

Manitoba Forestry Association

Manitoba Envirothon

2012-2013 Summary of Activities

The Manitoba Envirothon is a program of THINK TREES – Manitoba Forestry Association (MFA). In 1996, MFA explored the idea of Envirothon. Four teams participated in the first Manitoba Envirothon in 1997 at Birds Hill Provincial Park. In 2006, the MFA hosted the North American Canon Envirothon and made Envirothon one of its core programs.

Due to the popularity of the Manitoba Envirothon evolved into a regional and provincial format in 2010. In 2011 Manitoba won the Canon Envirothon—the first and only Canadian team ever to do so.

Today, the Manitoba Envirothon is still going strong with over 2000 students participating to date.

OVERVIEW

For the past 17 years the Manitoba Forestry Association (MFA), along with its partners and funders, has been the proud host organization of the Manitoba Envirothon. This program has provided Manitoba's high school students a unique and fun way to learn about the environment and current issues. In 2013, 40 teams competed at the Regional level, with 19 teams advancing to the Provincial level. The topic theme for 2013, Sustainable Rangeland Management, allowed the students to explore the roles and responsibilities needed to successfully manage these fragile, yet heavily used areas of the province and North America.

In 2013 there were four Regional Envirothon competitions that were held throughout the province on either April 16 or 17, 2013. The MFA partnered with the following Regional Host organizations: Duck Mountain Forest Centre, Manitoba Model Forest, The Pembina Valley Conservation District and Oak Hammock Marsh Interpretive Centre. Continuing the structure fully implemented in 2012, all teams were required to qualify at the Regional level in order to advance to the Provincial Envirothon.

The Provincial Envirothon took place at the International Peace Garden (straddling the Canada\USA border south of Boissevain, Manitoba) from May 23-25, 2013. The teams were housed and fed at this fine facility, delicious meals were again provided by members of the Fairholme Colony. The field test took place on the hills, fields and forest area surrounding the International Game Wardens Museum on the IPCG grounds; it consisted of 15 stops with two teams per stop. Following the field test the students attended presentations on Sustainable Farming practices by Clayton Robins of 4H and by Pascal Badiou, of Ducks Unlimited. The orals competition was held in the Music Camp cabins and The Burdick Centre for the Performing Arts and Orals prep was in the chilly Masonic Hall! Teams delivered 10 minute presentations on the orals scenario presented to them that morning – on managing a “local” Community Pasture. Once the scores from the field test and the oral competition were tallied the winning team was the Swan Valley Watershed Conservation District from Swan River, Manitoba. The team then advanced to compete at the North American Canon Envirothon.

The Manitoba team was awarded a Travel Scholarship for advancing to the Canon Envirothon in the name of Michael Pineau, a former Ontario Envirothon participant.

The 2014 Envirothon theme is Sustainable Agriculture\Local Foods. The Steering Committee is considering returning to Brandon University as the surrounding location would lend itself nicely to this topic.

There will also be the ongoing reviews of the program - incorporating feedback we get from the event participants and partners, to ensure that the MFA is providing the best Envirothon program for participants to experience hands-on learning opportunities and possibly begin careers as resource managers or scientists or empowered citizens and future leaders!

2013 Theme: Sustainable Rangeland Management

MANITOBA ENVIROTHON

Rangelands and Pasturelands

Theme Document 2013

Lindsey Andronak, Barbara Fuller and Mae Elsinger



"Made in Manitoba" Theme Document

Fall Kick-off event

On October 30th students and advisors gathered for the first ever Fall Envirothon Kickoff at Kelburn Farms. The kickoff provided everyone a chance to start off the year with a fun event and to get excited about the Manitoba Envirothon. Students were able to meet experts in the topic fields of Aquatic Ecology, Forestry, Soils and Land Use, and Wildlife.

There were lots of opportunities for students to get hands-on experience with the equipment used for environmental monitoring. Activities ranged from fish identification, tree measurement and soil texturing. Throughout the day groups rotated through four stations (one for each topic area) and were able to walk away with a lot of information and an idea of what area they are interested in specializing in for the regional competitions.

Due to its conflict with WE day 2012 attendance was not what we were hoping for but those who did participate thought it was a great event, and plans are underway for a repeat event somewhere in the fall of 2013!

Thank you to Kelburn Farm, its staff and all of the volunteers and trainers for making the event a success!

STAM\SAGE training sessions

Getting the Dirt on Soils

In October at the MSSTA and STAM SAGE the MFA hosted a focused session for teachers who are interested in learning more about Soils and Land Use, and how to communicate this knowledge to students. Teachers and advisors had a chance to get their hands dirty with this hands-on session as it concentrated on soil science as it pertains to the Manitoba Envirothon program.

Thank you to our presenters, David Hay and Lindsey Andronak, the University of Manitoba, Department of Soils Sciences for use of their labs and materials and the participants for making the session a success.

Session Outline:

1. Soil Texture

- a. Hand texturing
- b. Using the textural triangle
- c. Implications to internal drainage

2. Examining a Soil Pit

- a. Soil horizons
- b. Soil structure
- c. Presence of carbonates
- d. Soil Colour
- e. Presence of mottles
- f. Occurrence of a soil within a landscape

Con't.

3. **Using Soil Survey Reconnaissance versus detailed soil survey reports**
 - a. Dominion Land Survey System
 - b. Finding a location on a map
 - c. Interpretation/finding information in a soil survey report
4. **Soil Orders found within Manitoba and characteristics of these soil orders**

REGIONAL ENVIROTHON'S

In 2013 the Manitoba Forestry Association and the Manitoba Envirothon Steering Committee fully implemented the full regional format for the program, where teams were required to qualify at the regional level in order to advance to the provincial level. In order to be eligible to advance to the Provincial Competition teams were required to register and participate at a Regional Competition. The advancing structure was set up as follows:

Regional to Provincial Advancement Policy

Regional Scoring

Teams competing in Regional Envirothon events will be scored on three components:

- Field Test Core questions supplied by the Manitoba Envirothon Steering Committee (50%)
- Regional Questions provided by the Regional Organization (10%)
- Oral presentation (40%)

The percentages indicated above represent the weighting given in determining a team's final score.

Advancing to the Provincial Event

The teams with the two highest scores, (based on the combined field test, regional questions and orals in the proportions described under Regional Scoring), will advance to the Provincial Envirothon. This ensures representation from every region.

The remaining entry positions for the current year's Provincial Envirothon will be determined using a team's score on the Field Test Core Questions only. Teams, other than the two winners from each Region, will be ranked using their Field Test Core Question score and offered the entry positions available for the current year's Provincial Envirothon.

Sample scenario: 5 regions, a 24 team maximum Provincial Event

- 10 Regional winners will have automatic entries to the Provincial event
- 14 teams from across the province will be offered entry based on all the Field Test Core Question scores (regardless of Region) in descending order from highest to lowest.

Provincial Envirothon Attendance

The top two teams from each Region will then automatically advance to the Provincial competition based on their combined score as described in Regional Scoring. Should any of these teams decline their entry position in the Provincial Envirothon that entry will then go to the team in their region with the next highest combined score.

Manitoba Envirothon REGIONALS



EVENT DETAILS:

NORTH REGION:

Location—Swan River, Manitoba
Host—Duck Mountain Forest Centre
Date—April 16, 2013

EAST REGION:

Location—Pine Falls, Manitoba
Host—Manitoba Model Forest
Date—April 17, 2013

SOUTH-WEST REGION:

Location—Clearwater, Manitoba
Host—Pembina Valley Conservation District
Date—April 17, 2013

WINNIPEG REGION:

Location—Oak Hammock Marsh
Host—Oak Hammock Marsh Interpretive Centre
Date—April 16, 2013

TEAM REGISTRATION: \$50

OUTDOOR ENVIRONMENTAL EDUCATION OPPORTUNITY

Looking for a fun way to get outside?

Manitoba Envirothon provides students and teachers a fun, inexpensive, outdoor education experience. At the one day event students will meet experts in the field of environmental management, and gain hands-on experience with the equipment used for environmental monitoring.

This approach to environmental education helps students develop skills necessary to address environmental issues, such as team work, problem-solving, critical thinking, and public debate.

What teachers are saying about Envirothon:

"Envirothon is the BEST program we participate in for student engagement, citizenship, social justice, environmental awareness, sustainability education!"

"All round value for developing organizational skills, presentation skills, confidence, demonstration and integration of knowledge gained"

GET INVOLVED!

EMAIL: ENVIROCOORDINATOR@THINKTREES.ORG

900 Coryd on Avenue, Winnipeg, Manitoba R3M 0Y4 Tel 204.463.3182 Fax 204.477.5765 WWW.THINKTREES.ORG



Four regional events were held throughout the province on April 16 and 17, 2013, with local host organization partnerships coordinating these unique events. Regional partners for the 2013 competitions include:

Regional Hosts

- **North Region:** Northern Coordinator UCN (not held)
- **North-West Region:** Duck Mountain Forest Centre
- **East Region:** Manitoba Model Forest
- **South Region:** Pembina Valley Conservation District
- **Winnipeg Region:** Oak Hammock Marsh Interpretive Centre

STUDENT PARTICIPANTS “ROPING” AT THE SOUTH REGIONAL EVENT HELD AT CLEARWATER



The Test Writing Committee prepared a standard test that was made up of core questions that are consistent throughout the regions. Regional hosts are also able to add local questions if they choose, subject to approval from the Test Writing Committee. For the first time, the Orals component was built into all Regional field tests as a two-stop cluster and then marked by judges. The students were given the Orals question two weeks before the Regional events and expected to develop a poster and presentation and then answer questions to support their analysis. Throughout the day host organizations had the ability to showcase their own programs and facilities.

There were 40 teams that registered for the regional events from 18 different schools. Last minute cancellations and snowy weather posed a challenge for the Regional hosts but they adapted and put on wonderful events. One of the advantages to the regional program is that the host organizations are able to educate the students on the local environment and resource management issues in a local setting.



CHILIN' AT AN OAK HAMMOCK MARSH WILDLIFE STOP

Participating Schools 2013

There were 47 teams that originally registered for the regional events, however due to a variety of issues, only 40 were actually able to compete.

SOUTH-WEST REGION (18):

- Carman Collegiate - 3 teams
- Miami School – 1 team
- Nellie McClung School - 4 teams
- Baldur School – 4 teams
- Crocus Plains Reg. Secondary School – 3 teams
- Glenboro School – 3 teams



TEAM TRAINING AT THE SOUTH-WEST REGIONAL COMPETITION

EAST REGION (7):

- Lord Selkirk Regional Secondary Comprehensive School – 3 teams
- Wanipigow School – 2 teams
- Lac du Bonnet Secondary School
- Pinawa Secondary School

WINNIPEG REGION (12):

- St. James Collegiate Institute
- Vincent Massey Collegiate – 2 teams
- St. Boniface Diocesan High School - 2 teams
- Westwood Collegiate
- Shaftesbury High School
- Gimli High School – 3 teams
- Daniel McIntyre Collegiate – 2 teams

NORTH-WEST REGION (3):

- Swan Valley Regional Secondary School - 3 teams

PLEASE SEE APPENDIX B FOR A REGIONAL EVENT SUMMARY



BIRD ID TESTING AT OAK HAMMOCK MARSH

PROVINCIAL ENVIROTHON

The Provincial Competition was hosted at the International Peace Garden (IPG), Manitoba from May 24-26, 2013 at the International Music Camp and facilities.

Throughout the planning of the event the Manitoba Envirothon had tremendous support from Doug Hevenor, Kathy McGhan and IPG staff, and Manitoba Conservation and Water Stewardship; James Lockie and staff.



FIELD TEST ORIENTATION AT INTERNATIONAL GAME WARDENS MUSEUM

The field test took place in the fields, forests and ponds near the North American Game Warden Museum at the IPG. Having open rangeland set within aspects of the Boreal Forest and crossing through large areas of Manitoba pasture and rangelands to get to the IPG allowed the participants viewing \learning opportunities to help in their later Oral preparation studies. 2013 marked the third year that a single trail was used for field test, advantages included being able to offer topic training opportunities in the morning, and a shorter marking session for the Test Writing Committee, without losing the outdoor or marathon-type nature of the event! This again required two teams to be at a stop together but as always friendship, a common purpose and mutual respect allowed all to compete fairly!

Participating Schools

Nineteen teams from 12 schools participated at the provincial competition:

- Carman Collegiate
- Gimli High School – 2 teams
- Daniel McIntyre Collegiate
- Lord Selkirk High School – 2 teams
- Nellie McClung Collegiate – 3 teams
- Pinawa Secondary School
- Shaftesbury High School
- St. Boniface Diocesan High School
- St. James Collegiate Institute
- Swan Valley Regional Secondary School – 3 teams
- Vincent Massey Collegiate – 2 teams
- Westwood Collegiate



THE PETERSON DINING HALL, ALWAYS A CENTRE OF ACTIVITY AT A MANITOBA ENVIROTHON @ IPG!

Accommodation\Food

Students, volunteers, MFA staff and the Steering Committee were again housed at the International Peace Garden facility which straddles the Canada\United States of America boundary south of Boissevain, Manitoba. This again allowed the competition to be held on one site, with everything within walking distance, versus having people and equipment transported between various locations. Teams were able to walk to the field test located near the International Game Warden’s Museum on the IPC grounds and The Masonic Hall for Orals Prep. By popular demand, all our delicious meals were catered by the members of the Fairholme Hutterite Colony (located southwest of Portage la Prairie).

Appendix C contains the programs Financial Summary

Evening Activities

Thursday

Once teams had arrived on Thursday evening they gathered in the Burdick Centre for the Performing Arts for lively introductions to the event. Co-chair of the Steering Committee, and Manitoba Forestry Association Director of Education, Glenn Peterson served as Emcee for the evening. Each team was given the opportunity to get up in front of the group to use their imagination and creative spirit to introduce themselves. Teams performed skits, songs and everything in-between, to tell the group a little bit about who they are, and where they are from! These introductions also serve to remind everyone of the other talents these students possess. Lots of humour was incorporated into many skits and Westwood Collegiate won the annual EnviroJoke Contest with:

“What do you tell a rain forest that is about to be cut down? Run Forest Run!”

Friday

After the Friday evening dinner students and advisors walked over to the Burdick Centre for the Performing Arts to hear a session on Orals training followed by presentations on Sustainable Farming practises by Clayton Robins of 4H and by Pascal Badiou of Ducks Unlimited.

Field Test

The field test took place in the fields, forests and ponds near the North American Game Warden Museum at the IPG. Having open rangeland set within aspects of the Boreal Forest and crossing through large areas of Manitoba pasture and rangelands to get to the IPG gave the students much to observe s they travelled to the event.

Again the field test configuration was a single trail of 15 stops.



TREE SPECIES ID AND DENDROCHRONOLOGY (TREE AGE) STOP

Please refer to [Appendix A](#) to view a map of the 2013 Field Test. As in the past there were two teams per stop, where they were required to share the equipment. At the end of the test teams were allowed an additional 12 minutes to finish up any questions from the field test. It was a cool, gloomy and breezy day but despite grey skies for the rest of the afternoon teams managed to stay dry and judging by the smiles and laughter, a good time was had under trying conditions!

Mystery Teams

Once again the opportunity was offered to advisors to form a “Mystery Team” and then to participate in the field test as if they were a team of their students. This allows the teachers to experience first-hand what their students are dealing with; the pressures, time crunches and fatigue that the students face. These advisors had an excellent time, all were seemingly enthusiastic throughout the three hours and remarked that they were surprised by how much they actually knew! Team members from the winning provincial and Canon Envirothon team from 2011 from Swan River returned this year to again mentor new teams from their school, and were given the opportunity to participate on one of the Mystery Teams . The other advisors were given the important duty of being a “team buddy” and guiding a team of students from a school other than their own, around the field test. In this way they actually observe the field test, interact with the volunteers and the share the competition. Post-test team\ advisors debriefings help them plan future teams.

In addition the members of Fairholme Colony who were assisting in the catering of the event (and who had also participated as students or advisors in previous competitions) were also given time off to form and compete as a mystery team!



MYSTERY TEAM

Great job folks!

Orals Competition

On Saturday morning teams were presented the Orals Scenario, at which point they were sequestered into individual rooms for 2 ½ hours to prepare a ten minute presentation/response. This year there were 5 panels of judges of 5 judges each, each panel seeing 3-4 teams. Once the scores of the preliminary orals and field test scores were combined and tallied three teams were announced as the top-ranking: Swan Valley Watershed Conservation District, Shaftesbury High School and Swan Valley Regional Secondary School. These teams then re-presented in front of a large audience including all the other teams and advisors and a new panel of 5 judges. At this point scores were re-calculated, taking into account these final oral scores, and their final placing were announced.

The Regional and Provincial Orals Questions are included in Appendix D

Final Standings

First Place: The team from Swan Valley Regional Secondary School, sponsored by the Swan Lake Watershed Conservation District won the 2013 Manitoba Envirothon. They received the highest score in Forestry, Wildlife, Aquatic Ecology, and Theme (Sustainable Rangeland Management) and the highest score in the final orals competition. Congratulations! They included team members; Victoria Bertram, Chloe Legace, Victoria Verhoek, Megan Moore, and Jayden Wlasichuk and were assisted in their efforts by advisors Shawn Stankewich and Rick Wowchuk. The Swan Valley Conservation District team won the right to represent Manitoba at this year's North American Envirothon, North America's largest high school environmental education competition in Bozeman, Montana.



Second Place: Second place went to the team Shaftesbury High School in Winnipeg, Manitoba sponsored by the Sexton Group. Congratulations on a strong showing in all topics and the school's first top 3 finish! Kim Stovel and Christine Johnston coached this team that included team members; Anna Liu, Erica Northrup, Kayan Xu, Rachael Madlow, and Tina Kim.



Third Place: Swan Valley Regional Secondary School is home to the third place team made up of; Taylor Corbett, Ryan Cable, Megan Paquin, Braden Barker, Cole Cameron and advisors Eddie Shao and Matt Forbes (both Envirothon alumni), placed third overall and they had the best Preliminary Oral.



Top mark in **Soils and Land Use** went to Vincent Massey Team 1.

Thank You to Our Volunteers!

Without our volunteers we would not be able to operate this program! There are many individuals who are dedicated to the Manitoba Envirothon, some saying that, *“attending the events is the highlights of my year!”* Each regional organization was able to draw on a large number of volunteers from local organizations and surrounding community, and we thank them too!



In total over 100 individuals volunteered at the four regional competitions, and over 50 at the provincial competition!

Regional Volunteers

Each regional organization was able to draw on a large number of volunteers from local organizations and surrounding community. In addition, many long-time volunteers with the Manitoba Envirothon Provincial Competition also volunteered at the Regional events. The following individuals and volunteered their time and resources to help plan and deliver the regional events:

Aaron Goethe	Gil Godard	Neil Zalluski
Abby Simms	Dordon Hornbeck	Nick Pharoh
Al Thorleifson	Heather Perchaluk	Nova Cassan
Al Tymko	Irene Kraayeveld	Patricia Malcom
Andrea Kraayeveld	Jack Heard	Paul LeBlanc
Andrea McLean	Jeanette Coote	Paula Grief
Andy Maxwell	Jim Potton	Peter Miller
April North	Jodie Goerzen	Randy Dow
Audrey Boitson	John Heard	Rita Bazin
Avery Ascher	Jonathan Wiens	Robert Nichol
Baret Miller	Judy Mayer	Scott Hainsworth
Bill Kraayeveld	Justin Reid	Shawn Williams
Bob Austman	Kate Dykman	Sheri Mangin
Brenda Mutcher	Kathi Furness	Skye Thorleifson
Brenda Robinson	Kathrin McNaughton	Stephen Howatt
Brent Fuchs	Kathy Penner	Steven Hills
Brain Kotak	Kelly Lewis	Susan Kasian
Brigitte Demarchuk	Kerry He	Susan Pharoh
Cheryl Orr-Hood	Kim Robertson	Tabitha Martens
Chris Hunt	Kyla Maslaniec	Teresa Visser
Cliff Greenfield	Lacy Kontzie	Terry Galloway
Colby Desender	Larry Danielsen	Terry Powell
Craig Bailey	Laura Greenfield	Tim Chotka
Dana Austman	Leanne LaBrash	Trevor Kotyk
Daniel Dupont	Lexine Leblanc	Valerie Cobb-Friesen
Danielle Tichit	Linda Christianson	Vince Keenan
Daryl Wright	Linda Morin	Wade Cable
David Raitt	Lynda Matchullis	Walter Tokar
Denise Levesque	Madelyn Robinson	Will Trowell
Devon Baete	Margaret Friesen	Yasemin Wruth
Don Bergen	Marilyn Meyer	Ameena Bajer-Koulack
Don MacDonald	Marla Riekman	Armand Belanger
Don Mazur	Marriane Schultz	Audrey Boitson
Donna Kopecky	Marriane Tokar	Barry Konzelman
		Brigitte Demarchuk

Dusty Molinski
Dylan Bart
Edna Aytona-Austman
Erin Thorleifson
Gerald Shelemy
Shirley Esaruk
Tabitha Martens
Ria Semenowich
Shawn McMahon
Shawn Sexsmith
Brendan Carruthers

Michael Cavers
Mike James
Mike Papst
Mitch Timmerman
Myrna Potton
Nathalie Bays
Kelly Lewis
Linda Christianson
Linsey Andronak
Maggie Katzelay
Nia Massey
Rose Harrison

Chris Benson
Ellen Monro
Floyd Rayner
Gabe Kraljevic
John Perry
Heather Alexander
Heather Toews
Janelle Siekaniec
Jennifer Vallance
Glenn Peterson
Kate Peterson

Provincial Volunteers

A number of volunteers also commit time and energy to help make the Provincial event a huge success. These volunteers come from many areas: the local area, all levels of government, industry, different interest groups, retired teachers and professionals, etc. They perform many duties, big and small, but all contribute to the overall success of the event.

We would like to thank the following individuals for donating their time to the Envirothon program in 2013:

Amber Lahti
Andrea Evans
Andrea Kraayeveld
Andrea Swain
Barb Benoit
Barbara Fuller
Bev McKenzie
Bill Kraayeveld
Brenda Robinson
Byrnes Benoit
Cathy Shaluk
Clayton Robins
Dan Dew
Dave Wotton
Denise Levesque
Diane Olson
Doug Hevenor
Elaine Gauer
Ellen Cobb-Friesen

Gil Godard
Glenda Fauske
Glenn Peterson
Irene Kraayeveld
Jane Thornton
Jennifer Jessop
Jennifer Lidgett
Jennifer Bryson
Jim Potton
John Perry
John Shearer
Justin Reid
Kyla Maslaniec
Laureen Janusz
Linda Christianson
Lindsey Andronak
Madelyn Robinson
Mae Elsinger
Maria Zbigniewicz

Meghan Sprung
Michael Cavers
Mitchell Timmerman
Murray Smith
Myrna Potton
Olwyn Friesen
Patricia Pohrebniuk
Rebecca McKay
Shane Robins
Sherry Dangerfield
Steven Hills
Susan Kasian
Tim Byers
Tina Harding
Wade Cable
Walter Tokar
Wendy Creed

2013 Steering Committee Members

Name	Steering Committee Position	Representative Organization
Jim Potton	Co-Chair	GOM - retired
Glenn Peterson	Co-Chair, Test Writing Committee Co-Chair	Manitoba Forestry Association
Laureen Janusz	Test WC Co-Chair	Manitoba Conservation and Water Stewardship (C&WS): Fisheries Branch
John Sinclair	Orals Committee Co-Chair	University of Manitoba: Natural Resource Institute
Bob Austman	Orals Committee Co-Chair	Manitoba Model Forest
Byrnes Benoit	Media and Communications	Spectra Productions
Andy Swain	Education Committee, Middle Years Committee, Orals Committee	Ex-Envirothon coordinator
Barbara Fuller	Education Committee	Teacher - retired
Brenda Robinson	Volunteer Recruitment and Training	Manitoba C&WS: Forestry Branch - retired
Brendan Carruthers	Strategic Planning and Fundraising Committee Co-Chair	Manitoba Hydro - retired
Michael Cavers	Logistics Committee Co-Chair, Orals Committee	Manitoba Model Forest, Pinawa LGD
Al Tyrchniewicz	Test Writing Committee	Tyrchniewicz Consulting
Susan Kasian	Test Writing Committee	DFO - retired
David Hay	Regional Test Writing Committee Co-Chair	Manitoba C&WS: Water Science and Management
Avery Ascher	Regional Host Organization Representative	University College of the North
Cathy Shaluk	Middle Years Committee	Nature Conservancy of Canada
Murray Smith	Logistics	MAFRI - retired
Paula Grief	Regional Host Organization Representative	Oak Hammock Marsh Interpretive Centre
Nathalie Bays	Regional Host Organization Representative	Oak Hammock Marsh Interpretive Centre
Alec Stuart	Strategic Planning and Fundraising Committee	Manitoba Hydro
Rebecca McKay	Regional Test Writing Committee Co-Chair	Manitoba C&WS: Sustainable Resource and Policy Management
Mae Elsinger	Theme Expert	Agriculture and Agri-Food Canada

MANITOBA REPRESENTATION AT NORTH AMERICAN ENVIROTHON

The 2013 North American Envirothon was held at the Montana State University in Bozeman, Montana. This year, 57 states and provinces travelled to Montana to compete in North America's largest environmental education competition. This was in fact one of the largest competitions to date, as 47 US states, nine provinces and one Canadian territory competed this year's event. This week long competition challenges students on their problem-solving, team work building and presentation skills, as well as, their comprehension of the materials they studied leading up to and preparing for this competition. The five-member team of high school students from Swan Valley Regional Secondary School from Swan River earned the right to represent Manitoba this year.

Students started their week training and testing at a site south of Billings, in the Pryor Mountains, just north of Yellowstone National Park. Both station training and testing were located on a rural landowner's property, who operates a large scale ranching and guiding business. A very appropriate site, which aligned nicely with this year's current environmental issue focusing on Sustainable Rangeland Management, and achieving a balance between traditional agricultural uses with non-agricultural uses on Montana rangelands. Students had an opportunity to meet the rancher and discuss, with him, the management issues this individual faced as part of his ongoing ranching/guiding operation.

Mid-week, our hosts the Montana State Envirothon, provided a special treat to teams, advisors, committee members and guests with a day trip to Yellowstone National Park and an evening bar-b-que/local rodeo. In addition to touring the site of Old Faithful, participants were exposed to great wildlife viewing as they traveled through the state park and Big Sky Country. As well, students were encouraged to get involved in the local rodeo scene by testing their skills at roping and trying their luck at being the first to grab a flag off the back of a young steer as it raced across the arena. The students were excellent sports, as they were cheered on by the rest of the group, and great fun was had by all!

The remainder of the competition, the oral presentation preparation and the preliminary/final oral presentations were hosted back at the Montana State University campus. The winning team was announced the evening of Friday, August 9th, during the competition's closing ceremonies. The team representing Mount Academy from Esopus, New York was announced as the winners of the 2013 North American Envirothon, with second place being awarded to the Newton North High School from Newton, Massachusetts and third place to Pembroke Hill High from Kansas City, Missouri.

Congratulations!

We would like to congratulate our team from Manitoba, who placed 14th at the 2013 NAE competition. Team members Victoria Bertram, Chloe Lagace, Victoria Verhoek, Megan Moore and Jayden Wlasichuk worked very well together and earned high scores in their forestry and theme portions of their trail tests and delivered a solid oral presentation during the preliminary round. They were assisted in their efforts by advisors Shawn Stankewich and Rick Wowchuk.



We are all very proud of this team, their advisors and the support they have received from their school, their school division and the local community and businesses!

Michael Pineau Manitoba Envirothon Travel Assistance

Teams that win the Manitoba Envirothon and advance to the North American Envirothon are faced with additional costs for traveling to the competition. The Manitoba Forestry Association, as part of the Manitoba Envirothon Budget, provides \$5,000 to assist with these travel costs.

In 2013 travel assistance was given in the name of Michael Pineau, a former Envirothon participant from Mattawa, Ontario. Michael participated in the program throughout his four years of high school representing F.J. McElligott High School. In 2011, Michael passed away. Throughout his time in the program he became quite passionate about Envirothon. Discussions are now underway across Canada initiated by the Canadian Institute of Forestry (CIF) to consider a future scholarship fund in his name.

To quote a line from his memorial service “Michael was a bright, talented, generous and special young man who touched many lives positively”. His favourite quote was “Be kind whenever possible. It is always possible” (Dalai Lama). It is hoped that team members participating in the 2013 Envirothon kept this thought in mind throughout the competition.

Thank You to Our Sponsors!

We would like to thank the 2013 Manitoba Envirothon Sponsors whose generosity helped us make this youth environmental education program a success.

LEGACY SPONSORS

- Manitoba Hydro
Government of Manitoba
- *Aboriginal and Northern Affairs*
 - *Agriculture, Food and Rural Initiatives*
 - *Conservation and Water Stewardship*
 - *Education*
 - *Innovations, Energy and Mines*

ENCOURAGING SPONSORS

Society for Rangeland Management
Canon Canada

FRIENDS OF THE ENVIROTHON

Of course, the success of the Manitoba Envirothon depends greatly upon our generous friends! These people and organizations dedicate a vast amount of time, energy and resources on various committees - be it at the provincial and/or regional levels, team sponsorship, in-kind support or the donation of prizes to the final provincial competition.

REGIONAL HOSTS

Duck Mountain Forest Centre
Pembina Valley Conservation District
Oak Hammock Marsh
Manitoba Model Forest

The Manitoba Forestry Association would like to thank the following organizations for their team sponsorship and in-kind support:

In-Kind Support

4-H Manitoba Council
A Rocha Prairie Canada
Agriculture and Agri-Food Canada
Assiniboine Community College
Assiniboine Hills Conservation District
Byers Environmental Studies
Dave Wotton Consulting
Ducks Unlimited
East Interlake Conservation District
Environment Canada
Fort Whyte Alive
International Peace Garden
LaSalle Redboine Conservation District
Louisiana Pacific Ltd.
Manitoba Agriculture and Rural Initiatives
Manitoba Conservation and Water Stewardship

- *Fisheries*
- *Forestry*
- *Parks and and Natural Areas*
- *Water Science and Management*
 - *Wildlife*
- *Strategic Policy and Intergovernmental Affairs*

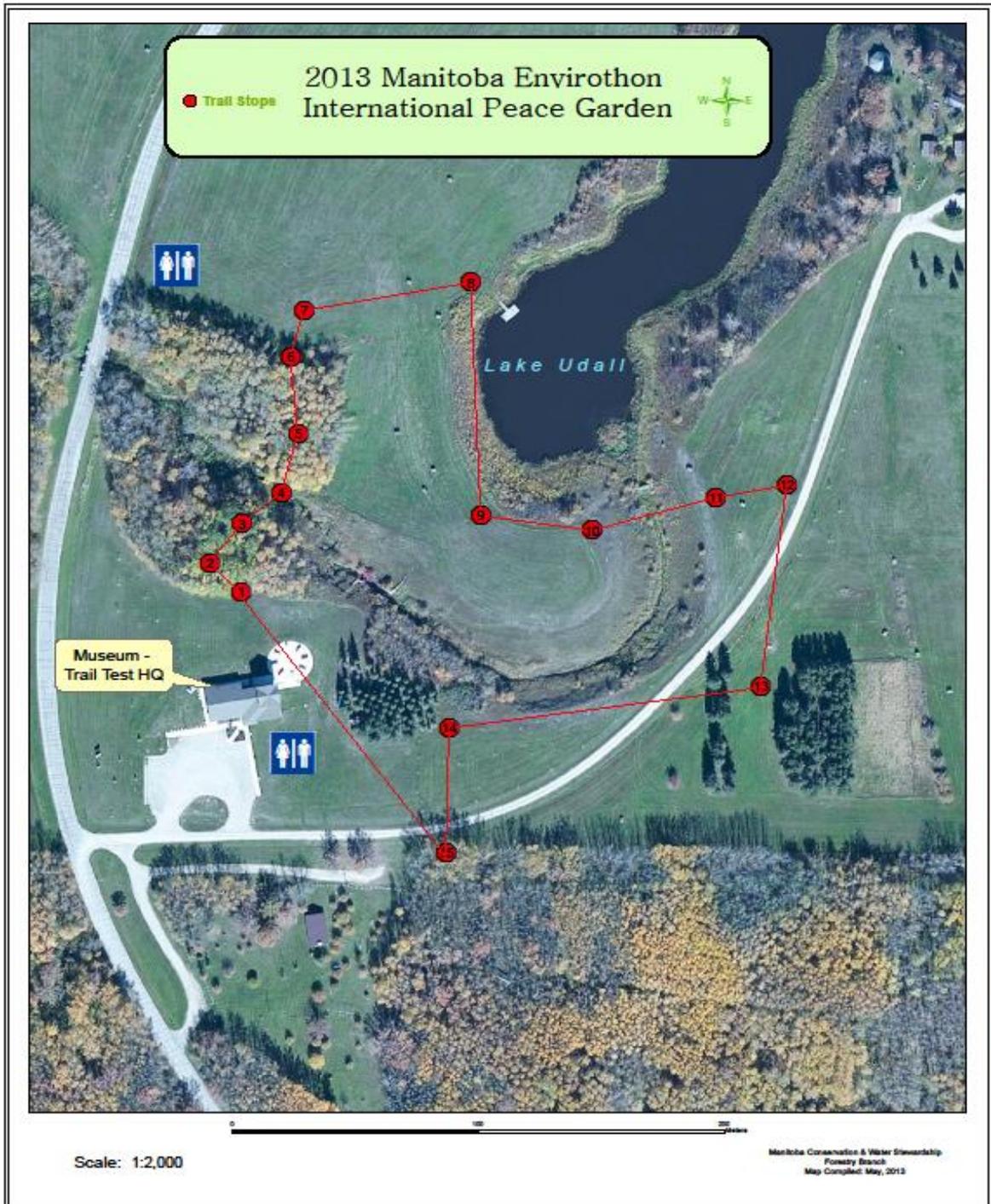
Manitoba Education
Manitoba Hydro
Manitoba Model Forest
Manitoba Museum
Maskwa Ecological Consulting Inc.
Nature Conservancy of Canada
Nature Manitoba
Natural Resource Institute-University of Manitoba
North Dakota Forest Service
Oak Hammock Marsh Interpretive Centre
Parks Canada
Pineland Nursery
Prairie Architects Ltd.
Prairie Spirit School Division
S. Dangerfield Interpretive Planning
Smith Poultry Consulting

Spectra-Productions Ltd.
Spruce Products Limited
Turtle Mountain Conservation District
Tyrchniewicz Consulting
University of Manitoba
University of Winnipeg
Youth Encouraging Sustainability

Team Sponsorship

East Interlake Conservation District
La Salle Redboine Conservation District
North-West Soil Management Association
Pembina Valley Conservation District
Prairie Rose School Division
Prairie Spirit School Division
School District of the Whiteshell
Sexton Building Group
Swan Lake Watershed Conservation District
Swan Valley Regional Secondary School

Appendix A
2013 MANITOBA ENVIROTHON FIELD TEST



AGAIN, THANKS TO LAURA GISTI OF MANITOBA CONSERVATION AND WATER STEWARDSHIP, FORESTRY BRANCH FOR THE OUTSTANDING MAP WORK!

Appendix B Regional Event Summary

Host Organization	Date of Competition	Location of Competition	Trainers	Field Test Information	Format of Orals Component	Food	What Worked	Needs Improvement	Total Cost
Duck Mountain Forest Centre	Tuesday, April 16 th	Duck Mountain Forest Centre	Soils and Land Use: Paul Leblanc Forestry: Trevor Kotyk, Paul Leblanc Wildlife: Dwayne White, Rick Wowchuk Aquatic Ecology: Ian Kitch Theme: Mae Elsinger	- Located around the Duck Mountain Forest Interpretive Centre	- Question created by provincial Orals Committee - Students were presented the topic 2 weeks prior to the event and prepared a poster and presentation to address the question at the competition	Catering was provided by the host committee	Things ran smoothly, but snowy conditions required trail to be plowed 3 teams, 15 students,	- Sample issues, not labeled correctly, some missing, lack of Northern teams	Food: \$292.36 Vol. apprec.: \$ 60.00

Manitoba Model Forest	Wednesday, April 17th	Winnipeg River Learning Centre (WRLC), Powerview-Pine Falls	Soils and Land Use: Mitch Timmerman, Marla Reikman Forestry: Vince Keenan Wildlife: Daniel Dupont and Dennis Brannen Aquatic Ecology: Brian Kotak Theme: Lindsey Andronak Orals: Sloan Cathcart, Jim Potton	-	Set up inside the WRLC due to weather	-	Questions added by local committee	-	Question created by host committee	-	Students were presented the topic 2 weeks prior to the event and prepared a poster and presentation to address the question at the competition	Catering was provided by the host committee	Enthusiastic host committee, 7 teams, 35 students	-	A number of teams dropped out, many did not advise the organizers resulting in extra food, a number of students noted the lack of an outside test.	Food and Rental Facilities: \$1996.33
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Oak Hammock Marsh	Tuesday, April 16 th	Oak Hammock Marsh Interpretive Centre	Soils and Land Use: Teresa Visser Forestry: Tabitha Martens Wildlife: Ria Semenowich Aquatic Ecology: Dusty Molinski Theme: Lindsey Andronak	-	Held on the grounds beside the Interpretive Centre	-	Question created by host committee Students were presented the topic 2 weeks prior to the event and prepared a poster and presentation to address the question at the competition Ensure all posters labelled!	-	Snacks provided throughout day Lunch was provided for all the volunteers. All food was provided by the OHMIC Café	-	Organization was good Training, all provided in-house, amount of time was good Location (wetland and upland habitats)	-	Training kit should be more complete (OHMIC) used many in-house items to supplement the kit Firm registration date Test materials should be received earlier	Room Rental: \$1620 Food: \$832.06
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South West	Wednesday, April 17 th	Clearwater	Soils and Land Use: John Heard, Rejean Picard Forestry: Andrea K., Neil Zalluski Wildlife: Jonathan Wiens, Robert Nichol Aquatic Ecology: Margaret Friesen, Devon Beate Theme: Jane Thorton, Dave & Val Pogson First Nations perspective: David Scott Orals: Nick Pharoah, Laura Greenfield	Held around the community of Clearwater	-	Question created by host committee	-	Students were presented the topic 2 weeks prior to the event and prepared a poster and presentation to address the question at the competition	-	Provided by Harvest Moon Society	-	Great community to host, facilities provided a fun hands-on learning task regarding cattle ranching.	-	Heavy snow day before, ensure all test material received in advance	Facilities: \$732.33 Food: \$2240
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Appendix C

Program Financial Summary

<i>Province of Manitoba</i>			
Manitoba Agriculture, Rural and Food Initiatives	\$5,000.00		\$ 5,000.00
Manitoba Education, Citizenship and Youth	\$5,000.00		\$ 5,000.00
Manitoba Water Stewardship	\$5,000.00		\$ 5,000.00
Manitoba Conservation	\$5,000.00		\$ 5,000.00
Manitoba Aboriginal & Northern Affairs	\$5,000.00		\$ 5,000.00
<i>Corporate & Non-Government Sources</i>			
Manitoba Hydro	\$5,000.00	\$30,000.00	\$ 35,000.00
Canon Canada T-Shirt Assistance		\$550.00	\$ 550.00
<i>Other Corporate & Non-Government Sources</i>			
Friends of the Envirothon	\$727.08		\$ 727.08
Other	\$6,000.00		\$ 6,000.00
<i>Other Revenue</i>			
Admissions/Reg./Program Fees	\$10,961.93	\$1,829.97	\$ 12,791.90
Miscellaneous Revenue	\$1,124.25		\$ 1,124.25
TOTAL INCOME	\$48,813.26	\$32,379.97	\$ 81,193.23
EXPENSES			
<i>Administration Costs</i>			
Advertising & Promotion, Legal Costs, Meeting Expenses,	\$5,395.32	\$6,614.70	\$ 12,010.02
<i>Professional Development</i>			
		\$184.17	\$ 184.17
<i>Salaries & Professional Services</i>			
Professional Services	\$14,740.64		\$ 14,740.64
<i>Program Delivery Costs</i>			
Accommodations & Meals	\$23,971.15	\$253.91	\$ 24,225.06
Awards & Recognitions	\$503.89	\$1,000.00	\$ 1,503.89
Clothing Purchase (Team and Volunteer Shirts)	\$1,132.08	\$5,647.15	\$ 6,779.23
Equipment \ Facility Rental	\$4,202.34	\$146.20	\$ 4,348.54
Postage/Shipping		\$109.56	\$ 109.56
Program Travel	\$1,336.23	\$856.51	\$ 2,192.74
Program Supplies	\$380.18	\$1,207.77	\$ 1,587.95
Regional Support Payments		\$8,072.33	\$ 8,072.33
<i>North American Envirothon Expenses</i>	\$10,457.45		\$10,457.45
TOTAL EXPENSES	\$62,119.28	\$24,092.30	\$ 86,211.58
TOTAL INCOME	\$48,813.26	\$32,379.97	\$ 81,193.23
BALANCE	-\$13,306.02	\$8,287.67	-\$ 5,018.35
*as of October 1, 2013			

Appendix D – Orals Questions

Manitoba Envirothon 2013 Regional Orals Sustainable Rangeland Management

The 2011 Manitoba flood caused forage acres across the province to be drowned out. Restoration became necessary as receding water left silt, debris, and invasive species as well as increasing weed pressure. These issues must be addressed before these regions can be used as forage areas again.

Much of the initial cleanup (i.e. debris) has been finished but livestock producers are concerned with re-establishing their fields so they can continue to be used as pastureland. Additionally, producers are concerned as they now need emergency feeds for their livestock. Damage was sustained on the shorelines of many streams and rivers, and conservation groups have been very concerned about restoring the riparian land. Further, the municipal governments have become concerned about their drinking water in light of the potential of floods to spread pollution of domestic and industrial chemicals from local agriculture.

Your team has been tasked with coming up with a presentation for local producers, and other stakeholders, including the municipal government and First Nations, as well as interest groups N.G.O.s (e.g. Nature Canada, Canadian Parks and Wilderness Society) and other conservation groups, to address many of their management concerns as well as looking for a restoration plan.

Your presentation should address the following:

- A. Describe how the range condition, rangeland health assessments, and riparian health assessments can be conducted within this area to assess its condition and need for restoration.
- B. Identify how some of the many ecological process on rangeland and pastureland may have been affected by this flooding.
- C. Provide some strategies that can be incorporated into a restoration plan to address livestock and wildlife interactions, biodiversity, soil quality, invasive plants, and water quality.
- D. As part of the restoration process, describe some practices that could be adopted to improve this rangeland and pastureland for years to come.

Appendix D – Orals Questions, continued.

Manitoba Envirothon 2013 Provincial Orals – International Peace Gardens Sustainable Rangeland Management

The community of Sibley is located within the Boreal Transition Ecoregion of Manitoba. You will recall from your *Theme Resource Guide* that rangelands are made up of many ecological communities (wetlands, riparian zones, upland forest and upland grassland), and that they interact with one another via the movement of resources (water, air, energy, nutrients) and resource users (livestock, wildlife, humans).

The above characteristics are true of the Sibley area, where rivers, streams, lakes, ponds and other wetlands provide habitat for recreationally sought after large bodied fish such as walleye, northern pike, yellow perch and rock bass and also small bodied fish such as creek chub, fathead minnows, central mud minnows and brook stickleback.

Forest- and grass-dominated rangeland communities provide food and shelter to a wide variety of wildlife such as wolves, white-tailed deer, moose, elk, black bears, coyotes, snowshoe hare as well as waterfowl, grouse, swans and owls. In this area, climate, animals and fire have played and continue to play an important role in the development of present-day vegetation.

The rolling hills around Sibley are covered in a mix of grassland and deciduous forest. The predominant tree, trembling aspen, is mixed with balsam poplar, green ash, birch, Manitoba maple, elm and bur oak. Shrubs like hazel, chokecherry, saskatoon, nannyberry, dogwood, high bush cranberry and pincherry are found in the forest understory. Many of these, and wild plum trees, provide fragrant blossoms in spring and the delicious fruit throughout the summer months for berry pickers and animals alike. Understory herbs include white grained mountain rice grass, purple oatgrass, sedges, wild lily of the valley, Lindley's aster, and wild sarsaparilla. Sedges, marsh reedgrass, and species of willow, including diamond willow, are common in moist areas. Small pockets of grasslands occur where trees and shrubs have not yet become dominant, especially on south-facing slopes or sandy uplands with their drier environment. Some herbaceous species in these grasslands include porcupine grass, little bluestem, juniper, bear berry, and fringed aster.

Near Sibley, a number of public and private parcels containing mixed plant community types were recently put up for lease or sale, and they form a contiguous block of rangeland adding to 4,455 hectares. Livestock producers around Sibley are interested in cooperating to form a community pasture. Their intents are to use the land for economic gain while conserving its

ecological integrity. The municipality and other local interest groups and stakeholders have some concerns about the idea of this new community pasture. Parcels of the land have been previously used for recreation, grazing, traditional uses, tree harvest, gravel extraction, and/or protection of natural ecological services to the local community and wildlife. Hunters also use this region to hunt for white-tailed deer, elk, and waterfowl and part of the area serves as a very important habitat for migratory birds.

The livestock producers want to present a sustainable rangeland management plan for the use of these lands for cattle and sheep production. Your team has been hired as consultants to help them develop a management plan that, among other things, attempts to satisfy all of the stakeholders in the region while ensuring conservation of the local ecology. Your plan must include the following specific considerations:

- i. A list of all the resources in the proposed rangeland area.
- ii. Your plan for managing the rangeland, including the:
 - carrying capacity (AUM) and the maximum number of cow/calf pairs that can be kept on the area for the grazing season (4.5 months)
 - management practices to be used,
 - infrastructure (e.g., livestock water sources and fences) that needs to be developed in order to support the plan.
- iii. Your plan to address:
 - land use conflicts,
 - health of rangeland and riparian areas,
 - preservation of biodiversity,
 - wildlife interaction,
 - soil erosion
- iv. Your strategy for the assessment and monitoring of the rangeland.
- v. Your proposal for how the livestock producers should involve the interest groups and range users who would be affected by the rangeland management plan.