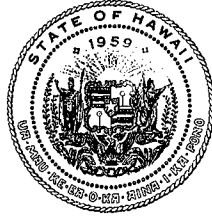
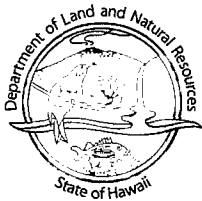


DAVID Y. IGE  
GOVERNOR OF  
HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

DEPT. COMM. NO. 25

SUZANNE D. CASE

CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

October 18, 2017

The Honorable Ronald D. Kouchi,  
President  
and Members of the Senate  
Twenty-Ninth State Legislature  
State Capitol, Room 409  
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki, Speaker  
and Members of the House of  
Representatives  
Twenty-Ninth State Legislature  
State Capitol, Room 431  
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Relating To The Wildlife Revolving Fund report, as required by Section 183D-10.5, Hawaii Revised Statutes (HRS). In accordance with Section 93-16, HRS, a copy of this report has been transmitted to the Legislative Reference Bureau and the report may be viewed electronically at <http://dlnr.hawaii.gov/reports/>.

Sincerely,

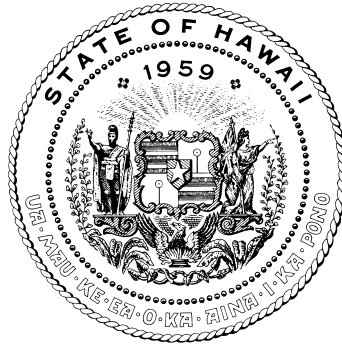
A handwritten signature in black ink, appearing to read "Suzanne D. Case", is written over a horizontal line.

SUZANNE D. CASE  
Chairperson

Enclosure

**REPORT TO THE TWENTY-NINTH LEGISLATURE  
STATE OF HAWAII  
2018 REGULAR SESSION**

**RELATING TO THE WILDLIFE REVOLVING FUND**



Prepared by

**THE STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF FORESTRY AND WILDLIFE**

In response to Section 183D-10.5, Hawaii Revised Statutes

Honolulu, Hawaii  
October 2017

## **RELATING TO THE WILDLIFE REVOLVING FUND FISCAL YEAR 2017**

### **PURPOSE**

The goal of the Wildlife Revolving Fund (WRF) is to provide funds to manage and enhance public hunting opportunities in Hawai'i. Act 290, Session Laws of Hawai'i 1991, amended Section 183D-10.5, Hawai'i Revised Statutes (HRS), by adding a requirement for an annual report to be prepared by the Department of Land and Natural Resources (Department) on the status of the WRF and transmitted to the Legislature no later than twenty days prior to each regular session. The report is to include:

1. The source and application of monies deposited into the fund, including a description of the criteria and process used to determine funding priorities;
2. A description of programs and activities supported by the fund;
3. A summary of program highlights and accomplishments; and
4. A description of future program plans, including specific goals and objectives.

### **FUNDS**

Section 183D-10.5(b), HRS, provides that the following proceeds shall be retained by or transmitted to the Department for deposit in the WRF: fees for hunting licenses, game bird farmer and Commercial Hunting Preserve licenses and fees, hunting guide licenses, hunter education training programs and use of public target ranges, fines collected for hunting or wildlife law violations, bail forfeitures, sale of articles required before hunting, and related works of art. For Fiscal Year 2017 (FY 17), the major source of revenue was hunting license sales followed by the sale of game tags. Sources of revenues are detailed below:

Revenue did not meet the Department's authorized budget ceiling for the WRF of \$635,428.00. New expenditures totaled \$429,115.32. The cash balance at the end of FY 17 amounted to \$428,841.72, with outstanding encumbrances of \$43,232.63. Revenues have gradually increased in the WRF throughout FY 17 due to an increase in the number of non-resident hunters in the State of Hawai'i and an increase in number of licenses and game tags sold.

#### **Status of S-343**

Beginning Cash Balance of Fund on July 1, 2017	\$236,631.23
Revenues during FY 2017	\$607,495.46
Cash Transfer from FY15	\$13,827.11
Investment Pool (FY15)	\$3.24
Expenditures during FY 2017	- \$429,115.32
Cash Balance as of June 30, 2017	\$428,841.72
Unpaid encumbrances as of June 30, 2017	-\$43,232.63
Unencumbered Cash for carryover as of 06/30/2017	\$385,609.09

**Summary of Revenues FY 17**

Hunting Guide License and Lottery	\$46,730.00
Game bird Farmers	\$5,500.00
Hunting license with Cons	\$288,680.00
Fees, Wildlife Conservation Stamp	\$2,110.00
Hunter Ed Fees (FY17)	\$0.00
Game bird Stamps	\$44,235.46
Sales of Game Tags	\$220,205.00
Operation and Maintenance	\$35.00
<b>Total Revenue for FY 17</b>	<b>\$607,495.46</b>

**Summary of Expenditures FY 17**

Personnel	\$169,725.49
Operations	\$225,400.85
Hunter Ed Fees (FY 2000 – FY16) Cash Transfer	\$33,988.98
<b>Total Expenditures</b>	<b>\$429,115.32</b>

**Summary of Outstanding Claims FY 17**

Operations Claims	77,711.05
Amount expended	34,478.42
<b>Total remaining balance of outstanding claims</b>	<b>43,232.63</b>

**FUNDING PRIORITIES**

The WRF has been an important portion of the overall budget to meet obligations of state match and operating and salary expenses for game and wildlife projects. Because the major sources of revenue for the WRF come from direct charges to hunters, priority is given to expenditures which benefit this user group. A formal hunting rule change has been conducted and was approved in May of 2015 therefore the sale of stamps, game tags, and application fees may be assessed to hunters by species, area, and season chosen to hunt.

In budgeting for the WRF, a policy of allotting at least 85% of the budget for the hunting program has been in place and followed. Up to 15% of the budget may be used for nongame and wildlife sanctuary management, for projects that may have dual benefits to game species and nongame species.

Section 183D-10.5(e), HRS, also requires that the State first use WRF monies to "maximize the State's participation to secure federal funds under the Pittman-Robertson Federal Aid in Wildlife Restoration Act." Consequently, a priority was given to those expenditures that provided the state match for Pittman-Robertson (PR) projects.

The allocation of operating funds to the Division of Forestry and Wildlife's (DOFAW's) Branch Offices was done on a lump sum basis to be used on eligible projects.

With the increase in hunting fee revenue, the funding available for salaries has increased and two additional positions have been funded. The operating funds were allotted to the Branches based on the respective Branch wildlife program size and complexity, and amount of revenue generated from license fees.

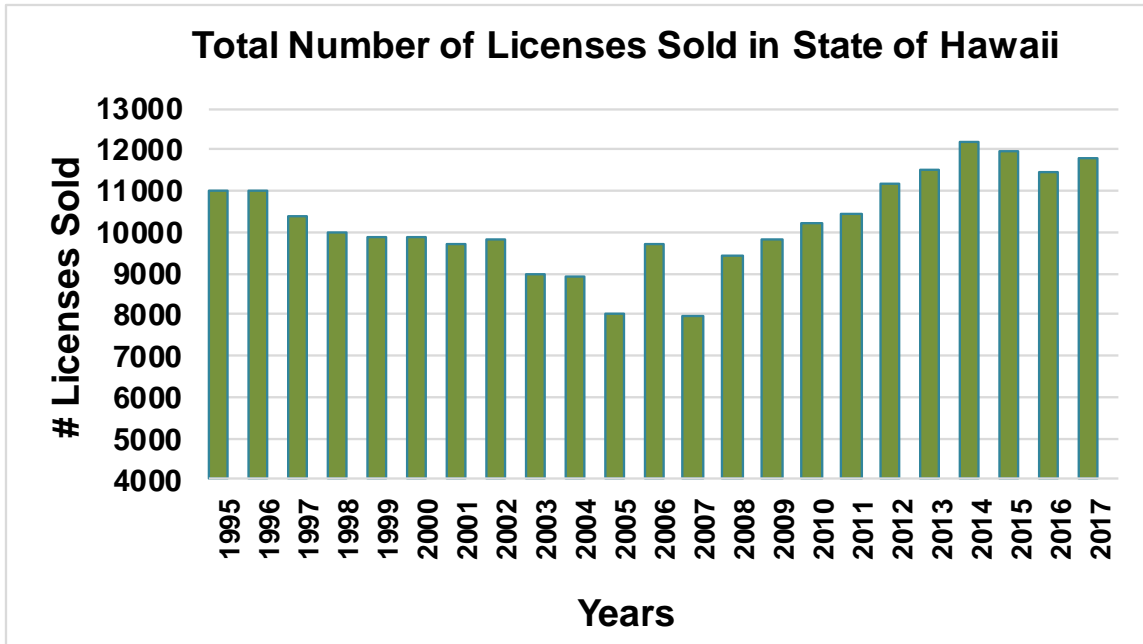
### **PROCESS USED**

1. The Department's Fiscal Office and DOFAW coordinated to determine the amount of the Fund available for allocation to DOFAW's Branch Offices.
2. At the beginning of each fiscal year, a portion of the WRF budget is allocated to each DOFAW Branch Office and to Honolulu Administrative Staff for Statewide projects. A portion of the funds are allocated for temporary personnel to maintain wildlife program functions, and to pay budgeted add-on salary costs to assist with wildlife projects.
3. Each Branch Office collaborates in the development of the overall annual WRF budget, to benefit the resources and resource users, all within the criteria of compliance with the purpose of the WRF and the necessity to provide state-match requirements for PR projects.
4. An emphasis was placed on using WRF for essential expenditures to provide support for public hunting opportunities.
5. All expenditures are identified and coded as "WILDLIFE REVOLVING FUND: S-17-343" to facilitate tracking and accountability.
6. Expenditures complied with approved categories of expenditures for WRF as established by The Board of Land and Natural Resources on August 13, 1993 (see Attachment 1, appended)

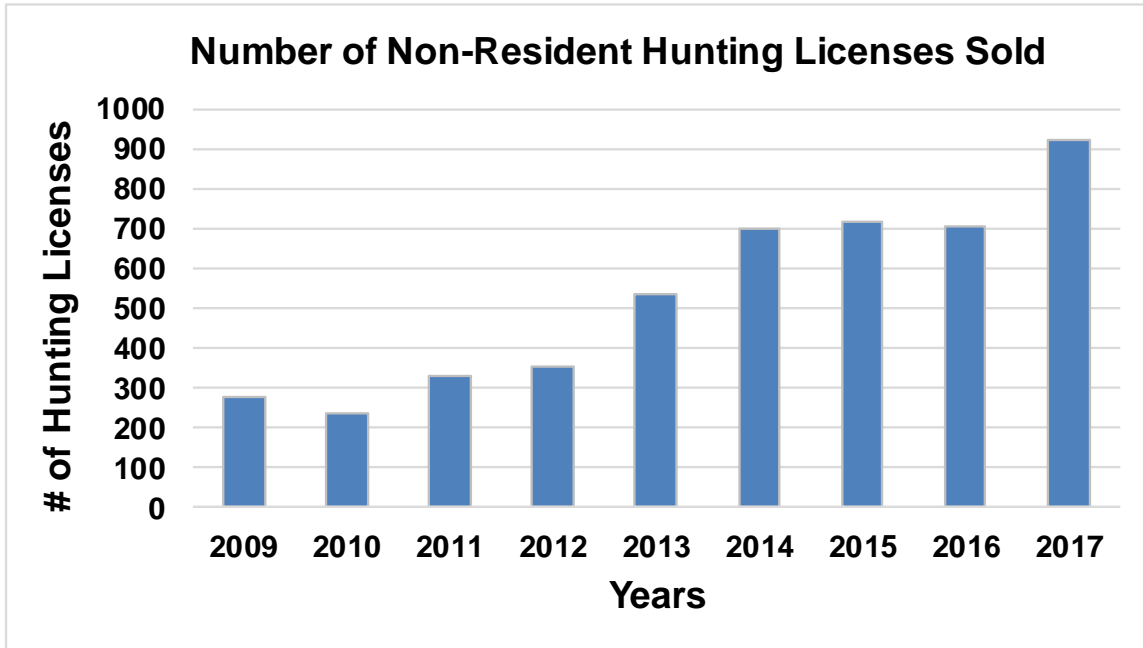
### **HUNTING LICENSE SALES OVERVIEW**

Overall, Hawai'i hunting license sales and sale of non-resident licenses have shown a steady increase since 2005 and 2009, respectively (Figure 1 and 2). Since this combined revenue is earmarked in the WRF and used to benefit game management and hunting programs, it suggests that hunter recruitment, hunter retention, and hunting tourism programs be actively promoted.

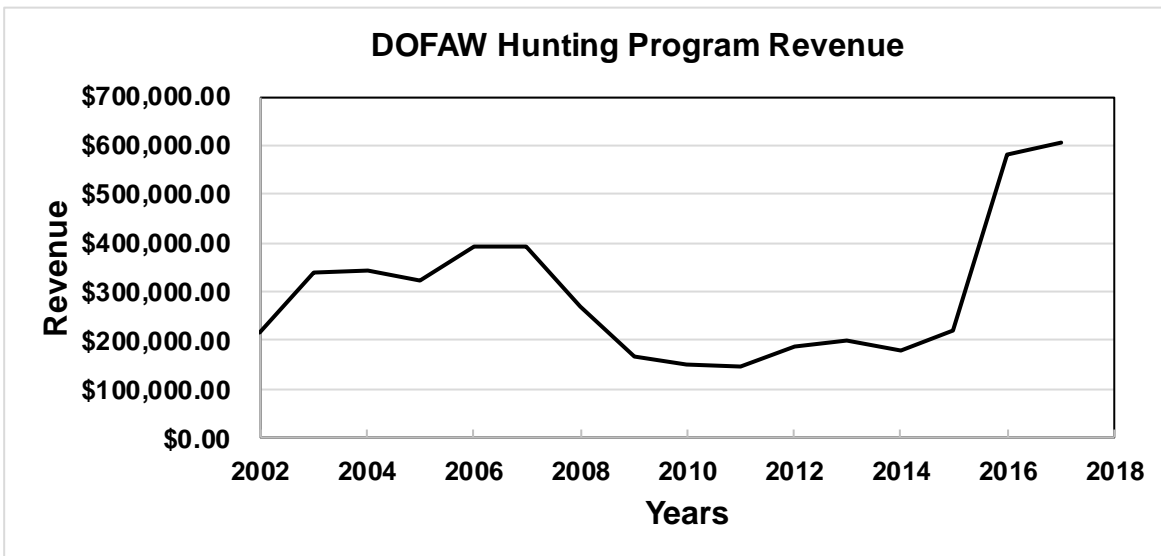
DOFAW established a \$10 Wildlife Conservation Stamp in 2015, and made it an integral and mandatory part of the general hunting license, effectively increasing the resident license fee purchase price to \$20 (non-resident \$105). Hawai‘i Administrative Rule 13-122-5.1 granted the Department authority to “establish fees for wildlife stamps, application fees, and tags” insofar as the fee set for each stamp, fee, or tag does not exceed the cost of a hunting license (\$10). Hence a sharp increase in revenues was observed in fiscal year 2016 (Figure 3). For the current fee schedule for hunting licenses, wildlife conservation stamps, applications, permits, and tags for special lottery or hunts (see Attachment I).



**Figure 1.** The total number of hunting licenses sold in the State of Hawai‘i (1995 – 2017).



**Figure 2.** The total number of non-resident hunting licenses sold (2009 – 2017).



**Figure 3.** Revenue derived from the WRF over a sixteen-year segment.

## **Economic Benefits**

In addition to providing recreation and supporting a chosen lifestyle for many residents, hunting provides an economic benefit to the state. Hunting in America is big business. It generates more than \$86.9 billion in economic output and 680,937 jobs. The top 10 states all receive over \$ 1 billion annually in economic benefit from hunting NSSF-National Shooting Sports Foundation & International Association of Fish and Wildlife Agencies-IAFWA 2011).

Hawai‘i, Montana, Maine and Idaho are states of similar population. Montana, Maine, and Idaho actively promote hunting in their states, and realized an average of \$428 million in 2001 to \$648 million in 2011 in economic benefit (NSSF & IAFWA 2001; 2011). Although Hawai‘i does not actively promote its game resources, the state economy nevertheless benefits from its hunting programs. The estimated overall economic impact from hunting in Hawai‘i was \$28 million in 2001 and \$73 million in 2011 (NSSF & IAFWA 2001; 2011). A modest effort in promotional activities could increase the state’s economic benefit substantially.

In addition to the tangible revenue benefit described, hunters provide a no cost service to mitigate the adverse impact of nuisance wildlife, a cost that would otherwise be borne by government agencies. State and local taxes would have to be raised significantly to pay for professionals to make up for the loss of licensed hunters who currently pay a fee to provide the same service. National studies have been made to estimate costs to the public in areas of human health, transportation, safety, agriculture, dwellings, and infrastructure if hunting and trapping were lost as primary wildlife management tools (IAFWA 2005).

<b>Economic Impact of All Hunting Activities in the State of Hawaii</b>								
<b>Year</b>	<b>Retail Sales</b>	<b>Total multiplier Effect</b>	<b>Salaries and Wages</b>	<b>Jobs</b>	<b>Sales and Motor Fuel Taxes</b>	<b>State &amp; Local Taxes</b>	<b>State income Taxes</b>	<b>Federal income Taxes</b>
<b>2001</b>	\$16,974,189	\$ 27,830,441	\$ 6,365,560	242	\$ 946,162	N/A	\$ 447,388	\$ 1,066,269
<b>2011</b>	\$52,713,340	\$ 73,001,767	\$23,514,889	774	N/A	\$ 6,025,027	N/A	\$ 5,099,046

NOTE: Definitions: Retail Sales – the dollars spent by hunters; Total Multiplier Effect – the total amount of spending that occurs in the economy as a result of hunters’ spending; Salaries and Wages: total amounts paid to employers and small business owners in companies that serve hunters or support businesses who directly serve hunters; Jobs – the number of positions supported in businesses directly and indirectly serving hunters; Tax Revenues – government receipts received from businesses and individuals who directly and indirectly serve hunters (NSSF & IAFWA 2001; 2011).

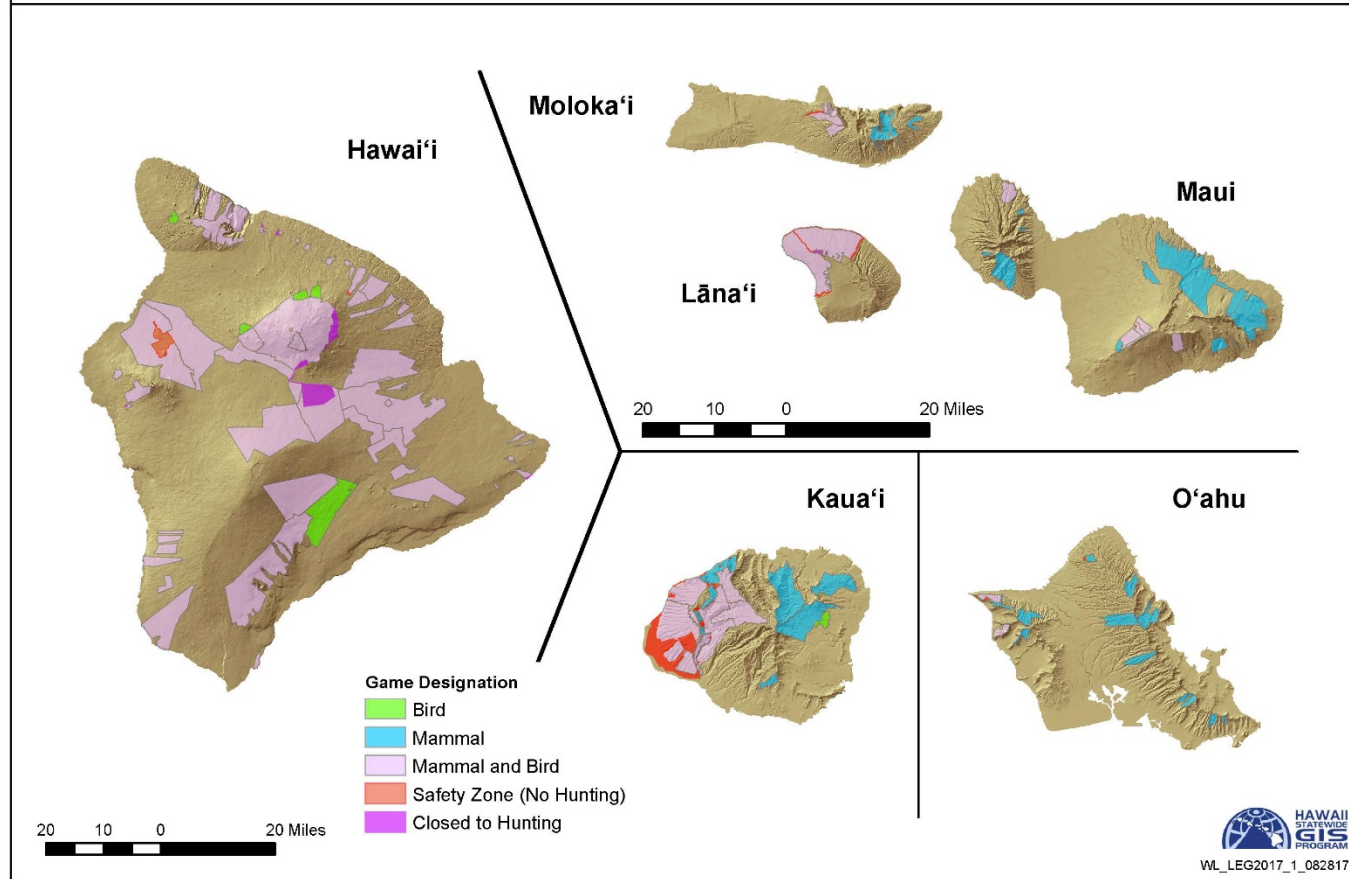
<b>Number of hunters and Days of Hunting in the State of Hawaii</b>		
<b>Year</b>	<b># Hunters</b>	<b># Days of Hunting</b>
<b>2001</b>	16,940	316,003
<b>2011</b>	22,523	774,173

Taken directly from NSSF & IAFWA 2001; 2011.



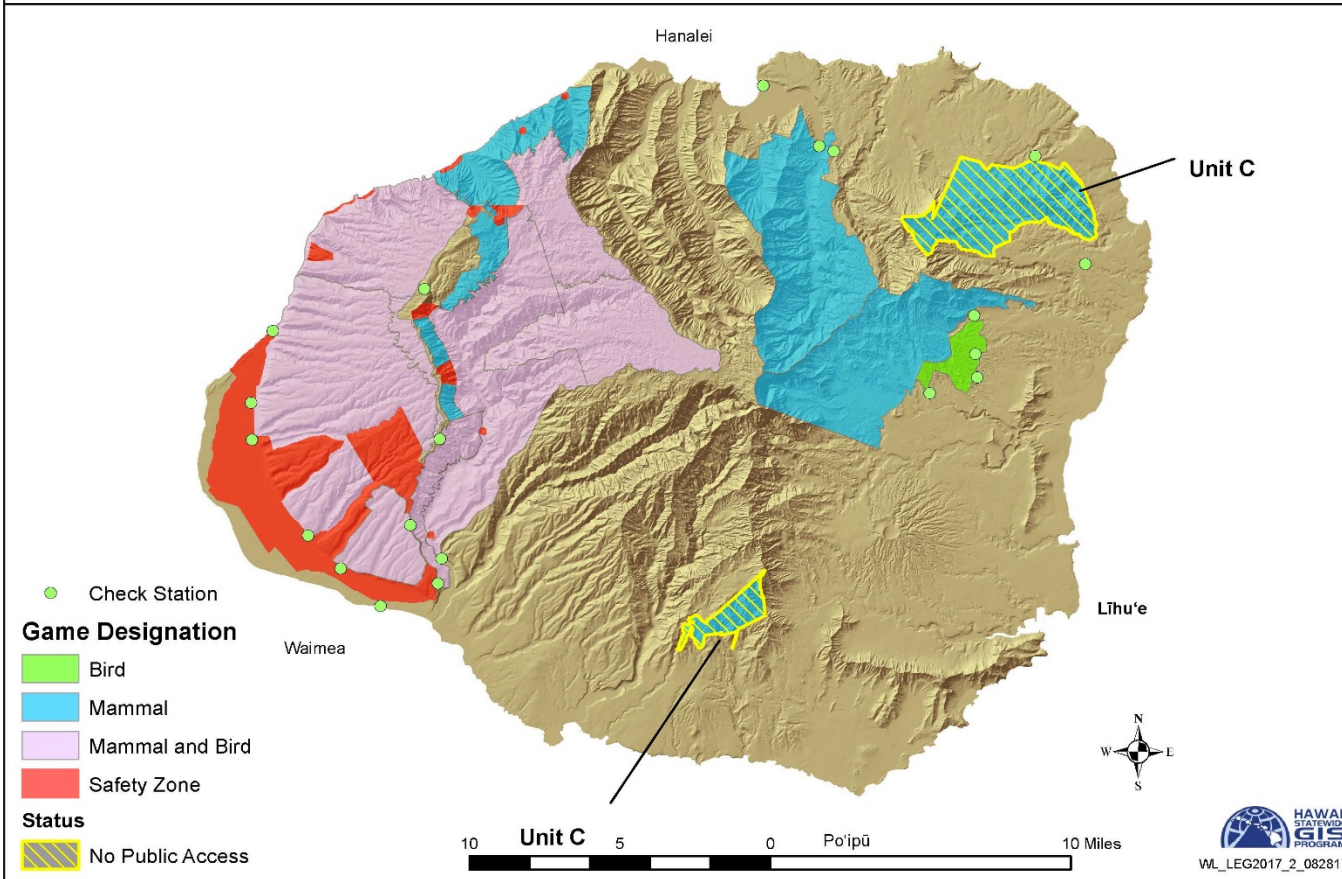


## Hunting Areas Statewide FY 2017





## Kaua'i Hunting Areas FY 17



## **PROGRAM HIGHLIGHTS, ACCOMPLISHMENTS AND FUTURE PLANS**

### **KAUA‘I BRANCH**

#### **Hunting Season Management**

*Objectives:* Provide hunting information to the public and other districts through announcements and news releases. Manage public hunting seasons in compliance with Chapter 13-122 Hawai‘i Administrative Rules, regulating game bird hunting and Chapter 13-123 Hawai‘i Administrative Rules regulating game mammal hunting.

*Accomplishments:* The WRF was used to purchase United States Postal Service bulk stamps to mail game tags and permits to public hunters. Miscellaneous office supplies were purchased using the WRF to operate the public hunting seasons. Bulk fuel was also purchased to operate six game trucks to manage twelve (12) public hunting units on Kaua‘i. The game trucks were also maintained and repaired when needed.

#### **Commission on Hunting License Sales**

*Objective:* To pay the Kaua‘i hunting license vendors for their commission on the sale of the 2016-17 Hawai‘i Hunting Licenses.

*Accomplishments:* Hunting licenses were available and sold to Kaua‘i license vendors.

#### **Research Project: Game Bird Guzzlers in Kekaha Game Management Area (GMA)**

*Objective:* Effectiveness of game bird guzzlers in Kekaha Game Management Area.

*Accomplishments:* During the month of March and April, DOFAW biologists on Kaua‘i, set up camera traps on two water tanks, also known as guzzlers. The two guzzlers are located in the Kekaha GMA. The camera traps recorded everything taking advantage of a free drink. The Biologists recorded a total of 174 game birds that drank from these two water tanks over a 3-day period. The species that took advantage of the guzzlers were the ring-necked pheasants (32); Erckel’s francolin (6); Spotted dove (97) and Barred Dove (39). By collecting this type of information periodically we can see if our guzzlers in the GMA are effective and being used by game birds.



Photo: Ring-necked pheasant caught drinking water on camera trap (03/17/2017).

### Game Bird Release Project

*Objectives:* Manage and operate the pheasant release project in the Kekaha Game Management Area.

*Accomplishments:* WRF monies were used to purchase and raise 700 day old ring-necked pheasant chicks to be released in the GMA. The project involved raising the birds for the first two and a half months of age and releasing them throughout the hunting area.

### Game Operations and Maintenance

*Objectives:* Maintain and expand the capacity to manage water units, fences, hunter checking stations, and other infrastructure necessary for hunting. Improve game operations and maintenance through additional field staffing, adequate equipment and supplies.

*Accomplishments:* WRF monies were used to upkeep the thirteen hunter public check stations on Kaua'i. WRF monies were expended on printing hunting information and maps. Game auto-feeders were maintained and operated through the summer and fall season and deactivated one month prior to the open season in November. A total of 30 game bird water guzzlers were in operation and were maintained in the Kekaha GMA. Bulk diesel fuel was purchased to operate medium and heavy equipment for game management purposes. This equipment was also maintained and repaired when needed. Lastly, WRF monies were used to pay for utility bills such as electric, water, and telephones.

Total WRF Expenditure for Kaua'i District: Operating \$30,426.62/Personnel \$53,124.04

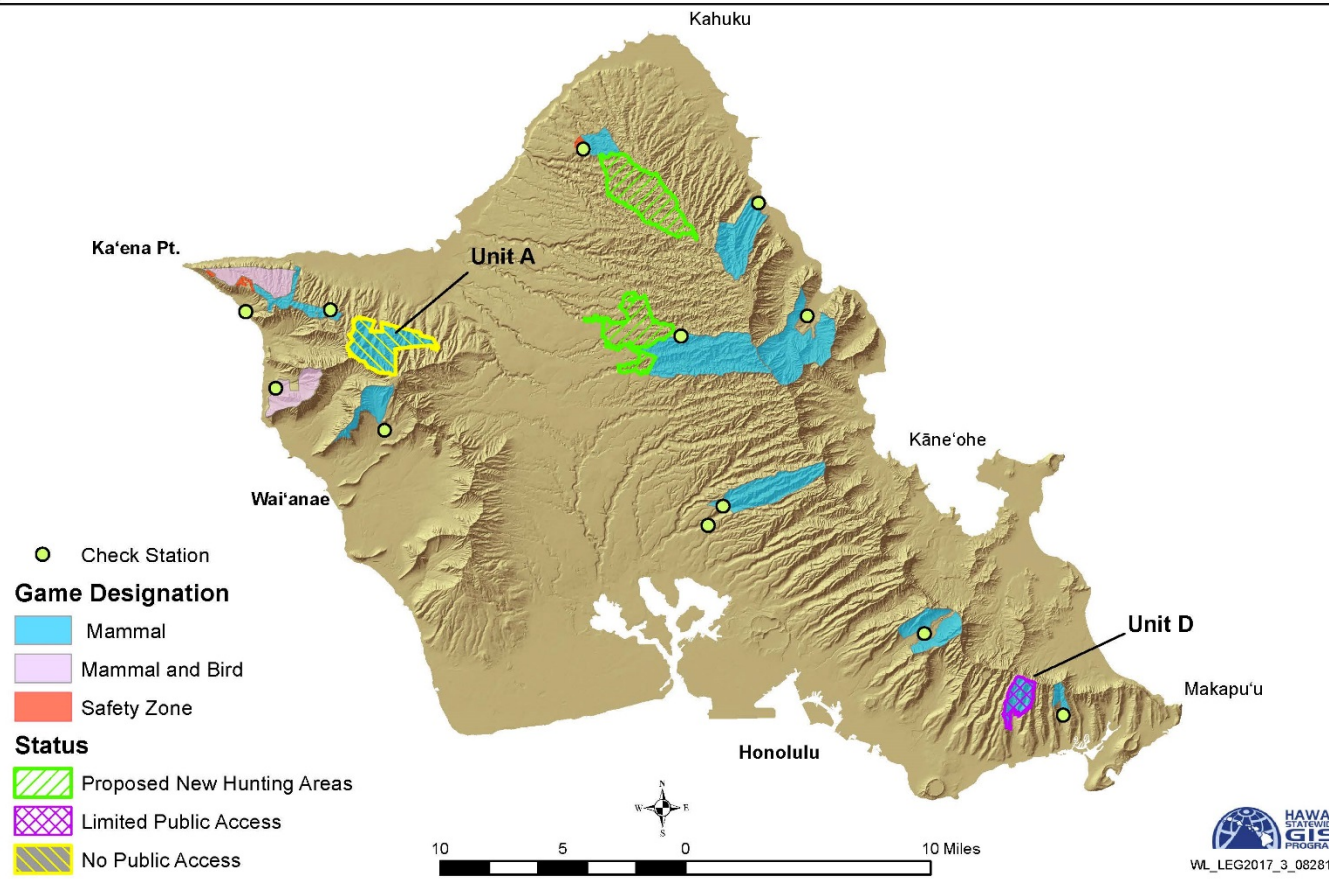
### Future Program Plans

1. Provide for the administrative costs, such as printing and publishing of game tags, permits, announcements of hunting seasons and additions of new hunting areas. - \$5,000 (100% WRF)
2. Incremental development of the proposed Hanahanapuni public shooting/archery range \$20,000 (50% WRF)
3. Continue the artificial game bird release project in the Kekaha GMA. Expand on the game bird release project in Hunting Unit I (Wailua GMA) and Unit L (Waimea Heights). Plan, design, and purchase building materials, equipment and supplies for the complete construction of a game bird rearing facility - \$30,000 (100% WRF)
4. Purchase one four-wheel-drive truck to be added to the game program to support all aspects of operations, management, and surveys. \$50,000 (50% WRF)
5. Maintain game vehicles and equipment to manage and operate the Kaua'i hunting program. \$30,000 (50% WRF)
6. Purchase of construction materials and supplies to maintain existing game management facilities, including fences, gates, water units, feeding sites, restrooms, storage buildings, and hunter checking stations. \$30,000 (50% WRF)
7. Provide air logistical support to conducts surveys, operations and maintenance of the Kaua'i game management program. \$20,000 (50% WRF)
8. Provide new hunter access routes to several hunting units. Procure to hire a consultant to assist DOFAW on the Environmental Assessment. \$60,000 (50% WRF).





## O'ahu Hunting Areas FY 17



## O‘AHU BRANCH

### Game Management on O‘ahu

*Objectives:* To maintain and enhance wildlife habitat and facilities on O‘ahu public hunting areas (PHA’s), GMA’s, and wildlife sanctuaries; and to improve game bird and game mammal hunting opportunities on O‘ahu.

*Accomplishments:* Funding was used to provide gamebirds and manage habitat for gamebird hunting on O‘ahu; specific activities as follows:

- Spread 1500 pounds of wild bird feed on in the Kuaoakalā GMA during the gamebird hunting season (November 2016 to January 2017) to attract birds into the hunting area and provide supplemental feed for released gamebirds.
- Released 25 Ring-necked pheasants donated from Nonokio Farms.
- Assisted in logistics to support Kaua‘i District Gamebird Release Program.
- Constructed brooding and fly pens for Ring-necked Pheasant Propagation Project.
- Imported and currently raising 200 Ring-necked pheasants and 100 Melanistic Blue Mutant pheasants for release during 2017-18 gamebird season. Gamebirds are raised and maintained by volunteers.

### Research Project: Feral Pig Distribution Model

*Objectives:* Ecological modeling of optimal pig management strategies for hunting and conservation purposes on O‘ahu.

*Accomplishments:* a survey technique using camera traps was developed to create a model of feral pig distribution and impact on O‘ahu. The model uses count data of pig abundance, collected at randomized sites via standardized survey protocols using camera traps. The data will be analyzed upon completion of the study. This study has only been partially funded by WRF and it is conducted in collaboration with University of Hawai‘i.



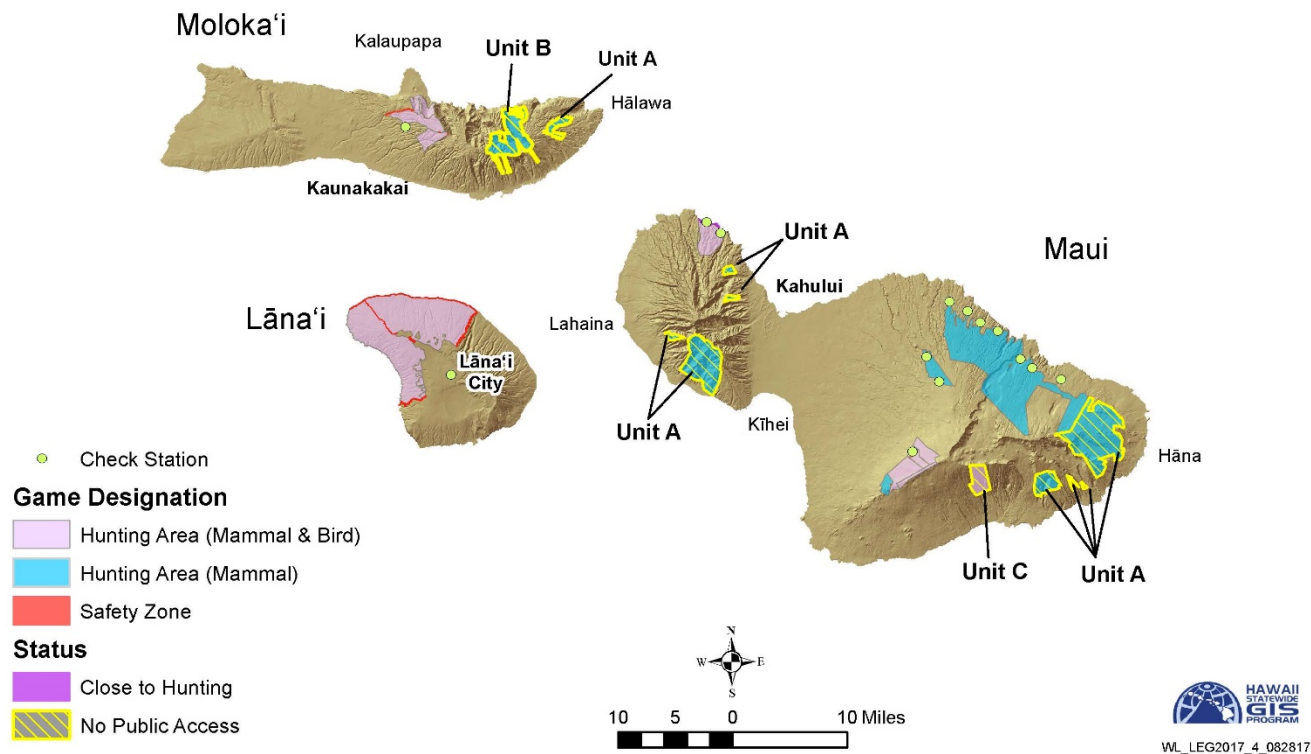
Total WRF expenditures incurred for O‘ahu: Operating \$23,727.98

### Future Program Plans

1. Restore revenue from the sale of hunting tags, stamps, and fees and fill vacant WRF General Laborer position on O‘ahu Branch.
2. Fund a WRF Wildlife Technician to perform tasks targeted towards ongoing management of O‘ahu District wildlife management areas. This position will assist the Game Management Biologist in field operations-\$75,000 (100% WRF).
3. Purchase equipment and supplies needed for ongoing Operations & Maintenance in O‘ahu Wildlife Management Areas - \$15,000 (100% WRF).
4. Through partnerships with the University of Hawai‘i, fund graduate level research to understanding the socio-economic impacts of Hawai‘i Hunters.



## Maui, Molokai, and Lanai Hunting Areas FY 17



## MAUI BRANCH

### Lease of Cooperative Game Management Area (CGMA) - Lānaʻi

*Objective:* Provide 30,000 acres of land on Lānaʻi for sport hunting and wildlife management.

*Accomplishment:* The annual lease rental for the Lānaʻi CGMA was paid via WRF monies. This area provided hunters the opportunity to pursue Axis deer, Mouflon sheep, and a variety of game birds.

### Game Mammal Aerial Survey

*Objective:* Annual game mammal surveys of the Lānaʻi CGMA and private portions of Lānaʻi Island. Staff from Maui led the survey effort for both the fall and spring surveys. Associated costs for the spring survey only included staff travel.

*Accomplishments:* An aerial survey of the Lānaʻi CGMA and the Pūlama Lānaʻi hunting area was conducted on September 15-16, 2016. The spring survey was conducted on March 8-9, 2017.

Within the Lānaʻi CGMA, a total of 860 Axis deer were counted on the fall survey resulting in an estimated population of 2,313 animals. A total of 519 Mouflon sheep were counted, bringing the estimated population to 1,396 animals.

Within the Pūlama Lānaʻi hunting area, a total of 1,010 Axis deer were counted, bringing the estimated population to 2,717 animals. A total of 124 Mouflon sheep were counted on the fall survey, resulting in an estimated population of 334 animals.

Surveys conducted on the state managed portion of Lānaʻi are used in part for setting upcoming bag limits.

### Personnel Expenses

*Objective:* Hire a Forestry and Wildlife Worker II on Lānaʻi to assist the Lānaʻi Forestry and Wildlife Technician with the upkeep and maintenance of 30 miles of water unit pipeline, 25 water units, a multitude of signs and 54 miles of access roads in the Cooperative Game Management Area. The Forestry and Wildlife Worker II would assist with habitat management, game bird and game mammal surveys, enclosure maintenance, and predator control. Hunting activities and hunter check in on Lānaʻi occurs after normal operating hours. Overtime is paid to the Lānaʻi technician to accommodate hunters.

*Accomplishment:* Funding for the Forestry and Wildlife Worker II position is funded through the Wildlife Revolving Fund. This position allows facilities and field operations on Lānaʻi to be properly maintained, serviced and free of any major problems. Overtime costs for both the Mouflon and Axis deer hunts were approved, allowing check in of hunters to be completed in a timely manner.

### Management of the Lottery Hunts - Lānaʻi

*Objective:* The processing and printing of documents for the Axis deer and Mouflon sheep hunts on Lānaʻi. Shipment of instruction sheets and applications for the two hunts to the outer districts. Cost associated with online applications for both hunts are a recent



addition to managing the hunts. A conference room is needed to conduct and accommodate the public for the Axis deer and Mouflon sheep lottery. Due to staff shortages on Maui, personnel from the outer districts were requested to assist in both lotteries.

*Accomplishment:* Application cards, instruction sheets, and addendums were printed and distributed to all districts and lotteries conducted. Approximately 40% of applicants applied online for both hunts, resulting in service fees being paid to the contractor of the online program. A conference room was rented to conduct and accommodate the public for the Axis deer and Mouflon sheep lottery. Staff from the outer districts assisted in the conducting of the lottery for both hunts.

#### Game Mammal Facilities Operations & Maintenance - Lānaʻi

*Objective:* Rental of dumpster(s) during the Axis deer and Mouflon sheep seasons for hunters to dispose of carcasses. Materials required for the hunting program to function needed to be purchased.

*Accomplishment:* Two (2) dumpsters were rented for each of the two (2) hunts. This provided the hunting community with the facilities to dispose of animal carcasses. Three (3) new signs were installed at the access points to the hunting area. Signs depicted maps of the hunting area, including roads, boundaries and other miscellaneous information. Vehicle repairs were also charged to this fund. Axis deer tags were purchased during this period.

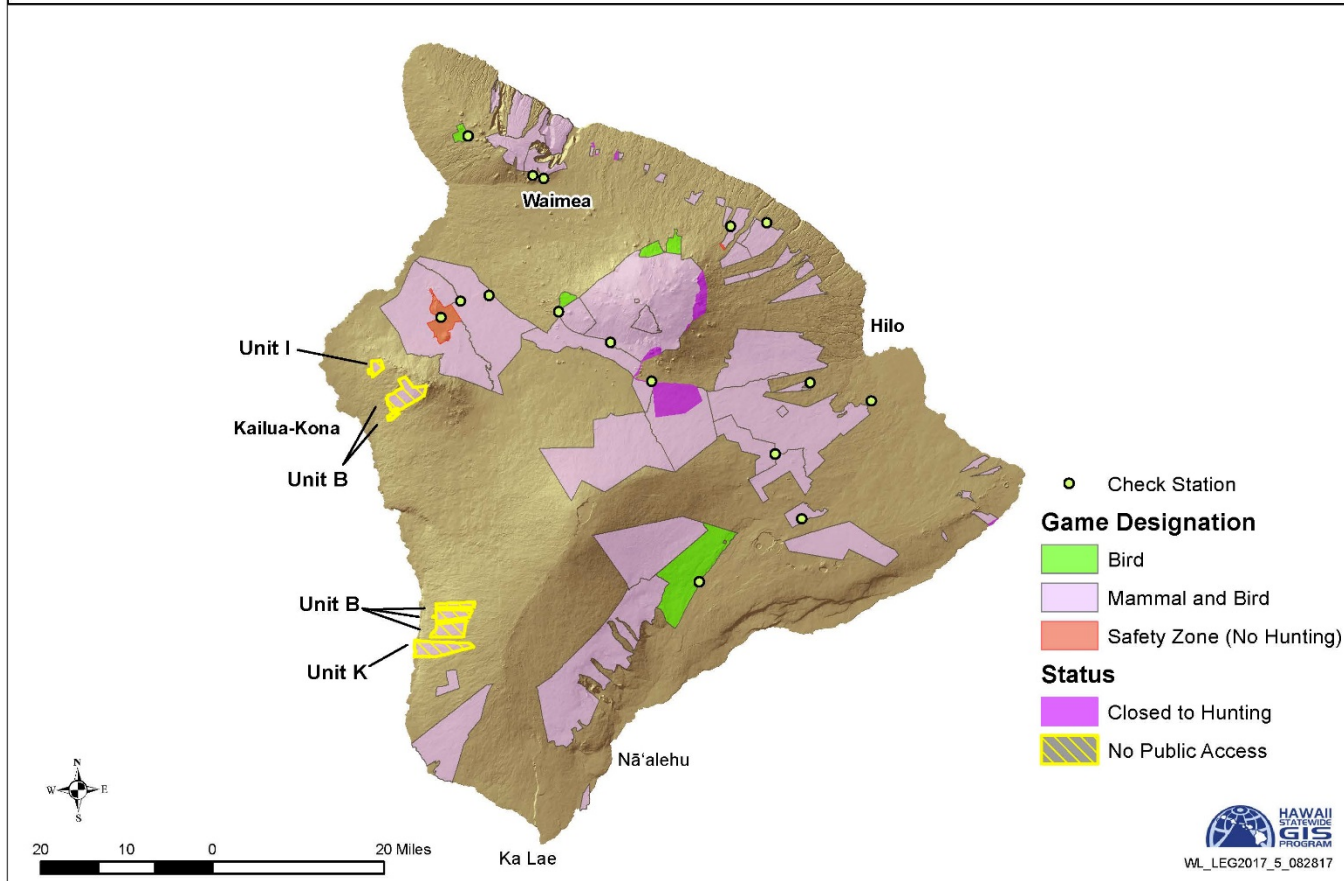
Total WRF expenditures for Maui District was \$168,644.14 with open claims and a contract (See Attachment II; Table 2).

#### Current and Future Program Plans

1. Fund Rental of Lease on Lānaʻi - \$35,000.00 (100% WRF)
2. Fund Lānaʻi Check Station overtime for FWT V position-\$5,000.00 (100% WRF)
3. Fund FWW II position on Lānaʻi for facility upkeep and maintenance-\$60,000.00 (100% WRF)
4. Fund game mammal facilities development and operation & maintenance on Lānaʻi-\$75,000.00 (100% WRF)
5. Fund game mammal surveys on Lānaʻi -\$15,000.00 (100% WRF)
6. Fund Management of Lottery Hunts on Lānaʻi; document printing, data input and drawings-\$15,000.00 (100% WRF)
7. Fund clerk position for Lānaʻi Check Station-\$25,000.00 (100% WRF)
8. Habitat remediation and enhancement - \$25,000 (100% WRF)



## Hawaii Island Hunting Areas FY 17



## WEST HAWAI'I DISTRICT

### Game Operations and Maintenance

*Objective:* Conduct predator control activities; maintain game related facilities such as guzzlers; increase road maintenance and habitat management capacity for the West Hawai'i District, while maintaining more than 60 miles of hunter access roads.

*Accomplishment:* All operations and maintenance activities were accomplished without use of WRF monies.

### Game Program Coordination

*Objective:* The District staff assisted Sports Authority, Wal-Mart and other vendors in Kona with hunting license sales and training (these being the only outlets for the public to purchase hunting licenses in Kona other than the DOFAW office 40 miles away in Kamuela).

*Accomplishment:* The District's secretary assisted with training of vendors in Kailua-Kona store staff in hunting license sales. During anticipated increase in hunting license sales traffic at these establishments, the Secretary assisted with license sales and dissemination of information pertinent to the upcoming seasons.

### Temporary Hire of ½-Time General Laborer (GL)

*Objective:* To assist the District's wildlife staff in the operations and maintenance of projects and to provide predator control at various locations.

*Accomplishment:* A part-time GL I position was paid for out of this special fund, and assisted in predator control, trapping of mongooses, feral cats, and feral dogs, maintained water units and water supply facilities, and assisted with invasive plant control. The GL removed 127 mongoose and 37 feral cats during FY 17.

### Research Project: sheep survival rates, population demographics, and habitat use

*Objective:* Estimate sheep survival rates, population demographics, and habitat use in the Pu'u Wa'awa'a Forest Reserve and the Pu'u Anahulu Game Management Area.

*Accomplishment:* In September 2016 we began research on the mouflon sheep within the Pu'u Wa'awa'a (PWW) and Pu'u Anahulu (PAH) game management areas south of the belt road. Captures were conducted by helicopter over PAH and ground captures in the ranch area of PWW. We sampled blood (for pregnancy and trace mineral content), estimated age, measured rump fat, and recorded various morphometric measurements on 80 individuals. A total of 24 GPS collars and 16 VHF collars were placed on a randomly selected subset of adults prior to their release at point of capture. These collars would provide information on movement, space-use, and survival. Ear tags were placed on each individual to facilitate identification and in anticipation of estimating population size through mark-recapture. This research project is funded by Pittman- Robertson grant.

However, in order to gather more accurate data, the sample size of GPS collared animals needed to be increased. Using the WRF, additional GPS collars have now been purchased and plans to deploy the collars are underway. The data will be analyzed upon completion of the study.

Total WRF expenditures for West Hawai'i District was \$41,319.66 with open claims (See Attachment II; Table 2).

## Future Program Plans

1. Purchase and maintain equipment and vehicles, and construct facilities, as funds allow. \$35,000
2. Provide for the administrative costs, such as printing and publishing of game tags, permits, announcements of hunting seasons and additions of new hunting areas. \$10,000
3. Improve game habitat projects in GMAs and appropriate areas by installing water units, food plots and improving cover. \$50,000
4. Continue part-time General Laborer I position.
5. Fund a full-time Wildlife Biologist III position. \$55,000

## EAST HAWAI'I DISTRICT

**General Laborer Position:**

**Objectives:** Pursue duties pertaining to Hilo watershed wild cattle control, hunter checking stations, and nēnē habitat renewal.

*Accomplishments:* Half-time general labor position was filled for two months. Work accomplished involved checking station repair and maintenance; sign, road and fence maintenance for special “wild cattle control” hunt.

### Commissions on Hunting License Sales:

*Objective:* To maintain a network of hunting license vendors on the island of Hawai‘i for sales of the 2016-2017 Hawai‘i hunting licenses.

*Accomplishment:* Hunting licenses were sold at various vendor locations, providing convenience to public hunters.

### Game Operations and Maintenance:

**Objective:** Conduct predator control activities, the maintenance of game-related facilities such as guzzlers and maintenance of hunter access roads.

*Accomplishment:* All operations and maintenance activities were accomplished without use of WRF monies. WRF monies were used to pay utility bills, supporting the administrative side of the game program.

Total WRF Expenditure for East Hawai‘i District:	Operating	\$23,354.90
	Personnel	\$9,560.37

### Future Program Plans

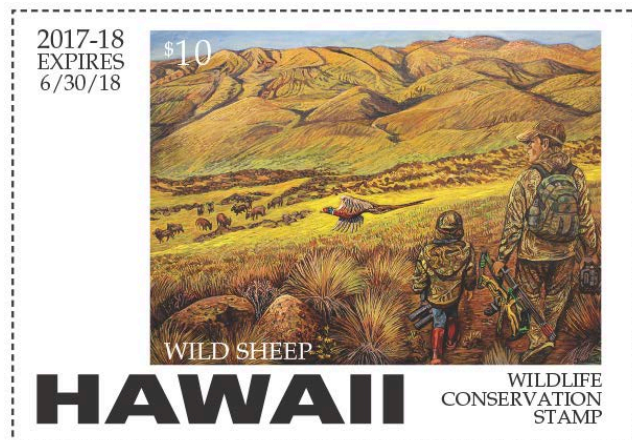
1. Replace boundary and safety zone signs in hunting areas.
2. Weed control and habitat improvements in public hunting areas.
3. Check station, roads, trails and water unit maintenance in public hunting areas.

## **STATEWIDE ADMINISTRATIVE SEGMENT**

### Hunting License, Wildlife Conservation Stamp, and Game Bird Stamp Production, Program Sales, and Management:

*Objective:* To produce and distribute required hunting licenses over the counter and online (electronic license), duplicate licenses, conservation stamps, gamebird stamps, tags and vendor booklets. A portion of the production costs were paid with WRF monies. Manage and monitor the Wildlife Revolving fund throughout the fiscal year to ensure all obligations are met.

*Accomplishment:* Produced and distributed vendor booklets, hunting licenses, web-based electronic hunting license system training, developed on-line non-resident exemption form, conservation stamps, game bird stamps, tags and duplicate hunting licenses. All hunting related materials for new hunting season were updated for public use.



Art Contest Winner- 2018 Conservation Stamp



Art Contest Winner- 2018 Game Bird Stamp

Notification of Hunting Season Openings and Changes:

*Objective:* Communicate any changes in hunting seasons, and announce new or special hunting opportunities as required by state rules.

*Accomplishment:* Several legal notices announcing new animal control opportunities for hunters were produced and a series of announcements and news releases were produced for hunting seasons.

Implementation of communication strategies to improve hunter recruitment and retention:

*Objective:* 1) Write, publish and distribute quarterly informational newsletter; 2) Create a listserv (email list) for all hunting enthusiasts that would like to receive hunting related announcements, updates and newsletter; 3) Update/improve the hunting section of the DOFAW website.

*Accomplishment:* The quarterly informational newsletter was published in March and June 2017. The Go Hunt Hawai'i newsletter is an informational newsletter to connect hunters and DOFAW resource managers. This newsletter is now available online on the DOFAW website.

A listserv was created where all interested parties could sign in with their names and email address and receive up-to-date hunting related news, announcements and our newsletter. There are now over 400 people signed up on this mailing list. Signup sheets are also available online (see DOFAW website) and at all district offices and at every hunter education class.

Finally, the hunting page on DOFAW website has been improved. For more information see [dlnr.hawaii.gov/recreation/hunting/](http://dlnr.hawaii.gov/recreation/hunting/)





This is the first edition of Go Hunt Hawai'i, a quarterly newsletter to connect hunters and the Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife (DOFAW). Sign up to stay up to date on announcements, changes to hunting areas, research on animal populations and more.

SIGN ME UP

## Kaua'i Hunting Unit Celebrates First Birthday

WAIHEA HEIGHTS (UNIT I)

In December 2015, Hawai'i DLNR, the State Agriculture Development Corporation (ADC), state agency landowners, and ADC's licensees including the Kalaheo Agriculture Association (KAA) and a Co-operative Management Agreement, and Wildlife-friendly Agreement to open Waiheea Heights Public Hunting Area (Unit I).

This provides access to another 3,372 acres of highly forested public hunting area on Kaua'i, an important addition to the State game management program.

Open:  
Saturdays & Sundays  
during hunting season.

DLNR DOFAW manages over a million acres of state land for recreation and conservation. We recognize the high demand for increasing public hunting opportunities on these lands statewide.

Unit I is another success of DLNR DOFAW's Wildlife Access and Acquisitions Program, which establishes new hunting areas and access by buying and leasing private lands, or negotiating lease agreements or donations. Hunters guide this program by communicating to DOFAW about which access or lands are the highest priorities.

**615**  
total hunter trips

**Gamebirds**

Early November -  
Final Sunday in January

**169**  
tagged

Axis deer, feral swine, and feral dogs are the most common threats to the native avifauna.

**Game mammals**

**23**  
tagged

July - August  
(archery only)

September - October  
(muskeeter only)



## Go Hunt Hawai'i Newsletter (March 2017).



This is the second edition of Go Hunt Hawai'i, a quarterly newsletter to connect hunters and the Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife (DOFAW). Sign up to stay up to date on announcements, Game Management Advisory Commission meeting dates, changes to hunting areas, and more.

SIGN ME UP

## Game birds use guzzlers to quench their thirst

KEKAHA GAME MANAGEMENT AREA

DOFAW installs and maintains water guzzlers in hunting units throughout the state. These water tanks, or guzzlers, provide water to support game bird populations.

Based on public interest into their effectiveness, DLNR biologists on Kaua'i set out to record gamebird visits using camera traps on two of the water guzzlers in the Kekaha Game Management Area. The cameras recorded everything taking advantage of a free drink. A total of 174 game birds visited over 6 days in Spring 2017, listed by species below. Collecting this type of information helps biologists to manage gamebird populations in hunting areas.



\* Ring-necked pheasant caught drinking water on camera trap.



**32**  
ring-necked  
pheasants



**6**  
Erkel's  
francolin



**97**  
spotted  
dove



**39**  
barred  
dove



**WILDLIFE STAMPS**

DLNR DOFAW would like to thank all wildlife artists who provided their amazing artwork for the 2017-2018 Hawaii Wildlife Conservation and Game Bird Stamp Art Contest. A committee reviewed all submissions and winners were chosen.



## Announcements

LANA'I

AXIS DEER SEASON

The 2017 Lani' Axis deer hunting season is now well underway. District biologists predict the upcoming season will be as good as or better than last. Recent winter rains are providing ample food and cover for the animals which may translate into healthier animals and increased fawn recruitment.

On average, 2,000 hunters take part in the Lani' Axis deer hunt annually. With bag limits set at 3 animals per hunter, more than 1,000 animals are harvested each year. Road conditions within the Cooperative Game Management Area are possible, with extensive plans to improve roads this spring/summer.

Hunters are reminded: they no longer need to pack the whole deer carcass, and are now allowed to de-bone the animal, provided a hind quarter is tagged with ginkola and skin still attached.

MOUFLON SHEEP APPLICATIONS



A friendly reminder that applications for the 2017 Lani' Mouflon sheep season will be available to the public soon.

Available: March 20, 2017

Deadline: 4:00pm on April 26, 2017

HAWAII

SPRING BEARDED TURKEY SEASON

The 2017 Spring Bearded Turkey Hunting Season opened on March 1, 2017 and will run for 45 consecutive days through April 15, 2017 (with the exception of Unit E - Kipuka Anahou that will run for 31 days). The daily bag limit is three per hunter with a season bag limit of three turkeys, within Pūu Waialeale and Mauna Kea Forest Reserve regions (Units A, E, and G) and Kipuka Anahou (Unit E).

The season length, bag limits, and hunting areas are listed in Table 12, Chapter 122, Rules Regulating Game Bird Hunting, Field Trials, and Commercial Shooting Provisions.

Please note, hunting is no longer allowed on Department of Hawaiian Home Lands in Unit E-Kipuka Anahou.



**PICTURES OF HUNTING ON PUBLIC LANDS?**  
We're looking for hunting activities, game animals & landscapes to be featured in future newsletters/online.  
Please email us at [huntinghawaii@hawaii.gov](mailto:huntinghawaii@hawaii.gov)

**BY THE NUMBERS**  
Game harvested by hunters

Axis Deer, Lani'

2015	1,286	2,220
2016	1,429	2,070
2017	1,681	2,260

Bearded Turkey, Hawaii'

2015	51	279
2016	47	229
2017	43	258

## Announcements

GAME MANAGEMENT ADVISORY COMMISSION

FIRST MEETING HELD

GMAC Commission members getting session 4 at their first meeting.



The first state Game Management Advisory Commission (GMAC) meeting was held June 16, 2017 on Oahu. The GMAC was established to advise the Board of Land and Natural Resources regarding hunting-related activities statewide.

The introductory meeting was a success, with Commissioners selecting their Chair and Vice-Chair. For dates of future meetings, please refer to the state calendar. For more information on the GMAC, refer to Section 180B-6-5, Hawaii Revised Statutes.

GMAC Commission Members

**Kaua'i** Robert Cremer  
**Oahu** Joseph Jurek and Nancy Toles  
**Molokai** Lori Buchanan (Vice Chair)  
**Lani'** Stacy Ralston  
**Maui** Jeffrey DeRigo  
**West Hawai'i** Ken Solano (Chair)  
**East Hawai'i** Ryan Kakuoka  
DLNR Chairperson's designated representative (ex officio voting member) Kalia Kakuoka

KAUAI

BLACK-TAILED DEER SEASON

Dates for the black-tailed deer hunting season on Kaua'i have been announced. The application deadline for regular deer rifle season is 3:30 p.m. Friday, August 4, 2017.

LANA'I

MOUFLON SEASON STARTS

The Mouflon sheep season starts on the last Saturday in July with archery hunts for 8 consecutive days, followed by the youth hunt weekend.

For season length, bag limits, and other information for all hunts, please see Title 12, Chapter 122, Rules Regulating Game Mammal Hunting.



**DO YOU HAVE PICTURES OF HUNTING ON PUBLIC LANDS?**  
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Please email us at [huntinghawaii@hawaii.gov](mailto:huntinghawaii@hawaii.gov)

## Go Hunt Hawai'i Newsletter (June 2017)

### Public engagement in game management

*Objective:* 1) Creation of an annual hunting informational survey to assist in improving management in public hunting areas in the state of Hawai‘i.

*Accomplishment:* An informational survey was created and is now available online for hunters (see [dlnr.hawaii.gov/recreation/hunting/](http://dlnr.hawaii.gov/recreation/hunting/)).

### Hunting license sales coordination

*Objective:* The clerical staff assisted vendors such as Walmart and Island Archer with hunting license sales, payments and collection of funds.

*Accomplishment:* During anticipated increase in hunting license sales traffic at these establishments, the clerical staff assisted with license sales and dissemination of information pertinent with upcoming seasons.

Total WRF Expenditure for O‘ahu Administration:	Operating	\$33,406.66
	Personnel	\$11,561.97

### Statewide Game Land Access and Acquisition

DOFAW manages over 1,000,000 acres of state land for wildlife-dependent recreation and conservation, and demand is growing for public hunting on these public lands. However, over half of all land in Hawai‘i is privately owned and private landowners, as well as other public landowners, sometimes block public access to portions of the DOFAW lands that are designated for public hunting. In order to expand opportunities for public hunting and other wildlife-dependent public uses, it is imperative that DOFAW (1) sustain and optimize public use of areas that are already accessible; (2) establish public access to areas that are not accessible; and (3) acquire new land for public use. If DOFAW does not satisfy the growing demand for access to public hunting areas, and if hunting pressure is not applied across a larger landscape, then game animals may become scarce in some existing hunting areas, and will cause increasing amounts of damage on inaccessible public and private lands. This could lead to a decline in the ability of hunters to manage ungulate populations, and hunter safety and satisfaction may be compromised due to the lack of adequate space for hunting activities.

Revenue from the sales of hunting licenses and other related hunting materials are eligible to support the Access and Acquisition program, and hunters overwhelmingly support use of WRF revenue for this purpose. To date, these actions have been funded primarily through capital improvement funds, Pittman-Robertson Federal Aid to Wildlife grant funds and other related grants, but increased emphasis should be focused on hunter and wildlife access, and WRF monies considered for this purpose.

### Future Program Plans

1. Produce and distribute hunting licenses, stamps, and vendor booklets.
2. Utilize revenue from the sale of hunting tags, stamps, and fees to support the statewide game program.
3. Publish notification of game bird and game mammal hunting season announcements and Go Hunt Hawai‘i newsletter.



4. Maintain existing leases, licenses, and other access agreements that provide hunter access to non-DOFAW controlled hunting lands.
5. Acquire fee title or access easements for lands that provide opportunities for public hunting, public recreation, and wildlife management.

## ATTACHMENT I. WILDLIFE REVOLVING FUND EXPENDITURE CATEGORIES

1. Development, improvement and management of public hunting and game management facilities including installing or maintaining hunter access roads, check-stations, fences, gates, stiles, cattle guards, entry/safety/boundary signs and markers, parking lots, sanitary facilities, water tanks, and campsites.
2. Sanctuary facilities including fences, moats, water control structures, pumps, ditches, nesting sites, holding pens, boardwalks, viewing kiosks, water devices, parking lots, sanitary facilities and entry and interpretive signs.
3. Wildlife habitat improvements including game bird and mammal watering units, food plots, vegetation clearing and mowing, non-game/endangered species enclosures/exclosures, noxious weed control, mowing and nest sites; and wildlife predator control, water quality testing and rehabilitation.
4. Personnel hires for wildlife management and hunter education including Wildlife Management Assistants and General Laborers (for hunter check station operation, public hunting area management, pest plant control, predator control, habitat development, and posting signs and markers) computer technicians (for public hunting lotteries) and hunter education specialists.
5. Wildlife management equipment including tractors, bulldozers, all-terrain vehicles, firearms, radios, outboard motors, small boats, binoculars, trucks and four-wheel drive vehicles.
6. Development and operation of public shooting ranges in conjunction with the Hunter Education Program.
7. Research, surveys, and inventories for game and non-game endangered species, including rental of helicopters, infrared technology, temporary hires, equipment rental, materials and supplies, and contracts for studies (game birds, forest birds, water birds, seabirds, Hawaiian bat, owls, disease, genetics, food habits, ungulates, limiting factors, etc.)
8. Public education on wildlife management including development of the “Wilderness Watch” program, providing maps and area informational leaflets, interpretative facilities, at game management areas and wildlife sanctuaries, and technical assistance to the public on wildlife management.
9. Rental of land for public hunting and wildlife management.
10. Law enforcement.

11.

**Table 1.** Fee schedule for hunting licenses, wildlife conservation stamps, applications, permits, and tags for special lottery or hunts.

Island	Item	Resident	Non-resident
All islands statewide	Hunting License*	\$10	\$95
	Wildlife Conservation Stamp	\$10	\$10
Kaua‘i	Black Tailed Deer Hunts Rifle Tag Application	\$5	\$5
	Rifle Tag	\$10	\$25
	Muzzleloader Permit Tag	\$5	\$25
	Archery Permit Tag	\$5	\$25
	Feral Goat Hunts Rifle Lottery Tag Application (Unit B)	\$5	\$10
	Rifle Lottery Tags (Unit B)	\$10	\$25
	Muzzleloader Permit Tags (Unit A & F)	\$10	\$25
	Annual Archery Permit (Unit G, F & K)	\$5	\$25
	Feral Pig Hunts Season Permit	\$5	\$25
	Special Hunts Application	\$5	\$5
	Goat/Deer/Pig Permit (Unit E & H)	\$10	\$25
	Goat/Pig Animal Control (Unit G)	\$10	\$25
Lāna‘i	Mouflon sheep season lottery Application	\$10	\$10
	Mouflon sheep season tag	\$20	\$125
	Axis Deer season lottery application	\$10	\$10
	Axis Deer season tag	\$20	\$125
Hawai‘i	Pu‘u Wa‘awa‘a feral sheep or goat tag	\$10	\$25
	Pu‘uanahulu feral sheep or goat tag	\$10	\$25

\*Free to all Hawai‘i residents 65 years or older and to all persons with Hansen’s disease who are residents of Kalaupapa, Moloka‘i

## ATTACHMENT II. WRF EXPENDITURES

**Table 2.** WRF expenditures: operating, personnel, claims and contract per district. The numbers between the parenthesis show the amount of the claim that has already been expended and is included in the operating costs.

<b>Oahu Administration</b>	<b>Expenditures &amp; Claims</b>	<b>Maui</b>	<b>Expenditures &amp; Claims</b>
Operating	\$ 33,406.66	Operating	\$ 44,428.15
Personnel	\$ 11,561.97	Personnel	\$ 2,008.12
Claims	\$ -	Claims	\$ 42,166.85 (\$23,483.2)
Contracts	\$ -	Contracts	\$ 5,000.00
<b>Total</b>	<b>\$ 44,968.63</b>	<b>Total</b>	<b>\$ 51,436.27</b>
<b>Oahu</b>		<b>Molokai</b>	
Operating	\$ 23,727.98	Operating	\$ 457.45
Personnel	\$ -	Personnel	\$ -
Claims	\$ -	Claims	\$ -
Contracts	\$ -	Contracts	\$ -
<b>Total</b>	<b>\$ 23,727.98</b>	<b>Total</b>	<b>\$ 457.45</b>
<b>West Hawaii</b>		<b>Lanai</b>	
Operating	\$ 11,021.76	Operating	\$ 58,577.33
Personnel	\$ 30,297.90	Personnel	\$ 63,173.09
Claims	\$ 20,770.00	Claims	\$ 14,774.2 (\$10,995.22)
Contracts	\$ -	Contracts	\$ -
<b>Total</b>	<b>\$ 62,089.66</b>	<b>Total</b>	<b>\$ 121,750.42</b>
<b>East Hawaii</b>		<b>Kauai</b>	
Operating	\$ 23,354.90	Operating	\$ 30,426.62
Personnel	\$ 9,560.37	Personnel	\$ 53,124.04
Claims	\$ -	Claims	\$ -
Contracts	\$ -	Contracts	\$ -
<b>Total</b>	<b>\$ 32,915.27</b>	<b>Total</b>	<b>\$ 83,550.66</b>