DAVID Y. IGE GOVERNOR OF HAWAII





CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION

LAND STATE PARKS

STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621 HONOLULU, HAWAII 96809

December 1, 2022

The Honorable Ronald D. Kouchi, President and Members of the Senate Thirty-Second State Legislature State Capitol, Room 409 Honolulu, Hawaii 96813 The Honorable Scott K. Saiki, Speaker and Members of the House of Representatives Thirty-Second 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 Relating to the Wildlife Revolving Fund Fiscal Year 2022 report as required by Section 183D-10.5(g), 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 https://files.hawaii.gov/dlnr/reports-to-the-legislature/2023/FW23-Wildlife-Revolving-Fund-FY22.pdf.

Sincerely,

/s/

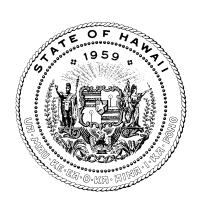
Samo Q. Code

SUZANNE D. CASE Chairperson

Enclosure

REPORT TO THE THIRTY-SECOND STATE LEGISLATURE STATE OF HAWAI'I 2023 REGULAR SESSION

RELATING TO THE WILDLIFE REVOLVING FUND FISCAL YEAR 2022



Prepared by

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

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

Honolulu, Hawaii October 2022

RELATING TO THE WILDLIFE REVOLVING FUND FISCAL YEAR 2022

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 the convening of each regular session. Reporting requirements 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 into the WRF:

- 1. Moneys collected as fees for hunting licenses, attendance of hunter education training programs, and use of public target ranges.
- 2. Moneys collected under the provision of any law relating to the importation, taking, catching, or killing of game, wildlife, and products thereof.
- 3. Moneys, other than informers' fees authorized under Section 183D-11, HRS, collected as fines or bail forfeitures for violation of Chapter 183D, HRS, or any provision of Chapter 195D, HRS, concerning wildlife conservation; and
- 4. Moneys collected from the sale of:
 - A. Any article, in addition to a hunting license, which a person is required to purchase from the Department to hunt, when the requirement is established by law or rule; and
 - B. Any work of art upon which the article under A is based.

For Fiscal Year (FY) 2022 the major source of revenue was hunting license sales followed by the sale of game tags. Revenues exceeded the Department's authorized budget ceiling for the WRF of \$626,435.00. New expenditures totaled \$383,533.41. The cash balance at the end of FY 2022 amounted to \$838,473.176, with outstanding encumbrances of \$212,460.79 resulting in unencumbered cash for carryover of \$646,450.66.

Status of S-343

Beginning cash balance of fund on July 1, 2022 FY-23	\$646,450.66
Revenues during FY 2022	\$771,316.77
Cash Transfer from FY 2021	\$450,689.81
Expenditures during FY 2022	(\$383,533.41)
Cash balance as of June 30, 2022 Unpaid	\$838,473.17
Encumbrances as of June 30, 2022	(\$212,460.79)
Expired encumbrances from prior years	\$20,438.28
Unencumbered cash for carry over as of June 30, 2022	\$626,012.38
Total FY2022 carry over	\$646,450.66
Summary of Revenues FY 2022	
Hunting guide license	\$2,125.00
Game bird farmer licenses	\$300.00
Hunting licenses with wildlife conservation stamp	\$400,580.00
Wildlife Conservation stamps	\$2,202.00
Game bird stamps	\$57,899.00
Game tags	\$302,045.01
Interest and Refund /reimbursement of prior period expenditures	\$2,700.00
Restitutions	\$480.00
Total Revenue for FY 2022	\$771,316.77
Summary of Expenditures FY 2022	
Personnel	\$174,863.01
Operations	\$189,476.81
Indirect costs	\$19,193.59
Total Expenditures	\$383,533.41
Summary of Outstanding Claims FY 2022	
Operations Claims	\$222,683.39
Amount expended	\$10,222.60
Total remaining balance if outstanding claims and contracts	\$212,460.79

HUNTING LICENSE SALES OVERVIEW

Overall, Hawai'i hunting license sales and sales of non-resident licenses have shown an increasing trend since a low was recorded in 2005 and 2007 (Figure 1 and 2). Revenue from license sales is deposited into the WRF and used to benefit wildlife management and hunting programs. FY 2022 had a record number of hunting license sales with an estimated 14,000 licenses sold.

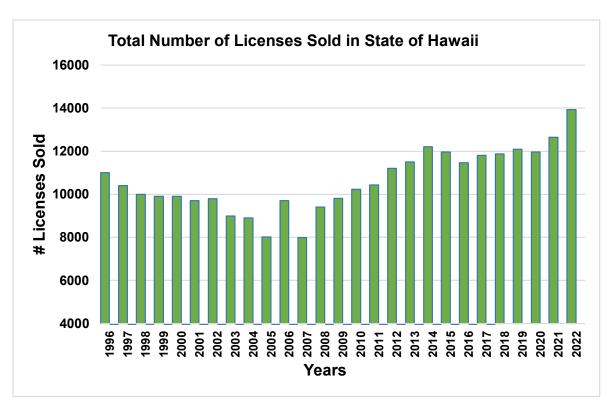


Figure 1. The total number of hunting licenses sold in the State of Hawai'i per fiscal year (1996 -2022).

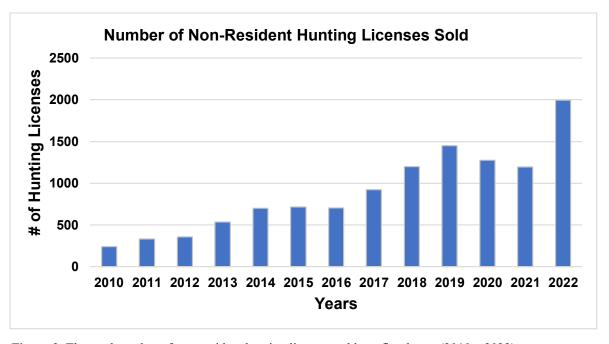


Figure 2. The total number of non-resident hunting licenses sold per fiscal year (2010 – 2022).

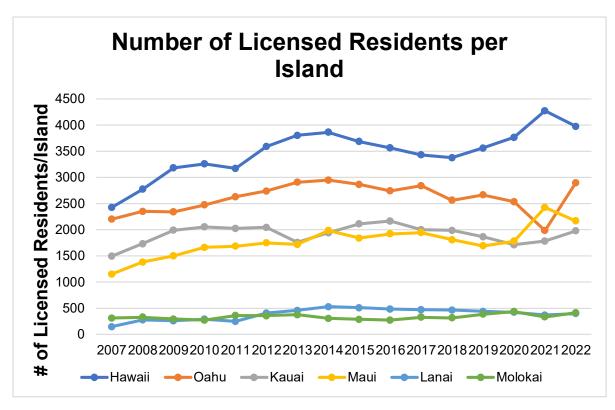


Figure 3. The total number of residents with a hunting license per island for fiscal years 2007–2022.

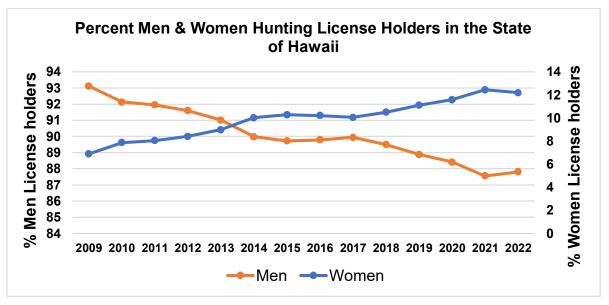
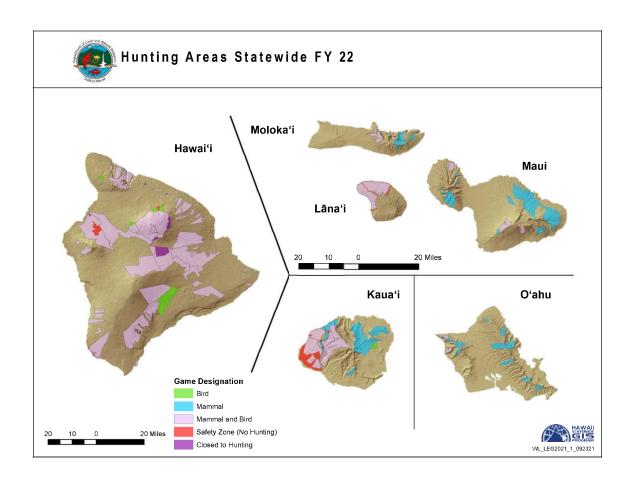


Figure 4. Percent men and women license holders in the State of Hawai'i for fiscal year 2009 – 2022.



Figure 5. Revenue derived from the WRF for fiscal year 2002–2022.



KAUA'I BRANCH (for maps and photos see Exhibit 1.)

Funding was used to manage habitat for game birds, and maintain infrastructure designed to facilitate game bird hunting. For specific activities see the following:

- Funded a Project Assistant through the Research Corporation of the University of Hawai'i (RCUH). The primary function for this position was to assist the Game Program Biologist in habitat management by range mowing; game bird propagation project operations; maintaining access locks and gates to control hunt areas; field operations to manage and maintain game mammal and bird habitat; assist in predator control in and around the GMA; planning, coordination, and logistics for Game Management Section.
- Gamebird Propagation: Import game birds for rearing and release; construct and maintain watering units, brooder and fly pens; purchase food and other material to support live birds.

Habitat Management and Operations

- Repaired and maintained tractors, mowers, and equipment used for road and habitat maintenance activities. (Kekaha GMA, Wailua GMA and Unit L). Purchased supplies for power tools used to maintain access infrastructure and roads.
- Maintained (250) acres of viable game bird habitat/traversable hunting grounds with Kubota tractors and various mower attachments. Expanded on (15) new acres of habitat/traversable hunting grounds in Wailua GMA.

Game Bird Propagation

- Successfully imported (500) ring-necked pheasants and 150 melanistic blue pheasants for the upcoming FY 2022-2023 game bird season. (Kekaha and Wailua GMA). Birds will be released weekly during the game bird hunting season
- Set up and maintained a 12'x24' walk-in brooder water system, and feeder systems for day old to 7 weeks.
- Maintained 1 fly pen (150' x 100') and a watering unit for game bird propagation project with volunteer hunters.

Future Program Plans

- 1. Fund a Wildlife Technician position to perform tasks related to ongoing management of public hunting areas \$75,000 (100% WRF). This position will assist the game management Wildlife Biologist in field operations.
- 2. Fund a RCUH Wildlife Technician position to perform tasks related to ongoing management of public hunting areas \$10,000 (100% WRF). This position will assist the game management Wildlife Biologist in various game operations and projects
- 3. Continue to purchase 650 pheasants, feed, and other supplies to keep gamebird program annually- \$12,000 (100% WRF)
- 4. Purchase equipment and supplies needed for ongoing operations and maintenance in wildlife management areas \$25,000 (100% WRF).
- 5. Purchase incubating, brooding and feed to propagate up to 300 ring-necked pheasants and/or other game bird species annually \$15,000 (100% WRF)

O'AHU BRANCH (for maps and photos see Exhibit 2.)

Wildlife Revolving Fund (WRF) FY 22 Report

Game Management

- *Objectives:* Maintain and enhance wildlife habitat and facilities on public hunting areas, game management areas, and wildlife sanctuaries; and improve game bird and game mammal hunting opportunities.
- Accomplishments: Funding was used to manage habitat for game birds, and maintain infrastructure designed to facilitate game bird hunting. For specific activities see the following:

1. Staff-

- Funded a biological technician through the Research Corporation of the University of Hawai'i (RCUH) to assist with various game related projects, including:
 - a. Processing and issuing permits for ungulate control/hunting opportunities in forest reserves and other state lands that are not open to public hunting.
 - b. Assisted with a game bird propagation project operations.
 - c. Maintaining access locks and gates to control hunt areas.

2. Habitat Management and Operations -

• Repaired and maintained tractors, mowers, and equipment used for road and habitat maintenance activities. Purchased supplies for power tools used to maintain access infrastructure and roads. Repaired and maintained WL side-by-side (Polaris Ranger) critical for accessing remote and less-accessible areas of management. (Appendix: Figure 2)

3. Game Bird Propagation -

- The program's one brooder house was revamped to an entire, enclosed unit to minimize cold drafts and provide more protection from predators. The entire rearing process can successfully be conducted in this renovated building. This building also acts as a storage facility during the months on inactivity.
- Additionally eight newly designed "feeder trough" style brooders were fabricated to house a larger amount of game bird chicks until they are mature enough to be transferred to flight pens. This style brooder allows for easy mobility, housing larger population of birds, and cleaning. (Appendix: Figure 7)
- One fly pen was demobilized and relocated to a higher standing parcel to avoid flooding during the raining months. In addition to our previous setup, we constructed another fly pen (30' x 60') in order to house a variety of species or higher number of birds. A watering unit was maintained and repaired for game bird propagation project by volunteer hunters. (Appendix: Figure 8)
- Three new fly pens (30'x50', 30'x50' & 10'x20') were constructed with volunteer bird hunters and DOFAW staff. (Appendix: Figures 9&10)
- For the 2022 -2023 Game Bird Season, Oahu DOFAW was successfully able to import a total of (735) game birds:

- a. (420) Ring-necked Pheasants
- b. (158) Melanistic "Blue" Pheasants
- c. (157) Chukar Partridges.
- Current number of purchased 56 bags of feed totaling 2,800 lbs. for Game Bird Propagation Project.
- 4. New Hunting Areas and Access -
 - Purchasing of signage and other miscellaneous equipment in order to run special hunts or open new State managed areas under a Wildlife Control Hunt program.
 - Provided new Wildlife Control Permit opportunities to:
 - i. Pia Valley Natural Area Reserve (Archery Only)
 - ii. BWS Makaha Valley Feral Swine Control Parcel (Dog/knife & Archery)
 - iii. Waianae Kai Restricted Watershed Parcel (All approved means of take)

New hunting accesses via a DOFAW Wildlife Control Permit include:

WCP Project Area	Number of Permits Released FY21	Number of Permits Released FY22
Board of Water Supply: Makaha	6	0
Valley		
Honouliuli FR	1	4
Manoa-Tantulus Section	24	24
Moanalua Section	22	34
Pia Valley Natural Area Reserve	2	15
Waianae Kai FR – Restricted	3	16
Watershed		
Waimanalo Forest Reserve	19	30
Poamoho Section Vehicle	143	141
Access Permit		

Future Program Plans

- 6. Restore revenue from the sale of hunting tags, stamps, and fees and fill vacant General Laborer position \$60,000 (100% WRF).
- 7. Fund a Wildlife Technician position to perform tasks related to ongoing management of public hunting areas \$25,000 (100% WRF). This position will assist the game management Wildlife Biologist in field operations.
- 8. Purchase equipment and supplies needed for ongoing operations and maintenance in wildlife management areas \$15,000 (100% WRF).
- 9. Through partnerships with the University of Hawai'i, fund graduate level research to understand the socio-economic impacts of Hawai'i's hunters \$10,000 (100% WRF).
- 10. Propagate and release 700 ring-necked pheasants and/or other game bird species annually \$10,000 (100% WRF).

MAUI BRANCH (for maps and photos see exhibit 3.)

Lease of Cooperative Game Management Area - Lāna'i

- *Objective:* Provide 30,000 acres of land on Lāna'i for sport hunting and wildlife management.
- Accomplishment: The annual lease rental for the Lāna'i Cooperative Game Management Area (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 - Lāna'i

- Objective: Conduct annual game mammal surveys of the Lāna'i CGMA and private portions of Lāna'i Island (Pulama Lanai) using a Hughes 500 helicopter. Surveys conducted on the state managed portion of Lāna'i are used in part for setting upcoming bag limits. Staff from Maui lead the survey effort for both the fall and spring surveys. Associated costs for the spring survey includes only staff travel.
- Accomplishments: The 2021 fall game mammal aerial survey on the island of Lanai occurred on August 23, 2021 (LCGMA) and August 24, 2022 (Pulama Lanai) and the 2022 spring game mammal survey was conducted on March 1, 2022 (LCGMA) and March 2, 2022 (Pulama Lanai). Costs associated with the fall survey included helicopter rental and staff travel and the associated costs for the spring survey included travel expenses only.

Personnel Expenses - Lāna'i

- Objective: Maintain and service facilities and field operations on Lāna'i through the Forestry and Wildlife Worker II position. Ensure the hunter check station is open beyond normal operating hours for the public hunter to check in and purchase game tags.
- Accomplishments: A Forestry and Wildlife Worker II position on Lāna'i, was funded through the WRF and assisted the Forestry and Wildlife Technicians 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 CGMA. The Forestry and Wildlife Worker II also supported habitat management, game bird and game mammal surveys, enclosure maintenance, and predator control.
- Due to staff shortages on Lanai, staff from Maui traveled to Lanai to assist in hunter check ins for the start of the 2022 Lanai Axis Deer and Mouflon Sheep hunting season. Associated costs for assisting in hunter check in included staff travel and overtime costs due to hunter check station hours being opened beyond normal working hours.

Management of the Lottery Hunts - Lāna'i

• Objectives: Provide opportunities for the public to apply online for hunts. Mail application cards, including lottery results, to hunters who apply online. Provide a conference room to conduct and accommodate the public for the Axis deer and Mouflon sheep lottery. Provide hunters the necessary tags and approval forms needed for hunting

on Lāna'i. Improve the online application system and lottery program.

• Accomplishments: Due to Covid-19, the public was required to apply for the combination Axis Deer/Mouflon Sheep hunt online. Annual service fees were paid to the host of the online site for Lanai hunt applications. A lottery was conducted at the DLNR/DOFAW base yard, and all successful applicants were mailed an application card. No conference rooms were rented to conduct the lottery. Axis deer and Mouflon sheep tags were purchased in preparation for the 2022 hunting season. First class stamps were purchased and used to mail applicants the permit cards informing them of the dates they are allowed to hunt. Carbon copy hunter assistant forms were printed in preparation for the 2022 Lanai Axis Deer and Mouflon Sheep hunting season. These forms are required for those hunters seeking hunter assistance during the hunting season.

Game Mammal Facilities Operations and Maintenance – Maui District

- Objectives: Rent dumpster(s) during the Axis deer and Mouflon sheep season for hunters to dispose of carcasses. Purchase materials/equipment required for the hunting program to function. Ensure vehicles are maintained and kept operational. Support travel to Lāna'i for meetings, and travel to outer islands for game related meetings. Purchase supplies for the office/hunter check station to ensure that the office/hunter check station can support staff in assisting the hunting public. Hire cleaning service for the office to ensure the office is kept in a sanitary condition. Provide support for other aspects of maintaining the hunting program for the district of Maui.
- Accomplishments: Dumpsters were rented for the combination Mouflon Sheep/Axis Deer hunt that provided the hunting community with the facilities to dispose of animal carcasses. Hardware items were purchased to maintain infrastructure within the Lanai Cooperative Game Management Area. Supplies/materials for water units were purchased and shipped to Lanai to be used to repair any water units that showed wear and tear or were damaged. Vehicle repairs were charged to this fund, ensuring staff vehicles were available and maintained for completing wildlife projects and facilities. Office supplies, including shelving, were purchased to ensure the office was supplied to better service the public. A cleaning company was hired to clean the office at the Lanai office/hunter check station. A fusion machine was purchased that will be used to maintain established water lines on Lanai and Maui. To maintain communication, a new cell phone was purchased for the Lanai Technician. A new vehicle was purchased for the Maui Island base yard supervisor and was partially paid for from the WRF.

Current and Future Program Plans

- 1. Fund rental of lease on Lāna'i \$1,000 (100%WRF).
- 2. Fund Forestry and Wildlife Worker II position on Lāna'i for facility upkeep and maintenance \$65,000 (100% WRF).
- 3. Fund Lāna'i check station overtime for Forestry and Wildlife Technician V and IV positions \$5,000 (100% WRF).
- 4. Fund game mammal surveys on Lāna'i \$15,000 (100% WRF).
- 5. Fund management of lottery hunts on Lāna'i; document printing, data input,

- updating and improving online application and computer-generated lotteries and drawings -\$25,000 (100% WRF).
- 6. Fund game mammal facilities development, operations and maintenance on Lāna'i -\$50,000 (100% WRF).
- 7. Fund clerk position for Lāna'i check station \$50,000 (100% WRF).
- 8. Habitat remediation/enhancement \$25,000 (100% WRF).
- 9. Purchase flatbed truck \$75,000 (75% WRF).
- 10. Fund road repairs \$50,000 (75% WRF)
- 11. Fund vehicle repairs and maintenance \$25,000 (50% WRF)

WEST HAWAI'I (for maps and photos see exhibit 4.)

Kamuela State Tree Nursery Base Yard Security Fence Installation

- *Objective*: Install a 6' tall chain-link fence surrounding the State Tree Nursery in Kamuela.
- Accomplishment: All of the materials required to install a 6' tall chain-link fence have been purchased. This fence will replace the 4' hog wire fence that currently surrounds the base yard. It will also help to secure the area of operations and protect it from theft and vandalism. The neighboring nursery has experienced an increase in theft and vandalism on their property. They have reported walking up on a trespasser/thief and that that person fled through the DOFAW base yard to escape. In addition, some tools have been stolen from the State Tree Nursery area. There are several expensive machines, tools, vehicles, and firearms stored at this base yard. All firearms are kept in a safe within the office, but a fortified security fence is greatly needed.

Sheep and Goat Surveys at Puu Anahulu and Puu Waawaa

- *Objectives:* accurately estimate sheep and goat population numbers in public hunting units E (Puu Anahulu GMA) and F (Puu Waawaa Forest Reserve).
- Accomplishment: Deployed 80 game cameras across approximately 105,000 acres of public hunting area. These cameras were programmed to use instantaneous sampling method to take pictures of and statistically generate population estimates for sheep and goats. The cameras were deployed in February 2022 and retrieved in May and June 2022. Memory cards were mailed to Brigham Young University for statistical analysis. We are awaiting results of the analysis. This will update the last estimates of ~2,150 goats 2020 and ~1,900 goats and ~950 sheep from 2018. The previous estimates suggest a stable or slightly growing population of goats. This is in stark contrast to the drastic increase in goat numbers witnessed in other parts of West Hawaii, particularly in the Waikoloa, Kawaihae, and Kona areas.

Game Bird rearing and release program

• Objectives: support sport hunting of Game birds and supplement natural game bird populations through purchase of select gamebird species for rearing and release in PHA and safety zones.

• Accomplishment: Assisted Kohala high school with the importation of 300 chukar partridge. Students from the school built a brood pen and a fly pen as part of a class project. They will raise the birds until the are adults and release them in the hunting area to improve the natural population of chukars on Mauna Kea hunting unit A.

Future Plans and Projects

- 1. Annual sheep and goat surveys using camera traps (\$15,000 20% WRF).
- 2. Support game bird facilities and game bird rearing activities (\$2,000 100%WRF)
- 3. Expand and improve game bird release program (\$2,500 100% WRF)
- 4. Fill position of half-time general laborer (\$42,000 50% fte 100% WRF)

EAST HAWAI'I (for maps and photos see exhibit 4.)

General Laborer Position

- *Objectives:* Pursue duties pertaining to game/hunting program. Conduct predator control activities, maintained facilities, and game species surveys.
- *Accomplishments:* Position was vacated in January 2019 just before COVID-19, the position was frozen during COVID and no movement in hiring happened in FY22. The position has just been re-advertised in July 2022 (FY23).

Commissions on Hunting License Sales

- *Objective:* To maintain a network of hunting license vendors on the island of Hawai'i for sales of the 2021-2022 Hawai'i hunting licenses.
- Accomplishment: Hunting licenses were sold at several east Hawaii vendor locations, providing convenience to public hunters. (Continuation of a second vendor in Hilo area mostly due to Covid-19 office closure)

Mile Marker 16 Shooting Range

- Objective: Assist with maintenance and questions concerning Mile Marker 16 range.
- Accomplishment: a portion of the Hilo Forest Reserve Unit D public hunting area at Mile Marker 16 on the Daniel K Inouye HWY is managed as a public shooting range by the DLNR/DOFAW/DOCARE. Mile Marker 16 shooting range has been open as a location for the public to improve marksmanship and practice the safe and responsible use of firearms, as taught in Hunter Education classes. The Division of Conservation and Resources Enforcement and DOFAW assisted with maintenance and management of the range. The "Need for a hunting license" rule was removed for the range, so all shooters can use the range and a mandatory check-in for shooters was established to addresses HRS13-106 restricted watershed access issue (Image 1 see exhibit 4).

Game Bird rearing and release program

- Objectives: support sport hunting of Game birds and supplement natural game bird populations through purchase of select gamebird species for rearing and release in PHA and safety zones.
- Accomplishment: Maintained and repurposed old bird rearing fly ways near Gil Kahele State Recreation Area for the game bird rearing and release flyways. Used funds to manage facilities near rearing houses to help in the management the work. (Image 2 see exhibit 4)

Game Operations and Maintenance:

- *Objective*: Conduct predator control activities, the maintenance of game-related facilities such as guzzlers/ hunter check stations and maintenance of hunter access roads.
- Accomplishment: A few of operations and maintenance activities were accomplished with some use of WRF monies. WRF monies were used to pay utility bills, supporting the administrative side of the game program, and to maintain/repurpose existing game bird rearing fly ways and old bird rearing facilities. Total WRF Expenditure for East Hawai'i District: Operating \$3,504.00/Equipment \$22,000/Personnel \$0 January 15, 2020 ½ time general laborer resigned, rehiring has been slow, and the position was on hold during the start of COVID.

Future Plans and Projects

- Replace boundary and safety zone signs in public hunting areas PHA (\$2,000 10% WRF).
- Support game bird facilities and game bird rearing activities (\$5,500 100%WRF)
- Expand and improve game bird release program (\$8,500 100% WRF)
- Weed control and habitat improvements in PHA (\$23,000 contract %50WRF).
- Check station, roads, trails and water unit maintenance in PHA (\$15,000 50%WFR).
- Fill position of half-time general laborer (\$42,000 50% fte 100% WRF)

ADMINISTRATION (for maps and photos see exhibit 5.)

• Objective assist and maintain a recreational public hunting program that does not threaten the persistence of native species and ecosystems in Hawaii. Public hunting provides a useful tool in controlling game mammals on public and private lands where control is needed, and funds are scarce. The Hawaii Division of Forestry and Wildlife (DOFAW) public hunting program supports and facilitates hunting on public and private lands by providing a structured program that promotes and encourages participation. The program aims to direct hunting toward less ecologically sensitive areas, while at the same providing structured hunter access to more remote/pristine sites where recreational hunting can help to control game mammal populations.

• The Game Program Planning and Coordination section provides staff and procedures to ensure that the State meets its responsibilities for participation in the Federal Assistance program, including long-term planning, compliance, record keeping, reporting, field staff supervision, and coordination of game Federal Assistance activities with the Service and other State and agency programs. Coordination of State and Federal funds for the program helps ensure continued participation in the PR Federal Assistance program and thereby improve hunting and increase sport hunting opportunities, protect, and enhance wildlife habitat on both public and private land, improve the integration of game management activities with other compatible or competing uses and provide information on the wise management and appropriate use of game species.

Notification of Hunting Season Openings and Changes

• 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 through out the year. The Lāna'i Mouflon and Axis deer hunt was conducted. All other regular hunts were conducted state-wide in FY22.

Implementation of Communication Strategies to Improve Hunter Recruitment and Retention

- The quarterly informational newsletter was published in Jan 2022 and Feb 2022. The *Go Hunt Hawai'i* newsletter is an informational newsletter to connect hunters and DOFAW resource managers. This newsletter is available online on the DOFAW website. https://dlnr.hawaii.gov/recreation/hunting/go-hunt-hawaii-newsletter/
- A listsery was created for those who are interested in signing up to receive hunting related updates, announcements, and newsletter. There are now 19,287 people signed up on this mailing list. People may sign up online (<u>dlnr.hawaii.gov/recreation/hunting/</u>). Sign-up sheets are also available at all DOFAW offices and at every hunter education class.

Public Engagement in Game Management

- 73 transects were selected at Kapapala and 68 selected on Mauna Kea. Game Bird Surveys are conducted with and without dogs each year. Data has shown that using dogs produce more accurate estimates of game birds then without the use of dogs. In 2021 the game bird survey for Mauna Kea and Kapapala were entered and engineered into a ESRI Survey 123 application so that surveyors can electronically enter data when conducting field surveys. Ongoing efforts are underway to enhance the survey to capture the most best fit data and to add additional survey locations.
- State-wide Hunting License Sales Coordination
- Clerical staff assisted with license sales and dissemination of information pertinent for upcoming season information.
- Conducted a Conservation and Game bird Stamp contest for stamp to be used as stamps on the new years hunting license. Winners receive \$1000.00 each.
- Conducted, monitored and participated in 3 Game Management Advisory Commission

Meetings in FY22. No funds were used for travel reimbursement as meetings were held virtually.

Outdoor Hunting and Trails Mobile Application

• Continue contract administration and project development with Trailhead Labs, Inc., for the maintenance and enhancement of a hunting and trail program mobile application. Application was launched in July 2021. Hunters have been utilizing the platform for it's electronic hunter check in and harvest reporting feature. Prior year funds supported this project. Over 2000 hunters have used the electronic hunter check in and 1000's more using the app for other recreational activities. https://dlnr.hawaii.gov/dofaw/app/.

Electronic Hunting Tags and Permit System

• Continue project development with the vendor (NIC) for the online hunting tag and permit portal. The new system was made available to public to purchase their tags and permits in May 2022. Over 2200 permits and tags were sold durring FY22 with an estimated revenue of \$78,000.00. A new convenient way for hunters to acquire Tags and Permits. Hunting license revenue supported this project.

Planning documents, Agreements, and Research

- Funding was leveraged from the Wildlife Revolving fund to assist in the completion of the Lāna'i Steering document in the prior fiscal year. In April 2021 the document was completed and delivered to the natural resource team at Pulama Lāna'i. DOFAW and Pulama Lāna'i continue work together to reach goals set forth in the document. The Division of Forestry and Wildlife has been interested in continuing a long-term management agreement for the LCGMA which will provide 1) economic benefits to the landowner and community of Lāna'i; 2) recreational benefits and opportunities to public hunters on Lāna'i and state-wide; and 3) a sustainable long-term game management program in balance with natural and cultural resources on the LCGMA. The framework on this long-term, sustainable game and natural resource management program is presented in the steering document. A new long term management agreement was executed on March 30, 2022 with a term up to 15 years. This agreement supports an ongoing public hunting program on the island of Lāna'i that covers an estimated 30,000 acres. Wildlife Revolving funds are used to manage special lottery hunts in this area. This is one of the most highly desired hunting opportunities in the State.
- Funding was used to support a research project through the University of Hawaii at Manoa. Project titled "Ungulate Distribution Models for Conservation and Recreational Hunting: Hawaii Island". The goal of this project is to develop a management prioritization model that identifies areas for conservation and areas for public accessible hunting and recreation based on validated ungulate distribution models for the main Hawaiian Islands. *Objectives:* Complete investigations to acquire, map and analyze ungulate distribution data on Hawai'i island and to create prioritization models for conservation and recreational hunting on Hawai'i island. This project is curretly underway and will be complete in 2023.

WILDLIFE REVOLVING FUND

EXPENDITURES

Table 1. Operating, personnel, claims, and contracts per branch or district.

Oahu Administration	Expenditures	Maui	Expenditures
Operating	\$50,050.90	Operating	\$25,036.98
Personnel	\$1354.75	Personnel	\$1,489.36
Claims	\$77,334.72	Claims	\$70,116.52
Contracts	\$0.00	Contracts	\$0.00
Total	\$128,740.37	Total	\$96,642.86
Oahu		Molokai	
Operating	\$24,084.25	Operating	\$1,725.51
Personnel	\$17,110.00	Personnel	\$0.00
Claims	\$0.00	Claims	\$0.00
Contracts	\$0.00	Contracts	\$0.00
Total	\$41,197.25	Total	\$1,725.51
West Hawaii		Lanai	
Operating	\$705.18	Operating	\$53,232.11
Personnel	\$0.00	Personnel	\$79,596.18
Claims	\$20,000	Claims	\$0.00
Contracts		Contracts	\$0.00
Total	\$20,705.18	Total	\$132,828.29
East Hawaii		Kauai	
Operating	\$28,579.82	Operating	\$25,603.59
Personnel	\$14,814.69	Personnel	\$60,146.26
Claims	\$33,679.69	Claims	\$9,772.46
Contracts		Contracts	
Total	\$77,074.20	Total	\$95,522.31

Table 2. Fee schedule for hunting licenses, wildlife stamps, applications, permits, and tags for special or lottery hunts.

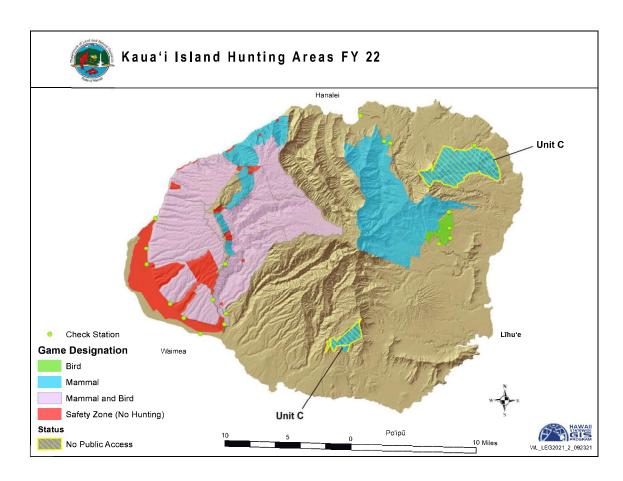
Island	Item	Resident	Non- resident
All islands	Hunting License*	\$10	\$95
statewide	Wildlife Conservation Stamp	\$10	\$10
Statewide	Game Bird Stamp	\$10	\$10
	Spring Turkey Tags	\$5	\$20
	Black Tailed Deer Hunts	\$5	\$5
	Rifle Tag Application	Ψ2	Ψ
	Rifle Tag	\$10	\$25
	Muzzleloader Permit-Tag	\$5	\$25
	Archery Permit Tag	\$5	\$25
Kauaʻi	Feral Goat Hunts	\$5	\$10
	Rifle Lottery Tag Applications (Unit B)	7 -	, -
	Rifle Lottery Tags (Unit B)	\$10	\$25
	Muzzleloader Permit-Tags (Units A & F)	\$5	\$25
	Annual Archery Permit (Units G, F, & K)	\$5	\$25
	Feral Pig Hunts	\$5	\$25
	Season Permit		
	Special Hunts	\$5	\$5
	Application		
	Goat/Deer/Pig Permit (Units E & H)	\$10	\$25
	Goat/Pig Animal Control (Unit G)	\$5	\$25
	Mouflon Sheep Season Lottery Application	\$10	\$10
	Mouflon Sheep Season Tag	\$20	\$125
Lāna'i	Axis Deer Season Lottery Application	\$10	\$10
	Axis Deer Season Tag	\$20	\$125
	Pu'u Wa'awa'a Feral Sheep or Goat Tag	\$10	\$25
Hawai'i	Pu'u Anahulu 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 whoo are residents of Kalaupapa, Moloka'i.

ATTACHMENT I: WILDLIFE REVOLVING FUND EXPENDITURE CATEGORIES

- 1. Development, improvement, and management of existing and new public hunting and game management facilities including installing or maintaining hunter access roads, checking stations, fences, gates, stiles, cattle guards, entry/safety/boundary signs and markers, parking lots, sanitary facilities, water tanks, and campsites.
- 2. <u>Development, improvement, and management of existing and new wildlife sanctuary facilities</u> including fences, moats, water control structures, pumps, ditches, nesting sites, holding pens, boardwalks, viewing kiosks, watering devices, parking lots, sanitary facilities, and entry and interpretive signs.
- 3. <u>Wildlife habitat improvements</u> 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 checking 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. <u>Wildlife management equipment</u> including tractors, bulldozers, all-terrain vehicles, collecting arms, radios, outboard motors, small boats, binoculars, trucks, and 4-wheel drive vehicles.
- 6. <u>Development and operation of public shooting ranges</u> 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, waterbirds, seabirds, Hawaiian bat, owls, disease, genetics, food habits, ungulates, limiting factors, etc.).
- 8. <u>Public education on wildlife management</u> 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.

Exhibit 1.







Fly pens for growing out pheasants.



Staff and volunteers catching and releasing pheasant for the gamebird season

Exhibit 2.

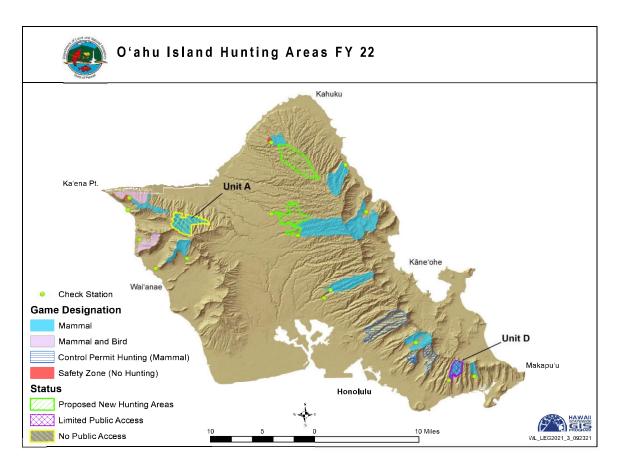




Figure 1. Kuaokala GMA Safety Unit 1 undergoing repairs for gutter system, paint, and vegetation management.



Figure 2. Starting from left to right, the Polaris Ranger, Kubota with rotary mower, Kubota with flail mower.



Figure 3. Shows Unit 14 in Fall 2021 initial mow before the start of the bird season. Grass is usually maintained to a knee-waist level for the most optimal habitat for game bird species.



Figure 4. Shows Unit 14 in Summer 2022. Mowing efforts are made to keep the vegetation at a manageable level throughout the hunting season. Lanes are created so that in the Fall, staff can follow these tracts to create more suitable/traversable habitat.



Figure 5. Shows the newly cleared out area (10 acres) of the Ranch Section of the GMA. This area was originally covered by Christmas Berry (*Schinus terebinthifolia*) but now is accessible to hunter for hunting habitat. This section is facing Northeast of the Wildlife storage unit.



Figure 6. Shows the newly cleared out area of the Ranch Section of the GMA. This area was originally covered by Christmas Berry (*Schinus terebinthifolia*) but now is accessible to hunter for hunting habitat. Area can now be maintained by the rancher's cattle so that vegetation overgrowth does not occur. This section is facing Northwest of the Wildlife storage unit.



Figure 7. A shot inside of the Makiki Base yard Brooder house with feed trough style brooders. Each brooder trough is fixed with head lamps, waterers, feeders, and wood shavings.



Figure 8. New location of the Kawainui Base yard Flight Pens. Volunteer Public Hunters help in all staged of the rearing program.



Figure 9. Additional flight pen facilities at the Waialua Farm. More pens mean more birds we can house.



Figure 10. Volunteer hunters also assisted with the construction of the farm pens. A total of (3) fly pens, (2) egg laying pens, and feed house are what sit on the footprint of this property.



Figure 11. Chukar Partridge (Alectoris chukar)

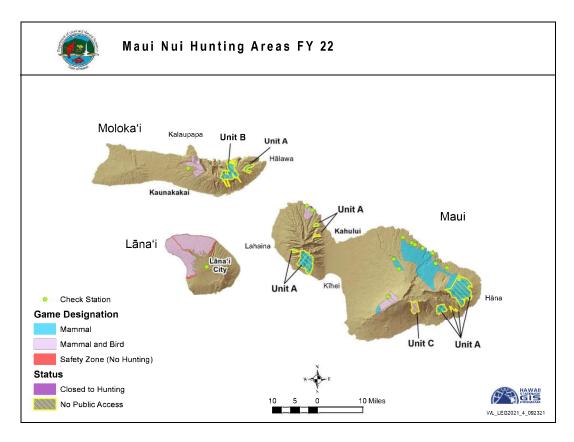


Figure 12. Melanistic "Blue" Pheasants (Phasianus versicolor versicolor)



Figure 13. Ring-Neck Pheasant "Hybrid" (Phasianus versicolor versicolor)

Exhibit 3





Youth hunt on the island of Lana'i

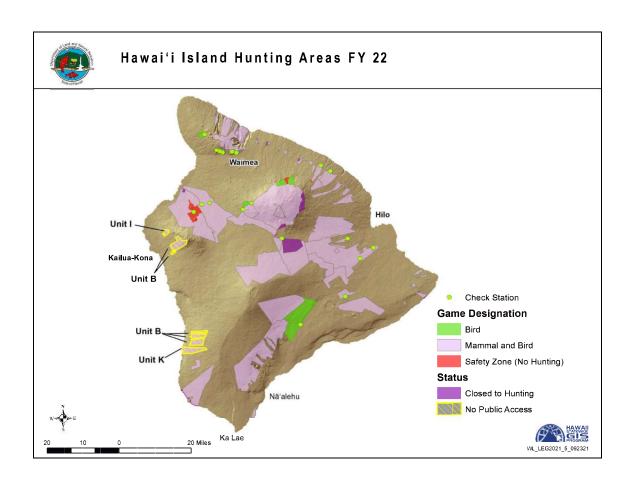


Roads maintained on Lāna'i



Mowing for game birds

Exhibit 4.





Mile Marker 16 Check in station

Game bird rearing and release project

Exhibit 5.

Go Hunt Hawai'i Newsletter (Jan. 2022 /. Feb. 2022)



off, a quarterly remoletter to connect hanters and sources (DUNR). Division of Forestry and Weldife nonnecements, changes to hanting areas, research

Game Bird Propagation Project on O'ahu On O'ahu, a total of 100 Ring

On Orahu, a total of 100 Ring-necled Phresants, 100 Melanistic (blue) Mutant Phersants, and 100 Chulor Partridges were released at the Kucolalia GMA DOFAW would like to thank the volunteers who helped with this year's game bird project.

Walantberts: Gordon Lau, Slave Desold, Issa Desold, Stephen Desold, Jalob Desold, Stephen Desold, Jalob Desold, Tom Marches, MRCh Marriz, Mark Leitz, Holly Pethiz, Redyn Pethiz, March Pethiz, Redyn Pethiz, March Pethiz, Redyn Pethiz, Sorress Brian Tokurage, Bryan M. Tom, Charle Lee, Jarob Choo, Germ Charles, Roya Garris, Marchad Cruz, Melson Choo, Glern Ghige, Gerard Mary, Royand Sartiago, Demona Sartiage, Mchael Cruz.

THANK YOU VOLUNTERS! 2021 Pheasant Release Project on Kaua'i

Game Bird Survey on Kekaha GMA

Kauri DOFAW would like to recognize and thank the volunteers who helped with this year's phessant release project DOFAW brought in 600 King, needed and 1500 Medaniski. Walants (Blue) good old phessant chicks on June 19 and with the help of volunteers reared them for 6 weeks. After the 6 weeks the chicks were then brought up to the Hypera and were cared for and released into the hunting area. Without the help of volunteers this project could not take place. We conducted a volunteer Kaua'i DOFAW would like to we conduced a volunteer game bird survey on October 21, 2021 in the Kelaha GMA. We wanted to thank the volunteers who took the time out of their busy schedules to assist with the survey.

Wakanteen: Rosin Vidiriha, Nick Croft, Jessie Alkirachet, Joff Emoto, Weiley Maharuma, John Emoto, Weiley Maharuma, Minera Mesamura, Tyrus Maharumoh, Mel Maharumoh, Derrik Rapton, Morgan Makins, Lapsu, Cury Carnetin, Kaneli Harris, Junes Marques, Teddy Perreira, Les Eara, Corey Lum Won, José Andres, loe Morare.



Webunteers: Chris Coscarella, Chloe Coscarella, Sean Igne, Corey Lum Won, Amy Lauren Lum Won, Mark Suegasu, Wayne Suegasu, Leske Suegasu, Jell Emoto, Hope Newton, Adam







PRELIMANARY RESULTS OF UNGULATES **DISTRIBUTION RESEARCH ON KAUA'I ISLAND**

In the first quarter of 2017, DOFAW released a study conducted by the University of Hawaii's Department of Natural Resources and Environmental Management research team to determine the distribution of ungulates on O'ahu and Maui with the purpose to assess the effectiveness of exclusion and direct take methods, the key strategies that are currently used to manage ungulates across the State.

used to manage ungulates across the State.

Recently, the study expanded that research to the island of futua' to inform game management and conservation decision making for feral piga (Sus scrafo), feral goats (Capra Nirus), and block-tailed deer (Odoconleus hemionus), in addressing these issues, the study identified seasonal patterns in ungulate distribution and potential species interactions between the three-ungulate species. Data was collected over two seasons from July 15th to December 11th, 2020 (fall) and March 15th to July 12th, 2021 (spring), Feral pigs were the most frequently detected species having been observed at 55 locations followed by black-tailed deer at 30 locations followed by black-tailed deer at 30 locations and feral goats were only observed at 9 locations. Preliminary model results indicate that two environmental variables indicate that were most important in predicting each species distribution.

Distribution and abundance maps show that each species occupy different ranges with some overlap of distribution. Future efforts will provide additional insight into underlying species interactions and also identify conservation priority areas and opportunities for recreational hunting.



Credit: Jason Omick, DUNR-DOFAW, Derek Risch and Melissa Price, Ph.D., University of Hawaii.

NEW UPDATED GO HUNT PORTAL: APPLY FOR HUNTS & PURCHASE TAGS ONLINE

Hunters can now purchase tags, permits, After payment, users can simply download their Hunters can now purchase tags, permits, After payment, users can simply download their and apply for hunts online through a new service provided by Hawaii's DLNR. The service can be accessed from the Hunt section of the Division of Forestry & Wildlife website, where users can click 'Purchase Tags & Permits' and/or "Apply for Hunts".

Users can log in and select the tags or permits they want to purchase, and submit applications for hunting. Required information can be entered into the online form, and payment can be made through the website.

Rig Island	Kava'i Island	Lâna'i
Pu'uanahulu Sheep Ram Tag	Annual Archery Permit (Unit G. F. & K)	Axis Deer & Mouflon Sheep Season - Archery
Pu'unahulu Goat Tag	Goat/Deer/Pig Permit (Unit E & H)	Axis Deer & Mouflon Sheep Season - Youth
Turkey Tag	Muzzieloader Permit (Unit F)	Axis Deer & Mouflon Sheep Season - Muzzfeloader
	Feral Pig Hunts - Season Permit (Unit A)	Axis Deer & Mouflon Sheep Season - General Rifle

ANNOUNCEMENTS

DOFAW SEEKING ART ENTRIES

The 2022-2023 Hunting Stamp contest is still open! The subjects for this year are the Chukar Partridge (Alectoris chukar) and the 'l'iwi (Vestiaria coccinea).

Artists interested in entering the contest must submit their paintings by February 25, 2022. The winner will be notified on March 2022, with a maximum prize of \$1,000.

For more information, click HERE.

DOFAW would like to thank all wildlife DOFAW would like to thank all wildlife arists who submitted art entries for the 2020-2021 Hawaii Hunting Stamp Contest. A committee reviewed all submissions in the subject categories: Ring-necked Pheasant (Phosionus colchicus), and Mouflon Sheep (Orvis musimon). Two winners were chosen, shown here:

AXIS DEER & MOUFLON SHEEP SEASON

Applications for a combination 2022 Lăna'i Axis Deer and Mouflon Sheep hunting season will be available to the public online beginning Monday, January 10, 2022.

For more information click HERE.

For season length, bag limits, and other information for all hunts, please

see Title 13, Chapter 123, "Rules Regulating Game Mammal Hunting".



Timothy Turenne



SPRING TURKEY SEASON

The 2022 Spring Bearded Turkey Hunting Season opened on January 1, 2022 and will run until April 15, 2022.

You can now purchase your Tags online through the new GO HUNT PORTAL.

COMMISSION UPDATES

The Maui and West Hawai'i Commissioner seats are still vacant! The State Game Management Advisory Commission (GMAC) is seeking applicants. If you are interested in serving on the GMAC, please fill out the online application HERE.



NEW ONLINE HUNTER CHECK STATION

CHECK-IN STEPS

- Download the OuterSpatial App. Navigate to the Hawaii community and go to "Challenges" or click on the red plus button on the page and then click "Hunting Check-in". Create an account, if you have not Click on Check-in.

- Click on Check-In.
 Select where you will be hunting.
 Enter your name and the names
 of everyone in your party.
 Enter your Hunting License # and
 Vehicle License #.
 Select the game you intend to
 hunt

Select "Yes" or "No" if you have any hunter assistants or hunting dogs.
 Select your Method of Take.

CHECK-OUT STEPS

- Enter the day when you completed your hunt.
 Select the "Check-out" icon and then the game species you harvested (if any).
 If your harvest contained a band or tag of any type, please enter the number or color.
 Add the amount of your harvest.

O O O C

ANNOUNCEMENTS

RESPECT THE LAW

State hunting regulations are designed to protect the resource, access and the hunter. In the State of Hawaii, hunting is regulated by the Hawaii is regulated by the Hawaii 122 & 123 Rules Regulating Game Mammal and Game Bird Hunting, it is the hunters responsibility to also have:

- · A valid Hawai'i hunting license on
- A current-year, \$10.00 Hawai'i Wildlife Conservation Stamp is also required to hunt game mammals and an additional game bird stamp for game bird hunting.

SPRING TURKEY SEASON

The 2022 Spring Bearded Turkey Hunting Season opened on January 1, 2022 and will run until April 15 , 2022.

You can now purchase your Tags online through the new GO HUNT PORTAL under "Purchase Tags & Permits". For more information click HERE.

ARCHERY HUNTING IN THE PU'U ANAHULU GMA

The 2022 Archery Hunting Season will open on March 5, 2022 and will run until June 26, 2022.

You can now purchase your Tags online through the new GO HUNT PORTAL under "Purchase Tags and Permits" For more information click HERE.

MOUFLON SHEEP CONTROL HUNT

A special 2022 Mouflon Sheep Control Hunt will be held during the month of April during the weekends.

For more information click HERE,

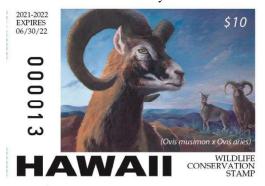
COMMISSION UPDATES

The Maui and West Hawai'i Comissioner seats are still vacant! The State Game Management Advisory Commission (GMAC) is seeking applicants. If you are interested in serving on the GMAC, please fill out the online application HERE.



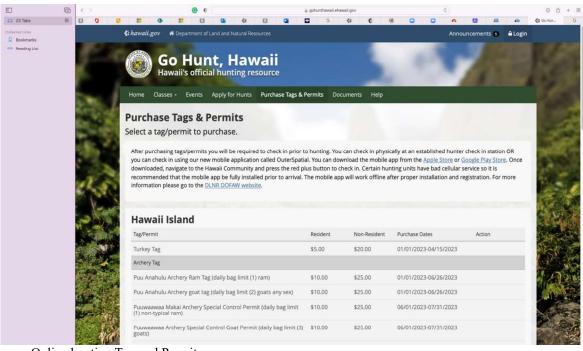
Wildlife Conservation and game bird stamp winners 2022

Artist Michael Bailey



Artist Timothy Turenne





Online hunting Tag and Permit Portal developed by NIC