

**TOWN OF ISLESBORO  
DEER REDUCTION COMMITTEE**

**REQUEST FOR AUTHORIZATION TO MODIFY AND EXTEND  
THE SPECIAL HUNT**

**INTRODUCTION**

The Deer Reduction Committee of the Town of Islesboro (DRC) requests authorization from the Maine Department of Inland Fisheries & Wildlife (MDIF&W) to continue the existing deer reduction program on Islesboro and 700 Acre Island by means of modifying the terms of the Special Hunt and extending it for an additional three years.

This request is the next step in Islesboro's ongoing effort to reduce the incidence of tick-borne disease and other deer-related problems. While prevention measures go back to 1997 (a detailed chronicle is attached), the following are the recent developments:

- 2011. Convinced that the harvest in the Extended Archery season had not reduced the herd sufficiently to address deer-related problems, in August the Town voted 100-28 to "*support and establish a wildlife management plan with the goal of reducing the deer population to 10 deer per square mile and maintaining the population at that level.*" The Selectmen subsequently established the DRC to develop the plan.
- 2012. In March the DRC proposed a plan for a three week Special Hunt to be held in December of 2012, 2013, and 2014; the goal was to harvest 100 deer per year. Qualifying residents and non-resident property owners who owned habitable, taxable dwellings which they occupied for part of the year of the Special Hunt, and their immediate families would be permitted to hunt. Hunting methods would be archery (compound bow or crossbow) and shotgun (greater than 20 gauge). The plan was approved by the Islesboro voters (voice vote) in May and by the Advisory Council in September, 5-1. The first hunt was held from December 10-31. 50 deer were harvested.
- 2013. Given that only 50 deer were harvested in the 2012 hunt, at the suggestion of MDIF&W staff, DRC investigated the possibility of replacing it with a sharpshooting program. A plan to that effect was considered by the voters at a Special Town Meeting in June; the article was overwhelmingly rejected by a vote of 97-43. A subsequent article to extend the Special Hunt to the first Monday after the extended archery season through the end of February was approved 83-37. The new plan was approved by Commissioner Woodcock on October 1, 2013. The Special Hunt was held from December 16 - February 28, 2014. 36 deer were harvested.

- 2014. In view of a spike in 2013 Lyme disease numbers (80 confirmed and highly suspected cases) and the modest results of the Special Hunt, a group of summer residents formed the Concerned Citizens of Islesboro (CCI) and circulated a petition to suspend the hunt in favor of one organized by professional sharpshooters in the winter of 2015. CCI secured pledges for approximately \$350,000 in private funds to underwrite the program for four years. The petition was considered by the voters on September 30 and was rejected 148-87. The Special Hunt was held from December 16, 2014 - February 28, 2015. 39 deer were harvested.

Because islanders and hunters from the mainland are seeing fewer deer than in the past, we believe that the deer herd has seen a significant reduction over the past few years. However, the level must still be reduced further. In order to increase the annual deer harvest and to maintain the herd at an acceptable level, it is apparent to the DRC that some changes are needed. The problem should be addressed through continuing the Special Hunt for another three years, with some notable improvements:

- Expand the Special Hunt to include all qualified Islesboro landowners, including those who own property but do not live on the island.
- Begin the Special Hunt earlier - from the first week of November of each year through January of each year.
- Establish a more rigorous system for qualifying hunters who participate in the Special Hunt.

## **BACKGROUND**

### **THE ISLANDS**

Islesboro is located approximately three miles off the coast of Lincolnville in the Penobscot Bay. Approximately 14 miles long and two miles wide in places, Islesboro has 14.3 square miles (8,445 acres). According to the 2010 Census, the winter population is 566; there are approximately 2,000 seasonal residents. The ferry ride from Lincolnville to Islesboro takes 20 minutes.

As its name implies, 700 Acre Island has about 700 acres (1.09 square miles). The winter population is three people; there are approximately 80 seasonal residents. 700 Acre can only be reached by private boat.

There are approximately 15 small islands surrounding Islesboro and 700 Acre Island. Of these, two belong to the State (one is a State Park) and three belong to the Islesboro Islands Trust (two involve easements). The rest are privately owned.

**THE DEER-RELATED PROBLEMS**

The large number of cases of Lyme disease and the threat of other tick-borne diseases is the primary concern. Islesboro’s large deer population has also damaged the island’s vegetation and caused vehicle and plane accidents.

- *With some ups and downs, over the years the abundance and infection rate of deer ticks collected on Islesboro have steadily increased.*

YEAR (FALL)	ADULT TICKS/HOUR	PERCENT INFECTED
1996	0.1	
1997	0.3	0.0
2006	2.4	24.2
2009	2.9	48.9
2010	8.1	47.4
2011	24.0	56.2
2012	24.1	52.8
2013	22.3	36.4
2014	14.7	31.2

Data from the Vector-borne Disease Laboratory, South Portland, Dr. Peter Rand, (207) 662-7141

- *Tick-borne disease in humans and animals.* Although the deer tick can infect people with a number of diseases, until 2014 only cases of Lyme disease were diagnosed on Islesboro. The first case was diagnosed in 2002; the number of cases has increased steadily, with spikes in 2008, 2011, and 2013.

YEAR	CONFIRMED CASES	SUSPECTED CASES
2002	1	
2003	4	
2004		
2005		3
2006	4	
2007	5	2
2008	18	1
2009	5	2
2010	8	3
2011	19	8
2012	11	2
2013	53	27
2014	24	19

Data from the Islesboro Health Center, Alison Wood, PA-C, 207-734-2213

In the fall of 2014, a patient was diagnosed as having both Lyme disease and anaplasmosis. Attached is a breakdown of the tick-borne disease figures for 2014.

A serological study of 65 island dogs conducted in 2009 by the Vector-borne Disease Laboratory at Maine Medical Center found that four of the five dogs who had not been protected against Lyme disease by vaccination or treated with anti-tick products were Lyme positive, and two had been exposed to the agent of anaplasmosis; one dog had been exposed to both diseases.

- *Vegetation damage.* Heavy deer browsing is impacting forest regeneration throughout Islesboro and 700 Acre Island, and invasive plant species such as Japanese barberry are spreading. The deer survey prepared by Stantec Consulting in 2011 reports: *Field observations by Stantec indicate the current deer density exceeds the carrying capacity of the island's forest communities and is not sustainable over the long term. Present high deer population levels are significantly impacting the general ecological and silvicultural health of the island forests, and in particular, current forest regeneration.*
- *Vehicle accidents.* In the past few years deer have caused approximately 12 vehicle accidents annually. One accident involved a motorcycle, and the driver was severely injured.
- *Airplane accidents.* In recent years there have been two accidents involving planes at the Islesboro Airport (57B). In one, a deer tore the stabilizer from the tail of a 4-passenger single engine plane as it was landing, narrowly averting a tragedy. In the other, a twin engine turbo prop plane struck a deer on takeoff, severely damaging the nose gear and causing the pilot to make an emergency stop.

## **DEER DENSITIES**

Hunting opportunity has reduced deer densities on Islesboro, however, they remain too high and continue to support tick-borne diseases.

Until 2010, people guessed at the deer numbers – about 500 was the accepted estimate for Islesboro. In 2008, when the number of new Lyme disease cases rose to 18, the Islesboro Health Center determined that Islesboro should establish a tick-borne disease prevention program. The first step was a deer count, and the committee researched the most appropriate method for our islands' topography. The Town chose Stantec Consulting of Topsham, ME to do two deer pellet surveys, one in March 2010 and one in April 2011.

- 2010 (Islesboro only). Using a 95 percent confidence interval, the population density was determined to be 62 (+/- 6) deer per square mile for a total of 744 deer on the island.
- 2011. Using a 95 percent confidence interval, the population on Islesboro was determined to be 48 (+/- 4) deer per square mile on Islesboro for a total of 528, and 53 (+/-) per square mile on 700 Acre Island for a total of 62.

A third Stantec survey has been scheduled for late March or early April 2015; the results will be available in late April.

## **DEER HUNTING**

History. Hunting laws on Islesboro go back to 1939, when a closed season was established that prohibited hunting deer on the island. In 1959 the closed season was continued except for hunting with bow and arrow during October and November. In 1997 the closed season was once again continued but allowed for an expanded archery season beginning in September till the end of the regular firearms season in Waldo County, usually the last Saturday in November. In 2003 the length of the archery season was further expanded until the second Saturday in December. Currently a hunter may take one buck and unlimited does as part of the bag limit.

As described above, the Special Hunt was put into place in 2012. The Rule approved by the Advisory Council reads: *Town of Islesboro, in the County of Waldo, shall be open to a special deer hunt during a specified period from the first Monday following the end of the expanded archery season until December 31 annually, for a period of three years. Only licensed hunters qualifying under the Town of Islesboro's Deer Reduction Plan may participate. Deer taken during this special hunt are in addition to the statewide bag limit. All other laws and rules relating to deer hunting shall apply. The permit from the Department to the Town of Islesboro will authorize restrictions to be placed on types of weapons, bag limits and any other special conditions deemed necessary.*

### Harvest Numbers - Expanded Archery season.

Year	Adult		Fawn		Unk	Total	Total Per Sq. Mi.
	Buck	Doe	Buck	Doe			
1992	22	9	1	1	0	33	2.3
1993	8	9	1	0	0	18	1.3
1994	20	3	1	0	0	24	1.7
1995	20	15	0	0	0	35	2.5
1996	24	9	1	1	0	35	2.5
1997 <sup>a</sup>	33	21	2	2	1	59	4.2
1998	37	20	1	3	0	61	4.3
1999	39	33	2	1	2	77	5.4
2000	44	35	1	3	0	83	5.8
2001	59	71	4	5	1	140	9.9
2002	18	109	0	2	8	137	9.6
2003	44	64	6	10	3	127	8.9
2004	61	69	7	8	3	148	10.4
2005	41	89	12	11	1	154	10.8
2006	42	70	12	11	1	136	9.6
2007	61	83	17	14	0	175	12.3

2008	64	117	21	21	1	224	15.8
2009	75	111	30	14	2	232	16.3
2010	49	63	16	17	1	146	10.3
2011	64	92	23	21	0	198	13.8
2012						146	
2013	44	57	14	17	1	133	
<b>2014</b>							

<sup>a</sup>Expanded archery season implemented in 1997 to present.

Data from MDIF&W

Harvest numbers - Special Hunt.

Year	Adult		Fawn			Total	Total Per Sq. Mi.
	Buck	Doe	Buck	Doe	Unk		
2012	14	23	9	4	0	50	
2013/14	6	20	2	8	0	36	

**2014/15**

**HUNTABLE LAND**

*Access to land.* The initiative to reduce the deer population through a Special Hunt, which included a landowner survey, has raised awareness of the importance of access to hunting, and in 2012 huntable land increased from 45% of total Town acreage (8,445 acres) to 55%, 559 properties comprising 4,666.71 acres. Property owners have stipulated the following hunting methods:

- Archery only on 133 parcels comprising 761.62 acres.
- Shotgun only on 25 parcels comprising 282.76 acres.
- Archery and shotgun on 401 parcels comprising 3,622.33 acres.

On Islesboro, about 75% of the land is owned by seasonal residents, who do not hunt themselves; they give permission to individual hunters. Because of safety concerns, landowners usually limit the numbers of hunters.

On 700 Acre Island, 98% percent of the land is owned by seasonal residents, who do not hunt themselves. 100% of that land is open to hunting. Acre Island landowners give responsibility for managing hunting on the island to Carol Macaulay, a caretaker, hunter, and full-time resident.

**HUNTERS**

Number of Hunters

- *Islesboro.* As of 2010 there were 36 licensed hunters who live on Islesboro; 19 of these hunters are licensed for archery. The following number of hunters registered deer harvested on Islesboro within the past three years:

Year	IsleRes	MaineRes	NonRes
2009	10	85	12
2010	7	74	10
2011	7	67	10

Data from MDIF&W

- *700 Hundred Acre.* During the expanded archery season approximately 16 hunters hunt on Acre Island. Of these, one is a year-round island resident who manages the off-island group.

#### Hunter Issues

- *Access.* As such a high percentage of hunters must secure landowner permission, access has been the primary issue for people wanting to hunt on Islesboro.
- *Interference from other hunters.* Interference with hunters from the mainland during the expanded archery season has been an occasional issue, but not in recent years.

### COMMUNITY OPINION

Of the 950 property owners (1266 properties) who received the DRC's survey in January 2012, 557 responded (59%). Of the 511 respondents to the question, "Are you in favor of the concept of a Special Hunt?" 77% answered "Yes."

### OTHER DISEASE PREVENTION MEASURES

Since early 2012, the Islesboro Health Center (IHC) has mounted a focused tick-borne disease prevention campaign. This has included instruction in personal protection, what to do when bitten by a tick, and landscape modification and the use of sprays in small areas. In addition, the IHC has kept the Islesboro community informed the Islesboro through meetings, Town calendar mailings, articles in the local newspapers, and signs at key spots around the island.

### DRC'S PROPOSED PLAN

In order to continue the process of reducing the deer herds on Islesboro and 700 Acre Island to 10 deer per square mile, the DRC requests authorization from MDIF&W to conduct a second three year Special Hunt (2015/16, 2016/17, 2017/18).

### SPECIFICS

- *Nature of the hunt.* The DRC sees the Special Hunt as a management tool, rather than recreation. Reducing the deer population is a job to be done in order to improve public health and safety as well as environmental conditions on the islands.
- *Dates.* The Special Hunt would begin on the first Monday of November of each year and end on the last day of January of each year, as follows:

	<u>Begin</u>	<u>End</u>
2015-2016	Monday, November 2, 2015	Saturday, January 30, 2016
2016-2017	Monday, November 7, 2016	Tuesday, January 31, 2017
2017-2018	Monday, November 6, 2017	Wednesday, January 31, 2018

The Special Hunts would coincide with the Expanded Archery season during November and part of December. In 2015, the overlap would extend from Monday, November 2 - Saturday, December 12.

- *Access to land.* Islesboro has 8,445 acres. 55% of that land, 559 properties totaling 4,666.71 acres, will be available for the Special Hunt. On 700 Acre Island, 98% percent of the land is owned by non- residents. 99% of that land is open to hunting.

Please see the attached color-coded maps prepared in 2012 by Islesboro's Town Assessor and Aerial Survey & Photo, Inc., Norridgewock, ME.

- *Hunters.* All property owners, residents, and their immediate family members who qualify would be permitted to hunt. By allowing all property owners and their immediate family members to participate, including those who own land but do not reside on the island, the total number of hunters would be increased by approximately 50%, from 40 who registered for the 2014/15 hunt to 60 or more.

All hunters must follow the Special Hunt's *Criteria for Participation* (see below).

- *Criteria for participation.*

All participants must possess valid, current, and appropriate hunting licenses as required by the State of Maine and must follow all Maine hunting laws.

In order to qualify, in their first year of participation hunters must attend and pass the following to be conducted by the Deer Reduction Committee:

- A two hour "safety" refresher course.
- A firing range exercise to demonstrate proficiency with their chosen hunting weapon(s), and understanding of safety features on their chosen weapon(s). Participants must be able to hit a 7" target at 25 yards 3 out of 5 times with a shotgun, the same target at 15 yards for archery and crossbows.



In the following year/s of participation, hunters who have qualified must attend and pass a firing range exercise but do not have to attend the "safety" refresher course.

Following qualification, all participants must obtain a specific written authorization from the Deer Reduction Committee to hunt in the Special Hunt.

All participants must obtain written permission from landowners or a landowner's designee to hunt on any property not owned by the hunter or a member of his/her immediate family.

All participants as defined above may hunt on all of Islesboro, subject to criteria specified by the Deer Reduction Committee.

- *Hunting Methods.* Archery (compound bow or crossbow) and shotgun (20 ga. or higher).
- *Regulations.* Standard MDIF&W regulations pertain to Special Hunts. For instance, night hunting, Sunday hunting, and baiting will not be permitted. In addition, during the month of November, all bow hunters must wear two items of hunter orange clothing. One article must be a solid-colored hunter orange hat; the other must cover a major portion of the torso, such a jacket, vest, coat, or poncho and must be a minimum of 50% hunter orange in color (camouflage). When hunting in the Special Hunt, participants will be required to display on their vehicles or have on their persons a card issued by the Deer Reduction Committee indicating they are a qualified hunter in the Special Hunt.
- *Violations.* Anyone not hunting under the MDIF&W provisions/permits and Town of Islesboro criteria will be considered illegal.
- *Enforcement.* Anyone found to be in violation of the Special Hunt regulations will be reported immediately to the appropriate law enforcement authority. Islesboro's Police Department (Public Safety Director) and the Maine Warden Service will be the primary contacts. Either can be reached through Waldo County Dispatch at 338-2040 or 1-800-660-3390.
- *Anticipated level of harvest in the first year of implementation:* Approximately 50.
- *Number of deer per hunter.* Unlimited.
- *Community Safety.* Islesboro residents would be fully informed about all aspects of the hunt through public hearings, publications and a map indicating where hunting is permitted.
- *Tagging station.* All deer taken during the Special Hunt will be tagged at Islesboro's tagging stations.

- *Biological analysis.* At the Town's expense, tagging station staff would take deer measurements and extract teeth. The teeth will be analyzed according to State procedures in order to ascertain the history, size and condition of the deer herd.
- *Butchering.* Butchering will be provided at a mainland facility. The Town will subsidize the cost of transporting harvested deer to the facility and of dressing. Hunters will be responsible for picking up the dressed meat at the mainland facility and for giving away meat that they did not want for their own use to people of their choice. Deer not wanted by the hunters will be donated to the needy through the Hunters for the Hungry program; the butchering facility will bill the program for grinding the meat and making it available to food programs.

### **MEASURES OF SUCCESS**

- *Social.* The DRC will keep careful record of hunter participation, landowner satisfaction and the public's reaction to safety issues.
- *Empirical.* Working with MDIF&W and other agencies, the DRC will keep record of the several categories of data:
  - Deer harvest and biological data.
  - Deer numbers. In 2015, The Town expects to underwrite a pellet count in the early spring and a camera survey in the fall. The Town expects to underwrite one survey in 2016, 2017, and 2018.
  - Tick numbers. The Vector-borne Disease Laboratory at the Maine Medical Center expects to continue its yearly tick counts on Islesboro.
  - Tick-borne disease. Working with the Islesboro Health Center, the DRC will monitor the incidence of Lyme disease and other tick-borne diseases.
- *Environmental.* Working with MDIF&W, the DRC will monitor the regeneration of the islands' forests.
- *Vehicle and plane accidents.* Working with the Islesboro Public Safety Office, the DRC will monitor the incidence of deer-related road airplane accidents.

### **LONG RANGE**

The DRC plans to conduct the Special Hunt for three years – 2015/16, 2016/17, 2017/18. In the early spring of 2018 there will be a pellet count to ascertain the number of deer as well as an analysis of harvest trends, and evidence provided by the biological work and vehicle/plane accident statistics. With this information in hand, the DRC will assess the effectiveness of both the expanded archery season and the Special Hunt.

If the DRC strategy proves to be effective, and the 10 deer per square mile goal is within reach, in subsequent years it is hoped that the expanded archery season will keep the herd in check. Annually, the DRC will review all available data relating to deer, medical, public safety, forest and other environmental impact to determine if further action is required and make such recommendations to the Selectmen as the committee deems appropriate.

If by 2018 the deer population has not decreased significantly and the incidence of serious medical cases involving ticks persists, the committee anticipates looking to other means, including an open deer season or, if necessary, the complete eradication of the deer herds. How this will be done will depend on what is available at that time, cost, and community support of the methodology.

During this period, the Islesboro Health Center plans to continue its comprehensive campaign to inform the Islesboro about tick-borne disease prevention.

## CONCLUSION

The large numbers of deer on Islesboro and 700 Acre Island have caused a rising number of tick-borne disease cases in both humans and animals, damage to the vegetation, and vehicle and plane accidents. In order to reduce the risk of these problems, in 2012 the Town voted to reduce the deer populations to 10 per square mile, and to that end a Special Hunt was held in 2012, 2013/14, and 2014/15. Because of a number of factors including severe weather (February 2015 was the coldest month on record and one of the snowiest), a limited number of island only hunters, and the timing of the hunt, the Special Hunt harvest has made progress but has not met expectations. The committee proposes extending the hunt for another three years with modifications that include expanding the number of hunters to include all qualified landowners and beginning the hunt in early November.

## DEER REDUCTION COMMITTEE

William Tilden, Chair; Michael Boucher; Andrew Coombs; Linda Gillies, Secretary; Paul Hatch, Jr.; Don Johnson; Carol Macaulay; Gilbert Rivera; Rachel Rolerson-Smith; Ken Smith

Contacts: Bill Tilden - 956-1124; Mike Boucher - 479-1101; Ken Smith - 734-6930.

C: Arch Gillies, Chair, Islesboro Board of Selectmen  
Janet Anderson, Town Manager

**ATTACHMENT**

**TICK-BORNE DISEASE ON ISLESBORO, 2014**

Below is a summary of Islesboro's tick-borne disease statistics in the past year, with comparative figures for 2013. The number of confirmed and strongly suspected cases of Lyme disease in 2014 is 46% lower than in the year before.

Of note is that a patient who lives on the island was diagnosed by an off-island specialist as having both Lyme disease and anaplasmosis, a tick-borne disease that affects the body's white blood cells. The symptoms are similar to those of Lyme disease. Treatment with antibiotics is effective, and there are no long-term effects. There has been an increase in the number of cases of anaplasmosis throughout the State in recent years.

We are also aware that three island residents who were treated in 2013 for Lyme disease are still symptomatic after a year and have the potential for secondary illness that can involve chronic symptoms.

**TOTAL PATIENTS WHO CAME TO THE HEALTH CENTER AFTER A TICK BITE**

	<u><b>2014</b></u>	<u><b>2013</b></u>
March	<b>1</b>	0
April	<b>8</b>	5
May	<b>27</b>	15
June	<b>13</b>	37
July	<b>43</b>	59
August	<b>23</b>	40
September	<b>6</b>	10
October	<b>14</b>	24
November	<b>7</b>	13
December	<u><b>2</b></u>	<u>0</u>
Total	<b>144</b>	203

**DIAGNOSIS AND TREATMENT**

Observation, no treatment.	<b>58</b>	50
Tick attached for 24-36 hours. Suspicion of infection. One-time dose Doxycycline.	<b>62</b>	67
Confirmed cases of Lyme disease reportable to the State: tick bite attached for 24-36 hours, Erythema migrans ("bull's-eye" rash) or positive results from blood test. 14-21 day course of		

antibiotic (doxycycline for adults. amoxicillin for children).	<b>24</b>	53
Strong suspicion of Lyme disease based on clinical analysis: tick bite, attached for 24-36 hours, fever, aching joints, fatigue.	<b>19</b>	27
Confirmed case of anaplasmosis (in addition to Lyme), reportable to the State. Appropriate antibiotics.	<b>1</b>	0
Potential for secondary illness that can involve chronic symptoms.	<b>3</b>	0

#### DEMOGRAPHIC BREAKDOWN

Females	<b>69</b>	92
Males	<b>75</b>	111
Ages (not all patients are included for 2013)		
0-9	<b>9</b>	8
10-19	<b>5</b>	5
20-29	<b>15</b>	10
30-39	<b>12</b>	4
40-49	<b>14</b>	12
50-59	<b>29</b>	27
60-69	<b>33</b>	23
70-79	<b>23</b>	10
80+	<b>3</b>	4
Islesboro residents	<b>88</b>	113
Seasonal residents or other	<b>56</b>	90

#### LOCATION WHEN BITTEN

Islesboro	<b>135</b>	188
Acre Island	<b>1</b>	5
Spruce/Warren	<b>0</b>	0
Mainland or out of state	<b>8</b>	10

#### MEDICAL COSTS

IHC visits:	\$7,735
Medications:	<u>1,877</u>
	\$9,612

*Alison Wood, PA-C, Islesboro Health Center, 1/19/15*