 below (See **Figure 7a** for precipitation and **Figure 5b** for temperature):

Winter 2021-2022 has been wetter in normal and milder in temperatures through Dec 2021. Jan and Feb 2022 have been drier than normal with temps on both ends of extremes with numerous windy days. Lake fly larvae are below average or a reduction of 69.4% over 2020 from information from the Department of Natural Resources. Freezes have occurred in Florida in early Feb with several storms going through southern states from Texas to North Carolina, Tennessee & Kentucky. April and most of March weather has been below normal. As of the 5th of April, it was 15 days straight below normal in the Green Bay and Fox Cities area. Severe cold rain showers throughout March and early April tallied 6.8 inches of precipitation which did not include the 5th's. January and Feb were below precipitation with the second driest conditions beginning and March set records for the most since 1886. Below normal temps for most of March and April with few days of being in the 50's and 60's. Ground is saturated. Two males and a female came in after 6:30PM on this cloudy, cool, and damp day (April 5) with winds mainly from the SE or E off Lake Michigan. A third male came in April 6. Weather continues to be below normal with snow and rain (almost 2" more rain in April) and cold through April 8 with snow during the day. On April 9 early morning snow (High 48F). As of April 20th, we have 20+ martins that we are feeding. Weather was terrible with a cold rain. Martins consumed 250+ super worms, 500 meal worms & approximately three scrambled eggs.

For April 16, the last 20 days have been below normal. April 21 is finally nice with temps at 60. Seen lots of midges flying even with the high winds. From April 24 through May 5 weather went back to the doldrums being cool and wet. Several mornings were in the low teens with winds constantly being above 20 mph with some days up to 40-50 mph. Continued feeding martins (50+) and placing handwarmers into 13 cavities. Bob Ring bought several times 2000 crickets & 2000 super worms. These along with eggs were constantly being eaten by our arrivals. Little to no flying insects. Lost several martins and the raptors were problems every day. Fed martins from April 6 through May 5 with about 5 days that were without any feeding.

Weather starts to improve on May 6. Gradually it improves to record highs after record lows were recorded. Several days were in the 90's setting those records. Little rain over this segment in May. Oconto County had over 8 inches fall on May 12 and 13 during late night thunderstorms. As of May 18, it is beginning to cool down again with lows being near freezing. Lake flies are showing up in small numbers as the week of May 16 to 21 goes along. Problems with sparrows and starlings during this warm spell continue through the present (May 19) are huge for we ended up with a female martin being killed along with its mate injured by three starlings. Later it died. Tree swallows are also a problem but not as nearly as the invasive birds. Weather for the next few days in the 70's with a return to cool weather for the weekend in the 50's with forecast until the end of the month being 5-10 degrees cooler than average. Little nest building done so far with no SY's present. Reports of SY's in the state with some reports of egg-laying near Horicon. May 19, .95" of rain fell during the night/morning and more throughout day on May 20 which has been cool, cloudy, and wet with winds from the west at 9 mph. May 21-30. Weather mostly sunny or warmer than normal with Memorial weekend hot and humid with temps in upper 80's and low 90's. Two rain events came with one on May 20<sup>th</sup> with 1.5" and on May 25 2+ ". Lake flies emerged through this period and assisted martins. Nest building was much later than normal and mostly started during this period with fewer ASY's being present. SY's started to come more during this period but just after rain event on May 25. May 31 to June 2 had decreasing temps but near average and no rain. June 3 cooler than normal with highs in 60's and lows in 40's. Projected to be cooler through June 12.

Oconto Area—Noted the public colony at the City Dock & Marina in Oconto had 25+ eggs missing. Theorized it was due to thin egg shells cracking because of thinness or addled with adults tossing them out due to cold weather (found cracked shells of eggs and eggs broke when touched) and +25 eggs were added at City Park on June 2. At City Dock there are two sets of housing with one being nine compartments and the other has nine compartments with four gourds. This last complex had seven cavities containing seven to eleven eggs documented alone for a total of 64. This averages a little over nine eggs per cavity. That alone tells you some outside or environmental parameter influenced that colony picture (see **Table 1**).

To give an idea of consumption of food for feeding martins I created some facts during one of those dates so I could realize the effort of tossing flying food resources (See **Figure 8**). Returning Purple Martins during spring migration weigh approximately 60 grams depleting fat reserves. Stresses from migration, lack of food, little to no shelter, invasive competition and predation add to survival of Purple Martins for prime real estate housing. A photo from April 6 shown in **Figure 9** sets the stage for reality at High Cliff State Park after feeding these Purple Martins and putting them to bed with full stomachs. Note that compartments were blocked off to encourage martins to go into the southern and eastern cavities away from the northwestern winds. Compartments open contained 16+ hour handwarmers for additional heat.



## Martin Facts 2022 at High Cliff SP

51 mealworms equals 4 grams

4 super worms equals 2 grams

6 crickets equals 2 grams

Fed on Thurs April 7, 2022 150 crickets & 80 mealworms to four martins

Fed on Friday April 8, 2022, 44 Superworms to four martins

28 grams equal one ounce.

## Martin Facts April 7, 2022 at High Cliff SP

56.275 grams divided by 4 martins equals 14.07 grams per martin consumed

6.275 grams plus 50 grams equals 56.275

11 superworms each equals 5.5 grams each April 8, 2022 equals 22 grams ttl

20 meal worms per martin

Ate 23.45% of their body weight per martin on April 7, 2022 if 60 grams

**Figure 8:** Fun facts from Dick Nikolai indicating consumption of what four Purple Martins consumed on April 8, 2022 when being fed. It takes a lot of calories to keep Purple Martins alive.



**Figure 9:** Weather picture shown on April 6, 2022 showing scouts near sunset at High Cliff State Park in Sherwood.

Summary for the 2022 breeding season for Purple Martins provided four regions of where Purple Martin reports were recorded for 43 colonies on 1000+ nests having fledged a little over 3850 fledglings (see **Table 1**). Details of the **Northeast Forest Region** comprised of **173 pairs** of Purple Martins having **167 nests** that contained **835 eggs** which was **4.61 eggs** per cavity. Of those eggs **74.25%** hatched at an average of **3.43 hatchlings** per nest. Martins fledged at **71.62% from eggs** with an average of **3.30 fledglings** per nest cavity. Compared to 2021's rate of fledging of eggs at **89.53%** and **3.20 fledglings** per nest cavity, 2022's rate of fledging per cavity from eggs was slightly larger with the percentage of hatch from eggs reduced by almost 18%. One of records missing from this region was a report in the Crivitz area that indicated they had similar rates of 3.25 fledgling rate with no other information so this was not included.

For the **Central Agricultural, Wetland & Forest Region** during 2022 comprised of **323 pairs** of Purple Martins having **315 nests** that contained **1679 eggs** which was **5.20 eggs** per cavity. Of those eggs **84.87%** hatched at an average of **4.41 hatchlings** per

nest. Martins fledged at **79.45% from eggs** with an average of **4.13 fledglings** per nest cavity. Compared to 2021's rate of fledging of eggs at **66.26%** and **3.30 fledglings** per nest cavity, 2021's rate of fledging per cavity from eggs was slightly smaller.

For the **Southern Prairie and Savanna Region** during 2022 comprised of **130 pairs** of Purple Martins having **129 nests** that contained **681 eggs** which was **5.24 eggs** per cavity. Of those eggs **83.99%** hatched at an average of **4.40 hatchlings** per nest. Martins fledged at **75.48% from eggs** with an average of **3.95 fledglings** per nest cavity. Compared to 2021's rate of fledging of eggs at **67.72%** and **3.51 fledglings** per nest cavity, 2021's rate of fledging per cavity from eggs was down almost a half a fledgling.

For the **Lake Michigan Region** during 2022 comprised of **358 pairs** of Purple Martins having **348 nests** that contained **1592 eggs** which was **4.43 eggs** per cavity. Of those eggs **82.92%** hatched at an average of **4.10 hatchlings** per nest. Martins fledged at **85.05% from eggs** with an average of **3.77 fledglings** per nest cavity. Compared to 2021's rate of fledging of eggs at **76.50%** and **3.78 fledglings** per nest cavity, 2021's rate of fledging per cavity from eggs was very similar. Several sites in Kenosha were not listed for these four sites had only listed the numbers of fledglings which was 207. As information is given to me for years in the past to record all my data requested, these are updated into that year data set to make an even more efficient analysis of our success during those nesting season.

Finally, for all those 43 reports in 2022 meeting the data requested we can surmise how Wisconsin fared for the year considering the weather and environmental factors mentioned earlier (see **Table 2**). Some comparisons will be added at the end looking at 2021 (see **Table 3**).

**Combined Wisconsin Purple Martin Report for 2022** shows that Purple Martins arrived from those **43 data sets** from *April 1, 2022* with the last fledgling taking place on *September 3, 2022*. There were 43 reports with 42 reports having purple martins during 2022 comprised of **998 pairs** of Purple Martins having **971 nests** that contained **4855 eggs** which was **5.00 eggs** per cavity. Of those **4085 eggs hatched** or **82.92%** hatched at an average of **4.04 hatchlings** per nest. Martins fledged at **79.32% from eggs** with an average of **3.82 fledglings** per nest cavity for a **total of 3851 fledglings** added to the population.

**Combined Wisconsin Purple Martin Report for 2021** shows that Purple Martins arrived from those **31 data sets** from *March 28, 2021* with the last fledgling taking place on *August 31, 2021*. There were 31 reports with 30 reports having purple martins during 2021 comprised of **996 pairs** of Purple Martins having **969 nests** that contained **4846 eggs** which was **5.00 eggs** per cavity. Of those **3943 eggs hatched** or **81.37%** hatched at an average of **3.97 hatchlings** per nest. Martins fledged at **70.47% from eggs** with an average of **3.44 fledglings** per nest cavity for a **total of 3415 fledglings** added to the population.

Comparison of the years we had more people report their data results in 2022. That is a great influx of concerned landlords and much appreciated. Looking further we had similar pair numbers for each year which may be more a reflection of the stress on those purple martins for there was a total of nests in 2021 of 876 nests compared to 1007 nests in 2022. Many pairs probably were either lost due to predation, weather impacts creating loss of health so eggs were not laid but health of the adult martins was more important than procreation and finally maybe we had more single males or at least unpaired martins especially in the second-year (SY) martin category. We will find out more in 2023, for many of the stressed-out adults may not have made it through two stressful migrations throughout the state. For us at High Cliff State Park colonies, I believe that was the case for our total pairs in 2021 was at 118 and in 2022 we had 58 pairs. Half of those succumbed to the elements from the bad weather 2021 and the stress placed on those trying to recover along with further stress in Spring 2022. Hopefully the 162 young fledged in 2022 and the 58 pairs relates to healthier martins both in the SY category and the After Second Year (ASY) categories in 2023 which will be our reward at High Cliff.

For Wisconsin comparisons in eggs per active cavity, it was the same in both years at 5.00 eggs laid. Around 4000 eggs hatched in both years with an 80% hatch rate around 4.00 hatchlings per cavity. It was where the total fledglings added to the population that 2022 came out ahead producing over 400 more fledglings at 3.82 versus 3.44. That is where the hope for 2023 comes, for there should be more SY birds entering Wisconsin giving us greater chances for growth or maintenance of those colonies existing. Let us hope for a normal spring with consistent temperatures that slowly increase to where cold weather is a non-factor. Want to see plenty of flying insects and most of all less than five days of feeding martins during their stay in 2023. As part of this outlook for Spring 2023, if you look at Figures 10a, 10b and 10c you can see there is an equal chance for having both precipitation and temperature being greater or less than normal. Some areas of Wisconsin already have abnormal conditions for lack of precipitation in the northwestern portion of the state given the winter has been slightly dry.

### Regional (Northeast Forest) Wisconsin Reports for 2022

Place of housing	County	1st martin	Pairs	Nests	Nests with eggs	eggs laid	Eggs/nest	Hatched	Hatched/nest	% Hatch	Fledge	Fledged/ nest	% Fledged	Fledged from eggs	Last Fledgling
Oconto City Marina	Oconto	Unknown	21	21	21	132	6.29	75	3.57	56.82%	73	3.48	97.33%	55.30%	8/9/2022
Oconto City Park	Oconto	Unknown	25	25	19	97	5.11	73	2.92	75.26%	70	2.80	95.89%	72.16%	8/8/2022
Lena	Oconto	4/21/2022	13	13	13	46	3.54	43	3.31	93.48%	40	3.08	93.02%	86.96%	8/8/2022
Crivitz	Marinette	4/11/2022	53	53	53	248	4.68	179	3.38	72.18%	176	3.32	98.32%	70.97%	Unknown
Lena	Oconto	4/1/2022	61	69	61	312	4.52	250	3.62	80.13%	239	3.46	95.60%	76.60%	8/8/2022
Total of 5 sites all active.		1st Martin 4-01-2022	173	181	167	835	4.61	620	3.43	74.25%	598	3.30	96.45%	71.62%	Last Fledge 8/09/2022

### Regional (Central Agricultural, Wetland & Forest Zone) Wisconsin Reports for 2022

Place of housing	County	1st martin	Pairs	Nests	Nests with eggs	eggs laid	Eggs/nest	Hatched	Hatched/nest	% Hatch	Fledge	Fledged/ nest	% Fledged	Fledged from eggs	Last Fledgling
Sherwood	Calumet	4/5/2022	58	58	52	257	4.94	208	4.00	80.93%	162	3.12	77.88%	63.04%	8/12/2022
Hortonville	Outagamie	4/10/2022	35	35	35	197	5.63	156	4.46	79.19%	151	4.31	96.79%	76.65%	8/27/2022
Appleton	Outagamie	4/15/2022	6	6	6	32	5.33	27	4.50	84.38%	27	4.50	100.00%	84.38%	8/1/2022
Menasha 1	Winnebago	Unknown	17	17	17	114	6.71	95	5.59	83.33%	90	5.29	94.74%	78.95%	9/1/2022
Menasha 2	Winnebago	Unknown	10	10	10	51	5.10	48	4.80	94.12%	48	4.80	100.00%	94.12%	8/13/2022
Montello	Marquette	5/6/2022	51	51	51	254	4.98	221	4.33	87.01%	217	4.25	98.19%	85.43%	8/3/2022
Hortonville	Outagamie	5/5/2022	4	4	2	11	2.75	9	2.25	81.82%	9	2.25	100.00%	81.82%	8/10/2022
Fond du Lac	Fond du Lac	5/13/2022	24	24	24	133	5.54	115	4.79	86.47%	112	4.67	97.39%	84.21%	7/27/2022
Harrisville	Marquette	4/15/2022	14	14	14	81	5.79	74	5.29	91.36%	71	5.07	95.95%	87.65%	7/18/2022
Montello	Marquette	4/6/2022	24	24	24	113	4.71	103	4.29	91.15%	99	4.13	96.12%	87.61%	Unknown
Lake Puckaway Park	Marquette	4/19/2022	16	16	16	88	5.50	76	4.75	86.36%	74	4.63	97.37%	84.09%	7/24/2022
Buffalo Lake (Sunset Drive)	Marquette	4/12/2022	26	26	26	143	5.50	128	4.92	89.51%	125	4.81	97.66%	87.41%	7/27/2022
Wild Rose	Waushara	4/12/2022	23	23	23	125	5.43	90	3.91	72.00%	76	3.30	84.44%	60.80%	Unknown
Winneconne	Winnebago	4/19/2022	3	3	3	15	5.00	15	5.00	100.00%	14	4.67	93.33%	93.33%	7/30/2022
Brooks (McGinnis Lake)	Adams	4/10/2022	12	12	12	65	5.42	60	5.00	92.31%	59	4.92	98.33%	90.77%	7/27/2022
Total of all 15 sites submitted & all active.		1st Martin 4/05/2022	323	323	315	1679	5.20	1425	4.41	84.87%	1334	4.13	93.61%	79.45%	Last Fledge 9/01/2022

### Regional (Southern Prairie & Savanna Zone) Wisconsin Reports for 2022

Place of housing	County	1st martin	Pairs	Nests	Nests with eggs	eggs laid	Eggs/nest	Hatched	Hatched/nest	% Hatch	Fledge	Fledged/ nest	% Fledged	Fledged from eggs	Last Fledgling
Middleton	Dane	4/11/2022	11	11	11	62	5.64	56	5.09	90.32%	54	4.91	96.43%	87.10%	8/1/2022
Waupun	Dodge & Fond du Lac line	Unknown	40	40	40	221	5.53	168	4.20	76.02%	115	2.88	68.45%	52.04%	Unknown
Belleville	Dane/Green Line	4/20/2022	16	16	16	74	4.63	60	3.75	81.08%	57	3.56	95.00%	77.03%	7/24/2022
McFarland	Dane	4/4/2022	12	12	12	67	5.58	58	4.83	86.57%	58	4.83	100.00%	86.57%	Unknown
Lussier-TN of Dunn	Dane	4/21/2022	9	9	9	47	5.22	40	4.44	85.11%	40	4.44	100.00%	85.11%	Unknown
Bergamont-Oregon	Dane	4/21/2022	9	9	9	49	5.44	43	4.78	87.76%	43	4.78	100.00%	87.76%	Unknown
Home-Oregon	Dane	4/30/2022	6	6	6	30	5.00	26	4.33	86.67%	26	4.33	100.00%	86.67%	Unknown
Netherwood-Oregon	Dane	4/1/2022	18	18	18	91	5.06	82	4.56	90.11%	82	4.56	100.00%	90.11%	Unknown
Muskego	Waukesha	5/24/2022	9	9	8	40	4.44	39	4.33	97.50%	39	4.33	100.00%	97.50%	8/5/2022
Juneau	Dodge	4/16/2022	14	14	14	68	4.86	53	3.79	77.94%	51	3.64	96.23%	75.00%	7/30/2022
submitted & all are active.		1st Martin 4/01/2022	130	130	129	681	5.24	572	4.40	83.99%	514	3.95	89.86%	75.48%	Last Fledge 8/05/2022

### Regional (Lake Michigan Zone) Wisconsin Reports for 2022

Place of housing	County	1st martin	Pairs	Nests	Nests with eggs	eggs laid	Eggs/nest	Hatched	Hatched/nest	% Hatch	Fledge	Fledged/ nest	% Fledged	Fledged from eggs	Last Fledgling
Sheboygan Falls	Sheboygan	4/23/2022	25	25	25	114	4.56	74	2.96	64.91%	70	2.80	94.59%	61.40%	7/31/2022
Port Washington (Afterglow Farms)	Ozaukee	Unknown	24	24	24	118	4.92	110	4.58	93.22%	104	4.33	94.55%	88.14%	8/6/2022
Plymouth	Sheboygan	4/23/2022	5	5	5	27	5.40	27	5.40	100.00%	26	5.20	96.30%	96.30%	Unknown
Plymouth	Sheboygan	Unknown	1	1	1	4	4.00	3	3.00	75.00%	3	3.00	100.00%	75.00%	Unknown
Jetzers Lake	Sheboygan	Unknown	2	2	2	5	2.50	5	2.50	100.00%	5	2.50	100.00%	100.00%	Unknown
Kohler Andrea State Park, Sheboygan	Sheboygan	No pairs 2022	0	0	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!	#DIV/0!	No pairs 2022
Mishicot	Manitowoc	4/11/2022	141	141	133	593	4.21	531	3.77	89.54%	510	3.62	96.05%	86.00%	8/25/2022
Sheboygan Falls	Sheboygan	4/5/2022	36	36	36	156	4.33	148	4.11	94.87%	145	4.03	97.97%	92.95%	9/3/2022
Cedar Grove	Sheboygan	Unknown	39	39	39	175	4.49	169	4.33	96.57%	169	4.33	100.00%	96.57%	Unknown
Harrington Beach State Park, Belgium	Ozaukee	Unknown	12	12	12	54	4.50	49	4.08	90.74%	49	4.08	100.00%	90.74%	Unknown
Mishicot	Manitowoc	5/14/2022	1	1	1	6	6.00	6	6.00	100.00%	6	6.00	100.00%	100.00%	8/3/2022
Newton	Manitowoc	4/15/2022	16	18	16	77	4.28	62	3.44	80.52%	60	3.33	96.77%	77.92%	8/6/2022
Racine	Racine	4/15/2022	56	55	52	263	4.78	214	3.89	81.37%	207	3.76	96.73%	78.71%	8/23/2022
Total of 13 sites submitted with 12 active and 2 first time colonies.		1st Martin 4-05-2022	358	359	346	1592	4.43	1398	3.89	87.81%	1354	3.77	96.85%	85.05%	Last Fledge 9/03/2022

**Table 1:** Regional Charts for Wisconsin showing Purple Martin Colony results across Wisconsin. Four Regions having full data submitted on 43 reports with their summaries for total nests with eggs, total eggs laid, total young hatched from eggs and total number of young fledged in 2022.

## Statewide Wisconsin Reports for 2022

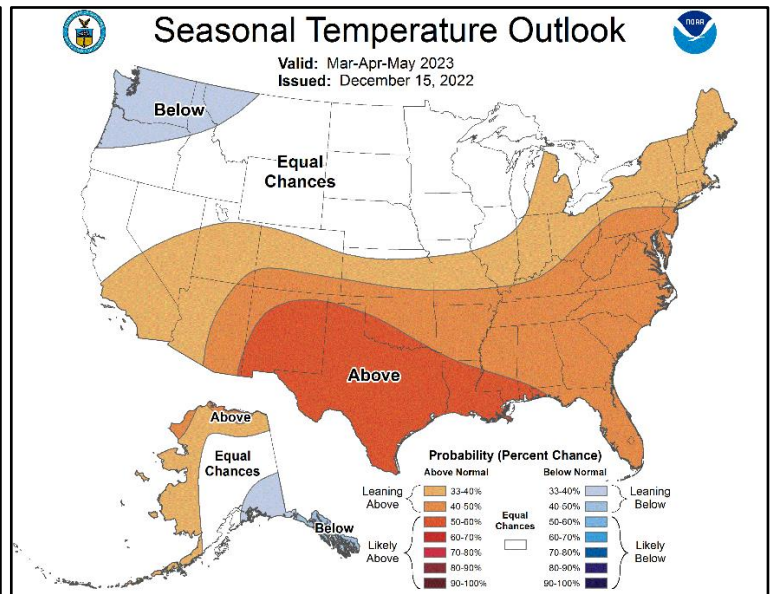
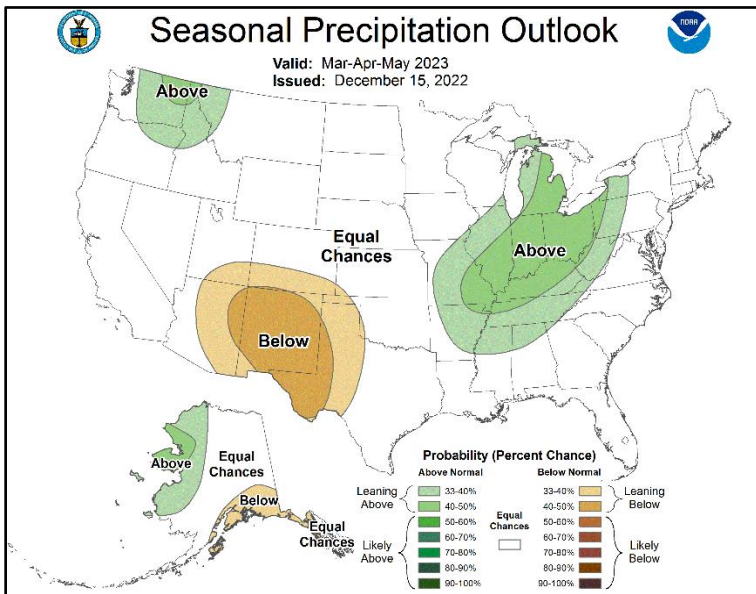
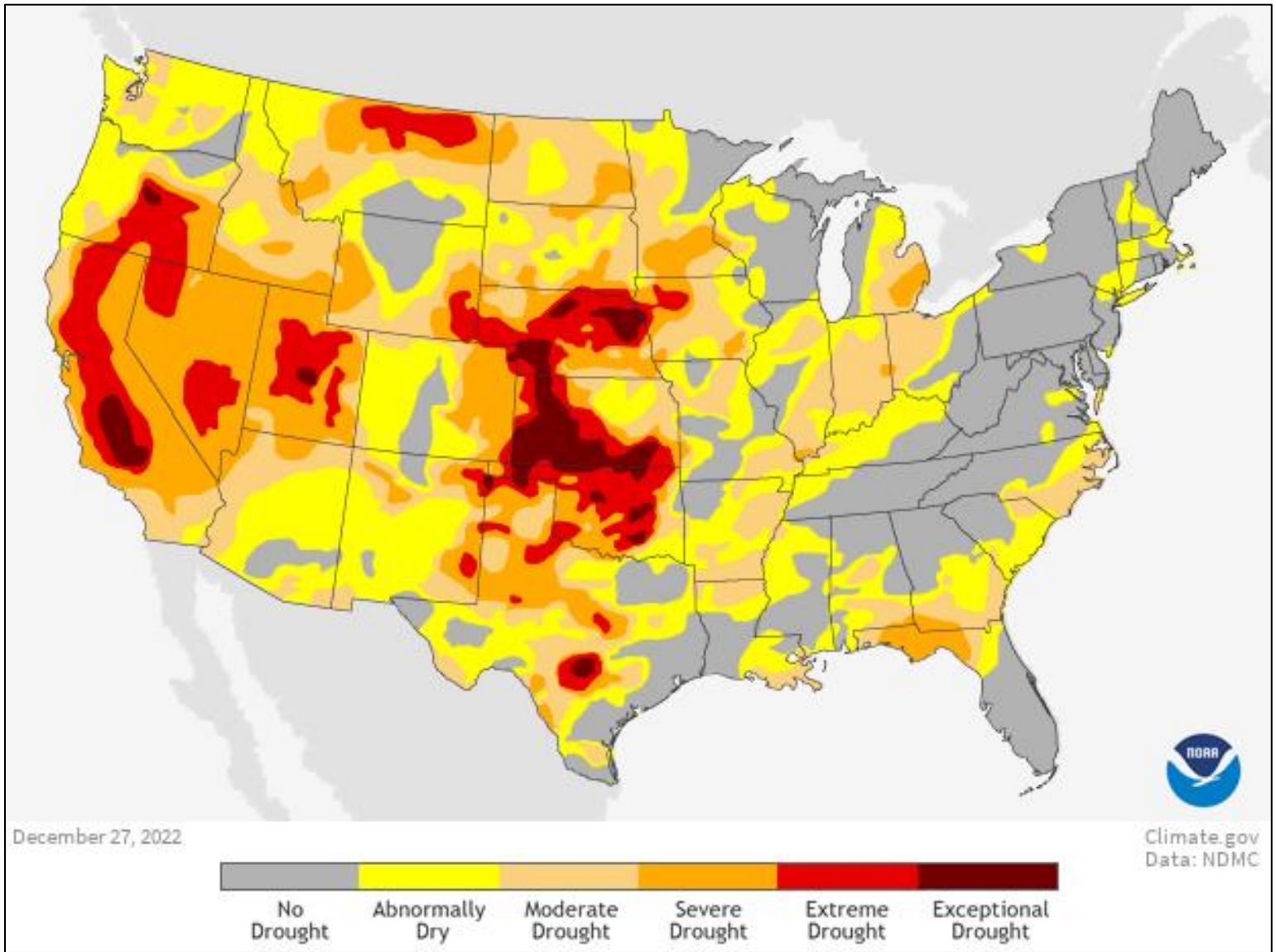
Place of housing	County	1st martin	Pairs	Nests	Nests with eggs	eggs laid	Eggs/ nest	Hatched	Hatched/ nest	% Hatch	Fledge	Fledged/ nest	% Fledged	Fledged from eggs	Last Fledging
Sherwood (3 sites)	Calumet	4/5/2022	58	58	52	257	4.94	208	4.00	80.93%	162	3.12	77.88%	63.04%	8/12/2022
Hortonville	Outagamie	4/10/2022	35	35	35	197	5.63	156	4.46	79.19%	151	4.31	96.79%	76.65%	8/27/2022
Appleton	Outagamie	4/15/2022	6	6	6	32	5.33	27	4.50	84.38%	27	4.50	100.00%	84.38%	8/1/2022
Menasha	Winnebago	Unknown	17	17	17	114	6.71	95	5.59	83.33%	90	5.29	94.74%	78.95%	9/1/2022
Menasha 2	Winnebago	Unknown	10	10	10	51	5.10	48	4.80	94.12%	48	4.80	100.00%	94.12%	8/13/2022
Montello	Marquette	5/6/2022	51	51	51	254	4.98	221	4.33	87.01%	217	4.25	98.19%	85.43%	8/3/2022
Hortonville	Outagamie	5/5/2022	4	4	2	11	2.75	9	2.25	81.82%	9	2.25	100.00%	81.82%	8/10/2022
Fond du Lac	Fond du Lac	5/13/2022	24	24	24	133	5.54	115	4.79	86.47%	112	4.67	97.39%	84.21%	7/27/2022
Harrisville	Marquette	4/15/2022	14	14	14	81	5.79	74	5.29	91.36%	71	5.07	95.95%	87.65%	7/18/2022
Montello	Marquette	4/6/2022	24	24	24	113	4.71	103	4.29	91.15%	99	4.13	96.12%	87.61%	Unknown
Lake Puckaway Park	Marquette	4/19/2022	16	16	16	88	5.50	76	4.75	86.36%	74	4.63	97.37%	84.09%	7/24/2022
Buffalo Lake (Sunset Drive)	Marquette	4/12/2022	26	26	26	143	5.50	128	4.92	89.51%	125	4.81	97.66%	87.41%	7/27/2022
Wild Rose	Waushara	4/12/2022	23	23	23	125	5.43	90	3.91	72.00%	76	3.30	84.44%	60.80%	Unknown
Winneconne	Winnebago	4/19/2022	3	3	3	15	5.00	15	5.00	100.00%	14	4.67	93.33%	93.33%	7/30/2022
Brooks (McGinnis Lake)	Adams	4/10/2022	12	12	12	65	5.42	60	5.00	92.31%	59	4.92	98.33%	90.77%	7/27/2022
Oconto City Marina	Oconto	Unknown	21	21	21	132	6.29	75	3.57	56.82%	73	3.48	97.33%	55.30%	8/9/2022
Oconto City Park	Oconto	Unknown	25	25	19	97	5.11	73	2.92	75.26%	70	2.80	95.89%	72.16%	8/8/2022
Lena	Oconto	4/21/2022	13	13	13	46	3.54	43	3.31	93.48%	40	3.08	93.02%	86.96%	8/8/2022
Crivitz	Marinette	4/11/2022	53	53	53	248	4.68	179	3.38	72.18%	176	3.32	98.32%	70.97%	Unknown
Lena	Oconto	4/1/2022	61	69	61	312	4.52	250	3.62	80.13%	239	3.46	95.60%	76.60%	8/8/2022
Middleton	Dane	4/11/2022	11	11	11	62	5.64	56	5.09	90.32%	54	4.91	96.43%	87.10%	8/1/2022
Waupun	Dodge & Fond du Lac line	Unknown	40	40	40	221	5.53	168	4.20	76.02%	115	2.88	68.45%	52.04%	Unknown
Belleville	Dane/Green Line	4/20/2022	16	16	16	74	4.63	60	3.75	81.08%	57	3.56	95.00%	77.03%	7/24/2022
McFarland	Dane	4/4/2022	12	12	12	67	5.58	58	4.83	86.57%	58	4.83	100.00%	86.57%	Unknown
Lussier-TN of Dunn	Dane	4/21/2022	9	9	9	47	5.22	40	4.44	85.11%	40	4.44	100.00%	85.11%	Unknown
Bergamont-Oregon	Dane	4/21/2022	9	9	9	49	5.44	43	4.78	87.76%	43	4.78	100.00%	87.76%	Unknown
Home-Oregon	Dane	4/30/2022	6	6	6	30	5.00	26	4.33	86.67%	26	4.33	100.00%	86.67%	Unknown
Netherwood-Oregon	Dane	4/1/2022	18	18	18	91	5.06	82	4.56	90.11%	82	4.56	100.00%	90.11%	Unknown
Muskego	Waukesha	5/24/2022	9	9	8	40	4.44	39	4.33	97.50%	39	4.33	100.00%	97.50%	8/5/2022
Juneau	Dodge	4/16/2022	14	14	14	68	4.86	53	3.79	77.94%	51	3.64	96.23%	75.00%	7/30/2022
Sheboygan Falls	Sheboygan	4/23/2022	25	25	25	114	4.56	74	2.96	64.91%	70	2.80	94.59%	61.40%	7/31/2022
Port Washington (Afterglow Farms)	Ozaukee	Unknown	24	24	24	118	4.92	110	4.58	93.22%	104	4.33	94.55%	88.14%	8/6/2022
Plymouth	Sheboygan	4/23/2022	5	5	5	27	5.40	27	5.40	100.00%	26	5.20	96.30%	96.30%	Unknown
Plymouth (2)	Sheboygan	Unknown	1	1	1	4	4.00	3	3.00	75.00%	3	3.00	100.00%	75.00%	Unknown
Jetzers Lake	Sheboygan	Unknown	2	2	2	5	2.50	5	2.50	100.00%	5	2.50	100.00%	100.00%	Unknown
Kohler Andrea State Park, Sheboygan (1)	Sheboygan	No pairs 2022	0	0	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!	#DIV/0!	No pairs 2022
Mishicot	Manitowoc	4/11/2022	141	141	133	593	4.21	531	3.77	89.54%	510	3.62	96.05%	86.00%	8/25/2022
Sheboygan Falls	Sheboygan	4/5/2022	36	36	36	156	4.33	148	4.11	94.87%	145	4.03	97.97%	92.95%	9/3/2022
Cedar Grove	Sheboygan	Unknown	39	39	39	175	4.49	169	4.33	96.57%	169	4.33	100.00%	96.57%	Unknown
Harrington Beach State Park, Belgium	Ozaukee	Unknown	12	12	12	54	4.50	49	4.08	90.74%	49	4.08	100.00%	90.74%	Unknown
Mishicot (2)	Manitowoc	5/14/2022	1	1	1	6	6.00	6	6.00	100.00%	6	6.00	100.00%	100.00%	8/3/2022
Newton	Manitowoc	4/15/2022	16	18	16	77	4.28	62	3.44	80.52%	60	3.33	96.77%	77.92%	8/6/2022
Racine	Racine	4/15/2022	56	55	52	263	4.78	214	3.89	81.37%	207	3.76	96.73%	78.71%	8/23/2022
(1) Housing had no purple martins nesting in 2022. (2) First year of colony having purple martins staying. (Total of 43 sites in 18 Counties)		1st Martin 4-01-2022	998	1007	971	4855	5.00	4068	4.04	83.79%	3851	3.82	94.67%	79.32%	Last Fledge 9/03/2022

**Table 2:** State wide summary for 2022 for all of Wisconsin. Data submitted was complete for 43 reports comprising of **998** total pairs, **971** total nests with eggs, **4855** eggs laid, **4068** young hatched from eggs and **3851** fledged young. Martins arrived on *April 1, 2022* with the last known fledging taking place around *September 3*. Over **79%** of the young fledged from eggs adding to the population of **3851 young** considering the impacts of the weather and environment.

## Statewide Wisconsin Reports for 2021

Place of housing	County	1st martin	Pairs	Nests	Nests with eggs	eggs laid	Eggs/ nest	Hatched	Hatched/ nest	% Hatch	Fledge	Fledged/ nest	% Fledged	Fledged from eggs	Last Fledgling
Sherwood	Calumet	4/8/2021	118	118	105	520	4.95	367	3.11	70.58%	233	2.22	63.49%	44.81%	8/11/2021
Hortonville	Outagamie	3/30/2021	52	52	52	273	5.25	247	4.75	90.48%	204	3.92	82.59%	74.73%	8/14/2021
Menasha	Winnebago	4/20/2021	18	18	18	96	5.33	74	4.11	77.08%	69	3.83	93.24%	71.88%	7/24/2021
Montello	Marquette	3/28/2021	53	53	53	289	5.45	262	4.94	90.66%	251	4.74	95.80%	86.85%	8/9/2021
Harrisville	Marquette	3/28/2021	14	14	14	78	5.57	69	4.93	88.46%	68	4.86	98.55%	87.18%	7/18/2021
Montello	Marquette	3/29/2021	24	24	24	116	4.83	101	4.21	87.07%	100	4.17	99.01%	86.21%	8/4/2021
Appleton	Outagamie	4/22/2021	7	7	7	34	4.86	25	3.57	73.53%	23	3.29	92.00%	67.65%	7/30/2021
Hortonville	Outagamie	5/13/2021	4	2	2	9	4.50	6	3.00	66.67%	6	3.00	100.00%	66.67%	8/20/2021
Fond du Lac	Fond du Lac	3/30/2021	19	19	19	93	4.89	59	3.11	63.44%	52	2.74	88.14%	55.91%	8/17/2021
Wild Rose	Waushara	4/28/2021	23	23	23	134	5.83	111	4.83	82.84%	82	3.57	73.87%	61.19%	Unknown
Oconto	Oconto	5/9/2021	24	24	15	67	4.47	43	1.79	64.18%	39	1.63	90.70%	58.21%	8/8/2021
Oconto	Oconto	5/16/2021	22	22	22	118	5.36	86	3.91	72.88%	66	3.00	76.74%	55.93%	8/22/2021
Lena	Oconto	4/27/2021	12	12	12	56	4.67	53	4.42	94.64%	52	4.33	98.11%	92.86%	8/8/2021
Pound	Oconto	4/1/2021	46	46	46	228	4.96	204	4.43	89.47%	184	4.00	90.20%	80.70%	8/21/2021
Edgar	Marathon	4/8/2021	27	27	27	101	3.74	82	3.04	81.19%	78	2.89	95.12%	77.23%	Unknown
Beaver Dam	Dodge	3/30/2021	38	38	38	197	5.18	146	3.84	74.11%	110	2.89	75.34%	55.84%	8/4/2021
Waupun	Dodge & Fond du Lac line	Unknown	43	43	42	231	5.50	155	3.69	67.10%	121	2.88	78.06%	52.38%	Unknown
(8) Juneau	Dodge	4/25/2021	7	7	7	27	3.86	24	3.43	88.89%	21	3.00	87.50%	77.78%	8/7/2021
McFarland	Dane	4/11/2021	26	26	26	148	5.69	106	4.08	71.62%	106	4.08	100.00%	71.62%	7/23/2021
Middleton	Dane	4/12/2021	36	36	36	174	4.83	153	4.25	87.93%	151	4.19	98.69%	86.78%	8/2/2021
(2) Rio	Columbia	5/20/2021	1	1	1	4	4.00	4	4.00	100.00%	4	4.00	100.00%	100.00%	8/31/2021
(3) Lake Geneva	Walworth	Unknown	59	59	59	310	5.25	241	4.08	77.74%	219	3.71	90.87%	70.65%	Unknown
(4) Lake Geneva	Walworth	Unknown	11	11	11	57	5.18	43	3.91	75.44%	40	3.64	93.02%	70.18%	Unknown
Middleton	Dane	4/7/2021	11	11	11	54	4.91	46	4.18	85.19%	42	3.82	91.30%	77.78%	7/27/2021
(1) Cumberland	Polk	3/30/2021	115	115	115	513	4.46	474	4.12	92.40%	391	3.40	82.49%	76.22%	8/15/2021
(7) Plymouth	Sheboygan	5/2/2021	5	5	3	18	6.00	12	2.40	66.67%	11	2.20	91.67%	61.11%	7/28/2021
(5) Sheboygan	Sheboygan	No martins		0		0	0.00	0			0				No Martins
(6) Mishicot	Manitowoc	3/30/2021	143	143	143	727	5.08	600	4.20	82.53%	550	3.85	91.67%	75.65%	Unknown
Port Washington	Ozaukee	Unknown	12	12	12	58	4.83	52	4.33	89.66%	48	4.00	92.31%	82.76%	Unknown
Port Washington	Ozaukee	Unknown	12	12	12	63	5.25	54	4.50	85.71%	54	4.50	100.00%	85.71%	Unknown
Sheboygan Falls	Sheboygan	5/11/2021	14	14	14	53	3.79	44	3.14	83.02%	40	2.86	90.91%	75.47%	7/29/2021
(1)Estimates due to monitoring last on July 4. Had some young mortality due to cool & windy stretch in July. (2)Had a pair in 2020 which did not return in 2021. New pair in 2021. (3)Estimate for all except Hatch & % fledged from eggs. (4)Estimate for all except Hatch. (5)No Martins came in 2021 & martins were present in 2020 (6)Estimated production for 2021 (7)First time martin landlord. (8)First time martin landlord. (Total of 34 sites in 16 Counties)		1st Martin 3-28-2021	996	994	969	4846	5.00	3943	3.97	81.37%	3415	3.44	86.61%	70.47%	Last Fledge 8/31/2021
(1)Estimates due to monitoring last on July 4. Had some young mortality due to cool & windy stretch in July. (2)Had a pair in 2020 which did not return in 2021. New pair in 2021. (3)Estimate for all except Hatch & % fledged from eggs. (4)Estimate for all except Hatch. (5)No Martins came in 2021 & martins were present in 2020 (6)Estimated production for 2021 (7)First time martin landlord. (8)First time martin landlord and removal of Sherwood colonies. (Total of 30 sites)		1st Martin 3-28-2021	878	876	864	4326	5.01	3576	4.08	82.66%	3182	3.63	88.98%	73.56%	Last Fledge 8/31/2021

**Table 3:** State wide summary for **2021** for all of Wisconsin. Data submitted was complete for **31** reports comprising of **996** total pairs, **969** total nests with eggs, **4846** eggs laid, **3943** young hatched from eggs and **3851** fledged young. Martins arrived on *March 28, 2021* from this report with the last known fledging taking place around *August 31*. Over **70%** of the young fledged from eggs adding to the population of **3182 young** considering the impacts of the weather and environment.



**Figure 10a Top, 10b Left Bottom, 10c Right Bottom:** Weather outlook for Wisconsin from NOAA shows some areas that are in an abnormal condition for being dry. The seasonal outlook has equal chances for both precipitation and temperature to have equal chances for being greater or less than normal.

Finally, I want to end on very positive note for all to know. Education is an important thing when you want to see something come back to you like recoveries of bands. On **Table 4** great accomplishments occurred from you and other publics by keeping an eye out for bands on Purple Martins and other birds. You blew me away on your response in these recoveries and reporting. Unfortunately, lots of these recoveries ended in death when the martin was recovered due to foul weather. Still others found live martins within cavities reading their band numbers. It is satisfying to know many are looking. My hat is off to all including one of the last martins I banded on August 16, 2022 shown below. Thanks.

PM Statewide Banding	Year	New	Recaptures	Totals	Indiana, Ontario & WI Recoveries by the public
Dick Nikolai/Bob Ring	2016	1227	153	1380	0
Dick Nikolai/Bob Ring	2017	2109	141	2250	2
Dick Nikolai/Bob Ring	2018	2086	131	2217	5
Dick Nikolai/Bob Ring	2019	1814	134	1948	8
Dick Nikolai/Bob Ring	2020	1416	143	1559	8
Dick Nikolai/Bob Ring	2021	1316	90	1406	3
Dick Nikolai/Bob Ring	2022	1830	52	1882	15
	2023				
<b>As of January 8, 2023</b>	<b>Total</b>	11798	844	12642	41
	<i>Average per Yr</i>	1685	121	1806	5.86
		<b>Recapture Rate %</b>			<b>6.676%</b>

**Table 4:** Banding and Recaptures from 2016 to 2022.

