



# Combined Report Back on:

Resolve Chapter 49 (LD 1213) Resolve, Regarding Electronic  
Tagging of Big Game Animals

Public Law 2021 Chapter 121 (LD 943) An Act to Improve  
Turkey Tagging

Department of Inland Fisheries and Wildlife

January 10, 2022

# Costs/Benefits of Changing to Electronic Registration of Big Game and Turkey



- Review:
  - Current registration process
  - Importance and use of information collected during registration
- Examine anticipated impacts of electronic registration on:
  - Hunters
  - Management programs
  - Registration stations
- Provide recommendations for addressing management challenges
  - Program costs and suggested timeline for implementation



# Maine's Current Big Game Registration Process

- In-person registration:
  - Hunter delivers animal to IFW-sanctioned station
  - Info on hunter, hunting authority, method, weapon, timing/location of kill
  - Biological data from animal: sex and age class and additional tissues/measurements that vary with species - Examples: tooth (age); ovaries, lactation (reproduction); antler measurements
  - Unique numbered seal (tag) is affixed to the animal to complete registration; provides legal connection between hunter and animal
  - Cost: bear/deer/moose - \$5; turkey \$2; revenue shared by station and IFW
  - Number of stations increased in 2021 (11 additional; 268 total)



## Registration Process - Surrounding Jurisdictions

- 7 Jurisdictions queried re: deer – MA, NH, NY, RI, VT; NB, QC
- Most employ BOTH in-person and electronic registration
- New York does not require in-person; 45-50% compliance of electronic registration
- New Hampshire does not have electronic registration (in development)
- In-person registration during select periods facilitates collection of biological data (high harvest days/youth seasons)

# Importance of Registration Data for Management— Maine



- Registration station is “one-stop shop” to collect BOTH harvest information AND biological data
- Electronic registration with self-reporting will decouple harvest/biological data collection
- Biological data is critical to management and varies by species
  - Species-specific challenges under electronic registration
  - Alternative methods to collect biological data
  - Considerations: staffing and funding



# Electronic Harvest Reporting: Bear Program Impacts



# Black Bear: Current Registration System



## Provides Accurate & Reliable Data for Population Models

- Date, location, and method of harvest
- Reporting of ear tagged bears
- Sex and age of harvested animal
  - Requires hunter to provide bear's tooth at registration
  - Registration stations provide instructions & submit samples



# Bear: Implications of Electronic Registration



- Potential for under reporting by hunters
- Need to develop effective & efficient methods for:
  - Estimating reporting rate
  - Obtaining tooth samples from harvested bears
  - Obtaining ear tags & radio collars from harvested bears



# Black Bear: Options



- Estimate Reporting Rate (harvested & marked bears)
  - Survey hunters and/or Law Enforcement checks?
  - Interview Registered Maine Bear Hunting Guides?
- Obtain age of harvested bears
  - Require guides to submit bear teeth taken by their clients
  - Mail tooth collection materials to every bear permit holder
  - Staff visit successful hunters/guide operations to collect teeth

# Black Bear: Recommendations



- Continue requiring hunters to register bears at physical stations distributed across the state
  - Department's population model and management system relies on accurate harvest data
  - Electronic registration will reduce reporting rate by hunters and require estimation of harvest
  - Regulations could become more restrictive if confidence in estimates are hampered by reporting rate



# Electronic Harvest Reporting: Deer Program Impacts





# Impacted Datasets

- Two deer datasets would be impacted by transitioning to electronic reporting: Harvest data and biological data.
  - Harvest data collection currently relies on in-person registration stations where station clerks collect data such as date and town of kill, sex, and age-class.
  - Biological data collection relies on methods such as collection at in-person registration stations, visiting meat lockers, and doing house-to-house visits to examine deer.



# Application of Datasets



- Harvest data application: Harvest data provide our primary means of monitoring population trajectory, monitoring harvest relative to objectives, and informing changes to expansion factors.
- Biological data application: Used to determine sex-age class of deer and estimate population sex ratios and age structure, estimate population status relative to carrying capacity, and other info such as antler points, weights, and lactation status.

# Impacts on Datasets



- Harvest data: Uncertainty about confidence in dataset.
- Biological data: Loss of biological data in areas of the state that rely on in-person registration for biological data collection.



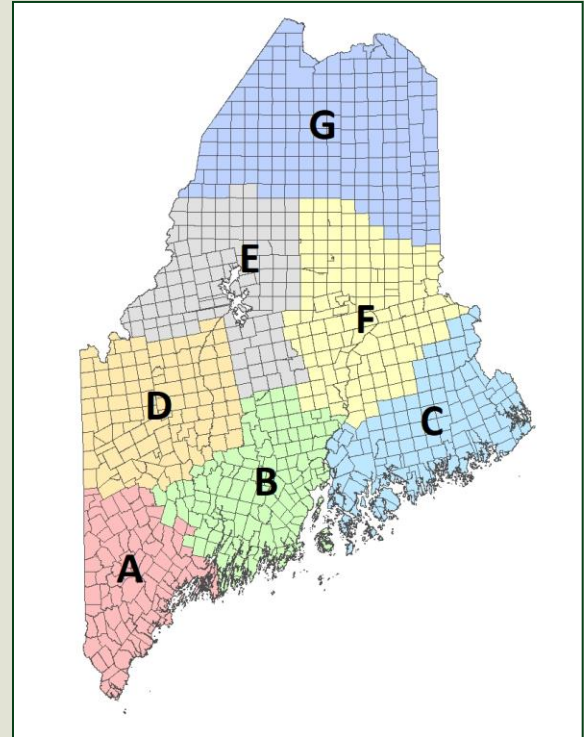




# Impacts on Datasets

- In 2020, the % of biological data collected at in-person registration stations by Region was approximately:

- |                    |                    |
|--------------------|--------------------|
| - Region A: 5-10%  | - Region E: 45-50% |
| - Region B: 0-5%   | - Region F: 15-20% |
| - Region C: 55-60% | - Region G: 75-80% |
| - Region D: 0-5%   |                    |





# Addressing Impacts on Datasets

- Harvest data: Ideally would survey hunters periodically to assess reporting rates. Would be necessary to issue a seal/identifier to hunters that register their deer electronically.
- Biological data: Effectiveness of alternative data collection methods would need to be assessed in the areas that rely on in-person registration for biological data collection. Consider requiring in-person registrations on some days in these areas.



# Electronic Harvest Reporting: Moose Program Impacts



# Importance of Registration Data for Management of Moose



- Registration/biological data collected
  - Registration data provides harvest location by town and WMD and associated success rates
  - Also provides the legal hunter information associated with licensing/permits
- Biological data collected at registration station includes antler measurements, weights, and most importantly: teeth for aging and ovaries (reproduction)
- Winter tick counts are done at stations during the October season by biologists

# Importance of Registration Data for Management of Moose



- Use in Management
  - Registration provides an accurate spatial distribution of harvest, success rate by WMD and demographic information from hunters
  - Tooth ages describe the age distribution of bulls and cows; support efforts to maintain mature bull percentages and reproductive success
  - Ovaries (corpora lutea) describe reproductive success
- Maintaining a prescribed level of mature bulls and adequate reproduction is the foundation of moose management
- Age distributions and reproductive data are vital components to modeling a moose population

# Importance of Registration Data for Management of Moose



- Impact of electronic registration
  - Expect less than 100% reporting of harvest
  - Will rely on estimates of harvest composition by WMD instead of total counts and near 100% accuracy of information
  - Collection of reliable biological data for WMD-level inferences would require sampling a high percentage of harvested moose,
  - Therefore, biological data collections will require significant costs in staffing, and reduced confidence in information may lead to conservative management and less hunting opportunity



# Electronic Harvest Reporting: Turkey Program Impacts



# Wild Turkey: In-Person Registration

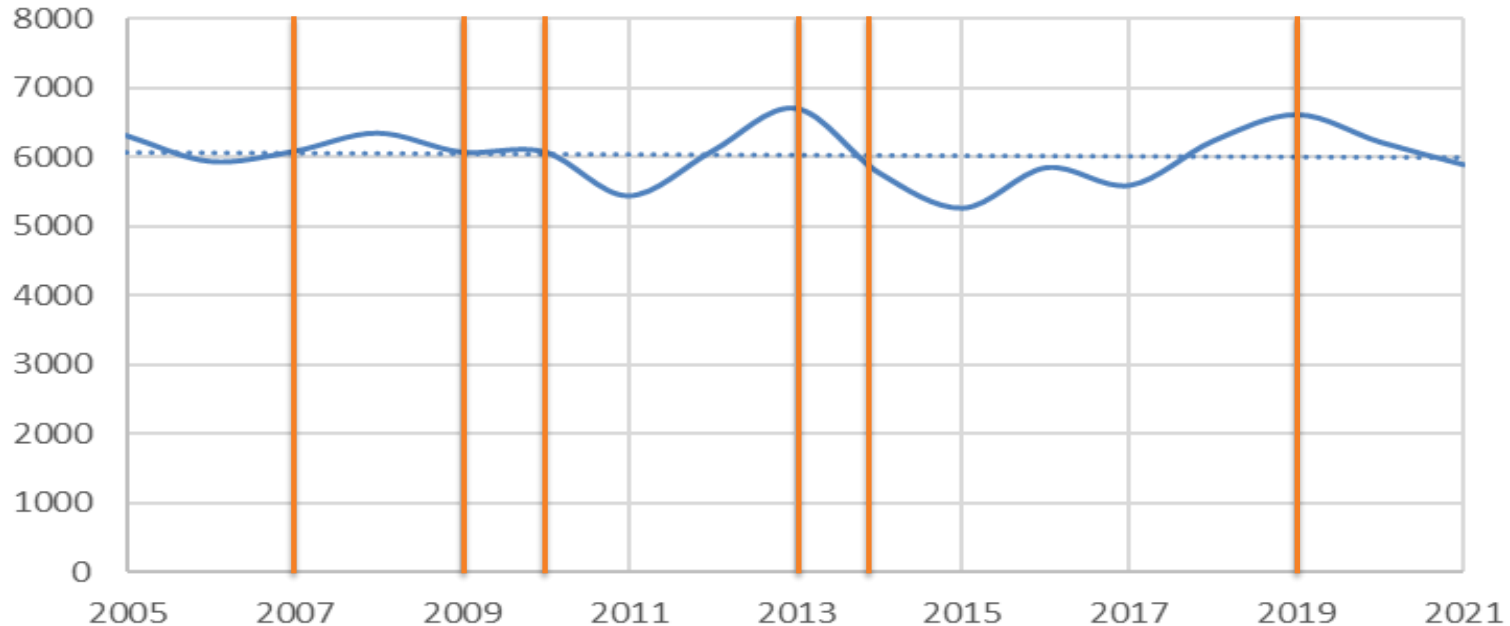


- Provides Consistent & Accurate Data for Spring Season Harvest
  - Date, Time, Location (Town and WMD) and Method of Harvest
  - Age of turkey harvested – Tom vs. Jake
- Provided Consistent & Accurate Data for Fall Season Harvest (Registration requirement for Fall Turkey Removed in 2021)
  - Date, Time, Location (Town and WMD) and Method of Harvest
  - Age and Sex of turkey harvested – Tom vs. Jake and Hen vs. Jenny

# Wild Turkey: Harvest Data allows for Population Monitoring



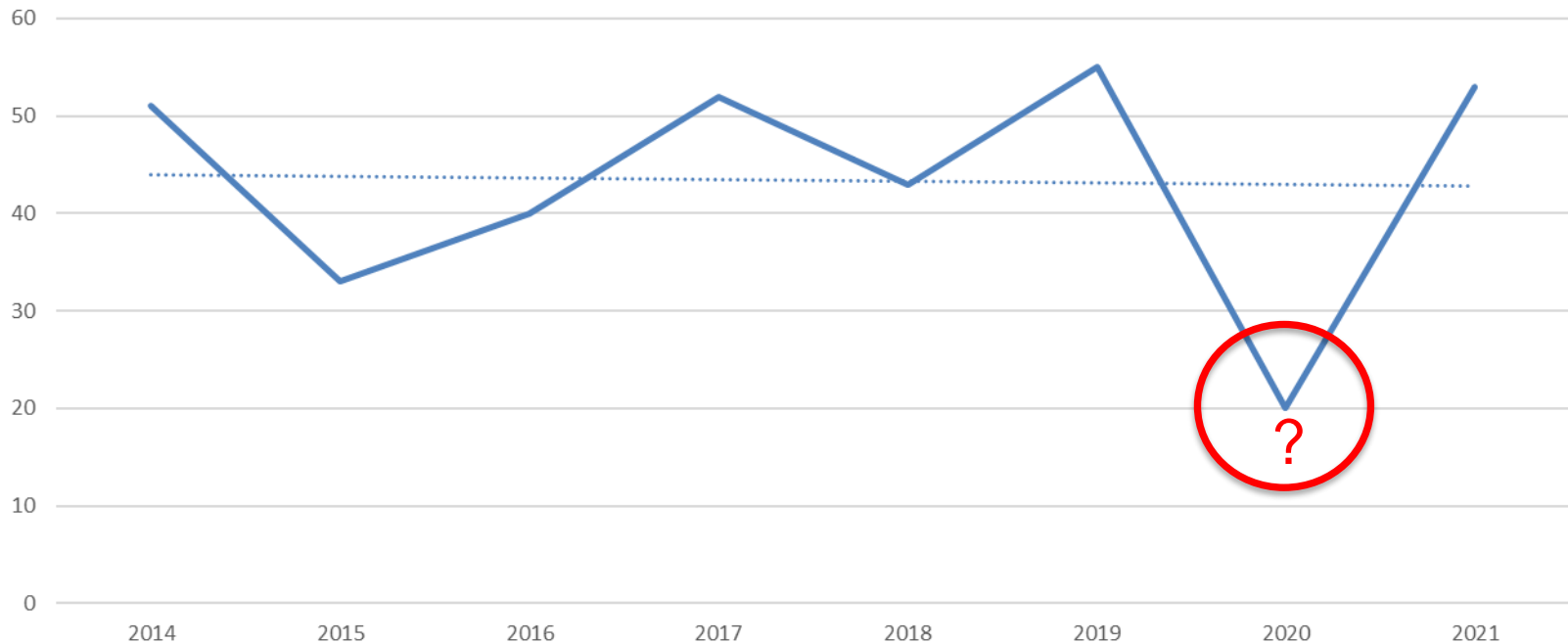
Spring Wild Turkey Harvest 2005 to 2021



# Spring Wild Turkey Harvest Trends Inform Fall Season Decisions



WMD 14 - SPRING WILD TURKEY HARVEST - 2014 to 2021





# Wild Turkey: Considerations for Changing to Electronic Registration



## Compliance (Reporting Rate)

- Example: New York State – 50% Spring Season Compliance and 42% Fall Compliance

## We will measure compliance – Now and in 5 years

- Reward Banding – Compensation for reporting banded turkeys
  - A sample of bands worth \$\$ to hunters reporting
  - Comparison of reporting rate for regular bands
- Post Season Surveys – to include age/sex/location/time, etc... - Used for comparison to electronic registration data

# Anticipated Impacts of Electronic Registration to Hunters



- Convenience – ability to register online 24/7; no travel required
- Positive for meat care – timely break down/cooling of animal
- Potential loss of some services – instruction/support for biological data submission; weight of animal: moose)
- Consider maintaining a number of registration stations for in-person registration - may extend travel time to open station
- Moose check stations provide a unique cultural experience



# Anticipated Impacts of Electronic Registration to Registration Stations



- With fewer animals registered in-person at stations,
  - Less income from registration/ancillary business - additional station closures
  - Station closures may have ripple effect: negative economic impact to seasonal business in small communities

# Anticipated Impacts on Enforcement and Accuracy of Biological Data under Electronic Registration



- Decline in compliance:
  - Reporting rate
  - Hunting laws and rules
  - Accuracy of biological data
- In-person registration is a major disincentive to provide incorrect information
- Registration stations report potential violations to Department
  - Animal of proper sex; on correct license; by correct shooter

# Proposed Framework of an Electronic Registration System



- Web-based: smartphone, tablet or computer – requires internet connection and will:
  - Require hunter to have an email in MOSES profile
  - Automatically select hunter's license/permit from their profile
  - Assign unique virtual SEAL NUMBER to be attached to animal
  - Generate/send confirmation email to hunter
  - No cost to hunter for self-reporting online

# Proposed Framework of an Electronic Registration System (continued)



- Other considerations of electronic registration system:
  - Hunters with paper license/permit (not in MOSES) would be unable to register electronically – in-person only
  - Would require additional staffing for technical support to assist hunters with electronic registration difficulties
  - Would include a communications plan to notify hunters
  - Would require significant simplification of the Department's license/permit framework – anticipate challenges to implementation

# Anticipated Challenges in Implementing Electronic Registration



- Statutory frameworks for current hunting licenses and permits are extremely complex
  - In-person registration stations require ongoing training/technical support
  - Identification of correct license/permit authority for harvesting an animal is critical (success rates, law enforcement)
  - A simplified licensing system is needed to reduce frustration by hunters and maintain compliance rates and satisfaction



## Costs of Electronic Registration (~\$300,000/year)

- System Development – Currently about \$50,000/year, no additional costs anticipated
- Lost Revenue – Up to \$60,000/year due to no charge for electronic registration
- Technical Support – Additional temporary staff to provide technical support to hunters (\$19,200; 2 seasonal positions)
- Collection of Biological Data and Estimating Reporting Rates - \$150,000 - \$190,000/year





## Conclusion and Recommendations

- Maine's registration process includes collection of information of critical importance to management
- A change to electronic registration will result in increased costs to collect important biological data
- Consideration of electronic registration highlights the complexity of Maine's current license/permit system - simplification is needed for data management, and is being addressed
- Simplification is also needed to minimize frustration by users

# If Legislature Pursues Electronic Registration, we recommend phased implementation:



- During 2022:
  - Enact proposed changes to the antlerless deer permit system in 2022
  - IFW reviews statutory framework for both hunting licenses/permits and crossbows, and proposes changes to simplify during 2023 session
- During 2024:
  - Begin electronic registration for Turkey (spring), reinstate Turkey registration in fall season
  - Implement electronic registration for Deer
  - Continue in-person registration at stations for Bear and Moose (for efficient collection of biological data)

# Our Mission



- *Maine Department of Inland Fisheries & Wildlife* protects and manages Maine's fish and wildlife and their habitats, promotes Maine's outdoor heritage, and safely connects people with nature through responsible recreation, sport, and science.

# Overview

*Maine Department of Inland Fisheries of Wildlife* (MDIFW) preserves, protects, and enhances the inland fisheries and wildlife resources of the state. Established in 1880 to protect big game populations, MDIFW has since evolved in scope to include protection and management of fish, non-game wildlife, and habitats, as well as restoration of endangered species like the bald eagle. In addition to its conservation duties, MDIFW is also responsible for enabling and promoting the safe enjoyment of Maine's outdoors — from whitewater rafting to boating, snowmobiling, hunting, fishing, and wildlife observation. The agency's constituents include the fish, wildlife, and people who call Maine home, as well as the visiting outdoor enthusiasts and ecotourists who call Maine Vacationland and contribute hundreds of millions of dollars each year to the state's economy.

