OPENING OUR DOORS



IISD EXPERIMENTAL LAKES AREA 2015-2016 ANNUAL REPORT

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MESSAGE FROM THE CHAIR OF THE BOARD

There is nowhere else in the world like IISD Experimental Lakes Area (IISD-ELA).

And as the last 12 months have proven, the world has never needed this unique freshwater research site more.

Invasive species in our lakes. Harmful chemicals. Climate change. Algal blooms. IIISD-ELA continues to reveal the nature of these threats to our water, and in doing so provides a critically important evidence base for better freshwater policies.

When its scientists weren't busy experimenting on the 58 lakes and their watersheds that comprise the site, IISD-ELA continued to push those borders that have traditionally defined its function, by building new relationships with local communities and First Nations, and strengthening new areas such as its outreach, educational and communications capacities.

Perhaps its greatest innovation, however, is the unique approach to science and policy. The science itself continues to be vital, but we believe it becomes all the more important when used to directly inform policy that affects the health of our water supplies, as well as energy usage, air emissions and more. IISD-ELA scientists and IISD researchers collaborated even more toward these goals this year, with joint research projects and more closely aligned strategic goals.

IISD is honoured to operate this renowned research facility, and we are all working together to maximize its potential. As 2015–16 demonstrated, this one-of-a-kind site will only continue to grow and expand its capacity, always maintaining the central objective of keeping our water supplies safe for generations to come.



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

MESSAGE FROM THE EXECUTIVE DIRECTOR

As 2015–16 played out, the doors of IISD-ELA continued to open further, ushering in new and innovative research ideas, welcoming multitudes of excited scientific minds and interested members of the public, and channelling sustainable and green practices into our daily operations.

First and foremost, IISD-ELA is always about the science. In 2015–16, the continued threats we see plaguing water supplies around the world in headlines across the globe confirmed why we continue to expand and update our research portfolio. Nanosilver pollution, eutrophication and climate change are all being studied, alongside new research into monitoring fish productivity and innovation in areas such as fish tracking and monitoring fish environments.

As a unique research facility, we can offer budding freshwater scientists an invaluable educational experience, through high school, undergraduate and graduate field courses, all of which were ramped up in 2015–16 to welcome more students than ever before. As a unique neighbour, we offer an exciting glimpse into a one-of-its-kind scientific program, and through tours and outreach programs invite our neighbours to experience the exciting freshwater research that is taking place in their backyard. As a research facility on Treaty 3 land, we collaborate with local First Nations to build partnerships, on which much progress was made this year.

At IISD-ELA, we strive to build sustainable practices into everything we do. In 2015–16. while making much-needed updates to infrastructure, we opted for new cabins that had minimal environmental impact. We also started talks on improving how we consume energy, and have set the ball rolling to move a significant portion of our energy consumption over to solar energy.

None of these advancements would have been possible without our second-to-none team of researchers, support staff, as well as our generous supporters and donors.

Canada is very fortunate to have such an innovative research facility, and so as IISD-ELA continues to evolve, we will do so always making sure that the public and scientific community are aware of what we are doing. In the spirit of opening our doors, we invite you to explore, over the next few pages, the exciting work that has taken place at IISD-ELA over the last year, and share our hopes for the future.



2015 - 2016

May 2015

- IISD-ELA kicks off its second research season.
- The Winnipeg Free Press names IISD-ELA as one of the highlights of Northwestern Ontario.
- IISD-ELA presents at the Grand Council of Treaty 3 Chiefs Assembly.

June 2015

- Elders and students from Naotkamegwanning (Whitefish Bay) First Nation embark on a three-day canoe trip to visit sacred sites near IISD-ELA.
- IISD-ELA Executive Director Matthew McCandless is honoured with a Water's Next Award nomination at the Canadian Water Awards.

July 2015

- The Watershed, an original play inspired by IISD-ELA and which explores the forces that are shaping the future of our natural resources, opens in Toronto.
- IISD-ELA welcomes students from St. John's-Ravenscourt School and Elmwood High School for an exciting two-week high school field course.

August 2015

- Four amateur cyclists ride from Winnipeg to IISD-ELA to raise money for the Lake Winnipeg Foundation.
- Researchers from the IISD Water program set up "floating bioplatforms" at IISD-ELA to test impact of cattails on eutrophic lakes.







September 2015

that we do here, and partake in some of the science.

October 2015

November 2015

Our second research season successfully concludes.

December 2015

on almost 50 years of monitoring lakes at IISD-ELA.

February 2016

with new off-road vehicles and snowmobiles.

March 2016

exploring how we can improve the health of Lake Winnipeg.





HIGHLIGHTS

• Kathleen Wynne, Premier of Ontario, arrives at IISD-ELA by canoe to learn about the work

• Over 30 people from seven communities, the Grand Council of Treaty Three and Bimose Tribal Council attend our first annual Fall Feast: a day of discussion, food and ceremony.

• Significant findings concerning the effects of climate change on water are released, based

• IISD-ELA is proud to announce a new partnership with Polaris Industries Ltd., providing us

• IISD-ELA teams up with the Lake Winnipeg Foundation to host a packed event in Winnipeg,













GUEST ARTICLE IISD-ELA: A PROVINCIAL AND GLOBAL TREASURE

Ontario is a province of lakes, rivers and streams that have played a central role in our history and development, and on which we sti depend. Given that 80 per cent of Ontarians get their drinking water from lakes, ensuring our fresh water is clean and free of harmful pollutants and contaminants is of utmost importance.

As luck would have it, we are also home to a world-class freshwater research site, IISD Experimental Lakes Area (IISD-ELA), which for the last 50 years has been making groundbreaking discoveries in the field of freshwater science.

In August 2015, I was honoured to be invited to the site, as part of a canoe trip I was on in the area with my partner Jane and some friends.

I was overwhelmed by the beauty of Teggau Lake, but what impressed us even more was the leading-edge science taking place at the 58 lakes and their watersheds. We had a great tour, and even helped haul in seine nets to inspect the fish (see photos on opposite page).

I am very grateful for the significant work carried out at IISD-ELA, given that much of the cutting-edge research conducted there provides the scientific foundation for the province to move forward with actions to protect the Great Lakes, Lake Simcoe and

	other watersheds. Its work also helps us assess the impact of climate change.
11	And we recognize, of course that issues of freshwater health are not limited to our province. Rivers, streams, lakes and watersheds all cross national and international boundaries, creating an imperative to work collaboratively to keep our freshwater supplies clean.
r	In 2014, Ontario committed up to \$2 million per year to keep IISD-ELA open so that the important pollution control and climate change research conducted there can continue.
0	IISD-ELA is ultimately of vital global importance, and its unique approach to whole- ecosystem experimentation has, and will continue to, inform water-related policy and decisions around the world.
he	I'm just glad that IISD-ELA calls Ontario home!













EXPANDING OUR **RESEARCH HORIZONS**

Our team of experts continued to grow in 2015–16. We welcomed Dr. Vince Palace, a fish toxicologist with extensive experience on the effects of contaminants such as selenium, oil and pesticides, and Dr. Craig Emmerton, who joined us as post-doctoral fellow to explore the effects of climate change on IISD-ELA lakes. Over 20 undergraduate and graduate students worked on a broad spectrum of research projects at the site, including five students who completed their graduate theses on topics such as the effects of nanosilver, herbicides, and lake trout behaviour. Congratulations to them.

As we headed into our second research season at IISD-ELA, we remained firmly committed to expanding our program of scientific research. There were many highlights, including the second year of a whole-lake study on the effects of nanosilver, continued investigation into harmful algal blooms, innovating methods for tracking fish and monitoring their environment, and the 48th year of long-term monitoring of un-manipulated lakes. Thanks to the support of Manitoba Hydro, we began a vital project to develop monitoring indicators of fish productivity. Our researchers contributed to several key publications on the effects of Now that the site has been under IISD scientific program is growing and flourishing. and others.

climate change, nanosilver, artificial estrogen, management for two years, I am thrilled that the We have an excellent team and are developing At IISD-ELA we almost always try to collaborate new projects that respond to the most pressing with scientists from different research facilities threats to our fresh water. We are welcoming around the world. 2015–16 was certainly no scientists from across the globe to benefit from exception, as we worked alongside researchers the unique scientific experience offered at IISDfrom over 15 universities and multiple ELA. Our research is making groundbreaking government agencies in Canada, the United discoveries, and we are innovating in many States, and Europe. Our data was used by more areas. than 30 organizations internationally.

The future looks very bright!









BUILDING SUSTAINABLE INFRASTRUCTURE

As IISD-ELA's second season kicked off, spirits were high. Researchers were returning having previously completed a successful season that demonstrated we were up to the task of running one of the world's most influential freshwater research facilities. As we headed into the 2015– 16 field season, the exciting task of refreshing the site and opening its doors to a broader audience was high on our todo list.

Our first project focused on renewing the facility's infrastructure. Work got underway for two prefabricated off-grid energy system cabins, which are particularly exciting, as they will lower our carbon emissions while increasing accommodation. By building them off site, these buildings will lower the environmental impact on the IISD-ELA site, and provide significant energy savings through the use of high-efficiency equipment,

added insulation, triple pane windows, natural ventilation and LED lighting.

We have also moved forward with a funding proposal to replace our aging kitchen facility with a multiplex structure that will include a visitor and educational centre in addition to a modernized kitchen and dining hall. With sustainability always in mind, the structure's design elements and energy systems will match those of the accommodation cabins.

To identify a sustainable alternative to diesel power for the facility, we commenced talks with an equipment manufacturer regarding a solar-diesel hybrid system that could reduce our facility's diesel consumption and carbon emissions by 50 per cent. We look forward to further discussion around this micro-grid solution in 2016. All-terrain vehicles and snowmobiles are essential for IISD-ELA researchers to safely transport themselves and research equipment to the lakes and other sites. In order to keep these vehicles up-todate, we obtained a strategic partnership with Polaris Canada, who have generously provided us with field vehicle fleet renewal assistance in 2015. We hope this relationship will continue for years to come.

Thanks again to all our staff, visiting researchers, and supporters, whose contributions made for a successful 2015–16 season.





WELCOMING NEIGHBOURS AND FRESHWATER SCIENTISTS OF THE FUTURE

We often refer to the world's only whole-lake experimentation site as a "living laboratory," but have you ever thought of IISD-ELA as an "open-air classroom"? Or a "community space"? With its year-round ongoing experimentation, breathtaking vistas, abundance of educational and recreational activities and fully equipped camp, it is the perfect venue for a unique scientific educational experience.

This was the year that we really ramped up our efforts to invite locals into the site and educate the freshwater scientists of the future. We want to ensure that today's students and community members are as excited and informed about freshwater issues as we are, that the skills, expertise and experience are transferred to subsequent generations.

In 2015–16, students from Lakehead University, the University of Manitoba, and Trent University came to the research site to hone their field research techniques in topics such as limnology, biogeochemistry, fisheries and aquatic sampling. They worked side-by-side with world-class researchers and gained invaluable experience that they can then apply to their studies and subsequent careers.

Our Experimental Lakes Students Expertise (ELSE) program gives high school students a unique perspective into ecological literacy, freshwater research and systems thinking. With the successful completion of the second year of this pilot program we hope to expand it to more schools and students in the future.

Educational outreach is not the only product of IISD-ELA's

opening the doors to the public. IISD-ELA lies within Treaty 3 land: the traditional territory of the Anishinaabe people. We are working to collaborate with Treaty 3 communities and were very pleased to host the first ever Fall Feast and elder-youth dialogue at IISD-ELA in October 2015.

Here in Northwestern Ontario we are lucky to have access to such precious resources for such important freshwater science. We want to give back to students and local stakeholders, and giving them hands-on access to a uniquely enriching experience is key for the future.

IISD-ELA IN THE MEDIA

Experimental Lakes Area research begins Kenora Daily Miner, May 18

ELA begins summer research The Northern Sun News, May 20

Liberals pledge renewel of ELA Winnipeg Free Press, June 29

Winnipeg institute breathes new life into outdoor research station Northern Ontario Business, June 30

Experimental Lakes Area Project Lets Fish Take The Measurements FishSens Magazine, August 21

Experimental Lakes Area expands mandate far beyond fish TB News Watch, August 30

Experimental Lakes Area back on track The Dryden Observer, September 23

ELA research shows climate change impacting lake trout size TB News Watch, January 31

BRINGING **IISD-ELA TO THE WORLD**

Ideally, you would all be able to come and visit us at IISD Experimental Lakes Area (IISD-ELA), to partake in the science firsthand, speak with our experts and then spend the evenings kayaking across the pristine lakes.

If you aren't able to make it over in person, there are many communications channels through which you can discover the latest from IISD-ELA. Since the International Institute for Sustainable Development (IISD) began operating the site, we not only began to "open our doors," but also our windows, browsers, newspapers, social media accounts and more, to make sure the world is kept abreast of what is happening at IISD-ELA.

Whether it be offering our unrivalled expertise on pressing water science issues to journalists, or inviting the media out to the site to take part in the science themselves, we continue to strengthen our relationship with traditional media both at home and internationally. This year we appeared in outlets such as the Globe and Mail, CBC and Canadian Geographic and continue to foster relationships with the world's leading science reporters.

Much of the science we carry out is complex, and so in order to convey this vital science to a broad spectrum of the interested general public, we distill our work through IISD-ELA's social media networks (Facebook, Twitter and Instagram) in images, videos, articles, researcher profiles and more. These can also be found in our quarterly newsletter.

Over almost 50 years of lake monitoring, IISD-ELA has been researching the effects of climate change before it even realized its results were attributable to climate change. And what we have discovered is significant.

Our lakes are getting darker and less icy. Our fish are getting smaller and squeezed into smaller habitats.

- This year we collected this information and made it accessible to the general public via eblasts and a printed brochure to inform a larger conversation about the impact of climate change on our fresh water supplies.
- This was also the year that we launched a full IISD-ELA website, hosting a wide variety of content ranging from blogposts, research, news, visitor information and more. You can even suggest a research topic. All at www. iisd.org/ela
- Much like our science, IISD-ELA's communications continues to innovate, so we will see you soon online, with new and exciting ways to relate our work to you.

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IISD-ELA BY THE NUMBERS 2015-2016

First Nations communities who participated in our Fall Feast (in October 2015)

person-days of IISD-ELA site usage during the 2015 research season

people engaged through IISD-ELA education and outreach activities including tours and off-site presentations and symposiums

highest temperature recorded this year on August 15. (The highest temperature ever recorded at IISD-ELA is 37°C)

number of fish surgeries (implantation of acoustic tags) performed

fish handled during our second research season

Help us protect one of our world's most precious resources—fresh water.

Your continued generosity supports a wide range of research and education programs, provides the means to hire the best minds to work on complicated problems and gives us the opportunity to seek innovative solutions.

If you would like to donate online, please visit our donation page at CanadaHelps.org or send a cheque payable to IISD Experimental Lakes Area.

To make a donation by a gift of securities, electronic fund transfer or find out more about how you can support IISD-ELA, please contact:

Susan Fraser IISD-ELA Director of Development sfraser@iisd-ela.org 1 (204) 958-7700 ext. 719

IISD Experimental Lakes Area has welcomed a partnership with Polaris Industries Ltd, providing us with new off-road vehicles and snowmobiles in 2016

IISD-ELA acknowledges and thanks all those who participated in the Giving Tuesday Campaign, CanadaHelps.org 24-hour online donation drive on December 1, 2015. The campaign raised more than \$1,000 in support of the fish tracking program to purchase Passive Integrated Transponder (PIT) tags to mark fish to estimate their abundance and a trap net for non-lethal capture of fish.

Our thanks to Forest Helicopters who generously donated helicopter services to enable our special guests a bird's eye view of the IISD Experimental Lakes Area site.

SECURING A SUSTAINABLE FUTURE

IISD Experimental Lakes Area (IISD-ELA) is extremely thankful for all of the support we received from our funders, donors and friends in 2015-2016. This generous support has allowed us to continue the incredible work of IISD-ELA and to preserve a legacy that began in 1968, allowing our researchers to find solutions to the most pressing threats to our most precious resource—fresh water.

Funders

- Government of Ontario
- Government of Canada
- Government of Manitoba (via IISD funding)

Major Supporters

- Anonymous
- Michael Paterson and Gail Asper

Donations \$50,000 - \$99,999

• Polaris Canada

Donations \$10,000 - \$49,999

- The Thomas Sill Foundation
- Tides Canada Foundation
- John and Pat McCutcheon Charitable Foundation
- Estate of Robert L. Cooke
- Forest Helicopters Inc.

Donations \$5,000 - \$9,999

- Lake Winnipeg Foundation
- Kristjan and Shirley Benidickson
- Jonathan Paterson
- Stephen Paterson

Donations \$1,000 - \$4,999

- Western Canada Water & Wastewater
 Association
- Lake of the Woods District Property Owners Association
- Steven Eisenreich
- Joan Richardson

Donations \$500 - \$999

- Rod Paterson
- Matthew Randell
- Brenlee Carrington Trepel, Brent, Skyler and Sierra Trepel
- Sandy and Deborah Riley

Donations \$100 - \$499

- The Canadian Society for Landscape Ecology and Management
- Campbell Grierson and Carol Gibb
- Pamela and Andrew Cooke
- Frances McCoubrey
- Darlene Stepanik and Peter Kirby
- Terrance Chapelsky
- Christine Skene
- Neil Richards
- Diane Malley
- Daphne and Gordon Nicholls
- Marcel and Louise Mollot
- Frances Pick
- Anne Saltel
- Andrea Sloan
- Nisha Tuli and Matthew McCandless
- Canadian Environmental Grantmakers' Network

Anonymous Donations through CanadaHelps totalling \$1,747.25.

ADDITIONAL THANKS

IISD-ELA would also like to recognize and thank the following for their partnership and support:

- Canadian Space Agency
- Eagle Lake First Nation
- ESDC Canada
- Environment Canada
- Gowlings
- Lac Seul First Nation
- Lake of the Woods Water Sustainability Foundation
- Lakehead University
- Manitoba Hydro
- Michigan Technological University
- NSERC
- Ochiichagwe'babigo'ining (Dalles) First Nation
- Obashkaandagaang (Washagamis Bay) First Nation
- St. John's Ravenscourt School
- Stratos Inc.
- The Grand Council Treaty #3
- Trent University
- University of Manitoba
- University of Regina
- University of Toronto
- University of Waterloo
- Wabauskang First Nation
- Wabigoon First Nation
- Whitefish Bay First Nation
- Wilfred Laurier University
- Winnipeg 1 School Division
- WSP Canada Inc.
- York University

REPORT OF THE INDEPENDENT AUDITORS ON THE SUMMARIZED FINANCIAL STATEMENTS

To the Members of the IISD Experimental Lakes Area Inc.

The accompanying summarized financial statements, which comprise the summarized statement of financial position, summarized statements of operations and changes in unrestricted net operating assets, are derived from the audited financial statements of the IISD Experimental Lakes Area Inc. for the year ended March 31, 2016. We expressed an unmodified audit opinion on those financial statements in our report dated June 22, 2016. Those financial statements, and the summarized financial statements, do not reflect the effects of events that occurred subsequent to the date of our report on those financial statements.

The summarized financial statements do not contain all the disclosures required by Canadian accounting standards for not-for-profit organizations. Reading the summarized financial statements, therefore, is not a substitute for reading the audited financial statements of the IISD Experimental Lakes Area Inc.

Management's responsibility for the summarized financial statements

Management is responsible for the preparation of the summarized financial statements.

Auditors' responsibility

Our responsibility is to express an opinion on the summarized financial statements based on our procedures, which were conducted in accordance with Canadian Auditing Standards (CAS) 810, "Engagements to Report on Summary Financial Statements".

Opinion

In our opinion, the summarized financial statements derived from the audited financial statements of the IISD Experimental Lakes Area Inc. for the year ended March 31, 2016 are a fair summary of those financial statements.

Winnipeg, Canada October 3, 2016

Ernst & young LLP

Chartered Professional Accountants

IISD-ELA STATEMENT OF FINANCIAL POSITION

As at March 31		
	2016	2015
	\$	\$
ASSETS		
Current		
Cash	673,473	117,613
Restricted cash	315,018	188,177
Grants receivable	354,530	261,000
Accounts receivable	52,525	41,608
Prepaid expenses	125,128	157,372
Total current assets	1,520,674	765,770
Capital assets	507,602	332,368
	2,028,276	1,098,138
LIABILITIES AND NET ASSETS		
Current		
Accounts payable and accrued liabilities	289,238	203,460
Due to IISD	223,177	271,416
Deferred contributions	533,272	87,861
Deferred capital contributions	405,969	202,563
Total current liabilities	1,451,656	765,300

NET ASSETS

Net assets invested in capital assets	101,633	129,805
Sustainable Future Fund	500,000	250,641
Unrestricted net operating deficit	(25,013)	(47,608)
Total net assets	576,620	332,838
	2,028,276	1,098,138

STATEMENT OF OPERATIONS AND CHANGES IN UNRESTRICTED NET OPERATING ASSETS

	2016	2015
	\$	\$
REVENUE		
Designated grants	2,250,000	2,250,000
Other	463,580	233,871
Sustainable Future Fund	56,841	_
Interest	1,564	2,095
	2,771,985	2,485,966
EXPENSES		
Field station operations	899,321	758,737
Field research	628,312	458,035
Administration	572,587	905,189
Laboratory research	280,841	146,553
Marketing and fundraising	228,707	49,683
Outreach and education	167,794	85,572
	2,777,562	2,403,769
Excess of revenue over expenses (expenses over revenue)	(5,577)	82,197
for the year		
Appropriation to (from) unrestricted net operating deficit		
Change in net assets invested in capital assets	28,172	(129,805)
Decrease (increase) in unrestricted net operating deficit	22,595	(47,608)
Unrestricted net operating deficit, beginning of year	(47,608)	_
Unrestricted net operating deficit, end of year	(25,013)	(47,608)

NOTE: The full 2015-2016 IISD-ELA financial statements are avaialble on our website iisd.org/ela/annual-report

2015-2016

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IISD-ELA 2015-2016 Staff

Philip Anderson Ken Beaty Katie Chan Andrew Chapelsky Colin Charles Danielle Chiasson Kelli-Nicole Croucher Simon Day Jamie Dearnley

IISD-ELA 2015-2016 Board of Directors

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IISD-ELA BEAR PATROL

The IISD-ELA Bear Patrol was established along with IISD-ELA in 1968. The members of this group have varied over the years but all have played their important roles to protect the camp from wandering bears.

Some of the ongoing activites of the group include: long and random meetings to unknown parts of the boreal forest, swimming, playing, fetching, canoeing, camping, wrestling and, most importantly, barking at bears.

IISD-ELA is very proud of this program and the level of sophistication it has reached. We have high hopes of attracting more members moving forward and maybe even a Post Dogtoral Furrlow one day.

- Kathy Clark, IISD Puplishing Mangier

MOLLY, Furcility Manager

GUINNESS, Head Barktender

BACO, Leashing Agent

HOLLY, Mutteorologist

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