Public Lands Hunting Information Survey Report

For the Hunting Year
January - December 2016
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Report Overview

In 2017, The Division of Forestry and Wildlife posted an online survey for hunters in the state of Hawaii about their use of public hunting lands during 2016. 453 hunters completed the online survey. The survey requested information about each hunter’s license, hunting history, spending, hunting locations, game harvest, organization membership status, and comments about various topics related to hunting.

This report summarizes the data submitted by the hunters on the survey. The questions are taken directly from the survey and are arranged in the same order. Answering the questions on the survey was optional, so each question has a note in blue text showing how many of the 453 people who took the survey responded to that question.

The purpose of this annual survey is to assist in improving management in public hunting areas in the State of Hawai‘i. The information provided by the hunters who responded will be used directly in the planning of upcoming hunting seasons. This is an opportunity for the hunting public to provide important information to be used for decision-making and management.
Q1: On which island did you purchase your hunting license? (453/453)

35% of people who took the survey purchased their license on Oahu, 34% on Hawaii, 4% on Kauai, 11% on Maui, 2% on Molokai, and 3% on Lanai. 34 reported that they purchased their license online without specifying an island, and 14 said that they did not have a hunting license.

These numbers show only where hunters purchased their license, not where they spent time hunting. Many hunters travel to other islands for hunting trips, so the number of people who reported hunting on an island differs from the number of people who purchased their license on that same island.

Q2: In what month did you purchase your license? (453/453)

While 125 of the 453 people did not remember when they had purchased their hunting license, the majority of those who did know purchased their licenses in June and July, when hunting licenses become available for the start of the fiscal year.
Q3: Are you a resident of the state of Hawaii? (453/453)

97% of people who took the survey responded that they were residents of the state of Hawaii, while 12 people reported that they were not. 163 hunters who reported being state of Hawaii residents provided their island of residence. Of those, 48% lived on Oahu, 33% on Hawaii, 3% on Kauai, 12% on Maui, 2% on Molokai, and 2% on Lanai.

Q4: How many years have you been hunting in the state of Hawaii? (453/453)

The experience of the people who took the survey ranged from new hunters to some who had been hunting for 70 years or their whole lives. The average was 22.68 years. 4% had hunted for less than a year, 30% for 1-10 years, 18% for 11-20 years, 17% for 21-30 years, 12% for 31-40 years, 12% for 41-50 years, 4% for 51-60 years, 2 people for 61-70 years, and 7 people who reported hunting for “life.”
Q5: What are the three most important reasons that you hunt? (453/453)

For the hunters who took the survey, the two most important reasons that they hunted were to acquire wild game meat (64.0%) and to spend time in nature (63.8%). 56.7% said to spend quality time with family and friends, 54.8% said for recreation and sport, 38.0% said for subsistence hunting, 37.8% said because hunting is a tradition in their family, and 12.8% said for trophy hunting. 56 hunters selected “other” and wrote in additional reasons for hunting, which included:

- control of wild or invasive populations to protect natural resources and property
- health benefits such as exercise or relaxation and stress relief
- spiritual connection and cultural or religious reasons
- knowing the value of Hawaii’s resources and where food is coming from
Q6: What type of hunting do you do? (453/453)

The most common type of hunting reported was rifle hunting, with 81.5% of respondents using that method. After that came archery or spear hunting, shot guns, muzzle loaders, hand guns, and then knife hunting. In the “other” category, 19 people reported hunting using various methods such as with dogs, traps or snares, crossbow hunting, or target shooting only.

Q7: Do you use dogs for hunting? (453/453)

41% of the hunters reported that they used dogs for hunting. The majority of these hunters used their dogs to hunt game birds (26.1%), followed by pigs, and then both birds and pigs.
Q8: In a typical month, how many of your meals are supplemented with game that you hunt? (Assuming 3 meals/day, 90 meals/month) (453/453)

45.0% of hunters who took the survey supplemented less than nine meals per month with game, 36.9% supplemented nine to thirty meals per month, 10.4% supplemented more than 30 meals per month, and 7.7% did not supplement their meals with game.

Q9: Approximately how much did you spend on hunting in 2016 (on both public and private lands)? Please include ground and air transportation, vehicle rental, lodging, guide services, food, game tags, hunting dog maintenance, etc. (453/453)

33% of hunters reported spending less than $1,000 dollars, 47% spent between $1,000 and $4,999, 13% spent between $5,000 and $9,999, 5% spent between $10,000 and $15,000, and 2% spent more than $15,000. The average amount spent was $2,681.60.
Q10: In 2016, have you hunted on private lands? (450/453)

Have you hunted on private lands?

58% of people who took the survey said that they had hunted on private land, and 42% said that they had not. The average amount of time those who responded “yes” spent hunting on private land was 22 days.

Q11: In 2016, have you hunted on public hunting lands? (451/453)

Have you hunted on public hunting lands?

47.7% of hunters reported that they had hunted on public land only for game mammals, 34.8% for both game birds and game mammals, and 4.0% for game birds only. 13.5% reported not hunting on public lands.
Q12: In 2016, which public hunting areas (PHAs) have you hunted on? (300/453)

300 people reported the PHAs they had hunted on in 2016. The percentages show the number of hunters out of the 300 who used each unit.

On Oahu, 20.67% reported hunting in the North West (Waianae Kai, Mokuleia, Makua Keaau and or Kuakalaka Forest Reserves), 15% on “Other” areas, and 11% in the East (Pupukea-Paumalu, Kaipapau, Hauula, Ewa forest Reserves, Kuliouou I/II).

On Hawaii, 36% reported hunting on Puu Waawaa and Puu Anahulu Forest Reserves, 30.67% on “Other” areas, 24.33% on Mauna Loa and Kipuka Ainahou, 17.33% on Manuka NAR, 15.67% on Hilo Watershed, 15% on Kapapala and Kau Forest Reserve, 13.33% on Olaa Forest Reserve, Waiakea FR, and Upper Waiakea FR, 12.33% on Piha and Laupahoehoe portions of Hilo FR, 11.33% on Kohala and Hamakua, and 5.33% on Nanawale, Malamaki, and Keauohana Forest reserves.
On Kauai, 5.33% reported hunting on Kekaha GMA and Waimea Unit A, 4.33% on Puu Ka Pele Forest Reserve and Na Pali Kona – Unit H, 4.33% on “Other” areas, 3.67% Na Pali-Kona Forest Reserve and/or Hono O Na Pali NAR – E1 and E2, 3.67% on Puu Ka Pele Forest Reserve and Na Pali Kona – Unit B, 3.67% on Kokee and Waimea Canyon Roads – Unit L, and 3% on Kealia, Halelea, Moloaa, and/or Lihue-Koloa Forest Reserves – Unit C.

On Maui, 11% reported hunting on Koolau, Makawao, Kula, and/or Kahikinui Forest Reserve, 6.67% on “Other” areas, and 2.67% on West Maui Forest Reserve.

On Lanai, 44.67% reported hunting on Unit 1, 44% on Unit 2, and 25.67% on Unit 3.

Not shown: Out of 300 hunters, 12% reported hunting on Molokai Forest Reserve. This was the only option of the survey for hunting on Molokai, so there is no graph for comparison between Molokai public hunting areas.
Q13: In 2016, which public hunting unit have you used the most? (300/453)

13.7% of those who responded reported using Puu Waawaa and Puu Anahulu Forest Reserves the most, followed by 13.3% who used Unit 2 on Lanai the most, 11.7% for Unit 1 on Lanai, 11.7% for “Other” areas on Hawaii, 6.0% for North West Oahu (Waianae Kai, Mokuleia, Makua Keaau and or Kuakakala Forest Reserves), 5.0% for Mauna Loa and Kipuka Ainahou on Hawaii, 5.0% for Manuka NAR in Hawaii, 4.7% for East Oahu (Pupukea-Paumalu, Kaipapau, Hauula, Ewa forest Reserves and or Kuliouou I and II), 4.3% for Koolau, Makawao, Kula, and/or Kahikinui Forest Reserve on Maui, and 4.3% for “Other” areas on Oahu.

Not shown in the graph (less than 10 responses): 9 hunters selected Unit 3 on Lanai as their most used public hunting unit, 8 selected Hilo Watershed on Hawaii, 7 selected Olaa Forest Reserve, Waiakea FR, Upper Waiakea FR on Hawaii, 5 selected Kohala and Hamakua on Hawaii, 5 selected Molokai Forest Reserve, 4 selected Kekaha GMA and Waimea Unit A on Kauai, 4 selected Kapapala and Kau Forest Reserve on Hawaii, 4 selected Piha and Laupahoehoe portions of Hilo FR on Hawaii, 3 selected “Other” areas on Maui, 3 selected Kokee and Waimea Canyon Roads in Unit L on Kauai, 3 selected “Other” areas on Kauai (this includes Unit G, K, D, J, and F), 2 selected Kealia, Halelea, Moloa, and/or Lihue-Koloa FR in Unit C on Kauai, 2 selected Puu Ka Pele FR and Na Pali Kona in Unit H on Kauai, 1 selected West Maui Forest Reserve, and 1 selected Na Pali-Kona FR and/or Hono O Na Pali NAR on Kauai.
Q14: In 2016, how many days did you spend hunting game mammals in public hunting areas? Please include the days that you hunted but did not harvest any game. (300/453)

Each day that hunters reported was counted as one hunting trip. The total number of trips made on each island was divided by the number of people who spent time hunting on that island to find the average number of trips each hunter made for game mammals there.

Hunters made an average of 19.9 trips on Oahu (1649 trips total), 29.1 trips on Hawaii (4364 trips total), 21.8 trips on Kauai (545 trips total), 16.3 trips on Maui (684 trips total), 17.6 trips on Molokai (546 trips total), and 5.7 trips on Lanai (795 trips total).
Q15: In 2016, how many game mammals did you harvest in public hunting areas? (300/453)

The graph above shows the average number of each game mammal species that hunters harvested per trip on each island. For example, hunters on Oahu harvested 0.16 feral pigs per trip, which means that hunters have to make approximately seven trips to harvest a feral pig on Oahu. On Oahu, Hawaii, and Kauai, feral pigs were harvested most frequently, while on Maui, Molokai, and Lanai, Axis deer were harvested most frequently.

*Even though Axis deer have not been confirmed on Oahu and Hawaii, 7 hunters reported that they have harvested Axis deer on Oahu and 11 hunters reported the same on Hawaii.

**Even though Mouflon sheep have only been confirmed on Hawaii and Lanai, a total of 8 hunters reported that they have harvested Mouflon sheep on Oahu, Kauai, Maui, and Molokai.
Game mammal species that were harvested on more than one island are shown here for comparison of total harvest in 2016. The exception is for feral sheep: 145 feral sheep were harvested on Hawaii, and 1 feral sheep was harvested on Maui. One game mammal species was only found on one island: black-tailed deer, of which 12 were harvested on Kauai.

The most feral pigs were harvested on Hawaii, with a total of 976 pigs. 335 pigs were harvested on Oahu, 114 pigs on Kauai, 65 pigs on Maui, and 33 pigs on Molokai.

The most feral goats were harvested on Hawaii, with a total of 484 goats. 136 goats were harvested on Oahu, 80 goats on Kauai, 105 goats on Maui, and 8 goats on Molokai.

The most Mouflon sheep were harvested on Hawaii, with a total of 97 sheep. 7 Mouflon sheep were harvested on Oahu, 2 sheep on Kauai, 4 sheep on Maui, 3 sheep on Molokai, and 94 sheep on Lanai.

*Even though Mouflon sheep have only been confirmed on Hawaii and Lanai, a total of 8 hunters reported that they have harvested Mouflon sheep on Oahu, Kauai, Maui, and Molokai.
The most Mouflon-feral hybrid sheep were harvested on Hawaii, with a total of 141 sheep. 7 Mouflon feral hybrid sheep were harvested on Molokai, and 7 sheep on Lanai.

The most Axis deer were harvested on Lanai, with a total of 180 sheep. 43 Axis deer were harvested on Oahu, 32 deer on Hawaii, 2 deer on Kauai, 131 deer on Maui, and 92 deer on Molokai.

*Even though Axis deer have not been confirmed on Oahu and Hawaii, 7 hunters reported that they have harvested Axis deer on on Oahu and 11 hunters reported the same on Hawaii.
Q16: During the game bird season (November 2016 - January 2017), how many days did you spend hunting game birds in public hunting areas? Please include the days that you hunted for game birds but did not harvest any game. (300/453)

Each day that hunters reported was counted as one hunting trip. The total number of trips made on each island was divided by the number of people who spent time hunting on that island to find the average number of trips each hunter made for game birds there.

Hunters made an average of 6.7 trips on Oahu (248 trips total), 11.2 trips on Hawaii (1208 trips total), 6.1 trips on Kauai (49 trips total), 5.3 trips on Maui (96 trips total), 5.3 trips on Molokai (21 trips total), and 1.9 trips on Lanai (15 trips total).
Q17: During the game bird season (November 2016 - January 2017), how many game birds did you harvest in public hunting areas? (300/453)

<table>
<thead>
<tr>
<th>Birds Harvested per Hunter Trip</th>
</tr>
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<tbody>
<tr>
<td>Oahu</td>
</tr>
<tr>
<td>Ring-necked Pheasant</td>
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</table>

On Oahu, Erckel's Francolins and Mourning Doves were harvested most frequently. On Hawaii and Kauai, Erckel's Francolins were harvested most frequently.
On Maui, Ring-necked Pheasants were harvested most frequently. On Molokai, Mourning Doves were harvested most frequently. On Lanai, Gray Francolins and Barred Doves were harvested most frequently.
Game bird species that were harvested on more than one island are shown here for comparison of total harvest in 2016. One game bird species was only found on one island: Chestnut-bellied Sandgrouse, of which 18 were harvested on Hawaii.

The most Ring-necked Pheasants were harvested on Hawaii, with a total of 104 birds. 12 were harvested on Oahu, 27 on Kauai, 25 on Maui, and 2 on Molokai.

The most Green Pheasants were harvested on Hawaii, with a total of 5 birds. 2 were harvested on Oahu and 1 on Maui.

The most Kalij Pheasants were harvested on Hawaii, with a total of 100 birds. 7 were harvested on Kauai.
The most California Quail were harvested on Hawaii, with a total of 294 birds. 1 was harvested on Oahu and 11 on Maui.

The most Japanese Quail were harvested on Hawaii, with a total of 36 birds. 2 were harvested on Molokai.

The most Wild Turkeys were harvested on Hawaii, with a total of 103 birds. 1 was harvested on Kauai, 2 on Molokai, and 1 on Lanai.
The most Chukar Partridges were harvested on Hawaii, with a total of 126 birds. 1 was harvested on Oahu, 23 on Maui, and 4 on Molokai.

The most Gray Francolins were harvested on Hawaii, with a total of 32 birds. 9 were harvested on Oahu, 12 on Maui, and 2 on Lanai.

The most Black Francolins were harvested on Hawaii, with a total of 406 birds. 5 were harvested on Oahu, 16 on Kauai, 2 on Maui, and 6 on Molokai.
The most Erckel’s Francolins were harvested on Hawaii, with a total of 745 birds. 47 were harvested on Oahu and 59 on Kauai.

The most Spotted Doves were harvested on Oahu, with a total of 23 birds. 8 were harvested on Kauai and 2 on Molokai.

The most Barred Doves were harvested on Oahu, with a total of 32 birds. 3 were harvested on Hawaii, 2 on Molokai, and 2 on Lanai.
The most Mourning Doves were harvested on Oahu, with a total of 47 birds. 3 Mourning Doves were harvested on Hawaii and 14 were harvested on Molokai.
Q18: Using any number from 1 to 5 (1 being the least important and 5 the most important), please rank the following statements for how you feel they would improve your hunting experience in the State of Hawaii. (296/453)

The average importance took into account the weight of the response, where 5 was the most heavily weighted and 1 was the least, corresponding to the scale of importance hunters used. The most important improvement was the acquisition of more public hunting areas, with an average importance of 4.06, followed by better access to public hunting areas with 3.57, an increase in the number of hunting days for game mammals with 3.10, an increase in the number of hunting days for game birds with 2.33, and lastly an increase of bag limits with 2.10.
Q19: How regularly do you check in at the check stations to report your time in and out of the hunting unit? (357/453)

Q20: How regularly do you check in at the check station to report the type and number of game harvested? (357/453)

![Time In and Out Reporting](chart)

78.7% of hunters reported always checking in and out at the check station. 6.4% reported using the check station sometimes, and 9.0% reported using the check station only if they were near it. 5.9% of hunters reported never checking in and out at the check station.

![Game Harvest Reporting](chart)

81.8% of hunters said that they always reported the type and number of game harvested at the check station. 5.00% reported using the check station sometimes, and 7.8% reported using the check station only if they were near it. 5.3% of hunters said they never reported the type and number of game harvested at the check station.

Q21: Would you use a smartphone app to access and provide the same hunting information that is currently collected at the check station if it meant that you did not have to stop at the check station? (356/453)

![Would you use a check station app?](chart)

83% of hunters responded that they would use an app that allowed them to provide the same information that is currently collected at the check stations. 17% said they would not use the app, with concerns such as some hunters not having smartphones or the technical skill to use an app, poor cell service coverage in certain areas, or that they were not interested or did not find an app to be a useful solution to problems with the hunting program management.
Q22: Are you a member of a hunting club/organization? (357/453)

357 hunters reported whether they belonged to a hunting club or organization. Of those, 72% did not belong to a hunting club, and 28% did. The organizations they belonged to, and the number of hunters who indicated their involvement, include:

- National Rifle Association (19)
- Safari Club International (13)
- National Wild Turkey Federation (11)
- Pheasants Forever (10)
- Kaupo Wildlife Club (7)
- Kahikinui Game and Land Management Ohana (5)
- Rocky Mountain Elk Foundation (5)
- Ducks Unlimited (4)
- Hawaii Rifle Association (4)
- Hawaii Sportsmen’s Alliance (3)
- North American Hunter (3)
- Pig Hunters Association of Oahu (3)
- Hunter Education Program (3)
- Hawaii Island Archers Club (2)
- Club Kahauloa (2)
- Big Island Bird Hunters (1)
- Molokai Bowhunters Archery Club (1)
- Aukahi Archers (1)
- Koko Head Skeet Club (1)
- Kauai Hunting Association (1)
Q23: Are you a member of, or do you work for, a conservation organization? (357/453)

357 hunters reported whether they belonged to a conservation organization. Of those, 81% did not, and 19% did. The organizations they belonged to, and the number of hunters who indicated their involvement, include:

- DOFAW (5)
- The Nature Conservancy (4)
- DLNR (3)
- Sierra Club (3)
- USDA Wildlife Services (3)
- US Fish and Wildlife Service (2)
- Conservation Council for Hawaii (1)
- Hawaii Audubon Society (1)
- Teddy Roosevelt Conservation Group (1)
- Shell Rock River Watershed District (1)
- Oahu Army Natural Resources Program (1)
- National Wildlife Federation (1)
- Cousteau Society (1)
- Friends of Hakalau Forest (1)
- Friends of Midway Atoll National Wildlife Refuge (1)
Q24: Do you have any additional comments? (171/453)

171 hunters left comments about their concerns, suggestions for improvement of the hunting program, and questions for the DLNR. The most common request, that the DLNR end eradication of game mammal populations, was mentioned 29 times. There were numerous comments calling for better management of the game program without offering any specific suggestions for improvement, but another frequently mentioned concern was fencing. Many hunters felt that fencing in public hunting areas was reducing the area available for hunting and limiting the number of game mammals that were available to hunt. Concern about the continued availability of public hunting land was frequently mentioned in the comments, with many hunters suggesting opening more or better quality land to public hunting. They were worried that the loss of public hunting lands and the lack of access to the lands that are open were reducing the availability of hunting opportunities in the state. Four people specifically wanted access to Kipuka Ainahou restored. Commenters also requested more maintenance of public hunting areas, mentioning both the roadways and wildlife habitat.

Hunters were looking for more opportunities to hunt. They expressed concern about the lack of game in public hunting areas in general, with specific requests to release additional gamebirds for hunters. Other commenters wanted the removal of overly strict regulations, increased bag limits, and week-long hunts all year in public hunting areas, especially for game species that were injurious to native habitat and wildlife. It was requested that there be more hunting areas and less harvest restrictions for youth, senior, and disabled hunters. Archery hunters wanted more land open for archery without gun hunting being allowed at the same time, so that bow hunting would be more successful.

8 commenters worried about the prevalence of poaching, both on public and private land. Many hunters wanted more enforcement of hunting regulations, because they felt that the lack of enforcement was allowing people to take advantage of the system and creating unfair situations for hunters who followed the rules. Two people specifically requested a stronger presence at check stations to ensure that hunters were being held accountable for following the rules.

Some commenters were looking for more frequent and clearer communication from the DLNR. The hunters mentioned a need for better maps, and requested that information about hunting season dates be announced earlier, so that they could have time to plan and prepare for the season. A few commenters called for an update and simplification of hunting regulations.

License costs and other fees associated with hunting were mentioned four times. Two hunters recommended that the DLNR charge money for game tags and others expressed willingness to pay more for hunting fees, as long as the revenue would be used to improve habitat and management. It was also suggested that non-residents be charged more for their licenses. One hunter suggested investigating ways that technology could be used to eliminate the need to go to the DOFAW office to acquire tags and permits.

Other concerns included the need for a shooting range (mentioned by 3 commenters), a request to switch Lanai Axis deer and Mouflon seasons (mentioned by 4 commenters), multiple use issues about hikers and non-hunting dogs sharing hunting land, the prevalence of invasive plants in certain hunting units, and reduced regulations for crossbows. All of the comments hunters left show their desire for support for the continuation of public hunting on Hawaii, which is a major part of many of their lives and livelihoods.