

**2021
MIGRATORY GAME BIRD
JOB COMPLETION**



Photo: Grant Frost

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By

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Introduction

In cooperation with the U.S. Fish and Wildlife Service (USFWS), the Wyoming Game and Fish Department (Department) Migratory Game Bird Section (MGBS) conducted annual surveys to derive population indices for management. The MGBS participated in dove banding and marked breeding Sandhill cranes with regional partners. Flyway membership dues in 2021 helped support the Central Flyway pre-season duck banding project in North Dakota. The MGBS remains strongly committed to Central Flyway management efforts, including the development and revision of management plans for the various migratory game bird populations and annual season setting. These processes are accomplished through participation on the Flyway Technical Committee meetings in winter and late summer. Wyoming sends representatives to both the Pacific Flyway and Central Flyway Technical and Council meetings.

Currently, the USFWS Division of Migratory Bird Management (DMBM) establishes migratory game bird regulatory frameworks during an annual meeting in September. Proposed regulations are developed for the subsequent year hunting seasons based on data and analyses available at that time. Experience gained through the Adaptive Harvest Management (AHM) process, which began in 1995, indicates the most appropriate regulatory package and can be reliably selected a year in advance based on current year harvest, breeding population, and wetland condition data. The Central and Pacific Flyway Technical Committee and Council meet in August or September each year to formalize regulation selection, and the Technical Committee will meet in February to address management plans and other technical issues.

The MGBS is involved in the management of all migratory game birds in the Central and Pacific Flyway portions of Wyoming. The section also coordinates trumpeter swan management with the nongame program and assists with the maintenance of goose hunting pits located on the Springer Wildlife Habitat Management Area (WHMA).

During the past year, substantial personnel time was devoted to wetland and habitat management projects across the state. Multiple projects at Department WHMAs are underway or in planning stages. Local involvement was maintained in the Intermountain West Joint Venture (IWJV). The Department participated in the Wyoming Bird Habitat Conservation Partnership, which serves both the IWJV and Northern Great Plains Joint Venture (NGPJV) in the state. The IWJV administrative boundary encompasses the majority of Wyoming and the NGPJV encompasses seven counties in northeast Wyoming.

Ducks and Mergansers

Population Surveys

Forecasts of fall duck flights are based on trends in duck breeding populations and water conditions on breeding grounds throughout the traditional survey areas in the Northern US and Canada. Due to the COVID-19 pandemic and associated concerns, the Breeding Waterfowl Population and Habitat Survey (BPOP) was not conducted in 2020 and 2021.

A midwinter waterfowl survey is conducted during early January. The number of ducks present in Wyoming is highly influenced by weather conditions and varies substantially from year to year. The mid-winter duck count in the Central Flyway portion of Wyoming was 52% below the long-term average in 2021 (Table 1).

2020-2021 Harvest

In the 2020 season, the Department estimated 42,870 ducks were harvested in Wyoming (Tables 2 and 3). It should be noted that the 2020-2021 state harvest survey experienced issues that may have reduced its accuracy and results for all species should be interpreted with caution. Since the early 2000s, trends in Wyoming duck harvest have not correlated well with the increasing duck population, possibly due to severe drought that prevailed throughout much of that period. Waterfowl management areas in Wyoming are depicted in Fig. 1.

Mallards are the most prevalent species harvested in Wyoming (Raftovich et al., 2021). American wigeon, blue-winged teal, green-winged teal, and gadwall are also well represented. Harvest estimates derived from the USFWS's Harvest Information Program (HIP) have consistently deviated from the Department's estimates. These data can be found in the report "Migratory bird hunting activity and harvest during the 2019-20 and 2020-21 hunting seasons" (Raftovich et al., 2021) on the USFWS website. Presently, HIP estimates do not distinguish flyway-specific duck harvest in Wyoming. Historic season dates are summarized in Table 18.

Recommendations

1. Continue to support and participate in the Flyway system of waterfowl management.
2. Continue to support objectives of the Adaptive Harvest Management (AHM) program and the North American Waterfowl Management Plan.
3. Work with Department personnel, joint ventures, the Wyoming Bird Habitat Conservation Partnership, Ducks Unlimited, and other interests to identify and develop wetland habitat projects designed to increase local duck production, hold more birds in the spring and fall, and provide additional harvest opportunity.

4. Increase public access within key waterfowl harvest areas statewide.
5. Provide technical consultation to recommend and implement wetland management practices that attract and hold additional waterfowl on Commission-owned WHMAs.
6. Provide biological information when requested and make recommendations to the U.S. Fish and Wildlife Service regarding the development and eventual management of refuge lands.
7. Support duck banding efforts in both the Central and Pacific Flyways.
8. Engage in state and regional research efforts to inform migratory game bird management and wetland habitat conservation.
9. Review and critique federal policies and regulations affecting waterfowl management in Wyoming.

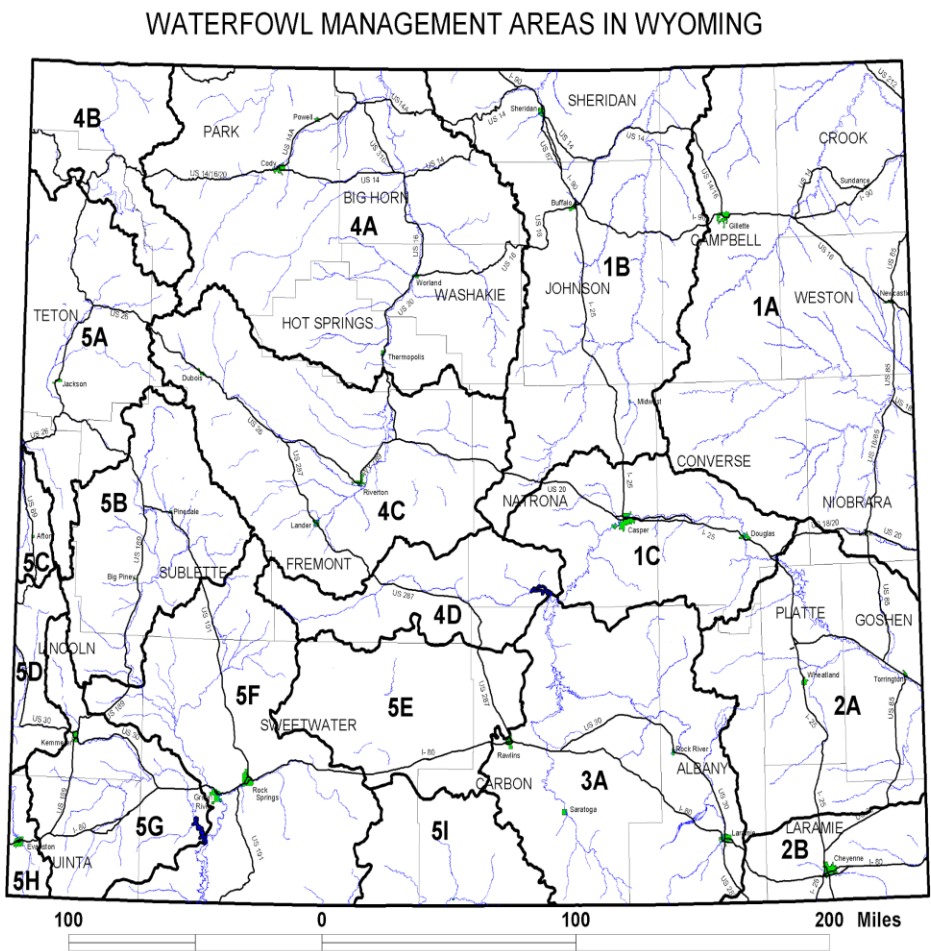


Fig. 1. Waterfowl management areas in Wyoming.

Table 1. Changes in ducks and mergansers counted during the mid-winter survey in Wyoming, 2020 to 2021.

Species	2021	2020	Percent Change from 2020	LTA ^a	Percent Change from LTA
Mallard	28,038	21,923	+28	51,827	-46
Gadwall	40	3	+1233	805	-95
American wigeon	12	15	-20	913	-99
Green-winged teal	241	63	+283	407	-41
Northern shoveler	0	0	-	12	-
Northern pintail	0	0	-	160	-
Wood duck	0	0	-	18	-
Redhead	0	0	-	12	-
Canvasback	0	0	-	0	-
Scaup	0	0	-	23	-
Ringneck	0	0	-	88	-
Goldeneye	2,881	3,588	-20	7,443	-61
Bufflehead	0	0	-	103	-
Ruddy duck	0	0	-	6	-
Mergansers	248	195	+27	2,245	-89
TOTAL	31,460	25,787	+22	64,960	-52

^aLong-Term Average from 1992-2020

Table 2. Duck harvest and hunter activity within waterfowl management areas in the Central Flyway of Wyoming.

Management Area			2020	2019	2018	2017	2016
Missouri/Chevenne/ Little Powder Rivers	1A	No. Hunters	139	216	149	167	201
		No. Days	623	737	434	797	708
		Harvest	946	1,324	609	1,513	1,164
Tongue/Little Big Horn /Powder Rivers	1B	No. Hunters	165	273	286	243	264
		No. Days	1,087	1,339	1,250	1,339	827
		Harvest	2,817	2,964	1,978	1,836	1,391
Central North Platte River	1C	No. Hunters	431	662	769	670	796
		No. Days	2,835	4,534	4,790	3,445	4,517
		Harvest	4,831	7,177	6,906	5,906	7,117
Lower North Platte River	2A	No. Hunters	656	1,208	1,005	1,065	946
		No. Days	3,989	5,205	4,538	4,280	4,611
		Harvest	4,541	7,248	5,191	6,867	8,250
South Platte River	2B	No. Hunters	64	166	110	55	110
		No. Days	550	998	594	236	620
		Harvest	1,262	1,770	996	380	1,404
Upper North Platte River	3A	No. Hunters	413	428	468	301	354
		No. Days	2,534	1,917	2,207	1,399	1,830
		Harvest	5,517	3,390	3,838	3,220	2,729
Big Horn River	4A	No. Hunters	642	1,140	1,155	1,061	1,133
		No. Days	3,516	6,947	7,047	6,057	6,058
		Harvest	5,803	13,200	10,316	10,165	14,291
Yellowstone River	4B	No. Hunters	37	23	8	2	20
		No. Days	148	31	28	7	20
		Harvest	370	25	20	7	25
Wind River	4C	No. Hunters	521	521	501	632	489
		No. Days	2,558	2,457	1,697	3,185	2,211
		Harvest	4,898	4,126	3,268	5,528	4,305
Sweetwater River	4D	No. Hunters	151	65	39	31	55
		No. Days	503	314	159	274	189
		Harvest	930	657	496	290	265
Total Central Flyway		No. Hunters	3,219	4,702	4,490	4,227	4,368
		No. Days	18,343	24,479	22,744	21,019	21,591
		Harvest	31,915	41,881	33,618	35,712	40,941

Source: WGF 2017-2021

Table 3. Duck harvest and hunter activity within waterfowl management areas in the Pacific Flyway of Wyoming.

Management Area			2020	2019	2018	2017	2016
Snake River	5A	No. Hunters	302	254	341	248	255
		No. Days	1,535	1,477	1,626	1,552	1,045
		Harvest	2,056	2,357	2,482	2,217	2,116
Upper Green River Basin	5B	No. Hunters	93	164	280	197	297
		No. Days	301	741	1,070	598	1,042
		Harvest	476	1,297	1,485	850	1,948
Salt River	5C	No. Hunters	64	234	194	224	224
		No. Days	416	1,996	1,594	1,705	1,317
		Harvest	502	4,308	3,425	2,776	1,829
Lower Bear River	5D	No. Hunters	87	148	104	101	175
		No. Days	284	720	395	692	998
		Harvest	492	1,751	917	1,104	2,228
Great Divide Basin	5E	No. Hunters	53	82	25	13	6
		No. Days	395	357	108	35	19
		Harvest	1,534	556	201	51	28
Lower Green River Basin	5F	No. Hunters	199	467	311	309	301
		No. Days	1,380	1,543	1,406	1,204	992
		Harvest	2,350	2,805	2,494	2,039	1,695
Ham's/Black's Fork	5G	No. Hunters	23	47	140	150	272
		No. Days	46	535	469	509	1,076
		Harvest	89	923	1,249	1,096	2,539
Upper Bear River	5H	No. Hunters	217	144	122	115	104
		No. Days	1,534	518	542	465	348
		Harvest	2,795	791	1,373	995	834
Little Snake River	5I	No. Hunters	57	53	51	41	45
		No. Days	840	133	93	151	208
		Harvest	661	517	280	252	268
Total Pacific Flyway		No. Hunters	25,074	1,593	1,568	1,398	1,679
		No. Days	42,870	8,020	7,303	6,911	7,045
		Harvest	10,955	15,305	13,906	11,380	13,485

Source: WGFD 2017-2021

Geese

Hi-Line Population of Canada Geese

Population Surveys

The range wide count of HLP Canada geese is unavailable for 2021 due to the cancellation of the BPOP survey.

State and federal agencies conduct the MWS throughout the US during the first full week in January. The purpose is to estimate the continental population and distribution of wintering waterfowl. Numbers of geese present in Wyoming during the winter period can fluctuate markedly from year to year and within a year dependent on seasonal weather and water conditions. The 2021 count was 23% lower than that of 2020, and 42% below the 5-year average (Table 4).

2020- 21 Harvest

According to the state harvest survey, during the 2020-21 hunting season, harvest of Hi-Line and CFAN geese decreased by 62% from 2019 (Table 5). Harvest fluctuations from year to year tend to be more related to weather influences on goose distribution rather than to actual changes in the total population. Historic season dates are summarized in Table 19.

During 2020-21, the standard shooting hours for dark geese were ½ hour before sunrise until sunset except within the following areas: Goshen County north of Wyoming Highway 313 and County Road 28; the portion of Platte County west of Interstate Highway 25; and the portion of Platte County south of Wyoming Highway 160 (Gray Rocks Road) and Riverview Road (Platte County Road 271). Within these defined areas, the shooting hours were ½ hour before sunrise until 1:00 p.m., except when all-day hunting was allowed October 3 through October 14, on all Saturdays and Wednesdays from November 14 through December 31, and on all Saturdays, Sundays, and Wednesdays from January 1 through the close of the dark goose season.

Rocky Mountain Population of Canada Geese

Population Surveys

Spring population surveys of the Rocky Mountain Population (RMP) of Canada geese are based on the spring waterfowl breeding survey, as well as several state surveys. This information was not available in 2020 and 2021 due to COVID-19 pandemic caused cancellations.

In January 2021, 9,705 geese were counted in the Central Flyway portion of the RMP range compared to 10,318 geese in 2020 (Table 4). Again, these counts vary markedly from year to year depending on weather conditions.

2020-21 Harvest

Early Season

Regulations governing Wyoming's early Canada goose season are summarized in Table 19. Wyoming does not offer an early Canada goose season in the Central Flyway portion of the RMP range. The justification for a September hunting season is to reduce damage problems by moving birds off private irrigated hay meadows and croplands while providing additional recreational hunting opportunities. In 2020, the early season harvest comprised 45% of the total goose harvest in the Pacific Flyway (Tables 7 and 8).

Regular Season

Canada goose harvests during the regular waterfowl hunting season are summarized in Tables 5, 6, and 8. RMP (Western) Canada geese comprise most of the harvest in the management areas that constitute the Central Flyway portion of their range, and almost all geese harvested in the Pacific Flyway. The estimated total regular season harvest of all RMP geese in both flyways was 7,389 (Table 5).

Central Flyway Arctic Nesting Canada Geese

Population Surveys

The West-tier CFAN nests on Victoria and Jenny Lind Islands and on the Canadian mainland from Queen Maud Gulf west and south to the Mackenzie River and northern Alberta. West-tier CFAN geese migrate through Wyoming each fall and spring and a small number winter in Wyoming. The 2021 MWS index across the Central Flyway was 394,068 (Dubovsky, 2021). During the 2021 MWS in Wyoming, 3,214 CFAN geese were counted (Table 4). Since 1999, ground surveys have been conducted as an alternative means to classify large and small Canada geese present in Carbon, Converse, Goshen, Natrona, and Platte counties in conjunction with the MWS.

Western Central Flyway Population of Light Geese

Population Surveys

The Western Central Flyway Population is comprised of over two-thirds lesser snow geese and nearly one third Ross' geese. These geese breed in the central and western Canadian Arctic. Large colonies are present at Queen Maude Gulf and Banks Island.

State and federal agencies conduct the mid-winter waterfowl survey during the first two weeks of January to estimate continental populations of wintering waterfowl. In January 2021, 353,681 light geese were counted throughout the U.S. portion of the Western Central Flyway population's winter range (Dubovsky, 2021). Generally, very few light geese are present in Wyoming during December and January.

2020-21 Harvest

The most recent light goose hunting regulations are summarized in Table 17. In 2020, the Department implemented the 21st consecutive year of the Light Goose Conservation Order (Table 18). Participants were required to purchase a Conservation Order Special Management Permit and complete a survey card provided with the permit. Use of electronic callers and hunting one-half hour after sunset were allowed. Light goose harvest during the Conservation Order is summarized in Table 9. Regular season harvest is summarized by federal HIP surveys (Raftovich, 2021). Very few light geese are harvested during the regular hunting season.

Recommendations

1. Continue to maintain liberal hunting seasons and bag limits.
2. Continue harvest surveys.
3. Continue the mid-winter waterfowl survey.
4. Continue ground classifications during the mid-winter waterfowl survey to estimate proportions of HLP and CFAN (large and small) Canada geese that are present.
5. Support management based on a single population of arctic-nesting, white-cheeked geese.
6. Continue the general, early Canada goose hunt in the Pacific Flyway portion of Wyoming to address local damage problems.
7. Continue to implement the Light Goose Conservation Order in Wyoming.

Table 4. Central Flyway mid-winter surveys of white-cheeked geese in Wyoming, 2017- 2021.

Population	2021	2020	2019	2018	2017	Average
Hi-line	18,270	25,787	63,932	45,426	38,851	38,453
CFAN	3,214	4,618	8,521	4,560	2,511	4,685
RMP	9,705	10,318	7,653	14,988	13,695	11,272
Total White-Cheeked Geese	31,189	40,723	80,121	64,974	55,057	54,413

Source: WGFD Unpublished Data

Table 5. Regular Season Hunter Activity and Harvest of Hi-Line, RMP, and CFAN geese in Wyoming.

Population	2020	2019	Percent Change 2019- 2020	Average 2007-2019	Percent Above/Below Average
Hi-Line & CFAN					
No. Hunters	1,725	3,465	-50	2,917	-41
No. Rec. Days	9,899	17,500	-43	15,173	-35
Harvest	7,656	19,921	-62	17,865	-57
RMP Central Flyway					
No. Hunters	988	1,494	-34	1,271	-22
No. Rec. Days	5,307	10,267	-48	6,851	-23
Harvest	5,342	19,031	-72	8,915	-40
RMP Pacific Flyway					
No. Hunters	484	870	-44	1,165	-58
No. Rec. Days	2,712	4,072	-33	4,475	-39
Harvest	2,047	2,822	-27	2,533	-19
Total Harvest					
No. Hunters	3,197	5,829	-45	5,353	-40
No. Rec. Days	17,918	31,839	-44	26,499	-32
Harvest	15,045	41,774	-64	29,312	-49
Birds/Hunter	4.7	7.2	-34	5.5	-14

Source: WGFD 2008-2021

Table 6. White-cheeked goose harvest in the Central Flyway of Wyoming.

Management Area		2020	2019	Percent Change 2019- 2020	Average 2007- 2019	Percent Above/Below Average
Missouri/Cheyenne/ Little Powder Rivers	1A No. Hunters	95	200	-53	187	-49
	No. Rec. Days	305	554	-45	671	-55
	Harvest	379	1,028	-63	1,034	-63
Tongue/Little Big Horn /Powder Rivers	1B No. Hunters	76	202	-62	167	-54
	No. Rec. Days	602	1,144	-47	634	-5
	Harvest	867	928	-7	513	+69
Central North Platte River	1C No. Hunters	332	538	-38	527	-37
	No. Rec. Days	1,625	3,353	-52	2,956	-45
	Harvest	813	2,346	-65	2,108	-61
Lower North Platte River	2A No. Hunters	988	2,220	-55	1,810	-45
	No. Rec. Days	6,394	11,082	-42	9,855	-35
	Harvest	4,504	14,817	-70	13,365	-66
South Platte River	2B No. Hunters	41	117	-65	81	-49
	No. Rec. Days	286	524	-45	351	-18
	Harvest	449	566	-21	389	+15
Upper North Platte River	3A No. Hunters	193	188	+3	146	+32
	No. Rec. Days	687	843	-19	707	-3
	Harvest	644	236	+173	457	+41
Big Horn River	4A No. Hunters	494	1,130	-56	873	-43
	No. Rec. Days	3,426	8,558	-60	5,160	-34
	Harvest	2,577	17,026	-85	6,928	-63
Yellowstone River	4B No. Hunters	37	11	+236	19	+91
	No. Rec. Days	111	34	+226	62	+80
	Harvest	37	23	+61	40	-6
Wind River	4C No. Hunters	367	335	+10	366	+0
	No. Rec. Days	1,520	1,503	+1	1,588	-4
	Harvest	2,678	1,928	+39	1,891	+42
Sweetwater River	4D No. Hunters	90	18	+400	13	+615
	No. Rec. Days	250	172	+45	42	+493
	Harvest	50	54	-7	56	-11

Source: WGFD 2008-2021

Table 7. Hunter activity and harvest of white-cheeked geese during the early season in the Pacific Flyway of Wyoming.

Population			2020	2019	Percent Change 2019-2020	Average 2007-2019	Percent Above/Below
Snake River	5A	No. Hunters	106	104	-2	81	-31
		Hunter Days	181	200	+10	172	-5
		Harvest	87	426	+80	208	+58
Upper Green River	5B	No. Hunters	52	71	+27	45	-15
		Hunter Days	144	153	+6	97	-49
		Harvest	354	194	-82	92	-285
Salt River	5C	No. Hunters	92	74	-24	71	-29
		Hunter Days	314	188	-67	177	-77
		Harvest	429	223	-92	188	-129
Lower Bear River	5D	No. Hunters	64	37	-73	51	-25
		Hunter Days	152	82	-85	111	-36
		Harvest	62	41	-51	99	+38
Great Divide Basin	5E	No. Hunters	0	0	-	2	-
		Hunter Days	0	0	-	3	-
		Harvest	0	0	-	3	-
Lower Green River	5F	No. Hunters	157	158	+1	140	-12
		Hunter Days	293	298	+2	287	-2
		Harvest	535	381	-40	291	-84
Ham's Fork-Black's For	5G	No. Hunters	7	47	+85	68	+90
		Hunter Days	29	113	+74	147	+80
		Harvest	59	211	+72	132	+55
Upper Bear River	5H	No. Hunters	45	32	-41	28	-60
		Hunter Days	92	49	-88	52	-76
		Harvest	140	84	-67	49	-186
Little Snake River	5I	No. Hunters	0	0	-	8	-
		Hunter Days	0	0	-	14	-
		Harvest	0	0	-	14	-
Total	No. Hunters	523	523	0	496	-6	
	Hunter Days	1205	1083	-11	1060	-14	
	Harvest	1666	1560	-7	1077	-55	
	Birds/Hunter	3.19	2.98	-7	2.2	-46	

Source: WGFD 2008-2021

Table 8. White-cheeked goose harvest of during the regular season in the Pacific Flyway of Wyoming

Management Area		2020	2019	Percent Change 2019- 2020	Average 2007- 2019	Percent Above/Below Average	
Snake River	5A	No. Hunters	122	116	+5	155	-21
		No. Rec. Days	610	460	+33	544	+12
		Harvest	605	378	+60	397	+53
Upper Green River Basin	5B	No. Hunters	12	57	-79	122	-90
		No. Rec. Days	21	252	-92	420	-95
		Harvest	4	206	-98	217	-98
Salt River	5C	No. Hunters	16	152	-89	156	-90
		No. Rec. Days	132	1,236	-89	783	-83
		Harvest	0	996	-100	431	-100
Lower Bear River	5D	No. Hunters	43	81	-47	106	-59
		No. Rec. Days	173	292	-41	385	-55
		Harvest	121	105	+15	254	-52
Great Divide Basin	5E	No. Hunters	18	46	-61	10	+78
		No. Rec. Days	179	117	+53	29	+525
		Harvest	207	182	+14	26	+688
Lower Green River Basin	5F	No. Hunters	99	224	-56	335	-70
		No. Rec. Days	730	933	-22	1322	-45
		Harvest	863	598	+44	694	+24
Ham's/Black's Fork	5G	No. Hunters	16	18	-11	158	-90
		No. Rec. Days	23	118	-81	597	-96
		Harvest	4	9	-56	312	-99
Upper Bear River	5H	No. Hunters	113	156	-28	102	+11
		No. Rec. Days	498	613	-19	352	+41
		Harvest	134	348	-61	161	-17
Little Snake River	5I	No. Hunters	45	20	+125	20	+120
		No. Rec. Days	346	51	+578	43	+711
		Harvest	109	0	-	41	+165

Source: WGFD 2008-2021

Table 9. Harvest and hunter activity for the Wyoming light goose conservation order 2017-2021.

	2021	2020	2019	2018	2017	Average
Permits Sold	175	189	98	211	178	170
Total Survey Respondents	51	77	44	111	94	75
% Responded	29.0	41.0	45.0	53.0	53.0	44.2
Active Hunters	134	140	65	169	135	129
Total Days Hunted	471	407	189	527	438	406
Days/Hunter	4	7	7	6	3.2	5.4
Geese Harvested	1261	805	149	1023	1066	861
Geese Knocked Down, but not retrieved	51	37	20	17	42	33
Total Harvest	1312	842	169	1040	1108	894
Harvest/Hunter	10	6	3	6	8.2	6.6

Source: 2016-2021

Sandhill Cranes

Rocky Mountain Population of Sandhill Cranes

Population Surveys

The principal index used to monitor Rocky Mountain Population (RMP) sandhill cranes is derived from a multi-state cooperative survey of pre-migration staging areas conducted during September. The 2020 count totaled 25,636 cranes (Table 10). Annual production is estimated by classifying the proportion of juveniles within the crane population staging in the San Luis Valley, Colorado in October. The recruitment rate during the 2020 survey was 9.7% (Table 10).

September crane surveys conducted on established and experimental survey areas in Wyoming are summarized in Table 11. In 2020, 6,680 cranes were counted in RMP staging areas of central and western Wyoming.

In the Pacific Flyway portion of Wyoming, crane counts are conducted in mid-September after the crane hunting season has ended. Informal, late August counts of cranes flying off roosts suggest crane numbers may be higher just prior to hunts in the upper Salt River and the Big Sandy/Eden Reservoirs. Therefore, the number of cranes counted during pre-migration staging

surveys in the Salt River, Bear River, Uinta, and Farson hunt areas may not be representative of cranes actually present at the start of the crane hunt.

Early hunting seasons are designed to reduce crop depredation by shifting the distribution of cranes away from agricultural fields. The limited harvest has minimal impact on the breeding population of cranes in Wyoming, but crane and concurrent early goose hunts in the Pacific Flyway portion of Wyoming may account for some changes in distribution (Rod Drewien, pers. com., Lockman et al. 1987).

The distribution of staging cranes has expanded in recent years. An area near Worland was added to the Bighorn Basin survey area in 2007. There is also a substantial influx of cranes, presumably from Montana, after surveys are completed in both the Wind River Basin and Bighorn Basin.

2020 Harvest

The Pacific and Central Flyway Management Plan for the Rocky Mountain Population of Sandhill Cranes allows regulated harvest of cranes when the population index exceeds 15,000 based on an average of the 3 most recent reliable surveys conducted on the fall pre-migration staging areas. A prescriptive model is used to allocate annual harvest among states. Wyoming's 2020 harvest allocation stayed static at 168 cranes. The number of permits issued has been approximately twice the allowable harvest allocation based on our experience that on average, 50% of permit holders will harvest a crane.

During 2020, 114 cranes were harvested in the seven Wyoming hunt areas (Table 12). Permit success ranged from 12% in Area 4 to 45% in Areas 1 and 3. Hunter success averaged 53% across all hunt areas. Harvest rates fluctuate from year to year in all 7 hunt areas. Changes in harvest rates appear to be influenced by permit numbers and crane availability in any given year. Shifts in crane distribution are likely responsible for some fluctuations in harvest and hunter success. Land use changes including conversions from agriculture to subdivisions, changes in grain crop type and distribution, and reduced hunter access also appear to impact hunter success in some hunt areas, particularly in the Bear River and Star Valley hunt areas. RMP crane hunting seasons are summarized in Table 17.

Mid-Continent Population of Sandhill Cranes

Population Surveys

The Mid-Continent Population (MCP) of sandhill cranes is comprised predominantly of lesser sandhill cranes (*Grus canadensis canadensis*), and includes components of the greater subspecies (*G. c. tabida*). Since 1982, the MCP remained comparatively stable for many years, but has increased in recent years. The photo-corrected, 3-year average for 2021 was 964,195 cranes, which is above the established population-objective range of 350,000- 475,000 cranes.

Cranes affiliated with the Mid-Continent Population do not nest in Wyoming. Most of the migration bypasses Wyoming to the east. Significant spring and fall staging has been documented in Wyoming in recent years. The past few years, 7,000-15,000 cranes have stopped to rest during daylight hours at Keyhole Reservoir around the 10th to 30th of October. In March of 2021, 4,512 cranes were counted on and around Table Mountain WHMA (Table 13).

2020 Harvest

Recent harvest statistics for mid-continent sandhill cranes are summarized in Table 14. During the 2020 season, 182 MCP sandhill cranes were harvested in Wyoming. As mentioned above, most MCP cranes pass east of Wyoming. Those that migrate through Wyoming do so over the course of a few days and do not stage in predictable concentrations. The timing of migration also varies from year to year. Consequently, most hunting is opportunistic, though permit application and harvest numbers have been increasing in recent years.

Recommendations

1. Continue the RMP harvest survey to estimate harvest and hunter activity.
2. Continue the coordinated spring survey of mid-continent sandhill cranes staging at Table Mountain WHMA.
3. Continue to monitor changes in RMP crane distribution.
4. Continue to monitor the success rate of RMP crane hunters to assure Wyoming's harvest allocation is not exceeded.
5. Continue to survey cranes on fall pre-migration staging areas.

Table 10. Population and allowable harvest of RMP Cranes.

Year	September Total	3 Year Population Average	Recruitment Rate	3 Year Recruitment Average	Total Allowable Harvest	Wyoming Allowable Harvest
1999	19,501	18,546	8.4	9.8	966	71
2000	19,990	19,198	6.7	8.8	1,128	95
2001	16,559	18,683	5.8	7.0	1,163	110
2002	18,803	18,451	5.2	5.9	829	79
2003	19,523	18,295	7.1	6.0	668	67
2004	18,510	18,945	9.4	7.2	660	66
2005	20,865	19,633	10.8	9.1	910	86
2006	Cancelled	19,633	9.9	10.0	1,320	123
2007	22,822	20,732	8.3	9.7	1,456	136
2008	21,156	21,614	9.1	9.1	1,744	165
2009	20,321	21,433	11.5	9.6	1,940	188
2010	21,064	20,847	8.4	9.6	1,985	193
2011	17,494	19,626	6.6	8.8	1,780	175
2012	15,417	17,992	7.8	7.6	1,275	123
2013	20,360	17,757	6.6	7.0	774	80
2014	19,668	18,482	10.3	8.2	677	70
2015	24,330	21,453	11.3	9.4	937	94
2016	22,264	22,087	8.8	10.2	1,946	188
2017	19,592	22,062	7.9	9.4	2,362	241
2018	21,801	21,219	7.9	8.2	2,168	211
2019	21,290	20,894	8.9	8.2	1,628	169
2020	25,636	22,909	9.7	8.8	1,536	168
2021	23,963	23,630	8.7	9.1	2,378	289

Table 11. Pre-migration staging areas and associated September estimates.

Survey Area	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
(1) Baggs	9	13	6	21	4	0	0	5	0	0	0	2	0	2	NS	5	0	4	3
(2) Bear River Valley	741	369	1046	148	909	692	163	379	490	539	488	153	264	510	NS	96	149	233	246
(3) Greybull River/Otto	36	123	58	77	6	109	99	197	166	185	454	283	481	374	NS	437	179	439	286
(4) Shoshone River/Ralston	482	172	228	294	303	109	384	366	446	341	470	389	196	386	NS	938	680	742	414
(5) Worland	124	206	28	50	85	134	174	113	31	96	322	215	201	24					
(6) Big Piney-Daniel	28	32	2	167	57	114	19	239	117	14	76	91	138	46	NS	3	58	174	40
(7) Bridger Valley	152	70	150	90	32	28	18	22	103	105	75	51	42	116	NS	273	43	125	33
(8) Lonetree	0	0	0	2	3	0	4	0	0	0	0	NS	NS	50					
(9) Farson	2,285	1586	1506	1578	1864	2087	1295	1354	1665	988	1297	1463	1957	1431	NS	1382	1256	813	1051
(10) Hams Fork	39	2	0	35	0	2	0	35	15	101	18	90	51	149	NS	161	24	4	0
(11) Pinedale-Cora-Boulder	2	2	0	0	0	0	0	0	3	0	2	45	0	8	NS	35	2	2	2
(12)Seedskaadee NWR	NS	NS	NS	NS	NS	NS	NS	NS	0	6	4	4	0	0	NS	0	3	2	6
(13) Saratoga	2	12	62	2	2	3	0	12	69	60	26	5	11	0	NS	2	85	193	0
(14) Jackson Hole (Elk	48	148	78	72	68	33	150	279	23	69	132	220	118	64	NS	40	84	117	121
(15) Star Valley	212	305	579	166	329	192	467	223	182	198	127	257	234	314	NS	191	234	316	304
(16) Hidden Valley	995	44	40	11	25	0	122	56	112	88	40	19	3	0	NS	43	119	39	58
(17) Ocean Lake	29	9	101	22	35	0	48	228	67	73	14	200	25	391	NS	96	113	229	433
(18) Riverview Valley	397	137	56	66	153	93	60	80	98	115	181	126	105	42	NS	209	43	14	41
Natrona County	207	413	238	104	479	359	452	139											
Johnson County	144	165	359	440	150	35	518	235											
Sheridan County	748	558	564	380	375	83	430	150											
Total	6,680	4366	5101	3725	4879	3596	3003	3588	3587	2978	3726	3613	3826	3907	0	3911	3072	3446	3038

* Natrona, Johnson, and Sheridan Counties not included in the total count until 2016.

Table 12. Harvest statistics from RMP sandhill crane hunts in Wyoming 2004-2020.

Hunt Area	Year																
	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
1 Bear River																	
No. Hunters	14	12	18	16	19	16	7	12	23	25	20	24	27	21	18	24	15
Hunter Days	26	25	41	34	58	36	13	30	48	46	33	46	51	44	27	47	29
Days/Hunter	1.9	2.1	2.3	2.1	3.1	2.3	2	2.5	2.1	2.1	1.7	1.9	1.9	2.1	1.5	2	1.9
Harvest	9	7	9	7	4	10	5	5	13	9	11	18	17	9	12	14	12
Cranes/Hunter	0.64	0.58	0.5	0.44	0.21	0.625	0.72	0.42	0.57	0.41	0.55	0.75	0.63	0.43	0.67	0.58	0.76
2 Salt River																	
No. Hunters	15	17	25	27	20	16	10	7	13	25	26	22	22	11	30	23	15
Hunter Days	36	37	45	53	50	37	20	21	36	61	109	54	45	29	87	59	48
Days/Hunter	2.4	2.2	2.3	2	2.5	2.4	2	3	2.8	2.4	4.2	2.5	2.1	2.6	3	2.6	3.3
Harvest	5	8	8	17	12	11	7	3	10	13	6	8	10	8	12	10	7
Cranes/Hunter	0.33	0.47	0.32	0.63	0.60	0.6875	0.7	0.43	0.77	0.52	0.23	0.36	0.45	0.7	0.42	0.43	0.46
3 Eden/Farson																	
No. Hunters	64	65	76	85	60	33	30	38	49	86	85	83	69	54	73	43	35
Hunter Days	102	114	146	186	99	51	54	64	76	171	151	152	137	103	135	82	65
Days/Hunter	1.6	1.8	1.9	2.2	1.7	1.5	1.8	1.7	1.5	2	1.8	1.8	2	1.9	1.9	1.9	1.9
Harvest	39	42	59	52	48	29	19	20	39	48	63	46	37	42	58	31	24
Cranes/Hunter	0.61	0.65	0.78	0.61	0.80	0.88	0.63	0.53	0.8	0.56	0.74	0.55	0.54	0.77	0.79	0.72	0.68
4 Riverton																	
No. Hunters	37	57	85	75	83	36	47	41	59	71	91	73	70	65	83	48	55
Hunter Days	107	132	256	187	192	104	106	98	149	166	196	133	121	118	155	90	91
Days/Hunter	2.9	2.3	3	2.5	2.3	2.9	2.2	2.4	2.5	2.3	2.2	1.8	1.7	1.8	1.9	1.9	1.6
Harvest	28	35	32	57	48	20	35	16	30	42	46	58	45	45	55	28	37
Cranes/Hunter	0.76	0.61	0.38	0.76	0.58	0.56	0.73	0.39	0.51	0.59	0.51	0.79	0.64	0.69	0.66	0.58	0.66
5 Uinta																	
No. Hunters	6	5	10	15	11	6	6	3	10	11	10	8	10				
Hunter Days	14	8	16	39	26	22	11	9	47	37	13	22	20				
Days/Hunter	2.3	1.6	1.6	2.6	2.3	4	1.8	3	4.7	3.4	1.3	2.8	2				
Harvest	4	3	8	11	9	2	4	0	0	7	3	2	3				
Cranes/Hunter	0.67	0.60	0.80	0.73	0.82	0.33	0.67	0	0	0.64	0.3	0.25	0.3				
6 Big Horn																	
No. Hunters	68	67	98	75	78	57	44	46	62	82	96	93	83	62	101	58	54
Hunter Days	260	164	282	238	214	125	73	119	165	228	192	217	191	124	276	152	110
Days/Hunter	3.8	2.4	2.9	3.2	2.8	2.2	1.7	2.6	2.7	2.8	2	2.3	2.3	2	2.6	2.6	2.1
Harvest	27	39	63	34	34	31	33	31	42	42	53	63	50	35	57	33	44
Cranes/Hunter	0.40	0.58	0.64	0.45	0.44	0.54	0.75	0.67	0.68	0.51	0.55	0.68	0.6	0.56	0.56	0.57	0.82
8 N/J/S																	
No. Hunters	8	11	17	25	13												
Hunter Days	23	50	64	77	27												
Days/Hunter	2.9	4.5	3.8	3.1	2.2												
Harvest	2	8	10	15	4												
Cranes/Hunter	0.25	0.73	0.59	0.60	0.31												
Total																	
Harvest Allocation	168	169	211	240	188	94	74	87	135	165	197	192	165	131	209	144	104
Permits Issued	306	306	410	460	381	216	163	180	270	352	395	387	330	266	401	254	206
No. Hunters	212	234	329	318	283	164	144	147	216	297	328	303	281	213	305	196	174
Hunter Days	568	530	850	814	666	375	276	342	521	709	695	624	562	418	687	430	343
Days/Hunter	2.7	2.3	2.6	2.6	2.4	2.3	1.9	2.3	2.4	2.4	2.1	2.1	2	2	2.3	2.2	2
Harvest	114	142	136	193	158	104	101	74	134	161	182	195	162	138	194	116	124
Cranes/Hunter	0.54	0.61	0.41	0.61	0.56	0.63	0.70	0.41	0.62	0.54	0.55	0.64	0.58	0.65	0.64	0.59	0.71

Table 13. Coordinated spring Mid-continent sandhill crane survey counts, WY.

	2021	2020	2019	2018	2017	Average
Table Mountain WHMA	4,512	4,500	4,140	3,475	3,255	3,976

Source: WGFD Unpublished Data

Table 14. Harvest Statistics of Mid-continent sandhill cranes 1975-2020.

Year	Permits Issued	Active Hunters	Retrieved Harvest	Birds / Hunter
1975-1979 Mean	47	20	8	0.4
1980-1989 Mean	39	11	6	0.5
1990-1999 Mean	38	8	5	0.6
2000	58	11	10	0.9
2001	72	13	7	0.5
2002	54	15	22	1.5
2003	50	10	7	0.7
2004	61	16	4	0.3
2005	68	24	16	0.7
2006	78	25	20	0.8
2007	58	19	20	1.1
2008	73	24	24	1.0
2009	62	67	8	0.1
2010	86	29	25	0.9
2011	86	41	20	0.5
2012	102	39	41	1.1
2013	106	35	41	1.2
2014	433	70	37	0.5
2015	454	78	28	0.4
2016	569	96	83	0.9
2017	646	305	263	0.9
2018	392	94	33	0.4
2019	714	138	82	0.6
2020	619	177	182	1.0

Source: Dubovsky 2021

Other Webless Migratory Game Birds

Mourning Doves

2020-21 Harvest

Dove harvest appeared to decrease in 2020. We continue to rely on harvest estimates derived from the Department-run harvest survey, as HIP-derived estimates continue to have excessively wide confidence intervals. Recent dove hunting seasons are listed in Table 17.

Banding

In 2008, the National Mourning Dove Task Force recommended that all states not currently banding mourning doves begin a banding program. Regional banding data from within each management unit provides specific population information to support implementation of both the Mourning Dove National Strategic Harvest Management Plan and relevant interim harvest strategies. In 2004, the USFWS Service Regulations Committee (SRC) required that a mourning dove harvest management strategy be developed for each management unit. Combined banding goals for the Wyoming portions of 4 Bird Conservation Regions (BCRs) are 191 after hatch year (AHY) and 202 hatch year (HY) (393 total) mourning doves each year beginning in 2009.

In 2021, mourning doves were trapped and banded at 11 locations across the state. Personnel banded 566 mourning doves (Table 16).

Wilson's Snipe

2020 Harvest

Snipe hunting and harvest in Wyoming have varied slightly over the past decade. The HIP harvest estimate for Wyoming in 2020 was 300 (Raftovich et al., 2021). Confidence intervals about HIP-derived estimates continue to be excessively wide. Recent rail hunting seasons are listed in Table 17.

Sora and Virginia Rail

2020 Harvest

Rail harvest and hunting in Wyoming remained low during the past 11 years. The HIP harvest estimate for Wyoming in 2020 was 0 (Raftovich et al., 2021). Confidence intervals around HIP-derived estimates continue to be excessively wide. Recent rail hunting seasons are listed in Table 17.

American Coot

2020-21 Harvest

For the most part, American coots are not actively hunted in Wyoming. Harvest has been nominal over the past 11 years. The 2020 HIP harvest estimate was 100 (Raftovich et al., 2021). Confidence intervals around HIP-derived estimates also continue to be excessively wide. Recent American coot hunting seasons are listed in Table 18.

Recommendations

1. Maintain hunting opportunity for all species of webless migratory game birds.
2. Continue to participate in dove banding statewide, focus on meeting banding goals while not banding excessively at any specific location.
3. Continue to support wetlands projects that provide habitat for rails and common snipe.

Table 15. Statewide mourning dove harvest in Wyoming.

Year	Hunters	Days	Days / Hunter	Harvest	Birds / Hunter
2004	2,471	7,645	3.09	32,142	13.01
2005	3,194	9,080	2.84	44,280	13.86
2006	2,461	7,141	2.90	32,807	13.33
2007	2,351	8,256	3.51	36,670	15.60
2008	2,315	7,482	3.23	29,994	12.96
2009	1,949	5,598	2.87	22,278	11.43
2010	2,528	8,096	3.20	28,906	11.43
2011	2,291	6,735	2.94	23,607	10.30
2012	2,263	7,260	3.21	28,402	12.55
2013	2,310	6,730	2.91	23,485	10.17
2014	2,235	6,857	3.07	27,791	12.43
2015	2,095	6,931	3.31	24,873	11.87
2016	2,255	6,758	3.00	23,920	10.61
2017	1,903	5,201	2.73	18,242	9.59
2018	2,119	6,637	3.13	20,420	9.64
2019	2,239	8,167	3.65	25,482	11.38
2020	1,023	3,656	3.57	9,526	9.31
Average	2,235	6,955	3.10	26,637	11.89

Source: WGFD 2005-2021

Table 16. Mourning doves banded by Department personnel to date.

Band Date	Location	Age			TOTAL
		UNK	HY	AHY	
2007	Casper	0	1	4	5
2008	Casper	1	21	24	46
2012	Cheyenne	0	11	25	36
2012	Downar	1	15	17	33
2013	Casper	0	1	2	3
2013	Cheyenne	57	34	35	126
2013	Downar	1	0	3	4
2013	Speas	3	4	9	16
2014	Casper	0	90	89	179
2014	Cheyenne	1	27	87	115
2014	Downar	3	14	34	51
2015	Casper	0	27	117	144
2015	Cheyenne	3	29	55	87
2016	Savery	0	1	18	19
2016	Casper	0	67	127	194
2016	Springer WHMA	0	1	13	14
2016	Cheyenne	6	57	176	239
2017	Rawlins	0	17	39	56
2017	Seedskadee NWR	0	32	129	161
2017	Casper	1	22	86	109
2017	Springer WHMA	0	2	15	17
2017	Cheyenne	13	63	181	257
2018	Baggs	0	7	16	23
2018	Cody	0	30	42	72
2018	Lander	0	0	1	1
2018	Rawlins	0	12	47	59
2018	Casper	0	71	146	217
2018	Glenrock	0	0	1	1
2018	Newcastle	0	10	67	77
2018	Wheatland	0	29	27	56
2018	Springer WHMA	0	8	22	30
2018	Cheyenne	18	39	179	236

2019	Cody	0	8	18	26
2019	Greybull	0	0	10	10
2019	Lander	0	7	16	23
2019	Opal	0	0	4	4
2019	Saratoga	0	10	40	50
2019	Seedskafee NWR	1	13	66	80
2019	Casper	0	115	227	342
2019	Dayton	0	1	19	20
2019	Glenrock	0	4	5	9
2019	Newcastle	0	9	53	62
2019	Wheatland	0	6	12	18
2019	Springer WHMA	1	3	1	5
2019	Cheyenne	1	45	46	92
2020	Baggs	0	50	11	61
2020	Cody	0	3	7	10
2020	Greybull	0	0	17	17
2020	Lander	2	7	26	35
2020	Opal	0	0	0	0
2020	Saratoga		4	36	40
2020	Seedskafee	14	25	41	80
2020	Casper	27	44	45	116
2020	Dayton	0	1	20	21
2020	Glenrock	0	11	13	24
2020	Newcastle	0	14	34	48
2020	Wheatland	0	4	1	5
2020	Cheyenne HQ	4	15	67	86
2021	Baggs	0	34	57	91
2021	Cody	0	0	0	0
2021	Lander	10	6	18	34
2021	Saratoga	0	12	108	120
2021	Seedskafee	0	20	120	140
2021	Casper	4	0	2	6
2021	Dayton	0	0	0	0
2021	Glenrock	0	0	0	0
2021	Newcastle	0	22	48	70
2021	Cheyenne HQ	0	15	43	58
2021	Sybilie	0	4	43	47
TOTAL		102	980	2606	3688

Table 17. Wilson's snipe, sandhill crane, mourning dove, and rail hunting seasons in Wyoming, 1996-2020

Year	Common Snipe	RMP Sandhill Crane							Area 8 Natrona, Johnson, Sheridan	Mourning Dove	Sora and Virginia Rail
		MCP Sandhill Crane Area 7	Area 1 Bear/Ham's Fork	Area 2 Salt River	Area 3 Farson/Eden	Area 4 Riverton Area	Area 5 Uinta	Area 6 Big Horn Basin			
1996	Sep. 14 - Dec. 15	Sept. 14 - Nov. 10	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 21 - Sep. 27	-	Sep. 21 - Sep. 23	Sep. 1 - Oct. 20	Sep. 13 - Nov. 16	
1997	Sep. 13 - Dec. 14	Sep. 13 - Nov. 9	Sep. 1 - Sep. 7	Sep. 1 - Sep. 7	Sep. 1 - Sep. 7	Sep. 20 - Sep. 28	-	Sep. 20 - Sep. 22	Sep. 1 - Oct. 19	Sep. 14 - Nov. 17	
1998	Sep. 12 - Dec. 13	Sep. 12 - Nov. 8	Sep. 1 - Sep. 7	Sep. 1 - Sep. 7	Sep. 1 - Sep. 7	Sep. 19 - Sep. 30	-	Sep. 19 - Sep. 30	Sep. 1 - Oct. 30	Sep. 15 - Nov. 15	
1999	Sep. 1 - Dec. 2	Sep. 11 - Nov. 7	Sep. 1 - Sep. 14	Sep. 1 - Sep. 7	Sep. 1 - Sep. 7	Sep. 18 - Sep. 29	-	Sep. 18 - Sep. 29	Sep. 1 - Oct. 30	Sep. 1 - Nov. 4	
2000	Sep. 1 - Dec. 16	Sep. 9 - Nov. 5	Sep. 1 - Sep. 14	Sep. 1 - Sep. 7	Sep. 1 - Sep. 7	Sep. 16 - Oct. 6	-	Sep. 16 - Oct. 1	Sep. 1 - Oct. 30	Sep. 1 - Nov. 9	
2001	Sep. 1 - Dec. 16	Sep. 15 - Nov. 11	Sep. 1 - Sep. 14	Sep. 1 - Sep. 7	Sep. 1 - Sep. 7	Sep. 15 - Oct. 5	-	Sep. 15 - Sep. 30	Sep. 1 - Oct. 30	Sep. 1 - Nov. 9	
2002	Sep. 1 - Dec. 16	Sep. 14 - Nov. 10	Sep. 1 - Sep. 14	Sep. 1 - Sep. 7	Sep. 1 - Sep. 7	Sep. 21 - Oct. 11	-	Sep. 21 - Oct. 6	Sep. 1 - Oct. 30	Sep. 1 - Nov. 9	
2003	Sep. 1 - Dec. 16	Sep. 13 - Nov. 9	Sep. 1 - Sep. 14	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 20 - Oct. 20	-	Sep. 20 - Oct. 5	Sep. 1 - Oct. 30	Sep. 1 - Nov. 9	
2004	Sep. 1 - Dec. 16	Sep. 18 - Nov. 14	Sep. 1 - Sep. 14	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 18 - Oct. 8	-	Sep. 18 - Oct. 8	Sep. 1 - Oct. 30	Sep. 1 - Nov. 9	
2005	Sep. 1 - Dec. 16	Sep. 17 - Nov. 13	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 17 - Oct. 7	-	Sep. 17 - Oct. 2	Sep. 1 - Oct. 30	Sep. 1 - Nov. 9	
2006	Sep. 1 - Dec. 16	Sep. 16 - Nov. 12	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 16 - Oct. 6	-	Sep. 16 - Oct. 1	Sep. 1 - Oct. 30	Sep. 1 - Nov. 9	
2007	Sep. 1 - Dec. 16	Sep. 15 - Nov. 11	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 15 - Oct. 5	-	Sep. 15 - Sep. 30	Sep. 1 - Oct. 30	Sep. 1 - Nov. 9	
2008	Sep. 1 - Dec. 16	Sep. 13 - Nov. 9	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 13 - Oct. 3	Sep. 1 - Sep. 8	Sep. 13 - Sep. 28	Sep. 1 - Oct. 30	Sep. 1 - Nov. 9	
2009	Sep. 1 - Dec. 16	Sep. 19 - Nov. 15	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 19 - Oct. 9	Sep. 1 - Sep. 8	Sep. 19 - Oct. 4	Sep. 1 - Oct. 30	Sep. 1 - Nov. 9	
2010	Sep. 1 - Dec. 16	Sep. 18 - Nov. 14	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 18 - Oct. 10	Sep. 1 - Sep. 8	Sep. 18 - Oct. 3	Sep. 1 - Nov. 9	Sep. 1 - Nov. 9	
2011	Sep. 1 - Dec. 16	Sep. 17 - Nov. 13	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 17 - Oct. 9	Sep. 1 - Sep. 8	Sep. 17 - Oct. 2	Sep. 1 - Nov. 9	Sep. 1 - Nov. 9	
2012	Sep. 1 - Dec. 16	Sep. 15 - Nov. 11	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 15 - Oct. 7	Sep. 1 - Sep. 8	Sep. 15 - Oct. 7	Sep. 1 - Nov. 9	Sep. 1 - Nov. 9	
2013	Sep. 1 - Dec. 16	Sep. 14 - Nov. 10	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 14 - Oct. 6	Sep. 1 - Sep. 8	Sep. 14 - Oct. 6	Sep. 1 - Nov. 9	Sep. 1 - Nov. 9	
2014	Sep. 1 - Dec. 16	Sep. 13 - Nov. 9	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 13 - Oct. 5	Sep. 1 - Sep. 8	Sep. 13 - Oct. 5	Sep. 1 - Nov. 9	Sep. 1 - Nov. 9	
2015	Sep. 1 - Dec. 16	Sep. 19 - Nov. 15	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 19 - Oct. 11	Sep. 1 - Sep. 8	Sep. 19 - Oct. 11	Sep. 1 - Nov. 9	Sep. 1 - Nov. 9	
2016	Sep. 1 - Dec. 16	Sep. 17 - Nov. 13	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 17 - Oct. 9	Sep. 1 - Sep. 8	Sep. 17 - Oct. 9	Sep. 17 - Oct. 9	Sep. 1 - Nov. 29	
2017	Sep. 1 - Dec. 16	Sep. 16 - Nov. 12	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 16 - Oct. 8	Sep. 1 - Sep. 8	Sep. 16 - Oct. 8	Sep. 16 - Oct. 8	Sep. 1 - Nov. 29	
2018	Sep. 1 - Dec. 16	Sep. 15 - Nov. 11	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 15 - Oct. 7	Sep. 1 - Sep. 8	Sep. 15 - Oct. 7	Sep. 1 - Sep. 30	Sep. 1 - Nov. 29	
2019	Sep. 1 - Dec. 16	Sep. 14 - Nov. 10	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 28 - Oct. 20	Sep. 1 - Sep. 8	Sep. 14 - Oct. 6	Sep. 1 - Sep. 30	Sep. 1 - Nov. 29	
2020	Sep. 1 - Dec. 16	Sep. 12 - Nov. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Sep. 1 - Sep. 8	Oct. 3 - Oct. 25	Sep. 1 - Sep. 8	Sep. 19 - Oct. 11	Sep. 1 - Sep. 30	Sep. 1 - Nov. 29	

Table 18. Duck, merganser, American coot, and light goose seasons, 1996-2019

Year	Ducks, Mergansers, and Coots				Light Geese		
	C1	C1A	C2	Pacific Flyway	Central Flyway	Pacific Flyway	Conservation Order
1996	Oct 5-Oct 20 Nov 2-Dec 15 Dec 21-Jan 12		Sep 28-Oct 27 Nov 2-Dec 1 Dec 14-Jan 5	Sep 28-Dec 29	Oct 5-Dec 19 Feb 14-Mar 10		
1997	Oct 4-Oct 26 Nov 1-Dec 21 Dec 22-Jan 13		Oct 4-Jan 8	Oct 4-Jan 17	Oct 4-Dec 24 Feb 14-Mar 10		
1998	Oct 3-Oct 25 Oct 31-Jan 11		Oct 3-Jan 7	Oct 3-Jan 16	Oct 3-Dec 22 Feb 13-Mar 10		
1999	Oct 2-Oct 24 Oct 30-Jan 11		Oct 2-Jan 6	Oct 2-Jan 15	Oct 2-Dec 26 Feb 13-Mar 10		
2000	Oct 7-Oct 22 Oct 28-Jan 16		Sep 30-Oct 22 Nov 4-Jan 16	Sep 30-Jan 13	Oct 7-Dec 31 Jan 19-Feb 8		Mar 1-Mar 31
2001	Oct 6-Oct 21 Oct 27-Jan 15		Sep 29-Oct 21 Oct 27-Jan 8	Sep 29-Jan 12	Oct 6-Dec 31 Jan 27-Feb 14		Mar 1-Mar 31
2002	Oct 5-Oct 20 Oct 26-Jan 14		Sep 21-Oct 20 Oct 26-Dec 8 Dec 14-Jan 5	Sep 21-Jan 4	Oct 5-Dec 31 Jan 27-Feb 13		Mar 1-Apr 6
2003	Oct 4-Oct 19 Oct 25-Jan 13		Sep 27-Oct 19 Oct 25-Dec 14	Sep 27-Jan 10	Oct 4-Dec 31 Jan 27-Feb 12		Mar 1-Apr 6
2004	Oct 2-Oct 17 Oct 23-Jan 11		Sep 25-Oct 17 Oct 23-Dec 12 Dec 18-Jan 9	Sep 25-Jan 8	Oct 2-Dec 31 Jan 27-Feb 10		Feb 21-Apr 3
2005	Oct 1-Oct 16 Oct 29-Jan 17		Oct 1-Oct 23 Nov 5-Jan 17	Sep 24-Jan 7	Oct 1-Dec 31 Jan 27-Feb 9		Feb 20-Apr 2
2006	Oct 7-Oct 24 Nov 4-Jan 21		Sep 30-Oct 22 Nov 4-Jan 16	Sep 23-Jan 6	Oct 7-Jan 7 Jan 27-Feb 8		Feb 19-Apr 8
2007	Oct 6-Oct 23 Nov 3-Jan 20		Sep 29-Oct 21 Nov 3-Jan 15	Sep 22-Jan 5	Oct 6-Jan 1 Jan 26-Feb 12		Feb 25-Apr 13
2008	Oct 4-Oct 21 Nov 1-Jan 18		Sep 27-Oct 9 Nov 1-Jan 13	Sep 27-Jan 9	Oct 4-Jan 1 Jan 26-Feb 9		Feb 23-Apr 12
2009	Oct 3-Oct 20 Oct 31-Jan 17		Sep 26-Oct 20 Oct 31-Jan 10	Sept 26-Jan 8	Oct 3-Dec 27 Jan 21-Feb 8		Feb 22-Apr 11
2010	Oct 2-Oct 19 Oct 30-Jan 16		Sep 25-Nov 28 Dec 11-Jan 11	Sep 25-Jan 7	Oct 2-Dec 26 Jan 20-Feb 7		Feb 21-Apr 10
2011	Oct 1-Oct 16 Oct 29-Jan 17		Sep 24-Nov 27 Dec 10-Jan 10	Sep 24-Jan 6	Oct 1-Dec 25 Jan 28-Feb 15		Feb 20-Apr 8
2012	Oct 6-Oct 21 Nov 3-Jan 22		Sep 22-Nov 25	Sep 22-Jan 4	Oct 6-Dec 30 Jan 30-Feb 17		Feb 25-Apr 7
2013	Oct 5-Oct 22 Nov 2-Jan 19		Sep 21-Dec 1 Dec 14-Jan 7	Sep 21-Jan 3	Oct 5-Dec 30 Jan 30-Feb 16		Feb 24-Apr 6
2014	Oct 4-Oct 22 Nov 1-Jan 17		Sep 27-Dec 7 Dec 13-Jan 6	Sep 27-Jan 9	Oct 4-Dec 31 Jan 31-Feb 15		Feb 23-Apr 12
2015	Oct 3-Oct 21 Oct 31-Jan 16		Sep 26-Dec 6 Dec 12-Jan 5	Sep 26-Jan 8	Oct 3-Dec 31 Jan 31-Feb 14		Feb 22-Apr 10
2016	Oct 1-Oct 18 Oct 29-Jan 15		Sep 24-Dec 4 Dec 10-Jan 3	Sep 24-Jan 6	Oct 1-Dec 29 Jan 29-Feb 12		Feb 13-Apr 9
2017	Sep 30-Oct 17 Oct 28-Jan 14		Sep 23-Dec 3 Dec 9-Jan 2	Sep 23-Jan 5	Oct 1-Dec 29 Jan 29-Feb 12	Sep. 23 - Dec. 28	Feb 19-Apr 8
2018	Sep 29-Oct 16 Oct 28-Jan 14		Sep 22-Dec 2 Dec 8-Jan 1	Sep 22-Jan 4	Sep 29-Dec 30 Feb 6-Feb 17	Sep 22 - Dec 27	Feb 18-Apr 7
2019	Sep 28-Oct 15 Oct 26-Jan 12	Sep 28 -Oct 15 Oct 26-Jan 12	Sep 21-Dec 1 Dec 14-Jan 7	Sep 21-Jan 3	Sep 28-Dec 29 Feb 5-Feb 16	Sep. 21 - Dec. 26	Feb 17-Apr 30
2020	Oct 3 -Oct 18 Oct 31-Jan 19	Oct 3 -Oct 18 Oct 31-Jan 19	Sep 26-Dec 6 Dec 19-Jan 12	Sep 26-Jan 8	Oct 3-Jan 3 Feb 3-Feb 14	Sep. 26 - Dec. 31	Feb 15-Apr 30

Table 19. Dark goose hunting seasons, 2010-2020.

2010	Oct 2-Oct 19 Nov 6-Dec 5 Dec 11-Feb 5	-	Oct 2-Oct 19 Nov 13-Feb 7	-	-	-	Sep 25-Nov 28 Dec 11-Jan 19	Sep 25-Oct 19 Oct 30-Dec 5 Dec 11-Jan 22	Sep 1-Sep 8	Sep 25-Dec 30
2011	Oct 1-Oct 16 Nov 5-Dec 4 Dec 10-Jan 28	-	Oct 1-Oct 16 Nov 19-Feb 12	-	-	-	Sep 24-Nov 27 Dec 10-Jan 18	Sep 24-Oct 18 Nov 5-Dec 4 Dec 10-Jan 28	Sep 1-Sep 8	Sep 24-Jan 6
2012	Oct 6-Oct 21 Nov 3-Dec 2 Dec 8-Feb 4	-	Oct 6-Oct 21 Nov 21-Feb 17	-	-	-	Sep 22-Nov 25 Dec 8-Jan 16	-	Sep 1-Sep 8	Sep 22-Dec 27
2013	Oct 5-Oct 22 Nov 2-Dec 1 Dec 7-Feb 1	-	Oct 5-Oct 22 Nov 22-Feb 16	-	-	-	Sep 21-Dec 1 Dec 14-Jan 15	-	Sep 1-Sep 8	Sep 21-Dec 26
2014	Oct 4-Oct 22 Nov 1-Nov 30 Dec 6-Jan 30	-	Oct 4-Oct 22 Nov 22-Feb 15	-	-	-	Sep 27-Dec 7 Dec 13-Jan 14	-	Sep 1-Sep 8	Sep 27-Jan 1
2015	Oct 3-Oct 21 Oct 31-Nov 29 Dec 5-Jan 29	-	Oct 3-Oct 21 Nov 21-Feb 14	-	-	-	Sep 26-Dec 6 Dec 12-Jan 13	-	Sep 1-Sep 8	Sep 26-Dec 31
2016	Oct 1-Oct 18 Oct 29-Nov 27 Dec 3-Jan 28	-	Oct 1-Oct 18 Nov 18-Feb 12	-	-	-	Sep 24-Dec 4 Dec 10-Jan 11	-	Sep 1-Sep 8	Sep 24-Dec 29
2017	Sep 30-Oct 17 Oct 28-Nov 26 Dec 2-Jan 27	-	Sep 30-Oct 11 Nov 18-Feb 18	-	-	-	Sep 23-Dec 3 Dec 9-Jan 10	-	Sep 1-Sep 8	Sep 23-Dec 28
2018	Sep 29-Oct 16 Oct 28-Nov 26 Dec 2-Jan 27	-	Sep 29-Oct 10 Nov 17-Feb 17	-	-	-	Sep 22-Dec 2 Dec 8-Jan 9	-	Sep 1-Sep 8	Sep 22-Dec 27
2019	Sep 28-Oct 6 Nov 9-Dec 1 Dec 6-Feb 16	Sep 28-Oct 9 Nov 16-Feb 16	-	-	-	-	Sep 21-Dec 1 Dec 14-Jan 15	-	Sep 1-Sep 8	Sep 21-Dec 26
2020	Oct 3-Oct 11 Nov 7-Nov 29 Dec 4-Feb 14	Oct 3-Oct 14 Nov 14-Feb 14	-	-	-	-	Sep 26-Dec 6 Dec 19-Jan 20	-	Sep 1-Sep 8	Sep 26-Dec 31

American Crow

Harvest

Recent crow seasons are summarized in Table 20. The crow harvest and hunter activity are unknown in Wyoming. Since a license is not required to hunt crows, there is no means to identify a sample frame in order to conduct a harvest survey. The very limited hunting that takes place has had essentially no impact on crow populations.

Recommendations

1. Maintain hunting opportunity for recreation and to assist with depredation control.

Table 20. Recent crow hunting seasons in Wyoming.

Year	Season Dates	Bag/Possession Limits
2004	November 1 - February 28	None/None
2005	November 1 - February 28	None/None
2006	November 1 - February 28	None/None
2007	November 1 - February 28	None/None
2008	November 1 - February 28	None/None
2009	November 1 - February 28	None/None
2010	November 1 - February 28	None/None
2011	November 1 - February 28	None/None
2012	November 1 - February 28	None/None
2013	November 1 - February 28	None/None
2014	November 1 - February 28	None/None
2015	November 1 - February 28	None/None
2016	November 1 - February 28	None/None
2017	November 1 - February 28	None/None
2018	November 1 - February 28	None/None
2019	November 1 - February 28	None/None
2020	November 1 - February 28	None/None

Trumpeter and Tundra Swans

Discussion:

Swans are federally defined as migratory game birds [50 CFR 20.11(a)] and hunted in several states. Small resident and restored populations of breeding trumpeter swans inhabit portions of western Wyoming. Comparatively, few tundra swans migrate through the State. Wyoming's resident population of trumpeter swans has increased and expanded its distribution in recent years, particularly in the Upper Green River Basin. Additional restoration efforts are ongoing. The MGBS addresses certain aspects of swan management through the Flyway process and jointly manages the species in the state, in coordination with the Nongame Program. There is no open hunting season on swans in Wyoming. Refer to Nongame completion reports for swan monitoring data and more detailed information about the restoration program.

Bump-Sullivan Managed Goose Hunt

Introduction

Springer/Bump-Sullivan Reservoir and Table Mountain WHMAs are the principal public goose hunting areas in Goshen County. Bump-Sullivan Reservoir has been a popular goose hunting area for over 50 years. A managed goose hunt was initiated there during the 1993-94 hunting season to reduce competition among parties and improve hunting quality. Twelve blinds were erected around the reservoir and four pass shooting pits were established in a field at the northwest corner of Springer WHMA. An additional property was acquired at the south end of Springer WHMA which opened three field hunting pits to include in the managed goose hunt. Hunters were required to check in at the Springer Check Station and a drawing was conducted before shooting hours each morning to assign hunting blinds or pits. A goose special management permit was also instituted to help offset the cost of blind maintenance and operation of the check station.

Due to drought conditions and low reservoir levels prevalent from 2002-2010, goose hunting opportunities and interest declined within the managed hunt boundaries. For the 2011-12 dark goose hunting season and thereafter, the Department decided not to require persons participating in the hunt to purchase a special management permit and the check station was not operated. Pits and blinds are occupied on a first-come, first-served basis. The hunt will continue to be managed in this manner until such time as demand may increase to the point that access needs to be controlled through a permitting system.

Recommendations

1. Support efforts to improve water supplies into Bump-Sullivan Reservoir.
2. Continue annual pit maintenance.
3. Replace lower section of pits as needed.
4. Monitor public use and demand for the pits/blinds

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