

Results of the 2016 Light Goose Conservation Order in Colorado

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The Colorado Division of Wildlife (now Colorado Parks and Wildlife) 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 2017 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 2016-2017 HIP registrants. The sample was stratified into HIP registrants that responded they did not hunt light geese during the 2015-2016 seasons and conservation order, light goose hunters that did not bag any light geese during 2015-2016, light goose hunters that bagged 1-30 birds during 2015-2016, and light goose hunters that bagged >30 birds during 2015-2016. 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 1,605 (36% of the original sample) hunters responded to the survey. In 2017, 67% of participants hunted north of Interstate 70 and harvested 58% of the total conservation order harvest, and 33% of participants hunted and harvested 42% of total geese south of I-70 in eastern Colorado. Compared to 2016, the 2017 estimate of hunter numbers was similar, the estimate of hunter days was slightly lower, and the estimate of harvest was substantially lower (Table 1); hunter numbers and days hunted were higher than the 1999-2016 averages (2,245 hunters, 10,961 days), but harvest was lower than the 1999-2016 average (20,407 geese harvested). In 2017, the average harvest per hunter was 5.5 and the average number of days hunted per hunter was 5.4.

Electronic calls were used by 26% of participants (748 ± 147) and 47% of harvest was obtained using electronic calls. Twenty-one percent of participants (605 ± 113) hunted after sunset and 5% of the total harvest was obtained through hunting after sunset. Unplugged shotguns were used by 21% of participants (625 ± 138) and 22% of total harvest was obtained using unplugged shotguns. Based on reported wounding loss by participants, we estimate that $1,059 \pm 58$ light geese were wounded but not retrieved during the 2017 conservation order (7% of reported retrieved harvest).

In 2017, 58% of respondents indicated they were very likely and 32% responded they were somewhat likely to participate in a light goose conservation order if it is offered in future years.

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)