



IISD EXPERIMENTAL LAKES AREA
2014-2015 ANNUAL REPORT





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iisdela
experimental lakes area

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MESSAGE FROM THE CHAIR OF THE BOARD

This was the year that IISD Experimental Lakes Area (IISD-ELA) was born.

After 47 years of ground-breaking freshwater research and whole-lake experimentation, Canada's Experimental Lakes Area's programming and legacy were transferred to one of the world's leading sustainable development think tanks, the International Institute for Sustainable Development (IISD).

IISD working with the Experimental Lakes Area is a unique and highly effective match. The innovative freshwater research happening at the facility will immediately influence the policy work happening at IISD, ensuring that the science reaches the right people at the right time.

And this is happening at a time when freshwater science has never been more critical. In 2015 we are already bracing ourselves for the impact of climate change, under-researched chemicals and pollutants entering our water—all pressing issues that IISD-ELA's current research is tackling head-on.

As you will read in the following pages, we are already seeing how great a match IISD and the Experimental Lakes Area is proving to be, with a highly successful first research season, an exciting education and outreach agenda, and a fundraising plan put in place.

It has been a great year, and we are looking forward to many more.



Written by Scott Vaughan, Chair of the IISD-ELA Board and IISD President and CEO

MESSAGE FROM THE EXECUTIVE DIRECTOR

IISD-ELA commenced operation on April 1, 2014, following agreements between Ontario, Canada and IISD to transfer operations and partially fund the Experimental Lakes Area as a private organization. A new era then began, allowing us to marry the Experiment Lakes Area's world-class freshwater research with IISD's influential policy analysis and recommendations.

Our primary first-year objectives were to: (1) continue long-term monitoring without interruption; (2) relaunch projects initially started by the Department of Fisheries and Oceans; (3) launch a new whole-lake nanosilver project; and (4) begin a strategic planning exercise.

We are pleased to announce that all of these objectives were met.

Long-term monitoring continued without interruption, including the ongoing research into eutrophication at the iconic Lake 227, which first alerted the world to the effects of phosphorus on freshwater back in the 1960s. Unfortunately, eutrophication is still plaguing lakes around the world, and so we continue to investigate it, along with other pressing issues affecting our water, including climate change and mercury. We are also pleased to launch a new nanosilver project this year in partnership with Trent University, just as the effects of nanotechnology, found in many consumer products, are piquing public interest.

In addition, IISD-ELA has begun to explore our educational potential by hosting high school and university field courses. Engagement with communities in Northwestern Ontario was a key strategic focus, and events and outreach were held in Kenora, Dryden and with many First Nations.



Written by Matthew McCandless, IISD-ELA Executive Director

The driving theme of 2014–15 was continuity. The experience from 2014 research activities—combined with education and outreach—has provided us with information and insight for strategizing the future directions of IISD-ELA. The strategic planning process began in October 2014 and is being conducted in two stages. First, big picture strategic thinking has been done using a methodology called Theory of Change. In October 2014 IISD-ELA launched a strategic planning process to examine our desired impact and develop a Theory of Change for IISD-ELA. This process is now complete, and we are working to develop an implementation plan for the next five years.

IISD-ELA cannot exist without the hard work, support and dedication of our tireless staff, and we would like to thank them unreservedly for ensuring that our first year of IISD-ELA was an unprecedented success. Moreover, we would like to express our gratitude to our many funders from the private and public sectors, without whom we could not keep doing what we do best: working to keep our water safe and clean, for our generation and for those to come.

HIGHLIGHTS FROM THIS PAST YEAR AT IISD EXPERIMENTAL LAKES AREA

APRIL

IISD assumes operation of Canada's renowned Experimental Lakes Area.



MAY

The first official research season starts at IISD-ELA.



JUNE

IISD-ELA surpasses \$25,000 Indiegogo campaign goal.



JULY

IISD-ELA announces appointment of the inaugural Board of Directors.



AUGUST

The first ever IISD-ELA High School Field Experience (ELSE) starts with students from St. John's-Ravenscourt.



SEPTEMBER

IISD-ELA confirms upcoming anonymous pledge of \$1,000,000 to assist with research fellowships and outreach positions.



OCTOBER

IISD-ELA and University of New Brunswick release findings of successful estrogen research study.



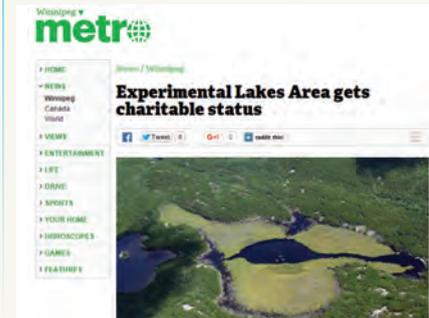
NOVEMBER

IISD-ELA's Chief Research Scientist Michael Paterson leads a TedX Talk at University of Manitoba.



DECEMBER

IISD-ELA announces recently acquired charitable status from the Canada Revenue Agency.



JANUARY

The first official IISD-ELA winter survey is completed.



FEBRUARY

IISD and IISD-ELA host the 2015 Water Gala in Toronto.



MARCH

Both IISD and IISD-ELA move into brand new offices in the heart of Winnipeg's historical Exchange District.





Mark Lyng, IISD-ELA
Operations Manager

IISD-ELA FACILITIES

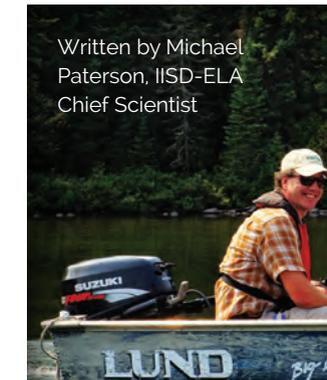
Ice-off on May 18, 2014 marked nature's start to another field season of research at the Experimental Lakes Area and, of particular significance, the very first field season of operations for IISD Experimental Lakes Area Inc. (IISD-ELA).

Transfer of the ownership of IISD-ELA to a not-for-profit organization meant that certain operations would now require approval from the province. Water treatment and health regulations fell under the jurisdiction of the Northwestern Health Unit, and by July of 2014 our kitchen/dining facility and our water treatment plant had successfully passed inspection. By November, we were also pleased to learn that we had met our target for filing environmental compliance applications for air emissions and subsurface sewage works with the Ontario Ministry of the Environment and Climate Change.

The 2014 field season also involved ambitious facility maintenance projects and renewal initiatives. To meet an immediate need for family-style accommodations for our researchers, we started renovating two existing cabins in January 2014 and had completed the project by March 31, 2015. Moreover, a new infrastructure project was initiated to design two new accommodations to meet the growing need. We also explored moving the facility towards new renewable energy alternatives.

The total number of site usage working days for the 2014 field season (May–October) was 3,498. This was higher than anticipated and a return to levels seen previously by Fisheries and Oceans Canada. IISD-ELA personnel accounted for 42.3 per cent of site usage, and 23.2 per cent of total site usage involved the graduate research of 13 different students representing five educational institutions. Summer students represented 11 per cent of total site usage days. We also hosted 44 individual researchers representing 10 different institutions.

The operational success of IISD-ELA depends on the efforts of many people, including the expertise, professionalism and work ethic of all the IISD-ELA facility users. The cooperation and assistance of the IISD-ELA staff is essential and valued. I would like to take this opportunity to recognize their contribution in making the 2014 field season a great success.



Written by Michael Paterson, IISD-ELA Chief Scientist

IISD-ELA RESEARCH

In 2014-15, IISD-ELA embarked on its first exciting season as an independently operated research facility. The transfer of the program to IISD in 2014 allowed our research to continue successfully for a 47th year.

For the first year under the new operating model, we planned to assemble a team of researchers, continue the long-term monitoring program, initiate a new whole-ecosystem experiment on the effects of nanosilver and begin development of new research projects and areas.

Upon completion of the transfer, a team of new staff immediately got to work. Most of these new team members had previously worked at ELA with Fisheries and Oceans Canada (DFO), allowing for a smooth transition. In addition, several undergraduate and graduate students worked with the research group.

The first priority was to ensure the continuation of IISD-ELA's 47-year monitoring record for meteorology, hydrology, water chemistry and aquatic organisms. Data from these lakes are being used to examine the effects of climate change, factors affecting harmful algal blooms, the effects of water diversions on lakes and mercury contamination in fish.

In 2014 we began a new whole-ecosystem experiment led by a team of researchers from Trent University on the environmental effects of nanosilver. Despite increasing use of nanosilver in many consumer products, relatively little is known about its fate and toxicity in the environment. Following three years of pre-impact study, we began adding nanosilver to Lake 222 and are following changes in chemistry, aquatic biota and fish. In addition to the nanosilver team, groups from several universities and government agencies were active at the IISD-ELA facility. These researchers were studying factors affecting harmful algal bloom development, contaminants in fish and the development of new methods of monitoring fish behaviour.

In 2014 alone, 17 papers were published in peer-reviewed journals based on research at IISD-ELA. Next year, we look forward to continuing the long-term monitoring of reference lakes and of existing projects. Following a strategic planning process, we have begun an extensive effort to develop new experiments and research projects, with an emphasis on pressing issues such as eutrophication, contaminants and climate change.

Overall, the first year of research at IISD-ELA was extremely successful, and we look forward to many new, exciting projects in the years to come. We owe a great deal of thanks to the many team members and supporters of IISD-ELA!



Written
by Pauline
Gerrard, IISD
Development
Coordinator

IISD-ELA EDUCATION AND OUTREACH

One of the most exciting opportunities that the birth of IISD-ELA in 2014 offered was opening the door to potential new education and public awareness programming. The 2014 field season saw us explore what we had to offer to surrounding communities through outreach, and what we could learn from them. To this end, IISD-ELA piloted a number of education and outreach-related activities during the 2014 field season.

This programming included the first ever IISD-ELA High School Field Experience (ELSE). In partnership with Saint John's-Ravenscourt in Winnipeg, five students spent two weeks living and working with IISD-ELA scientists. The students participated in research, spent three days canoeing through the region and conducted a self-guided inquiry study of their own. The experience was positive for both IISD-ELA researchers, who learned from the communication challenge of explaining their work in a comprehensible manner, and the students, who enjoyed the experience of being able to work directly with scientists.

A kid's tour for members of the Lake of the Woods Property Association was also a great success. Students spent a day at the site and had the opportunity to see fish seining and basic lake sampling, collect and identify aquatic invertebrates, and even participate in some chemistry of their own!

At the university level, a field component of Lakehead University's Fish and Wildlife Practice (Natural Resources Management 4251) was held at IISD-ELA. Students from Thunder Bay used the field station for a hands-on experience in field sampling and principles in basic ecological monitoring.

We also started an engagement process with First Nations communities in the IISD-ELA region. With support from a University of Winnipeg student, outreach and engagement with the communities nearest to IISD-ELA was initiated through meetings and presentations with community members. In 2014 an engagement was held in Kenora, as well as with the First Nations of Naotkamegwanning

(Whitefish Bay), Eagle Lake, Ochiichagwe'Babigo'Ining (Dalles), Obashkaandagaang (Washagamis), Asubpeeschoseewagong (Grassy Narrows) and Wauzhushk Onigum (Rat Portage). We are very pleased that this outreach has generated strong interest in IISD-ELA as well as potential future partnerships for research and education. Additionally, we have been working directly with the Grand Council of Treaty 3 on possible research collaboration, and on two occasions IISD-ELA personnel have attended and presented at Grand Council of Treaty 3 Anishinaabe Nation Chiefs' Assemblies.

As we move into our second year as IISD-ELA, we are already excitedly building on the strong foundation we built this past year. We are looking forward to engaging with and learning from the surrounding communities, who have so generously supported us from the beginning, recognizing the importance of this unique freshwater research facility.

58

 Number of lakes
(and their watersheds) comprising IISD-ELA

IISD-ELA BY THE NUMBERS 2014 | 2015

1968



First year of operation at the Experimental Lakes Area

3,528



Person days of IISD-ELA site usage during the May-October 2014 research season

227



The number of the lake used in the groundbreaking experiment that initially proved that phosphorus was the main cause of algal blooms, leading countries globally to take steps to reduce the amount of phosphorus entering waterways

826



Number of followers of the @IISD_ELA Twitter handle in the past year

184



Individuals who visited or worked at IISD-ELA in the past year

324



Individuals from around the world who donated to our highly popular Indiegogo campaign in May 2014

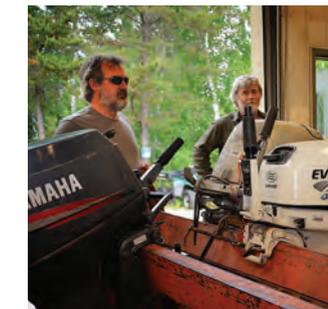
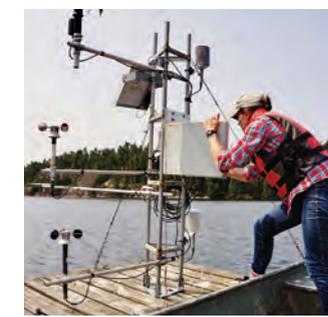
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Number of successful seasons completed since IISD took over operation of the facility



IISD-ELA TEAM



IISD-ELA 2014-2015 Board of Directors

- Scott Vaughan
- James Bruce
- Stephanie Cairns
- Glenn Crook
- Phil Fontaine
- Sheila Fraser
- Matthew McCandless

IISD-ELA 2014-2015 Staff

- Ken Beaty
- Graham Blakelock
- Meghan Borland
- Sandra Chalanchuk
- Andrew Chapelsky
- Colin Charles
- Gerald Fitzgerald
- Soleil Grise
- Lauren Hayhurst
- Scott Higgins
- Sonya Higgins
- Lee Hrenchuk
- Donna Laroque
- Mark Lyng
- Matt McCandless
- Roger Mollot
- John Neall
- Michael Paterson
- Stephen Paterson
- Brandon Penfold
- Michael D. Rennie
- Chandra Rodgers
- Mark Unger

INDEPENDENT AUDITORS' REPORT

To the Members of
IISD Experimental Lakes Area Inc.

We have audited the accompanying financial statements of the **IISD Experimental Lakes Area Inc.**, which comprise the statement of financial position as at March 31, 2015 and the statements of operations and changes in unrestricted net operating assets, changes in net assets, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

AUDITORS' RESPONSIBILITY

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

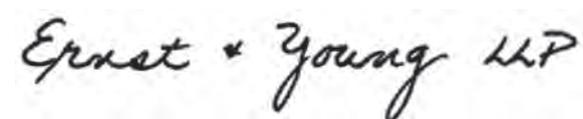
An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the

assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

OPINION

In our opinion, the financial statements present fairly, in all material respects, the financial position of the **IISD Experimental Lakes Area Inc.** as at March 31, 2015 and the results of its operations and its cash flows for the year then ended in accordance with accounting standards for not-for-profit organizations.



Chartered Accountants

Winnipeg, Canada
June 23, 2015

STATEMENT OF FINANCIAL POSITION

As at March 31

2015
\$

ASSETS

Current

Operating account	117,613
Remediation account	188,177
Total cash	305,790
Grants receivable	261,000
Accounts receivable	41,608
Prepaid expenses	157,372
Total current assets	765,770
Capital assets	332,368
	1,098,138

LIABILITIES AND NET ASSETS

Current

Accounts payable and accrued liabilities	203,460
Due to IISD	271,416
Deferred revenue	87,861
Deferred contribution in-kind	202,563
Total current liabilities	765,300
Commitments	

Net assets

Net assets invested in capital assets	129,805
IISD ELA Sustainable Future Fund	250,641
Unrestricted net operating deficit	(47,608)
Total net assets	332,838
	1,098,138

STATEMENT OF OPERATIONS AND CHANGES IN UNRESTRICTED NET OPERATING ASSETS

Year ended March 31

	2015 \$
REVENUE	
Designated grants	2,250,000
Interest	2,095
Other revenue	148,192
	<u>2,400,287</u>
EXPENSES	
Administration	1,184,347
Field station operations	541,841
Field research	396,384
Laboratory research	146,553
Marketing and fundraising	48,965
	<u>2,318,090</u>
Excess of expenses over revenue	82,197
Appropriation from unrestricted net operating assets	
Net assets invested in capital assets	(129,805)
Decrease in unrestricted net operating assets	<u>(47,608)</u>
Unrestricted net operating assets, beginning of year	—
Unrestricted net operating deficit end of year	<u>(47,608)</u>

THANK YOU FROM IISD-ELA

IISD Experimental Lakes Area is extremely thankful for all the support we have received in our first year of operation.

Sincere thanks to our funders:

Government of Ontario
Government of Manitoba
Gail Asper and Michael Paterson
Tides Canada

*Additional thanks go to:

James Angle
David and Ruth Asper
Margaret E. Atwood
John Bailey
Paul Blanchfield
ELA Support Group-Kenora
Sheila Fraser
Daniel Gagnier
Gail Asper Family Foundation
Donations in honour of Amy Gilbert
Government of Canada
Lake of the Woods Property Owners Association
Lake Weslemkoon Conservation Association
Lake Winnipeg Foundation
David W. Mayhood

Frances McCoubrey
Terence M. McNabb
Thomas Sill Foundation
RBC Foundation
Robert Page
Rod Paterson in honour of Anne Paterson
Joan Richardson
Kim Sanderson
Walter & Duncan Gordon Foundation
The Winnipeg Foundation

All who generously donated to IISD-ELA via
CanadaHelps.org

All who generously donated to our Indiegogo
crowdfunding campaign

Special thank you goes to Lauren Hayhurst whose
wonderful photos have greatly assisted us in
communicating the IISD-ELA message this year.

*This list includes, but is not limited to, all individuals and groups that have donated over \$500 CAD to IISD-ELA this year.



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