

THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE

MUNICIPAL COUNCIL

REGULAR MEETING

A G E N D A

- DATE:** July 18, 2011
- TIME:** Following Committee of the Whole  
Administration and Operations
- PLACE:** Council Chambers  
Oliver Paipoonge Municipal Complex
- PRESIDING:** Mayor L. Kloosterhuis
- MEMBERS OF COUNCIL:** Councillor J. Byers  
Councillor E. Collingwood  
Councillor B. Kamphof  
Councillor A. Vis
- MUNICIPAL OFFICERS:** Judy Jacobson, Deputy Clerk  
Sharron Martyn, Planner
- ORDERS OF THE DAY:** OPENING THE MEETING  
DISCLOSURES OF INTEREST  
ADOPTION OF THE AGENDA  
MINUTES OF PREVIOUS MEETINGS  
REPORTS OF COMMITTEES  
MAYOR'S REPORT  
REPORTS OF MUNICIPAL OFFICERS  
BY-LAWS  
PETITIONS AND COMMUNICATIONS  
NEW BUSINESS  
ADJOURNMENT

CALL TO ORDER

DISCLOSURES OF INTEREST

ADOPTION OF THE AGENDA

RES THAT with respect to the July 18, 2011, Regular Agenda we  
1 recommend that the agenda as printed including any additional  
information and new business be confirmed.

MINUTES OF PREVIOUS MEETING

Regular Meeting

8 – 14

Minutes of Regular Meeting held on June 27, 2011, for approval.

RES THAT the Minutes of the Regular Meeting held on June 27, 2011,  
2 be approved as submitted.

Discussion on the above noted minutes.

Public Meeting

15 – 16

Minutes of the Public Meeting held on June 27, 2011, for approval.

RES THAT the Minutes of the Public Meeting held on June 27, 2011,  
3 be approved as submitted.

Committee of the Whole Closed Session

17

Minutes of the Committee of the Whole Closed Session Meeting held on June 27, 2011, for approval.

RES THAT the Minutes of the Committee of the Whole Closed  
3 Session Meeting held on June 27, 2011, be approved as submitted.

Committee of the Whole  
Administration and Operations

18 – 22

Minutes of the Committee of the Whole Administration and Operations Meeting held on June 27, 2011, for approval.

RES THAT the Minutes of the Committee of the Whole Administration and  
4 Operations Meeting held on June 27, 2011, be approved as submitted.

MAYOR'S REPORT

CONFERENCE/SESSION REPORTS

REPORTS OF MUNICIPAL OFFICERS

BY-LAWS 

RES 5, 6, 7, 8, 9 & 10
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THAT the following By-laws be introduced, read, dealt with individually, engrossed, signed by the Mayor and Clerk, sealed and numbered:

- 1. THAT By-law No. 531-2011 to authorize payment to the Members of Council and Committees for attendance at meetings and payment of mileage and expenses Including mileage and expenses for Municipal Employees, BE APPROVED; 23 – 26

AND THAT the Mayor and Clerk be authorized to affix their signatures to said by-law.

**At the June 27, 2011, meeting, Council directed Administration to make changes to By-law No. 531-2011 as discussed and represent the By-law to the July 18, 2011, meeting.**

- 2. THAT By-law No. 654-2011 to authorize the executive of an Agreement between The Corporation of the Municipality of Oliver Paipoonge and the Construction & Allied Workers Local 607, BE APPROVED; 27

AND THAT the Mayor and Clerk be authorized to affix their signatures to said by-law.

- 3. THAT By-law No. 655-2011 to authorize the execution of an Agreement between The Corporation of the Municipality of Oliver Paipoonge/Nor West Recreation Centre and the Construction & Allied Workers Local 607, BE APPROVED; 28

AND THAT the Mayor and Clerk be authorized to affix their signatures to said by-law.

- 4. THAT By-law No. 652-2011 to authorize the execution of Contract No. 5-2011 between the Corporation of the Municipality of Oliver Paipoonge and R & S Bobcat Services for Roadside Grass Cutting, BE APPROVED; 29

AND THAT the Mayor and Clerk be authorized to affix their signatures to said by-law.

- 5. THAT By-law No. 653-2011 to amend By-law No. 185-01, a Zoning By-law, BE APPROVED; 30 – 31

AND THAT the Mayor and Clerk be authorized to affix their signatures to said by-law.

PINEVIEW MOTEL

- 6. THAT By-law No. 651-2011 to amend By-law No. 185-01, a Zoning By-law, BE APPROVED; 32 – 33

AND THAT the Mayor and Clerk be authorized to affix their signatures to said by-law.

PAIPOONGE COMPLEX

PETITIONS AND CORRESPONDENCE

**Action Items**

- Lyme Disease 34 – 56

Email from Christine Heffer dated July 10, 2011, attaching additional information and containing a resolution with respect to the above noted.

RES 11 THAT the Oliver Paipoonge Council endorses the resolution from the County of Huron to petition the legislative assembly of Ontario to request the Minister of Health to direct the Ontario Public Health system and OHIP to include all currently available and scientifically verified tests for Acute and Chronic Lyme diagnosis, to do everything necessary to create public awareness of Lyme Disease in Ontario, and to have internationally developed diagnosis and successful treatment protocols available to patients and physicians.

Donation

Wildfires in Slave Lake, Alberta

57

Letter from Stephen P. Kaegi, Chief Administrative Office, Township of Carling dated June 20, 2011, and containing a resolution to authorize a donation of \$100.00 to the Town of Slave Lake to help compensate them in their recent fire.

**For Information**

Highway 102 Improvements

58

Letter from Tom Kompon, Project Engineer, Ministry of Transportation dated July 4, 2011, advising of the work included as part of the Highway 102 improvements project, for information.

Letter of Appreciation

59

Letter from Sylvia Goodheart, Secretary, Oliver Agricultural Society dated July 5, 2011, thanking for the donation of gravel to fill in the holes in our driveway and yard.

Provincial Election 2011  
NDP Platform Bulletin No. 1

60 – 62

Communication from the Association of Municipalities of Ontario dated June 27, 2011, relative to the above noted, for information.

Livestock Damage Program  
Significant Changes Effective July 1, 2011

63 – 65

Email from the Association of Municipal Managers Clerks and Treasurers of Ontario dated July 4, 2011, relative to the above noted, for information.

	<b>PAGES</b>
<u>Prosperity Northwest Thunder Bay Chamber of Commerce</u>	66
Notification from the Thunder Bay Chamber of Commerce with respect to the above noted to be held on September 21, 2011, at the Valhalla Inn.	
<u>AMO's Top 12 Asks Provincial Election 2011</u>	67 – 69
Letter from the Association of Municipalities of Ontario dated July 8, 2011, relative to the above noted, for information.	
<u>Extended Producer Responsibility (EPR)</u>	70
Email from the Association of Municipalities of Ontario dated June 27, 2011, relative to the above noted, for information.	
<u>Emerald Ash Borer</u>	71 – 72
Media Release from Shelley Vescio, City Forester, City of Thunder Bay Parks Division relative to the above noted.	
<u>Ontario Good Roads Association</u>	73
Update from the Ontario Good Roads Association dated Jun 2011, for information.	
<u>2011 Lakewide Management Annual Report</u>	74 – 78
Letter from Kevin Guerin, Acting Director, Great Lakes Division, Environment Canada dated May 20, 2011, attaching a copy of the above noted report, for information.	
<u>Municipal Drinking Water Licence Drinking Water Works Permit and Accreditation</u>	79
Letter from John Stager, Chief Drinking Water Inspector/Assistant Deputy Minister, Ministry of the Environment dated July 5, 2011, relative to the above noted, for information.	

Impact of Farm and Forest Rebates on Municipal Taxation

Letter from Rick Kieri, Reeve, Township of Gillies dated June 28, 2011, relative to the above noted, for information.

NEW BUSINESS

ADJOURNMENT

RES THAT the Regular Meeting held on July 18, 2011, be adjourned  
12 the hour being \_\_\_\_\_ p.m.

THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE

REGULAR MEETING

MINUTES

DATE: June 27, 2011  
TIME: 7:53 p.m.  
PLACE: Council Chambers  
Oliver Paipoonge Municipal Complex  
CHAIR: Mayor Lucy Kloosterhuis  
PRESENT: Councillor J. Byers  
Councillor E. Collingwood  
Councillor B. Kamphof  
Councillor A. Vis  
MUNICIPAL OFFICERS: Jamie Cressman, CAO/Clerk  
Judy Jacobson, Deputy Clerk

CALL TO ORDER

Mayor Lucy Kloosterhuis called the meeting to order.

DISCLOSURES OF INTEREST

ADOPTION OF THE AGENDA

**Resolution No. 268-2011**

MOVED BY Councillor J. Byers  
SECONDED BY Councillor B. Kamphof

THAT with respect to the June 27, 2011, Regular Agenda we recommend that the agenda as printed including any additional information and new business be confirmed.

CARRIED

MINUTES OF PREVIOUS MEETING

Regular Meeting

Minutes of Regular Meeting held on June 15, 2011, for approval.

**Resolution No. 269-2011**

MOVED BY Councillor B. Kamphof  
SECONDED BY Councillor J. Byers

THAT the Minutes of the Regular Meeting held on June 15, 2011, be approved, as submitted.

CARRIED





**Resolution No. 275-2011**

MOVED BY Councillor J. Byers  
SECONDED BY Councillor B. Kamphof

THAT the following By-law be introduced, read, dealt with individually, engrossed, signed by the Mayor and Clerk, sealed and numbered:

4. THAT By-law No. 531-2011 to authorize payment to the Members of Council and Committees for attendance at meetings and payment of mileage and expenses including mileage and expenses for Municipal Employees, BE APPROVED;

AND THAT the Mayor and Clerk be authorized to affix their signatures to said by-law.

DEFERRED

Council directed Administration to make changes to By-law No. 531-2011 as discussed and represent the By-law to the July 18, 2011, meeting.

PETITIONS AND CORRESPONDENCE

**Action Items**

Sale of Goods in Ontario  
Recyclable/Compostable

Letter from Wayne Orr, Chief Administrative Officer, Township of South Frontenac dated June 1, 2011, containing a resolution with respect to the above noted.

**For Information**

Roslyn Village Water System

Letter from Dino Radocchia, Manager, Infrastructure Programs Unit, Ministry of Agriculture, Food and Rural Affairs, dated June 21, 2011, advising our application for the Roslyn Waterworks Upgrades was not approved for funding.

Final Housing Strategy & Bill 140 - TBDSSAB

Email from Glenda Flank, Administrative Assistant, Housing Services, TBDSSAB dated June 20, 2011, relative to the above noted. A copy of the Housing Strategy Presentation and Executive Summary are available for perusal.

Corbett Creek/Pennock Creek  
Watershed Assessment Updates

Letter from Mervi Henttonen, General Manager/Secretary-Treasurer, Lakehead Region Conservation Authority, dated June 21, 2011, advising the above watersheds continue to be in good condition, for information. A copy of the report is available at the meeting for perusal.

Medical Marijuana Grow-ops

Email from the Federation of Canadian Municipalities dated June 17, 2011, relative to the above noted, for information.

Communities in Bloom Ontario

Email from Lee Rozon, Executive Director, Communities in Bloom Ontario dated June 21, 2011, and attaching a newsletter, for information.

Training Event  
Partners in Planning Webinar

Agenda for the Partners in Planning Training webinar to be held on June 27, 2011, for information.

2011 AMO Annual Conference  
August 21-24, 2011  
London Convention Centre and Hilton London

Notice to advise the Delegation Request Form deadline date is July 18, 2011, for the above noted.

NEW BUSINESS

Rosslyn Road Water Drainage

Letter from Rick Kraemer, Land Development Officer, Thunder Bay District Health Unit dated June 24, 2011, expressing concerns with standing water observed along the back of properties between Maple Street and Rosslyn Road.

*Building Together*  
Ontario's Long Term Infrastructure Plan

Email from the Office of the Minister, Ministry of Infrastructure dated June 24, 2011, advising of the new long-term infrastructure plan, *Building Together*, for information.

Heads Up Alert from Ontario Good Roads Association dated June 24, 2011, providing information with respect to the above noted, for information.

Rosslyn Road Water Drainage

**Resolution No. 276-2011**

MOVED BY                      Councillor J. Byers  
SECONDED BY                Councillor A. Vis

THAT the Oliver Paipoonge Council awards the Rosslyn Road drainage project to P & I Construction in the amount of \$15,000.00.

CARRIED

COMMITTEE OF THE WHOLE CLOSED SESSION

**Resolution No. 277-2011**

MOVED BY Councillor A. Vis  
SECONDED BY Councillor J. Byers

THAT we resolve into a Committee of the Whole Closed Session to discuss matters pertaining to employee negotiations and a proposed disposition of land the hour being 9:07 p.m.

CARRIED

**Resolution No. 278-2011**

MOVED BY Councillor J. Byers  
SECONDED BY Councillor A. Vis

THAT we revert back to the Regular Meeting to complete the business at hand the hour being 9:41 p.m.

CARRIED

Salary Increases  
**Senior and Non Union Staff**

**Resolution No. 279-2011**

MOVED BY Councillor A. Vis  
SECONDED BY Councillor J. Byers

THAT with respect to Report No. 2011.01CS we recommend salary increases be given to the senior staff members based on By-law No. 517-2008;

AND THAT all other non-union staff receives 2.5% based on the union agreement;

AND THAT all increases are retroactive to January 1, 2011;

AND THAT in addition to the percentage increase, the Public Works Superintendent mileage be increased to \$2,400 annually and the Deputy Clerk salary be increased by \$500.

CARRIED

**Resolution No. 280-2011**

MOVED BY Councillor B. Kamphof  
SECONDED BY Councillor E. Collingwood

THAT a Special Council Meeting be established for July 5, 2011, at 7:00 p.m. to consider By-law No. 651-2011 relative to the rezoning of the Paipoonge Complex including any additional information and new business items as may arise.

CARRIED

ADJOURNMENT

**Resolution No. 281-2011**

MOVED BY  
SECONDED BY

Councillor J. Byers  
Councillor A. Vis

THAT the Regular Meeting held on June 27, 2011, be adjourned  
the hour being 9:43 p.m.

CARRIED

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Mayor Lucy Kloosterhuis

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Jamie Cressman  
Chief Administrative Officer

THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE  
PUBLIC MEETING

MINUTES

DATE: June 27, 2011

TIME: 6:30 p.m.

PLACE: Council Chambers  
Oliver Paipoonge Municipal Complex

PRESIDING: Mayor L. Kloosterhuis

PRESENT: Councillor J. Byers  
Councillor E. Collingwood (*late with notice*)  
Councillor B. Kamphof  
Councillor A. Vis

MUNICIPAL OFFICER: Jamie Cressman, CAO/Clerk  
Judy Jacobson, Deputy Clerk  
Peter Whittington, Public Works Superintendent  
Kyle Bushby, Community Services Supervisor

CALL TO ORDER

Mayor L. Kloosterhuis declared the Public Meeting open at 6:30 p.m.

DISCLOSURES OF INTEREST

No disclosures of interest noted.

ADOPTION OF THE AGENDA

**Resolution No. 261-2011**

MOVED BY Councillor A. Vis  
 SECONDED BY Councillor J. Byers

THAT with respect to the June 27, 2011, Public Meeting Agenda we recommend that the agenda as printed including any additional information and new business be confirmed.

CARRIED

PUBLIC MEETING

Zoning By-law Amendment  
Municipality of Oliver Paipoonge

An application on behalf of the Municipality of Oliver Paipoonge for a zoning by-law amendment from Paipoonge Institutional (P1) zone to Paipoonge Rural Commercial (PC1) on Concession 1, N/R Part Lot 5, MR48, Parts 1, 2 & 3 FWR153 and road allowance between Concession B and Concession 1, NKR (formerly known as Rosslyn Road) in the former Geographic Township of Paipoonge, now the Municipality of Oliver Paipoonge situated on Highway 130.

The draft by-law was contained in the agenda and a copy available for the public at the meeting.

- a) Mayor L. Kloosterhuis introduced the amendment.
- b) Jamie Cressman, CAO/Clerk read the Notice.
- c) Mayor L. Kloosterhuis reviewed the process and purpose and effect.
- d) Jamie Cressman, CAO/Clerk read comments received from agencies or individuals.

Letter from Michelle Sixsmith, Water Resources Technologist dated July 13, 2011, advising they have no comments or concerns with the proposed amendment.

- e) The Planning Department's Report was read at the Special Public Meeting held on April 4, 2011.
- f) Mayor L. Kloosterhuis asked for comments in support of the proposed amendment. No response was received.
- g) Mayor L. Kloosterhuis asked for comments in opposition to the proposed amendment. No response was received.
- h) Mayor L. Kloosterhuis asked for questions from the floor or Council Members.
- i) Mayor L. Kloosterhuis made concluding remarks and advised the By-law would be considered at the Regular Meeting of Council to held on July 18, 2011.

ADJOURNMENT

Resolution No. 262-2011

MOVED BY	Councillor J. Byers
SECONDED BY	Councillor A. Vis

THAT the Public Meeting to consider a Zoning By-law Amendment under Section 34 of the Ontario Planning Act, R.S.O. 1990, c.P.13, 1996 Edition, be closed, the hour being 6:36 p.m.

CARRIED

\_\_\_\_\_  
Mayor Lucy Kloosterhuis

\_\_\_\_\_  
Jamie Cressman  
Chief Administrative Officer/Clerk

THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE

COMMITTEE OF THE WHOLE CLOSED SESSION

MINUTES

DATE: June 27, 2011

TIME: 9:08 p.m.

PLACE: Council Chambers  
Oliver Paipoonge Municipal Complex

CHAIR: Mayor Lucy Kloosterhuis

PRESENT: Councillor J. Byers  
Councillor E. Collingwood  
Councillor B. Kamphof  
Councillor A. Vis

MUNICIPAL OFFICER: Jamie Cressman, CAO/Clerk  
Judy Jacobson, Deputy Clerk

CALL TO ORDER

Mayor L. Kloosterhuis called the meeting to order.

DISCLOSURES OF INTEREST

REPORTS OF MUNICIPAL OFFICERS

Employee Negotiations

Jamie Cressman, CAO, provided a verbal report relative to the above noted.

Council directed the CAO to proceed as discussed.

Proposed Disposition of Land

Jamie Cressman, CAO, provided a verbal report relative to the above noted.

Council directed the CAO to proceed with the sale of the property as discussed.

ADJOURNMENT

The meeting adjourned at 9:40 p.m.

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Mayor L. Kloosterhuis

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Jamie Cressman  
Chief Administrative Officer/Clerk

THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE

COMMITTEE OF THE WHOLE  
ADMINISTRATION & OPERATIONS

MINUTES

Administration Department  
Financial Department  
Public Works Department

DATE: June 27, 2011  
TIME: 6:30 p.m.  
PLACE: Council Chambers  
Oliver Paipoonge Municipal Complex  
CHAIR: Councillor J. Byers  
PRESENT: Mayor L. Kloosterhuis  
Councillor E. Collingwood  
Councillor B. Kamphof  
Councillor A. Vis  
MUNICIPAL OFFICERS: Jamie Cressman, CAO/Clerk  
Judy Jacobson, Deputy Clerk  
Peter Whittington, Public Works Superintendent  
Kyle Bushby, Community Services Supervisor  
Larry Eyres, By-law Enforcement Officer

CALL TO ORDER

Councillor J. Byers called the meeting to order.

DISCLOSURES OF INTEREST

No disclosures of interest were noted.

ADOPTION OF AGENDA

**Resolution No. 263-2011**

MOVED BY Mayor L. Kloosterhuis  
SECONDED BY Councillor A. Vis

THAT with respect to the June 27, 2011, Committee of the Whole Administration and Operations Agenda we recommend that the agenda as printed including any additional information and new business be confirmed.

CARRIED

## DEPUTATION

### Canadian Red Cross Disaster Management Program

Ken Widdifield, Disaster Management Coordinator, and Wendy Addison, Volunteer Operational Lead, Disaster Management Program, Canadian Red Cross, Thunder Bay District appeared and made a presentation with respect to the above noted and responded to questions.

Council directed Administration to submit a report with respect to the services and costs for the program to the August 15, 2011 meeting.

### Rural Food Bank

At the Regular Meeting held on May 25, 2011, it was suggested that a representative of the Rural Food Bank be invited to attend a meeting of Council to provide information on the services they provide, etc.

Judy Fleck, Secretary Treasurer, Rural Food Bank made a presentation with respect to the Rural Food Bank and advised they were in the process of seeking a new building to house an office and storage are for their operations.

It was suggested that the organization approach the Province and the municipalities being served by the Rural Food Bank for possible funding assistance.

6:57 p.m. - Councillor E. Collingwood attended the meeting at this time.

### Kakabeka Recreation Complex

Letter from Ralph Rosengren dated June 21, 2011, requesting to appear before Council with respect to concerns relative to the establishment of a commercial business at the above noted location.

Ralph Rosengren appeared and made a deputation with respect to the concerns addressed in his letter and responded to questions.

## MINUTES OF PREVIOUS MEETING

### Committee of the Whole Administration and Operations

Minutes of the Committee of the Whole Administration and Operations Meeting held on May 25, 2011, for discussion only.

## REPORTS OF MUNICIPAL OFFICERS

### Rosslyn Road Water Drainage

At the Committee of the Whole Planning and Development meeting held on May 9, 2011, an email from Scott Drury dated May 1, 2011, relative to water drainage in the backyards of Rosslyn residents from Maple Street was presented. At that time, Council directed the CAO to investigate this matter and report back to the May 25, 2011, meeting.

At the Committee of the Whole Planning and Development meeting held on June 15, 2011, an email from Scott Drury dated May 30, 2011, relative to the above noted was presented. Scott Drury attended the June 15, 2011, meeting and submitted a petition with nine (9) names expressing concern with respect to this matter.

Email from Scott Drury dated June 20, 2011, providing further information with respect to the above noted.

Peter Whittington, Public Works Superintendent, attended and provided a verbal report as requested at the June 15, 2011, meeting.

#### ADMINISTRATION DEPARTMENT

##### CAO Report

CAO Report from June 9, 2011, to June 22, 2011.

Jamie Cressman, CAO provided a verbal report on the above noted and responded to questions.

#### COMMUNITY SERVICES

##### Kakabeka Recreation Complex Tennis Courts & Request for Funding

At the June 15, 2011, Committee of the Whole Planning and Development meeting letters were received from the Franklin, Saul and Levanen Families and Danielle Dunne, President and Chrissie Dysievick, Vice President, Kakabeka relative to the above noted. Council directed Administration to review the funds available from the \$15,000 Hydro One grant for the above noted requests and provide a further report at the June 27, 2011, meeting. Above noted letters represented.

Jamie Cressman, CAO introduced Kyle Bushby, Community Services Supervisor, to Members of Council.

Kyle Bushby, Community Services Supervisor provided a verbal report with respect to the above noted as well as an update on the department.

#### FINANCE DEPARTMENT

##### List of Accounts

A copy of the List of Accounts as of June 22, 2011, for approval of payment.

##### Resolution No. 264-2011

MOVED BY  
SECONDED BY

Councillor A. Vis  
Mayor L. Kloosterhuis

THAT we recommend that the List of Accounts as of June 22, 2011, prepared by the Finance Department in the amount of \$678,592.32, BE APPROVED for payment.

CARRIED



Contract No. 5-2011  
Roadside Grass Cutting

Report No. 2011.18 to award Contract No. 5-2011 for roadside grass cutting.

**Resolution No. 266-2011**

MOVED BY Mayor L. Kloosterhuis  
SECONDED BY Councillor A. Vis

THAT the Oliver Paipoonge Council awards Contract No. 5-2011 for Roadside Grass Cutting to R & S Bobcat in the amount of \$7,344.98 (including taxes), being the lowest tender;

AND THAT the necessary By-law be presented to Council for ratification.

CARRIED

Kakabeka Recreation Complex

Following a discussion with respect to the deputation by Ralph Rosengren held earlier in the evening, it was the consensus of Council that a letter be forwarded to Ralph Rosengren and Bishop Racicot advising that this matter will be reviewed prior to the 2012 baseball season.

Council also directed Administration to provide a report on the improvements required in Kakabeka and how they will be funded.

ADJOURNMENT

**Resolution No. 267-2011**

MOVED BY Mayor L. Kloosterhuis  
SECONDED BY Councillor A. Vis

THAT the Committee of the Whole Administration and Operations Meeting held on June 27, 2011, be adjourned, the hour being 7:46 p.m.

CARRIED

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Mayor L. Kloosterhuis

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Jamie Cressman  
Chief Administrative Officer/Clerk

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

BY-LAW NO. 646-2011

*A By-law to authorize payment to the Members of Council and Committees for attendance at meetings and payment of mileage and expenses including mileage and expenses for Municipal Employees.*

WHEREAS the *Municipal Act*, SO 2001, c. 25, s. 283 (1) provides that a municipality may pay any part of the remuneration and expenses of the members of its council or of a local board of the municipality and its officers and employees; and s. 284 (1) provides that the treasurer of a municipality shall in each year on or before March 31<sup>st</sup> provide to the council of the municipality an itemized statement on remuneration and expenses paid in the previous year;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE HEREBY ENACTS AS FOLLOWS:

(1) In this by-law,

“COMMITTEE” shall mean the following committees of Council and shall include any new committees as formulated by by-law or resolution of Council:

- i) Oliver Paipoonge Library Board
- ii) Paipoonge Museum Board
- iii) Stanley Hill Cemetery Board
- iv) Finance Committee

“DAY” shall be defined as 1.0 hour.

- (2) THAT the Mayor shall be paid the sum of \$16,362.48 in 2011 with an increase on January 1 each year thereafter as per the CPI for carrying out his/her duties and responsibilities as Mayor, including attendance at all Committee of the Whole and Council meetings.
- (3) THAT each Councillor shall be paid the sum of \$11,687.40 per annum plus CPI on January 1 each year thereafter, payable in 12 equal payments for carrying out his/her duties and responsibilities as Councillor and for their attendance at all Committee of the Whole and Council meetings.
- (4) THAT each member of a Committee, which does not include a member of Council, may be paid a maximum sum of thirty-five dollars (\$35.00) for attendance at all Committee of the Whole and Council meetings.
- (5) THAT the members of the Committee of Adjustment shall be paid the sum of sixty-five (\$65.00) for each meeting for their attendance at all Committee of Adjustment meetings.
- (6) A per diem of two hundred dollars (\$200.00) per day shall be paid when Members of Council and Committees attend a workshop, seminar, meeting, convention or an assignment pre-approved by Council Resolution.
  - (a) Payment for attendance at approved sessions of less than one hour to be calculated at 50%.
- (7) THAT members of Council, Committees and Employees of the Municipality, when required to use their own vehicle shall be paid at a rate per kilometer as set by

Provincial Standards for travelling on Municipal business. (Does not include council or committee meetings)

- (8) THAT accounts for mileage shall be presented to the Treasurer of the Municipality which upon verification shall be paid.
- (9) THAT payment of expenses for the Members of Council, Committees, and Employees of the Municipality shall be in accordance with Schedule "A" attached hereto.
- (10) THAT Schedule "A" attached hereto is an integral part of this by-law.
- (11) THAT this By-law shall come into force and effect on the date of passing.
- (12) THAT By-law No. 531-2009 is hereby repealed.

Read a first and second time this 18th day of July, 2011.

Read a third time and finally passed this 18th day of July, 2011.

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

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Mayor Lucy Kloosterhuis

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Jamie Cressman  
Chief Administrative Officer/Clerk

SCHEDULE "A"

BY-LAW NO. 646-2011

For the payment of Expenses to Members of Council, Committees and Employees of the Municipality.

1. APPROVAL

- (a) The Council shall authorize by resolution the number of persons to attend a workshop, seminar, meeting or convention.
- (b) Notwithstanding Section 1(a) above, the CAO/Clerk shall have the authority of approving attendance of an employee to a workshop, seminar, meeting or convention, provided there are sufficient funds in the budget.

2. TRANSPORTATION

- (a) The following rates and transportation costs shall be paid:
  - Mileage – at the municipal rate as established by by-law
  - Air – Economy class
- (b) The normal method of transportation when traveling within the District of Thunder Bay shall be by automobile.
- (c) If deemed appropriate or reasonable to travel other than by automobile the Council may authorize an alternative method.
- (d) Method of transportation to points further than stated in (b) above shall be the most economical and the method of travel shall be determined by Council.
 

If an alternative method is used the person may be paid the equivalent to the approved method of travel.
- (e) When two or more members are traveling by motor vehicle, "car pooling" is encouraged and should be utilized whenever practical.

3. ACCOMMODATIONS

- (a) Reimbursement for accommodations be supported by receipts if the cost exceeds twenty-five dollars (\$25.00) per day.

4. MEAL ALLOWANCES

- (a) The following meal allowances are provided and shall not be required to be supported by receipts:

	Outside Northwestern Ontario	Within Northwestern Ontario
(i) Breakfast	Twenty Dollars (\$20.00)	Fifteen Dollars (\$15.00)
(ii) Lunch	Twenty-five Dollars (\$25.00)	Twenty Dollars (\$20.00)
(iii) Dinner	Forty Dollars (\$40.00)	Thirty Dollars (\$30.00)

- (b) Meals that are provided or included in the Registration Fee shall not be claimed.

5. REIMBURSEMENT

- (a) If attending in a dual capacity and the costs or portion thereof are paid/recovered from any other source, the money so received shall be reimbursed to the Municipality.

6. ENTERTAINMENT

- (a) The Chief Administrative Officer may approve the payment of expenses incurred for entertainment and will only be paid if the expenses are supported by receipts.

7. MISCELLANEOUS EXPENSE

- (a) Miscellaneous expenses shall be kept to a minimum and include, but are not limited, to registration fees.

8. ADVANCES

- (a) An advance for expenses may be provided upon request and should represent the approximate cost.

9. SUBMISSION OF EXPENSE ACCOUNTS

- (a) Expense accounts are to be submitted on the expense form accompanied by receipts within ten (10) days from the date of return from the function.
- (b) If a refund is due to the Municipality it shall accompany the expense form.

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

BY-LAW NO. 654 - 2011

*A By-law to authorize the execution of an Agreement between the Corporation of the Municipality of Oliver Paipoonge and the Construction & Allied Workers Local 607.*

WHEREAS the *Municipal Act, 2001*, c. 25, s. 9 provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS the Council for the Corporation of the Municipality of Oliver Paipoonge deems it expedient to enter into an Agreement between the Corporation of the Municipality of Oliver Paipoonge and the Construction & Allied Workers Local 607.

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE HEREBY ENACTS AS FOLLOWS:

1. That the Agreement attached hereto and marked as Schedule "A" being an Agreement between the Corporation of the Municipality of Oliver Paipoonge and the Construction & Allied Workers Local 607.
2. That the Mayor and Chief Administrative Officer/Clerk be authorized to execute the Agreement on behalf of the Corporation of the Municipality of Oliver Paipoonge.
3. That this by-law shall come into force and take effect upon the final reading thereof.

Enacted and passed this 18<sup>th</sup> of July, A.D. 2011 as witnessed by the Seal of the Corporation and the hands of its proper Officers.

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

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Mayor Lucy Kloosterhuis

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Judy Jacobson  
Deputy Clerk

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

BY-LAW NO. 655 - 2011

*A By-law to authorize the execution of an Agreement between the Corporation of the Municipality of Oliver Paipoonge/Nor West Recreation Centre and the Construction & Allied Workers Local 607.*

WHEREAS the *Municipal Act, 2001*, c. 25, s. 9 provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS the Council for the Corporation of the Municipality of Oliver Paipoonge deems it expedient to enter into an Agreement between the Corporation of the Municipality of Oliver Paipoonge/Nor West Recreation Centre and the Construction & Allied Workers Local 607.

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE HEREBY ENACTS AS FOLLOWS:

1. That the Agreement attached hereto and marked as Schedule "A" being an Agreement between the Corporation of the Municipality of Oliver Paipoonge/Nor West Recreation Centre and the Construction & Allied Workers Local 607.
2. That the Mayor and Chief Administrative Officer/Clerk be authorized to execute the Agreement on behalf of the Corporation of the Municipality of Oliver Paipoonge.
3. That this by-law shall come into force and take effect upon the final reading thereof.

Enacted and passed this 18<sup>th</sup> of July, A.D. 2011 as witnessed by the Seal of the Corporation and the hands of its proper Officers.

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

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Mayor Lucy Kloosterhuis

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Judy Jacobson  
Deputy Clerk

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

BY-LAW NO. 652 - 2011

*A By-law to authorize the execution of Contract No. 5-2011 between the Corporation of the Municipality of Oliver Paipoonge and R & S Bobcat Services for Roadside Grass Cutting.*

WHEREAS the *Municipal Act, 2001*, c. 25, s. 9 provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS the Council for the Corporation of the Municipality of Oliver Paipoonge deems it expedient to enter into a Contract with R & S Bobcat Services for Roadside Grass Cutting;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE HEREBY ENACTS AS FOLLOWS:

1. That the Contract attached hereto and marked as Schedule "A" being Contract No. 5-2011 with R & S Bobcat Services for Roadside Grass Cutting;
2. That the Mayor and Chief Administrative Officer/Clerk be authorized to execute the Agreement on behalf of the Corporation of the Municipality of Oliver Paipoonge.
3. That this by-law shall come into force and take effect upon the final reading thereof.

Enacted and passed this 18<sup>th</sup> of July, A.D. 2011 as witnessed by the Seal of the Corporation and the hands of its proper Officers.

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

\_\_\_\_\_  
Mayor Lucy Kloosterhuis

\_\_\_\_\_  
Judy Jacobson  
Deputy Clerk

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

BY-LAW NO. 653 - 2011

*A By-law to amend By-law No. 185-01, a Zoning By-law*

WHEREAS the Council for the Corporation of the Municipality of Oliver Paipoonge owner of certain lands situate in the Municipality of Oliver Paipoonge requires a change to the zoning to accommodate a site specific zoning change to said lands.

AND WHEREAS the Council is desirous of amending said By-law No. 185-01 in the manner herein set forth.

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE HEREBY ENACTS AS FOLLOWS:

- 1) Notwithstanding the provisions of Schedule "A" to By-law Number 185-01 as it applies to Concession 1, NKR, Part Lot 35, RP55R1304 Part 2 in the former Township of Paipoonge, now in the Municipality of Oliver Paipoonge, allowing for an addition to the existing zoning use as a site specific amendment in accordance with Schedule "A" attached hereto and forming part of this by-law.
- 2) Section 4.21 (PC2) Paipoonge General Commercial, is herein amended for the lands and premises being Part Lot 35, RP55R1304 Part 2, Con. 1 NKR by the addition of the following text at the end of the current section:

4.21.5 "for the property commonly known as the Pineview Motel being Part of Lot 35, Reference Plan 55R1304 Part 2, Con. 1 NKR by the addition of the following text at the end of the current section the following shall apply:

- a) Addition of use - bedding and feeding of cattle within a building on subject property
- b) Minimum rear yard zone provision for subject property being 3 metres for said building.

This By-law shall come into force and effect on the date of passing in accordance with Section 34 of the Ontario Planning Act, R.S.O. 1990, c.P. 13, 1996 Edition, as amended.

Enacted and passed this 18<sup>th</sup> of July, A.D. 2011 as witnessed by the Seal of the Corporation and the hands of its proper Officers.

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

\_\_\_\_\_  
Mayor Lucy Kloosterhuis

\_\_\_\_\_  
Judy Jacobson  
Deputy Clerk

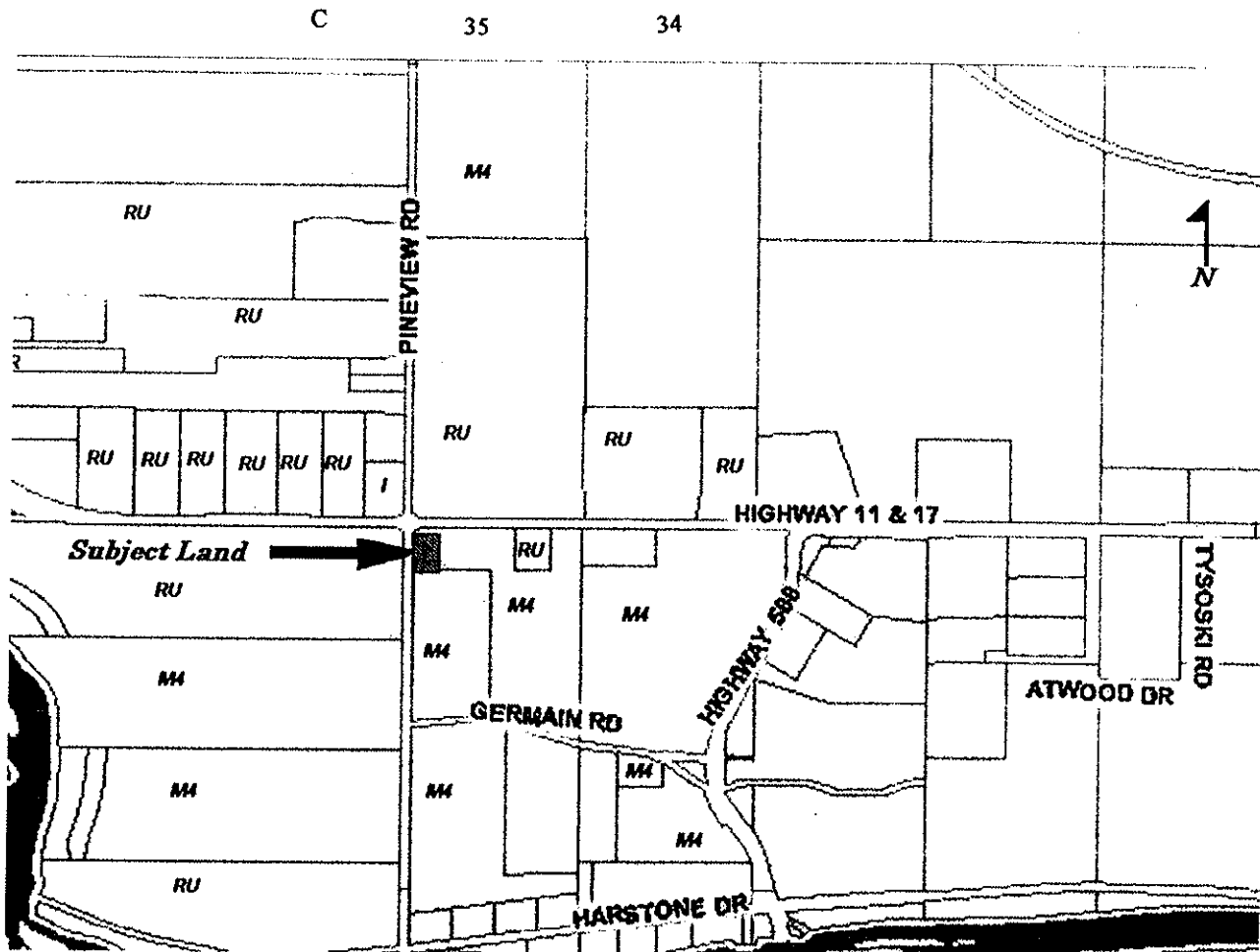
SCHEDULE 'A'

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

BY-LAW NO. 653 - 2011

PURPOSE AND EFFECT

Present Paipooonge General Commercial (PC2) to remain on Part Lot 35, RP55R1340 Part 2, Conc. 1, NKR but will add use of a barn for feeding and bedding cattle in Paipooonge General Commercial Zone and will allow for less rear yard requirement for the subject barn.



THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

BY-LAW NO. 651 - 2011

*A By-law to amend By-law No. 185-01, a Zoning By-law*

WHEREAS the Council for the Corporation of the Municipality of Oliver Paipoonge owner of certain lands situate in the Municipality of Oliver Paipoonge requires a change to the zoning to accommodate a site specific zoning change to said lands.

AND WHEREAS the Council is desirous of amending said By-law No. 185-01 in the manner herein set forth.

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE MUNICIPALITY OF OLIVER PAIPOONGE HEREBY ENACTS AS FOLLOWS:

Section 1 -- Application of the By-law

- 1.1 Sections 2 and 3 of this By-law shall apply only to the lands and premises being Concession 1, N/R Part Lot 5, MR 48, Parts 1,2,& 3 FWR153 and road allowance between Concession "B" and Concession "1", NKR (formerly known as Rosslyn Road) in the former Township of Paipoonge and now in the Municipality of Oliver Paipoonge.

Section 2 -- Change of Zone

- 2.1 Notwithstanding Schedule "A" to By-law 185-01 as it applies to Concession 1, N/R Part Lot 5, MR 48, Parts 1,2,& 3 FWR153 and road allowance between Concession "B" and Concession "1", NKR (formerly known as Rosslyn Road) in the former Township of Paipoonge and now in the Municipality of Oliver Paipoonge, the said lands are hereby removed from the Paipoonge Institutional (PI) zone and designated as being in and part of the Paipoonge Rural Commercial (PC1) zone.

Section 3 -- Regulation Changes

- 3.1 For the lands and premises being Concession 1, N/R Part Lot 5, MR 48, Parts 1,2,& 3 FWR153 and road allowance between Concession "B" and Concession "1", NKR (formerly known as Rosslyn Road) in the former Township of Paipoonge and now in the Municipality of Oliver Paipoonge, Section 4.19.1 of By-law 185-01 is hereby deleted and replaced with the following;

"4.19.1 Permitted Uses

- i) A business and professional office
- ii) A craft shop
- iii) A financial institution
- iv) A warehouse/storage
- v) An agricultural sales outlet
- vi) A petty trade
- vii) Car Wash

Definitions:

PETTY TRADE, shall mean an establishment, other than an automotive use, that provides a non-personal service or craft to the public, including, but not so as to limit the generality of the foregoing, a painter's shop, a carpenter's shop, and electrician's shop, a merchandise service shop, a bakery, a catering establishment, an egg grading station and a monument engraving shop.

WAREHOUSE, shall mean a building or part thereof which is used primarily for the storage or wholesale distribution of goods, wares, merchandise, food-stuffs, substances, articles or things but does not include the storage of fuel.

CAR WASH, shall mean a self service car wash that re-circulates water.

Section 4 – Administration

4.1 This By-law conforms to the Official Plan for the Municipality of Paipoonge, and shall come into force and effect on the date of passing subject to the filing of appeals and related Ontario Municipal Board decision.

Enacted and passed this 27<sup>th</sup> of June, A.D. 2011 as witnessed by the Seal of the Corporation and the hands of its proper Officers.

THE CORPORATION OF THE MUNICIPALITY  
OF OLIVER PAIPOONGE

---

Mayor Lucy Kloosterhuis

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Jamie Cressman  
Chief Administrative Officer/Clerk

## Jamie Cressman

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**From:** cheffer <cheffer@cogeco.ca>  
**Sent:** Sunday, July 10, 2011 9:00 AM  
**To:** jamie.cressman@oliverpaipoonge.on.ca  
**Subject:** Lyme disease petition and awareness  
**Attachments:** LYME DISEASE INFORMATION PACKET 2.pdf

Attn: Clerk;

My name is Christine Heffer. I am a resident of Ontario. I am writing this letter to ask the council to endorse the Lyme disease petition set forth by MPP Bob Bailey of Sarnia Lambton and to help raise awareness about Lyme disease in the Province of Ontario. I am unable to come in person to the council to present a formal delegation but I would like to have this issue brought to the council's attention.

Lyme disease is the fastest growing infectious disease in North America with an estimated 400000 people contracting the disease this year alone. Lyme disease is spreading at a rate of 7X that of AIDS. Here in Ontario the Chief Medical Officer sent a letter in 2010 to all the physicians stating that Lyme disease cases and the black legged tick that carries the bacteria were increasing in Ontario especially southern Ontario. A recent study reported that migrating birds are transmitting ticks by the millions into Canada resulting in the ability to contract Lyme disease anywhere in this country.

The public is generally unaware of Lyme disease and the affect it can have on the body. Late stage Lyme disease is similar to having AIDS. The Lyme bacteria suppress your immune system just like HIV. I take 54 pills a day to try and fight this infection possibly for the rest of my life. This is a public health threat yet the provincial government is doing little to warn the public about a deadly bacterial infection that can be contracted in their own backyard. In fact the government is down playing the risk. Citizens of Ontario are becoming incapacitated by a tick bite due to the lack of public education.

I was misdiagnosed for four years and underwent many tests, procedures and even a major surgery do to the faulty Lyme disease testing and general lack of know about this disease in the medical community and the provincial government's belief that Lyme disease is rare in Ontario. I was tested three times for Lyme disease and was told I didn't have the disease. I finally figured out what was wrong myself and went to my family physician who knew nothing about this disease. I have seen many specialists and the lack of knowledge about this disease has been astounding. I am only one of thousands of Canadians who have contracted Lyme disease in this county and we all have experienced the same ignorance by the medical community about this disease.

As I stated before the testing is poor. Here in Ontario we use a 2 tiered testing system. The 1st tier is the ELISA test. This test has been shown in numerous scientific studies to be inaccurate over 50% of the time yet people are being told they do not have Lyme disease based on this test. Lyme disease is supposed to be a clinical diagnosis yet our physicians are not educated in the clinical presentation of this disease or the other tick borne illnesses that one can contract from a tick bite. Very little is taught in medical school about tick borne diseases.

Since the medical community lacks education on Lyme disease, treatment options are not available in this province. Presently if a person contracts Lyme disease he will probably be misdiagnosed since the physicians are not familiar with the disease. If you miss the acute form of the disease a person develops late stage Lyme disease which there is no treatment options in Ontario. The only option is to seek treatment in the US and to pay for it yourself. We have people in Ontario many of them children being denied medical care in Ontario for this infectious disease. If left untreated Lyme disease will make a person bedridden and can kill.

The petition asks the provincial government to provide better testing which is available, a wide scale public education program, education for our physicians and treatment options for those of us fighting for our lives from the bite of a bug. I

hope that after learning about Lyme disease that the council will endorse the Lyme disease petition on behalf of the citizens in your community but even more important than that my hope is that after learning about Lyme disease the council members will educate families, neighbours and friends about this insidious disease. We are all at risk and this disease can happen to anyone. I have attached an information packet including the petition.

Sincerely;

Christine Heffer

486 Alderbury Cres.,  
Corunna, Ontario  
N0N 1G0  
(519) 481-0972



Corporation of the  
**COUNTY OF HURON**

COUNTY CLERK, Barbara L. Wilson, CMO  
1 Court House Square, Goderich, Ontario N7A 1M2  
[bwilson@huroncounty.ca](mailto:bwilson@huroncounty.ca)

519-524-8394 (ext. 257)  
Fax 519-524-2044

July 6<sup>th</sup>, 2011.

The Hon. Dalton McGuinty,  
Premier of the Province of Ontario,  
Room 281, Main Legislative Building,  
Queen's Park,  
Toronto, ON M7A 1A1

Honourable Premier:

The Council of the Corporation of the County of Huron recently heard a presentation from Christine Heffer, an Ontario resident living with Lyme Disease. The following Motion was passed by Council at their July 6<sup>th</sup>, 2011 Council meeting:

**WHEREAS:**

The tick-borne illness known as Chronic Lyme Disease, which mimics many catastrophic illnesses, such as Multiple Sclerosis, Crohn's, Alzheimer's, arthritic diabetes, depression, Chronic Fatigue and Fibromyalgia is increasingly endemic in Canada, but the scientifically validated diagnostic tests and treatment choices are currently not available in Ontario, forcing patients to seek these in the USA and Europe;

**AND WHEREAS:**

The Canadian Medical Association informed the public, governments, and the medical profession in the May 30, 2000 edition of their professional journal that Lyme Disease is endemic throughout Canada, particularly in Southern Ontario;

**AND WHEREAS:**

The Ontario Public Health system and the Ontario Health Insurance Plan currently do not fund those specific tests that accurately serve the process for establishing a clinical diagnosis, but only recognize testing procedures known in the medical literature to provide false negatives 45 to 95% of the time;

.../2

The Hon. Dalton McGuinty,  
Premier of the Province of Ontario.  
Re: Lyme Disease

July 6<sup>th</sup>, 2011.  
Page 2 of 2.

**NOW THEREFORE BE IT RESOLVED THAT:**

The Council of the County of Huron petition the legislative assembly of Ontario to request the Minister of Health to direct the Ontario Public Health system and OHIP to include all currently available and scientifically verified tests for Acute and Chronic Lyme diagnosis, to do everything necessary to create public awareness of Lyme Disease in Ontario, and to have internationally developed diagnosis and successful treatment protocols available to patients and physicians.

Your attention to this very distressing disease that is affecting the livelihood of residents in Ontario is greatly appreciated.

Sincerely,



Barbara L. Wilson, CMO,  
County Clerk,  
County of Huron.

c.c. The Hon. Deborah Matthews, Minister of Health and Long-Term  
Care  
The Hon. Carol Mitchell, MPP Huron-Bruce  
Bob Bailey, MPP Sarnia-Lambton  
Christine Heffer, [cheffer@cogeco.ca](mailto:cheffer@cogeco.ca)

To date I have presented to three municipal councils and I am on the agenda of other municipalities in southern Ontario. I am also contacting all the municipalities in the province on this issue. Lambton and Huron County have endorsed the petition. As well as endorsing the petition the County of Huron has sent a letter to Premier McGuinty asking him for action on “this very distressing disease that is affecting the livelihood of residents in Ontario”. Middlesex is bring the issue forward to the next level in their organization as well as reaching out to various advocacy groups that council members are a part of on the public`s behalf.

My hope is that all municipal governments can lend their clout to this petition. It won`t be long before everyone is affected in one way or another by this insidious disease. In the US this disease is now being called an epidemic by many health officials and its moving North. We need a strong response from our elected officials who are responsible for the public health of all the citizens of Ontario and Canada.

Thank you for taking the time to investigate this very urgent public health issue.

Christine Heffer

## LYME DISEASE INFORMATION

- Lyme disease is transmitted by the bite of a tick infected with *Borrelia burgdorferi* and results in a systemic infection similar to syphilis
- Many pathogens can be transmitted by one bite
  - ANAPLASMOSIS, BABESIOSIS, EHRLICHIOSIS, RICKETTSIA ROCKY MOUNTAIN SPOTTED FEVER (RMSF), STARI, TULAREMIA, BARTONELLA AND MANY MORE
- Lyme disease is the fastest growing infectious disease in North America with an estimated 400 000 cases per year in the US
- Lyme disease has been shown in studies to be increasing across Ontario especially in Southern Ontario
- Everyone is at risk especially children (age 2-14 highest risk group)
- Lyme disease is can be found everywhere, at parks, in yards, in gardens as ticks are transmitted by birds
- Public awareness, testing and treatment for this disease is poor
- If not caught early Lyme disease becomes chronic and incurable requiring long term treatment much like AIDS does
- A person infected with Lyme disease often becomes total disabled
- The far reaching effects of this disease on our communities include loss productivity , loss tax revenue, increased medical costs and increased burden on social services
- The Lyme bacteria has been found in semen
  - **RECOVERY OF LYME SPIROCHETES BY PCR IN SEMEN SAMPLES OF PREVIOUSLY DIAGNOSED LYME DISEASE PATIENTS**  
Dr. Gregory Bach, Do.O., P.C. 2415 North Broad Street, Colmar, PA 18915
- Lyme disease can be passed Congenitally
  - <http://www.canlyme.com/congenital.html>
- Tick borne diseases transmitted by blood
  - **Transfusion-transmitted tick-borne infections: a cornucopia of threats.** Leiby DA, Gill JE. Department of Transmissible Diseases, American Red Cross Holland Laboratory, Rockville, MD 20855, USA. *Transfus Med Rev.* 2004 Oct;18(4):293-306

# INFORMATION ON TESTING

- In Ontario we use a 2 tiered testing system for Lyme disease
- 1<sup>st</sup> tier is the ELISA test (Enzyme-linked immunosorbent assay)
- 2<sup>nd</sup> tier is the WESTERN BLOT
- A person must receive a positive on the ELISA to move on to the WESTERN BLOT
- ELISA has been shown in numerous scientific studies to be faulty (references to some studies and a complete study to follow)
- **IMPORTANT TO NOTE ABOUT THE TESTING IN THE ACUTE FORM OF LYME DISEASE**
  - It takes a person 4-6 weeks to develop antibodies to the bacteria (this is what the ELISA measures)
  - If the person receives antibiotics early in the infection the body often will not mount a strong antibody reaction due to the antibiotics killing the bacteria
  - Often the ELISA test will come back negative for said patients early in the infection yet doctors are relying on the test and tell patients that they do not have Lyme disease based on this test yet the person could very well be infected and is now not receiving treatment

## REFERENCES ON LYME DISEASE

### **Scientific Studies on the faultiness of the ELISA test used for testing for Lyme in Ontario**

1. Tilton RC, Sand MN, Manak M. The Western immunoblot for Lyme disease: determination of sensitivity, specificity, and interpretive criteria with use of commercially available performance panels. *Clin Infect Dis* 1997;25(Suppl 1):S31-4.
2. Schmitz JL, Powell CS, Folds JD. Comparison of seven commercial kits for detection of antibodies to *Borrelia burgdorferi*. *Eur J Clin Microbiol Infect Dis* 1993;12:419-24
3. Engstrom SM, Shoop E, Johnson RC. Immunoblot interpretation criteria for serodiagnosis of early Lyme disease. *J Clin Microbiol* 1995;33:419-27.
4. C. W. Ang & D. W. Notermans & M. Hommes & A. M. Simoons-Smit & T. Herremans Large differences between test strategies for the detection of anti-*Borrelia* antibodies are revealed by comparing eight ELISAs and five immunoblots *Eur J Clin Microbiol Infect Dis*  
DOI 10.1007/s10096-011-1157-6

### **Studies on the spread of Lyme disease throughout Canada and Ontario**

1. Birds Disperse Ixodid (Acari: Ixodidae) and *Borrelia burgdorferi*-Infected Ticks in Canada Authors: Scott, John D.; Fernando, Keerthi; Banerjee, Satyendra N.; Durden, Lance A.; Byrne, Sean K.; Banerjee, Maya; Mann, Robert B.; Morshed, Muhammad G. Source: Journal of Medical Entomology, Volume 38, Number 4, July 2001 , pp. 493-500(8)
2. Presence of spirochete causing Lyme disease, *Borrelia burgdorferi*, in the blacklegged tick, *Ixodes scapularis*, in southern Ontario S N Banerjee, M Banerjee, K Fernando, J D Scott, R Mann, and M G Morshed *CMAJ*. 2000 May 30; 162(11): 1567–1569.
3. The rising challenge of Lyme borreliosis in Canada, Canada Communicable Disease Report **1 January 2008 Volume 34 Number 01** NH Ogden, DPhil, (1), LR Lindsay, PhD, (2), M Morshed, PhD, (3), PN Sockett, PhD, (4), H Artsob, PhD, (2)
4. *Ixodes scapularis* ticks collected by passive surveillance in Canada: analysis of geographic distribution and infection with Lyme borreliosis agent *Borrelia burgdorferi*. Ogden NH, Trudel L, Artsob H, Barker IK, Beauchamp G, Charron DF, Drebot MA, Galloway TD, O'Handley R, Thompson RA, Lindsay LR. *J Med Entomol*. 2006 May;43(3):600-9

## Large differences between test strategies for the detection of anti-*Borrelia* antibodies are revealed by comparing eight ELISAs and five immunoblots

C. W. Ang · D. W. Notermans · M. Hommes ·  
A. M. Simoons-Smit · T. Herremans

Received: 21 July 2010 / Accepted: 1 January 2011  
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**Abstract** We investigated the influence of assay choice on the results in a two-tier testing algorithm for the detection of anti-*Borrelia* antibodies. Eighty-nine serum samples from clinically well-defined patients were tested in eight different enzyme-linked immunosorbent assay (ELISA) systems based on whole-cell antigens, whole-cell antigens supplemented with VlsE and assays using exclusively recombinant proteins. A subset of samples was tested in five immunoblots: one whole-cell blot, one whole-cell blot supplemented with VlsE and three recombinant blots. The number of IgM- and/or IgG-positive ELISA results in the group of patients suspected of *Borrelia* infection ranged from 34 to 59%. The percentage of positives in cross-reactivity controls ranged from 0 to 38%. Comparison of immunoblots yielded large differences in inter-test agreement and showed, at best, a moderate agreement between tests. Remarkably, some immunoblots gave positive results in samples that had been tested negative by all eight ELISAs. The percentage of positive blots following a positive ELISA result depended heavily on the choice of ELISA-immunoblot combination. We conclude that the assays used to detect anti-*Borrelia* antibodies have widely divergent sensitivity and specificity. The choice of ELISA-immunoblot combination severely influences the number of positive results, making the exchange of test results between laboratories with different methodologies hazardous.

### Introduction

Lyme disease is caused by *Borrelia* spp. In Europe, infection is mostly caused by *B. afzelii* and *B. garinii*, while in the United States, *B. burgdorferi sensu stricto* is the causative agent [1]. Lyme disease manifests in a myriad of clinical ways, including erythema migrans, arthritis, carditis and neuroborreliosis [1]. Extracutaneous Lyme disease requires laboratory confirmation by culture, polymerase chain reaction (PCR) or antibody determination [2, 3]. Culture is only available in a limited number of laboratories, and the value of PCR in the diagnosis of various forms of Lyme disease is of limited use [2, 3]. Therefore, serological assays are the main method used to diagnose extracutaneous forms of Lyme disease.

Current guidelines for the diagnosis of Lyme disease include a two-tier testing algorithm [2, 3]. First, an enzyme-linked immunosorbent assay (ELISA) is performed, followed by the confirmation of positive ELISA results with an immunoblot. This two-step procedure was initiated because first-generation ELISAs for the detection of anti-*Borrelia* antibodies lacked specificity. The inclusion of a second, more specific, serological method made it possible to exclude false-positive ELISA samples [2, 4].

Many diagnostic assays are currently commercially available, and manufacturers have developed them to increase their sensitivity and specificity. During the last decade, assays using a peptide from the sixth invariant region (C6) of the variable major protein-like sequence-expressed (VlsE) of *B. burgdorferi* have been shown to be promising [5, 6]. Laboratories can choose between ELISAs and immunoblots using sonicated whole-cell antigens, whole-cell antigens combined with recombinant antigens (VlsE C6 peptide) and exclusively recombinant antigens. Due to this array of serological tests, there are an almost

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Centre for Infectious Disease Control Netherlands, National  
Institute for Public Health and the Environment (RIVM),  
Bilthoven, The Netherlands

indefinite number of possible combinations between ELISA and immunoblot in a two-tier testing scheme. Comparing anti-*Borrelia* test results between laboratories and studies may be impossible if tests with widely diverging sensitivities and specificities are used [7].

The aim of the present study was to compare a wide range of ELISA assays and immunoblots, based on either whole-cell or recombinant antigens, for detecting anti-*Borrelia* antibodies. We also aimed to investigate the influence of assay choice on results in a two-tier testing algorithm (ELISA followed by immunoblot). Therefore, we tested serum samples in eight ELISA systems and five immunoblots, covering the entire spectrum of native and recombinant antigens.

## Patients and methods

### Patients

Serum samples were selected from 89 clinically well-defined individuals. Fifty-nine samples were from patients suspected of *Borrelia* infection (skin manifestations,  $n=8$ ; neurological symptoms,  $n=26$ ; arthritic symptoms,  $n=11$ ; ocular symptoms,  $n=4$ ; other,  $n=10$ ). Fourteen samples were from healthy controls and 16 came from patients with a high possibility for cross-reacting antibodies (syphilis patients,  $n=10$ ; *Mycoplasma pneumoniae*-infected patients based on symptoms consistent with *M. pneumoniae* infection and a positive result for anti-*M. pneumoniae* IgM and IgG with a Virion/Serion ELISA,  $n=6$ ).

### Methods

Serum samples were tested in eight different ELISA systems. Three assays were based on sonicated whole-cell antigens (Diachek/Moran anti-*Borrelia*, VIDAS and Virion/Serion ELISA Classic *Borrelia burgdorferi*), three assays with sonicate whole-cell antigens supplemented with VIsE for IgG anti-*Borrelia* antibodies (Dade Behring Enzygnost Lyme link VIsE, Euroimmun Anti-*Borrelia* plus VIsE ELISA and Genzyme Virotech *Borrelia afzelii*+VIsE ELISA) and two assays using recombinant proteins (Immunetics C6 Lyme ELISA Kit and Mikrogen recomWell *Borrelia*). A subset of samples from 31 patients suspected of *Borrelia* infection were also tested in five different immunoblots. This group consisted of the following patients: skin manifestations,  $n=3$ ; neurological symptoms,  $n=15$ ; arthritic symptoms,  $n=6$ ; ocular symptoms,  $n=2$ ; other,  $n=5$ . One whole-cell blot (home-made using *B. afzelii* strain A39 cell sonicate, RIVM), one whole-cell blot supplemented with VIsE (Viramed *Borrelia* "MiQ"+VIsE ViraBlot) and three recombinant blots (Euroimmun Euroline-RN-AT, Mikrogen recom

Line *Borrelia* and Genzyme Virotech *Borrelia* Europe Line). A total of 31 samples were tested in all immunoblots.

Manufacturer-suggested cut-off levels and interpretation criteria were used for the ELISAs and immunoblots. Statistical analysis was performed using SPSS version 16.0 (SPSS Inc., Chicago, IL, USA).

## Results

As expected, there was considerable discordance between the eight ELISAs. We tested 89 samples from patients and controls on all eight ELISAs. Of the complete set of serum samples, 35/89 (39%) were negative in all assays, while 16/89 (18%) were positive in all assays. The remaining 38/89 (43%) samples were positive in one to seven ELISAs.

In the 59 patients that were suspected of *Borrelia* infection, we observed a wide range of positive results, with percentages of positive ELISAs varying between 34 and 61% (Table 1). We did not observe a relation between the fraction of positive results and the nature of antigen used for the ELISA. The specificity of the ELISAs also varied widely. Although we had only small numbers of positive tests in healthy controls, some ELISAs produced up to 38% of positive tests in the cross-reactivity group (syphilis and *M. pneumoniae*-infected patients).

We aggregated results from the IgM and IgG tests and assessed them using a kappa statistic to determine agreement between the ELISAs. The kappa values ranged from 0.41 (moderate agreement) to 0.79 (substantial to good agreement), emphasising the differences between the ELISAs (Table 2). The choice of antigen does not seem to influence the level of agreement. Even the lowest kappa values were observed between two 'whole-cell+VIsE' ELISAs (0.43).

We tested a subset of 31 serum samples from patients suspected of *Borrelia* infection in all five immunoblots. Samples were from patients with positive and negative ELISA results, allowing us to investigate the specificity of the immunoblots. In general, we observed a much lower agreement for the immunoblots than for the ELISAs. Kappa values ranged from 0 (poor agreement) to 0.84 (good agreement), indicating that, for many samples, the outcome of the immunoblot is highly dependent on the choice of manufacturer (Table 3). Inter-blot agreement was disappointingly low for IgM and much higher for IgG (Table 3). Interestingly, recombinant blots did not have a higher agreement than whole-cell blots, and there was limited agreement even between recombinant blots. The highest agreement was for the home-made whole-cell blot with the Mikrogen recombinant blot. Additional analysis on the individual band level revealed similarly poor agreement, even in immunoblots containing recombinant antigens.

**Table 1** Performance of eight enzyme-linked immunosorbent assay (ELISAs) in the three patient groups

ELISA manufacturer	Antigen used for ELISA	Number of positive samples (%)			Total number of tested samples
		Patients suspected for <i>Borrelia</i> infection	Cross-reactivity controls	Healthy controls	
Diacheck/Moran	Whole-cell	20/59 (34%)	2/16 (13%)	1/14 (7%)	89
VIDAS	Whole-cell	31/59 (53%)	4/16 (25%)	1/14 (7%)	89
Virion/Serion	Whole-cell	24/59 (41%)	1/16 (6%)	0/14	89
Enzygnost	Whole-cell+VlsE	23/59 (39%)	0/16	0/14	89
Euroimmun	Whole-cell+VlsE	29/59 (49%)	3/16 (19%)	0/14	89
Virotech	Whole-cell+VlsE	35/59 (59%)	6/16 (38%)	0/14	89
Immunetics	Recombinant	22/59 (37%)	0/16	0/14	89
Mikrogen	Recombinant	24/59 (41%)	3/16 (19%)	0/14	89

When performing eight different ELISAs and five different blots, there are 40 possible ELISA–blot combinations. Thirty-one samples were tested in all 40 combinations. A score of 0 indicates a negative result in all ELISAs and all blots, while a score of 40 indicates a positive result in all ELISAs and all blots. A score between 0 and 40 indicates that not all possible combinations yielded a positive result (i.e. disagreement between various ELISA–blot combinations). Of this small sample cohort, 20/31 (65%) had either a score of 0 or 40, indicating perfect agreement, irrespective of the ELISA–blot combination used. Discordant interpretations were generated in the other 35% of samples.

The influence of assay choice is further illustrated by investigation of the relationship between each ELISA and the fraction of positive blots. Surprisingly, we found anti-*Borrelia* immunoblot reactivity in samples that were negative in all eight ELISAs. These are samples that normally would not have been tested in immunoblots. Again, this was not dependent on the nature of the antigen used for the immunoblot. For the Euroimmun immunoblot, 4/11 (36%) of the ELISA-negative samples were blot-positive. Some immunoblots also seem to lack sensitivity, since samples that were positive in six to all eight of the tested ELISAs remained negative in all immunoblots. Some

of these samples were from Lyme disease patients with a short duration of symptoms, confirming that ELISAs may have a higher sensitivity than immunoblots during the early phase of a *Borrelia* infection.

For some ELISA–blot combinations, only about half of the ELISA-positive samples could be confirmed by immunoblot (e.g. VIDAS ELISA–Virotech immunoblot, Table 4). The quality of the other ELISAs was so high that the majority of ELISA-positive samples were confirmed with immunoblots (e.g. Diacheck/Moran and Enzygnost ELISAs). When taking into account the lack of specificity of a number of the immunoblots, it is clear that the combination of a non-specific ELISA with a non-specific blot will lead to a high fraction of presumably false-positive test results.

The ELISA test value is the final factor influencing the fraction of positive confirmatory blots. Figure 1 depicts an example—values for the VIDAS and Immunetics C6 Lyme ELISA according to the immunoblot results of a whole-cell blot (home-made) and a recombinant blot (Mikrogen). For the VIDAS–home-made blot combination, it is difficult to indicate a cut-off value for the VIDAS ELISA with a good separation between blot-positives and blot-negatives. When using the Immunetics ELISA as a screening tool, it becomes clear that, irrespective of the blot method used,

**Table 2** Agreement between ELISAs for detecting IgM and/or IgG anti-*Borrelia* antibodies (kappa values)

ELISA manufacturer	Antigen used for ELISA	Diacheck/Moran	VIDAS	Virion/Serion	Enzygnost	Euroimmun	Virotech	Immunetics
Diacheck/Moran	Whole-cell	-	-	-	-	-	-	-
VIDAS	Whole-cell	0.53	-	-	-	-	-	-
Virion/Serion	Whole-cell	0.67	0.69	-	-	-	-	-
Enzygnost	Whole-cell+VlsE	0.71	0.62	0.78	-	-	-	-
Euroimmun	Whole-cell+VlsE	0.71	0.45	0.56	0.56	-	-	-
Virotech	Whole-cell+VlsE	0.44	0.65	0.57	0.43	0.47	-	-
Immunetics	Recombinant	0.74	0.60	0.64	0.86	0.53	0.41	-
Mikrogen	Recombinant	0.79	0.53	0.63	0.68	0.67	0.44	0.65

**Table 3** Agreement between immunoblots for detecting anti-*Borrelia* antibodies (kappa values)

Blot	Blot type	Home-made	Virablott	Euroimmun	Mikrogen	Virotech
IgM and IgG combined						
Home-made	Whole-cell	-	-	-	-	-
Virablott	Whole-cell+VlsE	0.55	-	-	-	-
Euroimmun	Recombinant	0.45	0.24	-	-	-
Mikrogen	Recombinant	0.74	0.42	0.29	-	-
Virotech	Recombinant	0.66	0.60	0.25	0.55	-
IgM						
Home-made	Whole-cell	-	-	-	-	-
Virablott	Whole-cell+VlsE	-1.57	-	-	-	-
Euroimmun	Recombinant	0.04	0.20	-	-	-
Mikrogen	Recombinant	0.42	0	0.26	-	-
Virotech	Recombinant	0.20	0.46	0.39	0.34	-
IgG						
Home-made	Whole-cell	-	-	-	-	-
Virablott	Whole-cell+VlsE	0.43	-	-	-	-
Euroimmun	Recombinant	0.43	0.24	-	-	-
Mikrogen	Recombinant	0.84	0.27	0.43	-	-
Virotech	Recombinant	0.71	0.63	0.30	0.56	-

samples with an index >4 are almost always blot-positive. These characteristics make it possible to define groups of ELISA-positive serum samples that do not need immunoblot confirmation.

## Discussion

We studied the influence of the choice of detection method on the results of *Borrelia* serology. We found that *Borrelia* ELISAs and immunoblots for detecting anti-*Borrelia* antibodies have widely divergent sensitivity and specificity, and that immunoblots generally show limited agreement. Analysis of a large number of ELISA-immunoblot combinations revealed large differences between various test

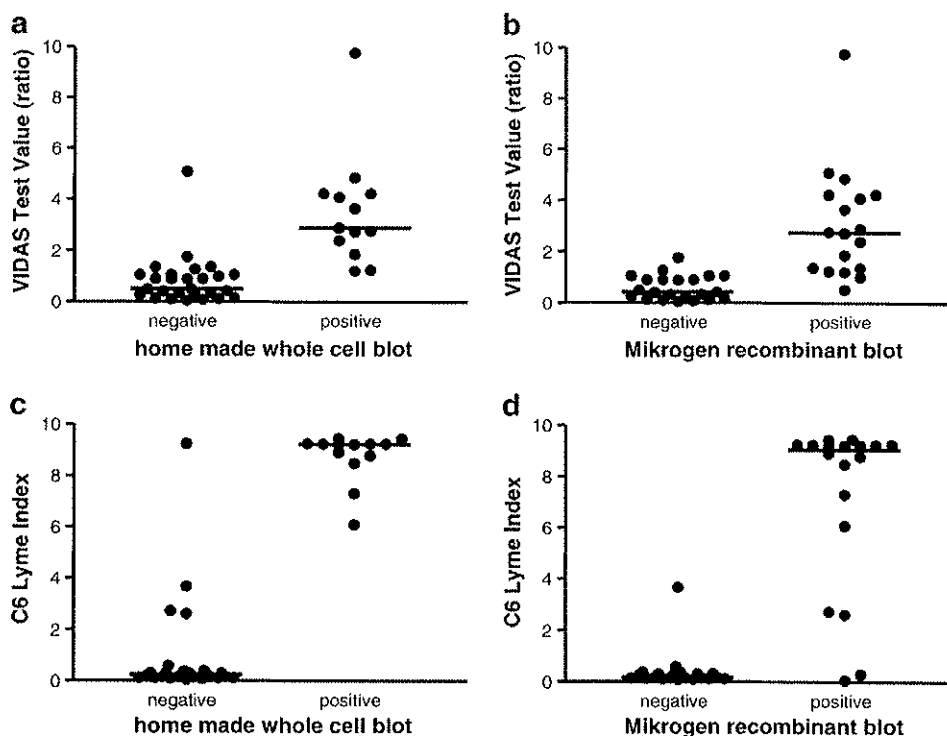
strategies in a two-tier testing algorithm. Although we only studied a limited number of serum samples, our extensive approach allowed us to draw several conclusion based on our observations.

Theoretically, the use of recombinant antigens should lead to increased specificity and, possibly, increased sensitivity as well. This does not seem to be true for the currently available ELISAs and immunoblots for the detection of anti-*Borrelia* antibodies. We could not find a clear relationship between the fraction of positive tests, the specificity and the nature of the antigen used for the serological tests. ELISAs using sonicated whole-cell antigens can be sensitive and specific, while recombinant ELISAs may lack specificity. Therefore, manufacturer claims for the superior performance of assays using

**Table 4** Fractions of blot-confirmed samples for 40 ELISA-immunoblot combinations

ELISA manufacturer	Antigen used for ELISA	Number of positive samples in ELISA/total number of samples	Blot				
			Whole-cell	Whole-cell+VlsE	Recombinant		
			Home-made	Virablott	Euroimmun	Mikrogen	Virotech
Diacheck/Moran	Whole-cell	12/31	11/12 (92%)	9/12 (75%)	11/12 (92%)	12/12 (100%)	9/12 (75%)
VIDAS	Whole-cell	19/31	11/19 (58%)	12/19 (63%)	13/19 (68%)	14/19 (74%)	10/19 (53%)
Virion/Serion	Whole-cell	15/31	11/15 (73%)	11/15 (73%)	13/15 (87%)	12/15 (80%)	9/15 (60%)
Enzygnost	Whole-cell+VlsE	12/31	11/12 (92%)	10/12 (83%)	10/12 (83%)	12/12 (100%)	10/12 (83%)
Euroimmun	Whole-cell+VlsE	14/31	11/14 (79%)	11/14 (79%)	12/14 (86%)	12/14 (86%)	9/14 (64%)
Virotech	Whole-cell+VlsE	17/31	11/17 (65%)	11/17 (65%)	13/17 (77%)	13/17 (77%)	9/17 (53%)
Immunetics	Recombinant	13/31	11/13 (85%)	10/13 (77%)	10/13 (77%)	13/13 (100%)	10/13 (77%)
Mikrogen	Recombinant	13/31	11/13 (85%)	9/13 (69%)	11/13 (85%)	12/13 (92%)	9/13 (69%)

**Fig. 1** Enzyme-linked immunosorbent assay (ELISA) test values in relation to immunoblot results for the detection of anti-*Borrelia* antibodies



recombinant antigens for the detection of *Borrelia* antibodies must be interpreted with caution.

A two-tier testing algorithm for the detection of anti-*Borrelia* antibodies is recommended world-wide [2, 3, 6]. However, there are several reasons to reappraise the additional value of an immunoblot confirmatory test in a two-tier testing scheme.

First, the lack of specificity of some immunoblots is counter-intuitive. The immunoblot is used as a confirmatory test, although it can be argued that it is merely a supplemental test due to the inter-dependence of ELISAs and immunoblots [8]. Theoretically, the use of recombinant antigens should allow discrimination between a specific antibody reactivity, cross-reactive antibodies and true anti-*Borrelia* antibodies [4]. The presence of commercially available immunoblots with low specificity diminishes the value of the immunoblot as a confirmatory test [8]. Furthermore, the two-tier testing scheme was originally proposed to overcome the lack of specificity of *Borrelia* ELISAs. This study has shown that not all of the newer generation ELISAs using recombinant *Borrelia* antigens have improved specificity compared to older serological assays [9, 10].

Second, the low level of agreement between the different immunoblots is very disappointing, especially for IgM. This low level of agreement, even at the individual band level, makes it hard to compare immunoblot results from different manufacturers.

Third, a mismatch between immunoblot and ELISA may occur during the early phase of infection. There are numerous

examples—from this and other studies—in which patients with early Lyme disease were initially ELISA-positive and blot-negative [11]. In such cases, immunoblot seroconversion can only be documented in a follow-up sample, and, sometimes, even this option is blocked because antibiotic treatment may interfere with the development of the anti-*Borrelia* antibody response [12]. This is an example of better sensitivity in the ELISAs compared to the immunoblots. Without detailed knowledge of the clinical manifestations and illness duration, reporting these cases as ‘negative’ could lead to erroneous conclusions.

Finally, several groups can be discriminated based on the ELISA value [10]: a ‘high positive’ group exhibiting clinical symptoms consistent with a diagnosis of Lyme disease and which can be reported as ‘positive’ without confirmatory testing, a ‘low positive’ group in which confirmatory testing may be helpful and, lastly, a negative group that does not require any further investigation. We do not advocate abandoning the use of immunoblots to confirm anti-*Borrelia* antibodies, but we do think that only a selection of samples needs confirmatory blotting. Furthermore, knowledge about the lower sensitivity of immunoblots compared to some of the ELISAs is indispensable in interpreting results.

In conclusion, ELISAs and immunoblots for detecting anti-*Borrelia* antibodies have widely divergent sensitivity and specificity, and immunoblots for detecting anti-*Borrelia* antibodies have only limited agreement. Therefore, the choice of ELISA-immunoblot combination severely influ-

ences the number of positive results, making the exchange of test results between laboratories with different methodologies hazardous. The widespread availability of more specific and sensitive assays for the detection of anti-*Borrelia* antibodies will open the way for a reappraisal of the two-tier testing system.

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## EDUCATION FOR PHYSICIANS

- Very little is taught about Lyme disease and tick borne diseases in medical school
- Often a person with Lyme disease is marginalized and ostracised by the medical community due to the lack of knowledge about this disease
- We need to focus on education especially for the GP's and the ER physicians who will see the Acute Lyme patient when this disease is curable
- We need doctors to treat right away and not be waiting for test results since the window to treat Acute Lyme is very narrow
- Presently the College of Physicians and Surgeons of Ontario cannot provide a Lyme Literate Physician anywhere in this province who is trained in how to treat late stage Lyme disease
- Due to the lack of available Lyme Specialists, residents of Ontario are forced to seek medical treatments in the US at their own expense often resulting in bankruptcy.

# Lyme disease is on the increase

## Message from the Chief Medical Officer of Health

Ontario is seeing an increase in human cases of Lyme disease and an increase in numbers and range of black-legged ticks, especially in southern Ontario.

Reporting of all cases is critical.

Lyme disease is a preventable disease caused by a *Borrelia burgdorferi* bacterial infection and transmitted through the bite of an infected tick.

In Ontario, the black-legged tick (or deer tick) *Ixodes scapularis* is the sole vector of *B. burgdorferi*. People who spend time outdoors may encounter other tick species, but only the black-legged tick can transmit the Lyme disease bacteria. These ticks are small (3-5 mm) and people often do not realize they have a black-legged tick on them.

### Risk Areas

The greatest risk of acquiring Lyme disease is found in areas where black-legged ticks carrying the bacteria are endemic (well-established).

The endemic areas in Ontario include:

- Long Point Provincial Park (northwest shore of Lake Erie near Port Rowan)
- Point Pelee National Park (near Leamington)
- Prince Edward Point National Wildlife Area (located at the southeastern tip of Prince Edward County)
- St. Lawrence Islands National Park (near Brockville)
- Rondeau Provincial Park (southeast of Chatham)
- Turkey Point Provincial Park (near Port Rowan)
- Wainfleet Bog Conservation Area (in Port Colborne)

The black-legged tick also feeds on birds and can be transported to almost anywhere in the province; therefore, Lyme disease can be acquired almost anywhere in the province.

When a person is showing signs and symptoms of Lyme disease, health care professionals should consider this diagnosis even if the person is not from, or has not visited, an endemic area.

Persons can come into contact with ticks from early spring to the end of fall. The ticks can also be active in the winter in areas with no snow and mild temperatures (>4°C).

### Highlights:

- Since 2005, there has been an increasing trend in the number of Lyme disease cases acquired in Ontario.

### REPORT:

- Lyme disease is a reportable disease as per O. Reg. 559. Clinically diagnosed Lyme disease, even in the absence of laboratory confirmation, should be **reported** to your local public health unit.

### TEST:

- While the probability is low, it is possible to acquire Lyme disease almost anywhere in Ontario. If you suspect Lyme disease, have the patient **tested**.

### TREAT:

- Early **treatment** with appropriate antibiotics is important.

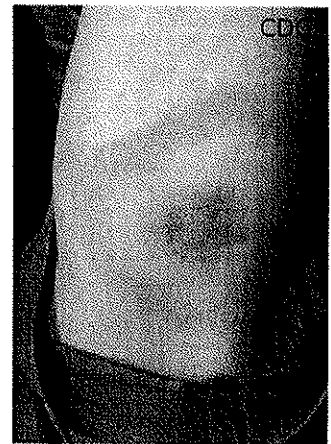
## Information for Clinicians

### Clinical Presentation

The incubation period for *B. burgdorferi* is usually one to four weeks after a bite from an infected tick. Early infection is characterized in 70 to 80 per cent of cases by erythema migrans, a skin lesion commonly known as a "bull's eye rash" (see picture, right).

Other early symptoms include fever, headache, muscle and joint pains, fatigue and stiff neck. Clinical diagnosis can sometimes be difficult as the symptoms can mimic many other diseases.

If left untreated, Lyme disease can progress to an early-disseminated disease with migraines, weakness, multiple skin rashes, painful or stiff joints, cardiac abnormalities and extreme fatigue. If the disease continues, arthritis, along with neurological symptoms such as headaches, dizziness, numbness and paralysis can occur.



(see over)

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Lyme   
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 Ontario

# Lyme Disease is on the increase

## Treatment

If treated early with appropriate antibiotics, patients can expect to make a full recovery<sup>1</sup>. People should seek medical attention if symptoms develop within 30 days of suspected tick exposure. If the patient still has the tick, or a health care professional removes it, submit the tick to the local public health unit where it will be sent for identification and Lyme bacteria testing (black-legged ticks only species tested). If the initial infection is not treated, then infection can become difficult to treat and patients may experience joint, heart and neurological symptoms.

## Testing

Laboratory testing is used to support the diagnosis of Lyme disease and should be used in conjunction with clinical signs and symptoms<sup>2</sup>. It is up to the attending physician to make the diagnosis and determine treatment. Patients tested during early infection may not have developed antibodies (negative serology) to the bacteria, making detection difficult; therefore, testing patients again in four weeks is recommended. Health Canada-approved blood tests are performed at the Ontario Public Health Laboratory and follow the recommendations of the Canadian Public Health Laboratory Network.

Testing patients for Lyme disease can be requested by writing "Lyme Serology" on the requisition form and providing clinical background.

The Centers for Disease Control and Prevention in the United States and the Public Health Agency of Canada caution health care professionals and the public regarding the use of private laboratories offering Lyme disease testing in the USA. These "for-profit" laboratories may not follow the same testing protocols as most provincial, state and federal laboratories in Canada and the USA.

## Removing a Tick

- Using fine-tipped tweezers, carefully grasp the tick as close to the skin as possible. Pull it straight out, gently but firmly.
- Do not squeeze the tick. Squeezing can accidentally introduce Lyme bacteria into the body.
- Do not put anything on the tick, or try to burn the tick off.
- After tick removal, place it in a screw-top bottle (pill vial or film canister) and submit it to your local health unit for identification and testing. Establishing the type of tick will help assess the risk of acquiring Lyme disease.
- It is important to remember where the person most likely acquired the tick. It will help public health workers to identify areas of higher risk.
- Thoroughly cleanse the bite site with rubbing alcohol and/or soap and water.

If the tick is removed soon after its attachment, it will help to prevent infection as not all black-legged ticks are infected. An infected black-legged tick has to be feeding for at least 24 hours before it can transmit the bacteria to the human host.

## For Further Information:

1. Canadian Family Physician: Lyme Disease, a zoonotic disease of increasing importance to Canadians. <http://www.cfp.ca/cgi/reprint/54/10/1381.pdf>
2. The laboratory diagnosis of Lyme borreliosis: Guidelines from the Canadian Public Health Laboratory Network. <http://www.pulsus.com/journals/abstract.jsp?HCtype=Physician&sCurrPg=abstract&jnlKy=3&atlKy=7231&isuKy=711&isArt=t&romfold=&>
3. Erythema Migrans Lesions of Lyme Disease Photos. [http://www.cdc.gov/ncidod/dvbid/lyme/ld\\_lymediseaseRashPhotos.htm](http://www.cdc.gov/ncidod/dvbid/lyme/ld_lymediseaseRashPhotos.htm)
4. Ontario Lyme Disease Fact Sheet <http://www.health.gov.on.ca/en/public/publications/disease/lyme.aspx>
5. Health Canada, It's Your Health: Lyme Disease [http://www.hc-sc.gc.ca/hl-vs/alt\\_formats/pacrb-dgapcr/pdf/iyh-vsv/diseases-maladies/lyme-eng.pdf](http://www.hc-sc.gc.ca/hl-vs/alt_formats/pacrb-dgapcr/pdf/iyh-vsv/diseases-maladies/lyme-eng.pdf)
6. Public Health Agency of Canada: Ticks and Lyme Disease. <http://www.phac-aspc.gc.ca/id-mi/tickinfo-eng.php>

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