

Results of the 2023 Light Goose Conservation Order in Colorado

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The Colorado Division of Parks and Wildlife (CPW) established a conservation order for light geese in 1999. The conservation order area is the eastern plains of Colorado, east of Interstate 25. The conservation order period in 2023 was February 13–April 30. Shooting hours were from one-half hour before sunrise to one-half hour after sunset. There was no bag or possession limit. Electronic calls and unplugged shotguns were allowed. Participants were required to be registered for the Harvest Information Program (HIP) and to have a Colorado state duck stamp. All other federal and state regulations pertaining to the take of migratory birds were in effect during the conservation order.

A stratified random sample of 4,500 potential light goose hunters was drawn from among 2022-2023 HIP registrants. The sample was stratified into HIP registrants that responded they did not hunt light geese during the 2021-2022 seasons and conservation order, light goose hunters that did not bag any light geese during 2021-2022, light goose hunters that bagged 1-30 birds during 2021-2022, and light goose hunters that bagged >30 birds during 2021-2022. A post-season harvest survey was conducted by phone; individuals within the sample that provided email addresses when registering for HIP were sent email surveys as well.

A total of 1,771 (39% of the original sample) hunters responded to the survey. Estimates of hunter numbers and total hunter-days in 2023 were lower than estimates in 2022, and lower than the 1999-2022 averages; however, light goose harvest in 2023 was higher than in 2022 and the long-term average (Table 1). In 2023, the average light goose harvest per hunter was 12.3, higher than the 1999-2022 average of 9.2. The average number of days hunted per hunter in 2023 was 5.7, the same as in 2022 and slightly above the 1999-2022 average of 5.1 days. Estimates of hunter numbers, hunter-days, and harvest have remained stable or slightly increasing throughout the 24-year history of the light goose conservation order in Colorado (Figs. 1-3). In 2023, 80% of participants hunted north of Interstate 70 and harvested 81% of the total conservation order harvest, and 20% of participants hunted and harvested 19% of total geese south of I-70 in eastern Colorado.

Electronic calls were used by 20% of participants (395 ± 76) and 40% of harvest was obtained using electronic calls. Twenty-two percent of participants (435 ± 78) hunted after sunset and 1% of the total harvest was obtained through hunting after sunset. Unplugged shotguns were used by 25% of participants (498 ± 85) and 30% of total harvest was obtained using unplugged shotguns. Based on reported wounding loss by participants, we estimate that $1,395 \pm 175$ light geese were wounded but not retrieved during the 2023 conservation order (6% of reported retrieved harvest).

In 2023, 67% of respondents indicated they were very likely and 29% responded they were somewhat likely to participate in a light goose conservation order if it is offered in future years.

In 2023, CPW added several questions to the light goose survey to learn more about hunters' behaviors, perceptions, and opinions about the light goose conservation order. These questions and responses are listed below.

How many of the last 5 years have you participated in the light goose conservation order? (Circle one)

	% of responses (n = 111)
0 years	1.8
1 year	42.3
2 years	20.7
3 years	9.0
4 years	2.7
5 years	23.4

Compared to other wildlife management and conservation issues, how important is the population control of light geese?

	% of responses (n = 114)
Not at all important	4.4
Slightly important	7.0
Moderately important	25.4
Very important	36.0
Extremely important	27.2

Since being enacted in 1999, how effective or ineffective do you feel the light goose conservation order has been at controlling light goose populations?

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Very ineffective	0.9
Ineffective	5.3
Neither ineffective or effective	45.1
Effective	38.1
Very ineffective	10.6

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What do you believe the current status of the light goose population to be?

	% of responses (n = 113)
Increasing	37.2
Decreasing	15.0
About the same	18.6
Don't know	29.2

How do you view your participation in the light goose conservation order?

	% of responses (n = 113)
It is the most enjoyable hunting activity I do	10.6
It is one of the most enjoyable hunting activities I do	53.1
It is not any more important than other types of hunting I do	29.2
I would not miss it if it were discontinued	7.1

Did you use a professional guide or outfitter the last time you participated in the light goose conservation order?

	% of responses (n = 113)
Yes	78.8
No	21.2

Table 1. Estimates (\pm SE) of participation and harvest during the light goose conservation action in Colorado.

Year	Hunters		Total-Hunter Days		Total Harvest		Harvest Using Electronic Calls	Harvest After Sunset	Harvest with Unplugged shotguns
1999	1,638	(179)	6,709	(62)	13,417	(550)	Not permitted	Not permitted	Not permitted
2000	3,276	(511)	15,316	(3,178)	31,783	(7,877)	17,441 (5,607)	3,364 (1,417)	Not permitted
2001	2,495	(616)	8,836	(2,521)	22,457	(8,673)	16,671 (7,068)	2,060 (964)	Not permitted
2002	1,323	(351)	5,016	(1,502)	7,594	(1,923)	3,445 (1,011)	1,153 (505)	Not permitted
2003	2,162	(205)	10,193	(1,563)	27,395	(5,336)	19,828 (5,044)	3,658 (809)	Not permitted
2004	1,877	(184)	8,547	(911)	24,497	(3,286)	13,467 (2,457)	3,051 (652)	Not permitted
2005	1,281	(157)	6,593	(1,194)	16,135	(3,620)	12,417 (3,473)	1,886 (323)	Not permitted
2006	2,704	(511)	12,568	(3,406)	18,535	(751)	8,357 (466)	2,338 (170)	Not permitted
2007	2,367	(229)	10,847	(1,613)	23,375	(1,362)	16,041 (6,210)	3,509 (1,232)	Not permitted
2008	2,555	(250)	11,886	(1,595)	13,745	(1,268)	7,212 (896)	1,381 (233)	Not permitted
2009	1,951	(208)	8,744	(936)	23,072	(1,246)	15,190 (5,669)	6,485 (3,155)	Not permitted
2010	1,899	(200)	8,829	(1,343)	11,473	(861)	6,149 (1,260)	2,058 (468)	2,443 (639)
2011	1,385	(157)	10,905	(1,884)	28,193	(1,853)	14,438 (4,651)	3,066 (974)	3,246 (655)
2012	1,847	(203)	8,659	(1,215)	18,971	(1,316)	13,168 (2,921)	1,916 (337)	2,785 (580)
2013	2,461	(285)	7,533	(1,027)	13,246	(868)	8,821 (1,963)	2,049 (586)	2,766 (1,157)
2014	3,555	(310)	25,311	(4,035)	34,216	(1,435)	14,774 (3,217)	3,878 (1,461)	7,956 (1,912)
2015	2,693	(298)	13,907	(1,996)	15,719	(732)	8,075 (2,525)	2,981 (1,148)	4,478 (2,171)
2016	2,933	(261)	16,903	(2,360)	23,499	(1,457)	10,613 (3,624)	1,750 (811)	7,415 (3,387)
2017	2,921	(275)	15,637	(2,356)	16,102	(611)	7,645 (2,132)	796 (489)	3,477 (1,211)
2018	2,821	(259)	18,076	(5,294)	56,647	(2,819)	18,021 (6,298)	1,396 (841)	28,542 (13,302)
2019	2,506	(223)	14,336	(2,128)	20,719	(893)	11,202 (3,434)	1,764 (1,057)	4,136 (2,293)
2020	2,075	(198)	11,154	(1,637)	16,813	(1,117)	3,564 (1,390)	550 (277)	3,974 (1,308)
2021	2,833	(286)	14,220	(1,946)	15,164	(600)	6,617 (1,752)	1,980 (688)	3,929 (1,201)
2022	2,787	(217)	15,997	(2,046)	23,226	(1,009)	9,557 (2,457)	3,018 (1,015)	4,535 (1,175)
1999-2022 average	2,348		11,947		21,500		11,422	2,439	6,129
2023	1,966	(169)	11,164	(1,701)	24,118	(1,678)	9,622 (3,468)	200 (126)	7,325 (2,619)

Figure 1. Annual estimates of numbers of hunters participating in the light goose conservation order in Colorado, 1999-2023.

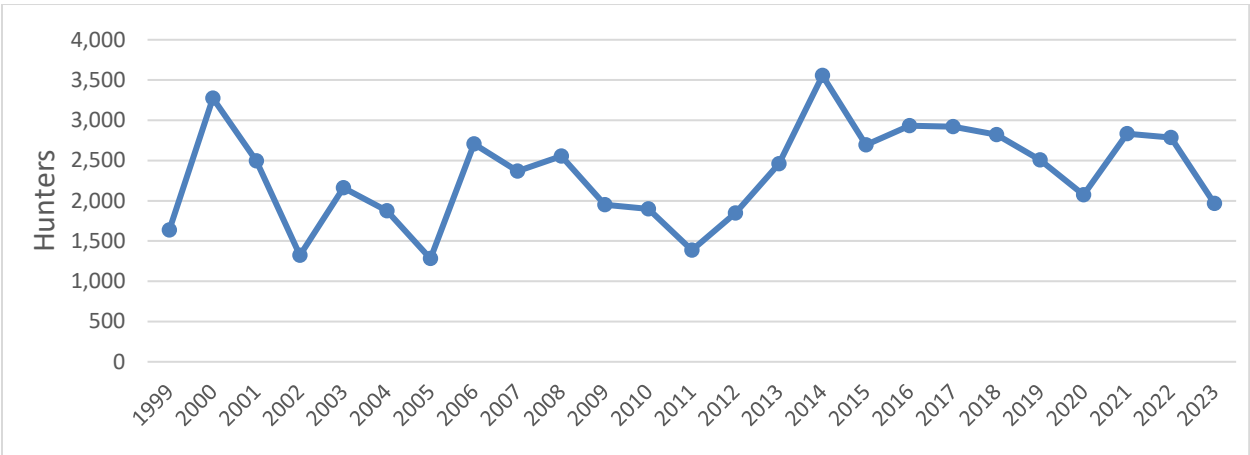


Figure 2. Annual estimates of numbers of the total number of hunter-days in the light goose conservation order in Colorado, 1999-2023.

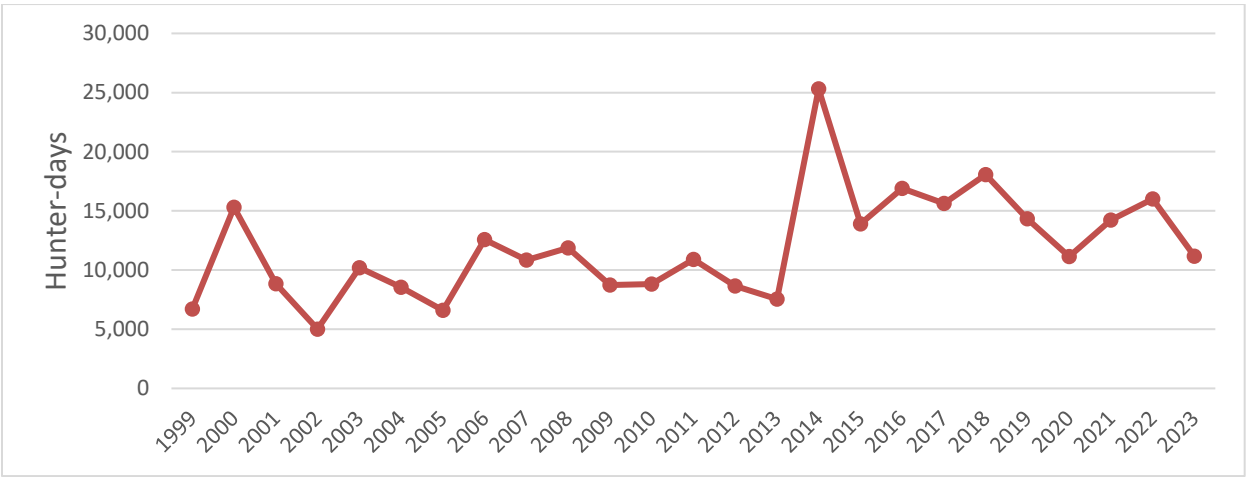


Figure 2. Annual estimates of total harvest in the light goose conservation order in Colorado, 1999-2023.

