

TOWN OF ISLESBORO

LYME DISEASE PREVENTION COMMITTEE

MEETING – MONDAY, FEBRUARY 7, 2011 – 4:30 PM – TOWN OFFICE

MINUTES

Present: Philo Hutcheson, Linda Gillies, Laura Houle, Seth Wilbur, Alison Wood, PA

Absent: Andrew Coombs, Nakomis Nelson

Invited but unable to attend: Jeffrey Grossman

The minutes of the committee's meeting of December 6, 2010 were approved.

Report on Information Gathering. Linda Gillies said that work on the report being prepared for the Selectmen is about 80% done. So far, the report includes largely background information; the committee's recommendations will be formulated and incorporated into the report after the results of the second pellet count, to be taken in late March/early April, are known. She circulated copies of the report's Table of Contents and of the incomplete report, encouraging committee members to read and comment on the document as it evolves in draft form over the next several weeks. She then discussed several points that have become clear during the preparation of the report.

- Lyme disease and other tick-borne diseases are on the rise in parts of the U.S., particularly the upper mid-west and the northeast. Attachments A and B.
- Lyme disease and other tick-borne diseases are on the rise in Maine. Attachment C.
- Where there is deer control, either through hunting regulations (usually including firearms) or locally controlled hunts, Lyme disease is not a serious problem.
 - The Vector-borne Disease Laboratory is now saying that the "safe" number for deer/sq. mile is 8-10, rather than 10-15.
- A good many Maine coastal communities have deer management programs in place. Attachment D.
- For the most part, prevention methods other than personal care, landscape management and deer control have proven to be ineffective/costly/harmful to the environment. Attachment E.
- Deer and tick populations and new cases of tick-borne diseases vary according to a variety of factors (sometimes unknown).

Conversations with IF&W Staff. Laura Houle and Linda Gillies reported that IF&W Regional Wildlife Biologists Scott Lindsay (Region A), James Connolly (Region B) and Thomas Schaeffer (Region C) have provided very helpful information about tick-borne disease prevention in their jurisdictions, particularly locally-controlled deer management programs. Linda Gillies has approached State Deer and Moose Biologist Lee Kantar about how to proceed should the committee recommend changes to present hunting regulations on Islesboro. He said that any recommendations would be worked out with James Connolly

and the Region B staff at the Sidney office and that he would be back to her about a possible discussion with them.

Surveys. The committee discussed tick and deer counts, both past and planned.

- The Vector-borne Disease Laboratory, which conducted a tick count in November 2010, has reported that of the 93 ticks found per hour, 49.4 percent were infected with Lyme disease; in the fall of 2009, 48.4percent were infected.
- IF&W's Potvin aerial survey held on January 20, 2011 was not able to provide a reliable estimate of deer on Islesboro and 700 Acre Island. Because of snow conditions, deer were likely staying close to the spruce and fir cover and not flushing upon the helicopter's approach. When there is less snow, IF&W may attempt the survey again.
- The Town has signed the contract for the second deer pellet count, to be taken in March/April 2011. Arrangements for the count are underway:
 - Stantec has provided the transects for both Islesboro and 700 Acre Island. Vicki Conover and James Westhafer are currently matching the transects with Town maps to identify the landowners.
 - Letters to landowners and permission forms are being prepared and will be sent once the landowner information is available. Allie Wood suggested that perhaps members of the Health Center Advisory Board, who helped with last year's letters, can be enlisted to assist with this year's mailing.
 - The exact dates for the pellet count have not yet been determined. It is still too early to forecast when the snow will be gone and when trees will begin to leaf out.
 - As last year, the Stantec biologists will stay with Katie and Nakomis Nelson.
 - Seth Wilbur offered to transport the biologists to and from 700 Acre Island in his boat.

Preparation for Special Town Meeting. Committee members agreed that we should be prepared for questions that might arise at the Special Town Meeting of February 26, 2011, when voters will consider a warrant for \$7,000 to be added to the \$7,500 2010/11 budget line for the deer survey and other expenses that the committee may incur. It was agreed to hold a committee meeting about this in advance of the Special Town Meeting.

Other Business. Committee members discussed the dissemination of the completed report/recommendations.

- The report will first go to the Selectmen, who will each receive a copy.
- Hard copies should be available at various island locations – the Town Office, the Health Center, the Library, etc.
- An online copy should be available on the Town's new website.
- Philo Hutcheson suggested that a summary of the report be prepared and distributed, perhaps in an island-wide mailing.
- It was agreed that a forum should be held for the community to hear about the recommendations.

Next meeting. The committee's next meeting was scheduled for Thursday, February 24, 2011 at 4:30 pm in the Town Office.

The meeting adjourned at 5:30 pm.

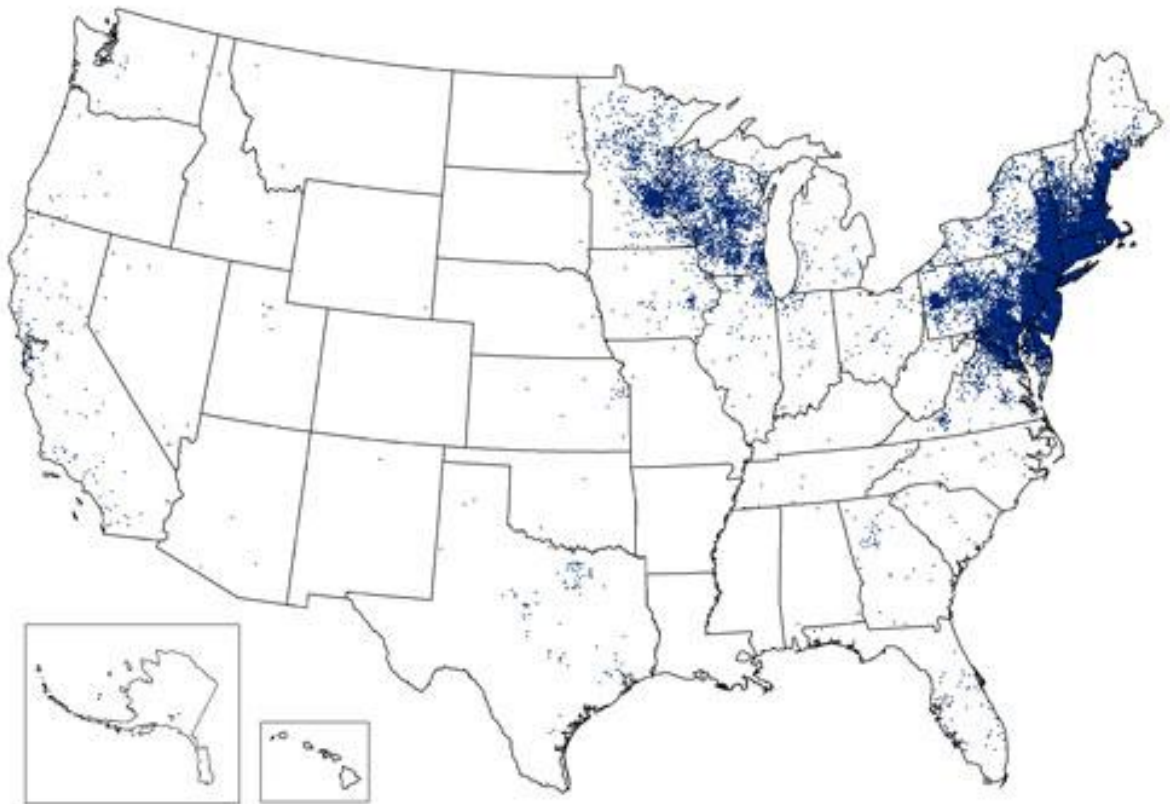
Respectfully submitted,

Linda Gillies, Secretary

February 15, 2011

Attachment A:

Reported Cases of Lyme Disease -- United States, 2009



1 dot placed randomly within county of residence for each confirmed case

Attachment B:

Reported Lyme disease cases by state, 1995-2009

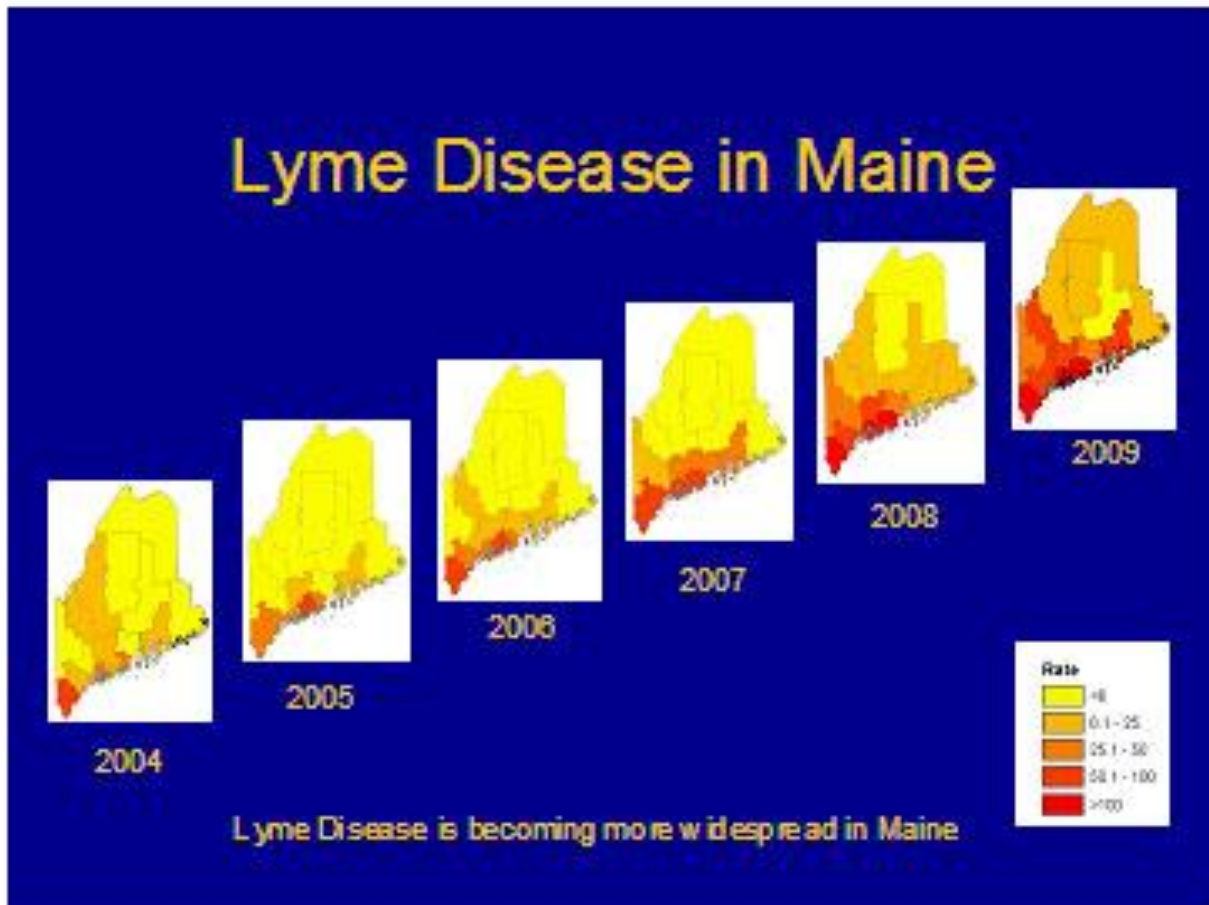
TABLE. Reported cases of Lyme disease by state or locality, 1995-2009

State	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008 ^a	2009		
															Confirmed	Probable	Incidence ^b
Alabama	12	9	11	24	20	6	10	11	8	6	3	11	13	6	3	0	0.1
Alaska	0	0	2	1	0	2	2	3	3	3	4	3	10	6	7	0	1.0
Arizona	1	0	4	1	3	2	3	4	4	13	10	10	2	2	3	4	0.0
Arkansas	11	27	27	8	7	7	4	3	0	0	0	0	1	0	0	0	0.0
California	84	64	154	135	139	96	95	97	86	48	95	85	75	74	117	0	0.3
Colorado	0	0	0	0	3	0	0	1	0	0	0	0	0	2	0	1	0.0
Connecticut	1548	3104	2297	3434	3215	3773	3597	4631	1403	1348	1810	1788	3058	2738	2751	1405	78.2
Delaware	56	173	109	77	167	167	152	194	212	339	646	482	715	772	984	0	111.2
DC	3	3	10	8	6	11	17	25	14	16	10	62	116	71	53	8	8.8
Florida	17	55	56	71	59	54	43	79	43	46	47	34	30	72	77	33	0.4
Georgia	14	1	9	5	0	0	0	2	10	12	6	8	11	35	40	0	0.4
Hawaii	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Idaho	0	2	4	7	3	4	5	4	3	6	2	7	9	5	4	12	0.3
Illinois	18	10	13	14	17	35	32	47	71	87	127	110	149	108	136	0	1.1
Indiana	19	32	33	39	21	23	26	21	25	32	33	26	55	42	61	22	0.9
Iowa	16	19	8	27	24	34	36	42	58	49	89	97	123	85	77	31	2.6
Kansas	23	36	4	13	16	17	2	7	4	3	3	4	8	16	18	0	0.6
Kentucky	16	26	20	27	19	13	23	25	17	15	5	7	6	5	1	0	0.0
Louisiana	9	9	13	15	9	8	8	5	7	2	3	1	2	3	0	0	0.0
Maine	45	63	34	78	41	71	108	219	175	225	247	338	529	780	791	179	60.0
Maryland	454	447	494	659	899	688	608	738	691	891	1235	1248	2576	1746	1466	558	25.7
Massachusetts	189	321	291	699	787	1158	1164	1807	1532	1532	2336	1432	2988	3960	4019	1237	61.0
Michigan	5	28	27	17	11	23	21	26	12	27	62	55	51	76	81	22	0.8
Minnesota	208	251	256	261	283	465	461	867	474	1023	917	914	1238	1046	1063	480	20.2
Mississippi	17	24	27	17	4	3	8	12	21	0	0	3	1	1	0	0	0.0
Missouri	53	52	28	12	72	47	37	41	70	25	15	5	10	6	3	0	0.1
Montana	0	0	0	0	0	0	0	0	0	0	0	1	4	6	3	0	0.3
Nebraska	6	5	2	4	11	5	4	6	2	2	2	11	7	8	4	1	0.2
Nevada	6	2	2	6	2	4	4	2	3	1	3	4	15	9	10	3	0.4
New Hampshire	28	47	39	45	27	84	129	261	190	226	265	617	896	1211	996	419	75.2
New Jersey	1703	2190	2041	1911	1719	2459	2020	2349	2887	2698	3363	2432	3134	3214	4598	375	52.8
New Mexico	1	1	1	4	1	0	1	1	1	1	3	3	5	4	1	4	0.0
New York	4438	5301	3327	4640	4402	4329	4083	5535	5399	5100	5565	4460	4165	5741	4134	1517	21.2

North Carolina	84	66	34	63	74	47	41	137	156	122	49	31	53	16	21	75	0.2
North Dakota	0	2	0	0	1	2	0	1	0	0	3	7	12	8	10	5	1.5
Ohio	30	32	40	47	47	61	44	82	66	50	58	43	33	40	51	7	0.4
Oklahoma	63	42	45	13	8	1	0	0	0	3	0	0	1	1	2	0	0.1
Oregon	20	19	20	21	15	13	15	12	16	11	3	7	6	18	12	26	0.3
Pennsylvania	1562	2814	2188	2760	2781	2343	2806	3989	5730	3985	4287	3242	3994	3818	4950	772	39.3
Rhode Island	345	534	442	789	546	675	510	852	736	249	39	308	177	186	150	85	14.2
South Carolina	17	9	3	8	6	25	6	26	18	22	15	20	31	14	25	17	0.5
South Dakota	0	0	1	0	0	0	0	2	1	1	2	1	0	3	1	0	0.1
Tennessee	28	24	45	47	59	28	31	28	20	20	8	15	31	7	10	27	0.2
Texas	77	97	60	32	72	77	75	139	85	98	69	29	87	105	88	188	0.4
Utah	1	1	1	0	2	3	1	5	2	1	2	5	7	3	6	3	0.2
Vermont	9	26	8	11	26	40	18	37	43	50	54	105	138	330	323	85	51.9
Virginia	55	57	67	73	122	149	156	259	195	216	274	357	959	886	698	210	8.9
Washington	10	18	11	7	14	9	9	11	7	14	13	8	12	22	15	1	0.2
West Virginia	26	12	10	13	20	35	16	26	31	38	61	28	84	120	143	58	7.9
Wisconsin	369	396	480	657	490	631	597	1090	740	1144	1459	1466	1814	1493	1952	637	34.5
Wyoming	4	3	3	1	3	3	1	2	2	4	3	1	3	1	1	2	0.2
U.S. TOTAL	11,700	16,455	12,801	16,801	16,273	17,730	17,029	23,763	21,273	19,804	23,305	19,931	27,444	28,921	29,959	8,509	13.4

- [†]confirmed cases presented for all years except most recent
- [^]confirmed cases per 100,000 population

Attachment C:



Attachment D:

SUMMARY – DEER AND DEER CONTROL – MAINE COASTAL COMMUNITIES

The following summary is excerpted from the Tick-borne Disease Prevention Committee’s report, which is still in draft. It includes the 20 communities researched for this report, 17 islands and three townships.

- No deer, no tick-borne disease 1
 - Matinicus
- All deer eradicated, now no tick-borne disease 1
 - Monhegan
- Many deer, limited hunting, considerable tick-borne disease 2
 - Isle au Haut
 - Mount Desert
- Deer controlled through use of Maine State hunting regulations, few cases tick-borne disease 5
 - Chebeague
 - Deer Isle
 - Lincolnville/Northport/Belfast
 - North Haven
 - Vinalhaven
- Many deer until instituted a successful, ongoing controlled deer reduction program, few cases tick-borne disease 11
 - Cape Elizabeth (Ram Island Farm/Sprague Preserve)
 - Casco Bay Islands (Cliff, Cushing, Diamond, Long, Peak’s)
 - Cranberries
 - Frenchboro
 - Marsh Island/Orono
 - Swan’s
 - Wells Sanctuary/Drake’s Island

2/14/11

Attachment E:

The following is excerpted from the Tick-borne Disease Prevention Committee's report, which is still in draft. 2/14/11

SECTION 4

GENERAL INFORMATION ABOUT TICK-BORNE DISEASE PREVENTION¹

The key to reducing the incidence of tick-borne disease is based upon the ability to reduce the exposure and probability of human contact with infected ticks. In recent years, numerous medical organizations, townships, civic groups and individuals have researched a variety of ways to protect people from becoming bitten and infected. Some of these approaches have proven to be effective beyond a doubt. Others have uncertain results, are prohibitively costly or are harmful to the environment.

MEASURES THAT HAVE PROVEN TO BE EFFECTIVE

- Personal Care. Attention to protective clothing and personal care is the first line of defense against tick-borne disease. Measures include:
 - wearing of appropriate clothing,
 - use of tick repellents
 - daily bathing
 - prompt removal of ticks

- Landscape Modification. Landscapes can be modified so as to be less hospitable to small animals, deer and deer ticks.
 - Studies have shown that open-grass/sparse-shrub habitats contain fewer immature blacklegged ticks than high shrub areas. Tick densities are greatest on mice trapped from areas with more shrub cover and woody stem densities.
 - The "edge" effects of shrub patches provide large areas for deer browsing.
 - Excessive watering of grass will increase the humidity and promote a more favorable habitat for ticks.

- Deer Control. Blacklegged tick numbers and distribution are directly linked to deer density. Deer are the primary host for the adult blacklegged tick; deer feed most adult ticks and are key to the reproductive success of the tick. Other potential hosts are not as important as deer. It has been proven that islands that lack deer do not sustain deer tick populations even with alternative hosts available.

¹ Information about tick-borne disease prevention methods has been taken from a number of sources including the Nantucket Report, pp. 15-29 and the Dover, MA Report.

There is a direct correlation between the rise in the density of deer in the eastern U. S. and the epidemic curve for Lyme disease. Information generated from scientific studies and successful reduction programs indicates that if deer herd density is reduced to or below 8-10 deer/sq. mile, tick numbers can be lowered to levels that decrease risk of human disease.

MEASURES THAT HAVE NOT PROVEN TO BE EFFECTIVE OR THAT ARE UNTESTED, COSTLY OR ENVIRONMENTALLY HARMFUL

- Acaricide Usage. Acaricides are pesticides for ticks. The most common is permethrin, a member of the pyrethroid class of pesticides. The devices using permethrin include:
 - Permethrin spray. Applied in May or early June to target nymphal ticks, the stage most likely to transmit tick-borne disease. Adults may be targeted by spraying in the fall (or in the spring if no fall application was made). Highly toxic to fish and other aquatic organisms, but generally less so to mammals, birds and other wildlife.
 - The Four Poster device to apply acaricides to deer consists of a central bin containing whole kernel corn as bait. When deer feed on the bait, the device forces them to rub their heads, necks and ears against permthrin-impregnated applicator rollers.

Some studies have shown the device to be effective in reducing tick density. A study conducted by the U. S. Department of Agriculture in five eastern states showed a 71% reduction in nymphal ticks after 5 years. Another study in Connecticut failed; sufficient ticks remained to reproduce and cause disease. Further experiments are currently being conducted and studied on Cape Cod and Shelter Island. The technique is labor-intensive and costly. The coast to set up the system on Shelter Island was \$182,000 in the first year and \$118,767 in the second year.²

- Damminix Tick-tubes® are cardboard tubes filled with cotton balls treated with permethrin that mice collect to build their nests. Ticks that feed on nesting mice in the spring and fall are exposed to permethrin.

The effectiveness of Damminix tubes is uncertain. Two studies in Connecticut and New York State failed to show any reduction in the number of infected, host-seeking nymphs when this product was used for a three-year period in woodland and residential areas; a Massachusetts study reported reductions.

- “Bait box” systems, which attract mice and apply an acaricide to their bodies when they enter, have not been extensively tested. One of these products, Maxforce®, has been removed from the market because of low sales.

² Shelter Island Task Force, Executive Summary, www.shelter-island.org/deerandtck/report.html

- Immuno-contraception. Contraceptive drugs can be administered with corn that has been treated or with under-the-skin implants or injections. Best used for single herds of deer that are manageable. The Maine Department of Inland Fisheries & Wildlife does not consider fertility control to be a safe and effective means of controlling wild populations of deer.³
- Biological Control. The use of predators, parasites and pathogens has been examined for tick control, including chalcid wasps, fungi and nematodes. Such biological controls have not been extensively tested and may interfere with typical predator-prey dynamics.
- Small Animal Control. Small animals and rodents are key intermediate hosts for tick-borne disease. The control of small animals is best accomplished by reducing the dense vegetation and ground cover that provide cover for them as they forage for food. A widespread, organized program directed at artificially reducing the small animal population has no supporting data indicating a reduction in tick-borne disease and may in fact alter the ecological balance of the environment.

³ Maine Department of Inland Fisheries and Wildlife, *Deer Reduction Protocol*, June 2001