

Pigeon Lake Watershed Association

Annual Report 2012/2013



“be part of the solution”

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Table of Contents

Board's Message	3
Background.....	4
PLWA Overview	4
Mission	4
Roles.....	4
Principles.....	4
Strategy - Health of the Lake and its Watershed	5
Ongoing Priorities	6
Overview of 2012-2013.....	6
Stewardship	6
Building Relationships	6
Leadership Advisory Session	7
Communication	7
Home-site Consultations	7
Education: Newcomer Package.....	8
Education: Events	8
Water Monitoring In-Depth Assessment.....	8
Pigeon Lake Watershed Management Plan ("PLWMP")	9
Steering Committee & Stakeholders.....	10
Topics.....	11
Model Land Use Bylaw	11
Cosmetic Fertilizer.....	12
Watershed Community Engagement	12
Restoration, Enhancement and Protection of Shorelines	12
Financials.....	13
Memberships.....	15



Pigeon Lake Watershed Association

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Board's Message

It has been a busy year for the Pigeon Lake Watershed Association (PLWA). The focus has been to inform and educate the public on topics related to the health of the watershed and lake. Our four key areas of work this past year have included progress on:

- Water Quality
- Watershed Management Plan
- Stewardship and summer events and
- Reaching out to our members.

With the help of the municipalities, the provincial and federal governments, volunteers and other partners, we are making headway. Excellent progress been made in all four areas.

We hope that this report inspires you to go to our website and to learn more about the programs offered and ways you can take environmental action for a healthier watershed, lake and community.

The board would like to thank all the members, donors and interested parties who have shown their appreciation, encouragement and support. Our mission is strong - *to enhance, preserve and protect Pigeon Lake and its watershed.*

We think that 2013 - 2014 will be an exciting one. With your help and support we will continue the course for a healthy and environmentally sustainable ecosystem for current and future generations.

Emile Beaudry - Vice-President
Ryan Devlin - Director
Susan Ellis - President
Michael Gaian - Director
Bob Gibbs - Director

Jeff Lloyd - Director
Marcia Mielke - Treasurer
Hugh Sanders - Director
Don Smallwood - Secretary
Leonard Standing on the Road - Director



Background

PLWA Overview

The Pigeon Lake Watershed Association (PLWA) is an Alberta not-for-profit society that was founded in 2007. It is a volunteer association governed by a Board of Directors and supported by its members. The Pigeon Lake watershed includes two counties, four First Nation Reserves, ten incorporated Summer Villages, several unincorporated hamlets or community areas, two Provincial parks, numerous recreational developments, church and youth camps, golf courses and more.

PLWA was established as a response to public concerns about lake health, blue green algae blooms, fish kills, land development, and resource development in the watershed.

Mission

The Mission of PLWA is to *enhance, preserve and protect Pigeon Lake and its watershed as a healthy and environmentally sustainable ecosystem for current and future generations.*

To achieve its mission, PLWA engages with stakeholders on environmental best practices, advises on effective land-use policies for governments and regulators, and takes a leadership role in educating the public on watershed protection and lake restoration.

Roles

PLWA's primary role is to inform, educate, advise and protect Pigeon Lake. In an effort to fulfill these roles PLWA has been:

- building relationships with municipalities and organizations around the lake;
- partnering with other water and nature organizations whose mandates can further its mission; and
- creating a platform of information for members and stakeholders.

Principles

The natural ecosystems and water quality must be restored and preserved such that the water quality and water levels of the lake and its tributaries are at optimum levels.

Environmentally sustainable land use practices must be **identified and promoted to** avoid or minimize the biophysical impact of the total ecosystem within the watershed, the lake and its tributaries.

Engage stakeholders in environmental best practices such that residents, businesses, industries and municipal agreements located within the watershed (or indirectly affecting the watershed) are committed to their use as they plan, develop, maintain and utilize Pigeon Lake and its watershed region.



Strategy - Health of the Lake and its Watershed

The drainage area of the Pigeon Lake watershed is less than twice the size of the lake. This means that the activities of a relatively small number of people can impact the health of the lake.

The health of Pigeon Lake requires a strategy that will support the health of both the lake and its watershed area. PLWA has been working to support both.

The PLWA strategy aligns to the recommendations of the 2008 State of the Watershed Report by Aquality Environmental Consulting Ltd.

The Aquality report has four categories of recommendations:

1. Planning – An ongoing, regulatory approach including the watershed management planning process, and the municipal process (inter-municipal development plans, bylaws, others).
See Pigeon Lake Watershed Plan section
2. Stewardship – On-going community involvement of education and awareness, use of cottage owner BMP's and agricultural BMP's.
See the Stewardship section
3. Reclamation and restoration – This involves activities such as riparian restoration, replanting and restoration of critical lacustrine marsh areas and riparian vegetation and others.
See the section on Restoration, Enhancement and Protection of Shorelines and Watershed Plan
4. Data gaps – Significant data gaps will need to be filled to move forward with a Watershed Management Plan. These gaps include drained wetland inventories, an updated and measured nutrient budget for the lake and riparian health assessments.
See Pigeon Lake Watershed Plan section

A Pigeon Lake Shoreline Health and Integrity Assessment was conducted and the results along with a shoreline video and user guide was released in 2008. Studies and data are being collected for the nutrient budget. PLWA is actively involved in collecting the data for scientific analysis. See Water Monitoring In-depth Assessment on page 8.

Following the October 2012, release of the PLWA Summary Report on Methods for the Control of Nuisance Blue-Green Algae, the PLWA membership gave PLWA a strong endorsement for its work and approach for enhancing water quality; expressed an understanding that there is no one quick fixes or magic bullets; and stated a strong desire to proceed with a research based approach employing proven courses of action. Many members underscored the need to eliminate nutrients and address root causes.



PLWA is now moving forward with on-land initiatives and the Association of Pigeon Lake Municipalities (APLM) has taken the lead on in-lake initiatives. The two organizations are working closely together sharing knowledge and expertise.

PLWA efforts are focused on lowering levels of nutrients coming into the lake. Water quality testing, home site consultations and active education, are all critical to improving water quality. We are developing a watershed management plan that will give research-based information on best practises and recommendations to landowners and municipalities on important watershed topics to enhance the lake. There will also be recommendations for the PLWA to help with the support of the implementation of these topics.

See more detailed information and highlights below.

Ongoing Priorities

- Stewardship, Education, Communication
- Pigeon Lake Watershed Management Plan (PLWMP)
- Restoration, Enhancement and Protection of Shorelines
- Water Quality Monitoring
- Responding to Watershed Development

Overview of 2012-2013

Stewardship

Stewardship is the responsible care and management of our land, water and wildlife resources through positive environmental action. Everyone has a role to play and has the opportunity to be an environmental steward. Over the past year PLWA has been working to connect with the residents of the Pigeon Lake watershed in a variety of new ways. The privilege of living and recreating in a watershed is accompanied by responsibilities and our stewardship programs and services have helped individuals learn how to incorporate these responsibilities into their lives. Below are some highlights of the 2012-2013 stewardship programs.

Building Relationships

PLWA's success is based on the growing relationships with the many organizations, associations and groups with similar interests and goals. Working with leaders, partners and stakeholders from around the lake, has enabled PLWA to begin to fund restoration opportunities, supporting one another and learning together. PLWA directors have attended various stakeholder meetings and informal gatherings including the Alberta Land Stewardship - Stewards in Motion conference and the Central Alberta Recreational Lake Annual conference. We seek and share information, and collaborate on ways to improve the watershed and lake.

The following are some of the groups that are working with and assisting PLWA with its mission, roles and priorities:

- Alberta Agriculture and Rural Development
- Alberta Environment and Sustainable Resource Development
- Alberta Health Services
- Alberta Lake Management Society
- Alberta Land Stewards
- Alberta Riparian Habitat Management Society (Cows and Fish)
- Alberta Tourism, Parks & Recreation
- Association of Pigeon Lake Municipalities (APLM)
- Battle River Watershed Alliance (BRWA)
- Central Alberta Recreational Lakes (CARL)
- First Nations Bands
- Leduc County
- Summer Villages
- Nature Alberta
- Wetaskiwin County

Leadership Advisory Session

In support of building relations, a second annual leadership advisory session was held in April this year with invitations going to leaders from the many local governments, and organizations around the lake. The objectives of the session were to have as many Pigeon Lake leaders come together to:

- review the planned summer lake programs, get feedback and determine how to make them successful,
- update and get feedback on the PLWMP, the Model Land Use Bylaws and Cosmetic Fertilizer Use Best Practice, and
- to receive an APLM in-lake update.

Communication

The PLWA website www.plwa.ca communicates information about PLWA activities and posts reports published by many environmental experts. It is a wealth of valuable information and links and is updated on a regular basis. We appreciate the assistance of Summer Villages who have posted on their websites PLWA updates and links to our website.

Home-site Consultations

For the 5th year in a row, PLWA has made available confidential home-site consultations, free of charge, to the residents of Pigeon lake. These consultations are done by knowledgeable representatives from Nature Alberta who offer recommendations for new and sustainable landscaping techniques. Their advice is useful to help filter landowner run-off into the lake thereby minimizing environmental impact.



In the summer of 2012, 33 home-site consultations were sponsored by PLWA and 22 from Sundance Beach. These home-site consultations included information on invasive plants, fertilizers and pesticides, phosphates and harsh chemical cleaning products and general shoreline health. View the complete report on the PLWA website.

Education: Newcomer Package

Our goal in 2012 was to help new comers make smart and informed environmental decisions about living by a lake. The PLWA created 100 packages containing:

- an introduction to the lake, its current state and the importance of the watershed;
- an introduction to the PLWA;
- a “Living on the Edge” book;
- information on invasive plants within the watershed and how to eradicate them, and
- contacts and websites available for additional education.

These packages are being distributed through the Summer Village Administrators.

Education: Events

PLWA Provincial Park Walk & Talk Sessions

Working in partnership with Pigeon Lake Provincial Park personnel, Battle River Watershed Alliance, Nature Alberta, AESR - Respect Our Lakes Program and the Alberta Lake Management Society, two events were organized for the users of Pigeon Lake. These events included stations on different healthy lake topics, learning about the importance of shorelines, what makes them healthy, water testing, water bugs and more.

Events

PLWA directors and volunteers attended many local events such as farmer markets and summer village AGM’s, informing the public of its mission, handing out pamphlets containing key information, and engaging people in the activities of the PLWA.

Resources

The “Birds of Pigeon Lake’ Brochure was finalized and distribution has begun. The brochure identifies key birds that require healthy shorelines to thrive. The brochure has bird watching tips, identification of the birds and a checklist challenge.

Water Monitoring In-Depth Assessment

Water quality testing has been a priority since 2007. Partnering with Alberta Environment and Sustainable Resource Development (AE/SRD) and Alberta Lakes Management Society (ALMS) the group continues to work on building a nutrient budget for Pigeon Lake. The water sampling focus is on “point source sampling”. PLWA volunteers use their boats to take water samples at specific points around the watershed including streams and the lake itself.

Building on our current information and enhancing it with further results will enable targeting efforts and making informed decisions about moving forward on what is best for the lake. The model will indicate the potential difference the different choices could make for the health of the lake over what time periods.

Water samples give information on the following characteristics that characterize general water quality to see trends and changes over time:

- lake water level
- lake water clarity
- temperature and dissolved oxygen levels
- chlorophyll a levels
- total phosphorus and nitrogen levels
- microcystin concentrations and
- various water chemistry parameters.

Information collected in past and in the coming year will contribute to the development of an accurate “nutrient budget” for Pigeon Lake. This will serve as a basis for decision making and will guide future mitigation strategies.

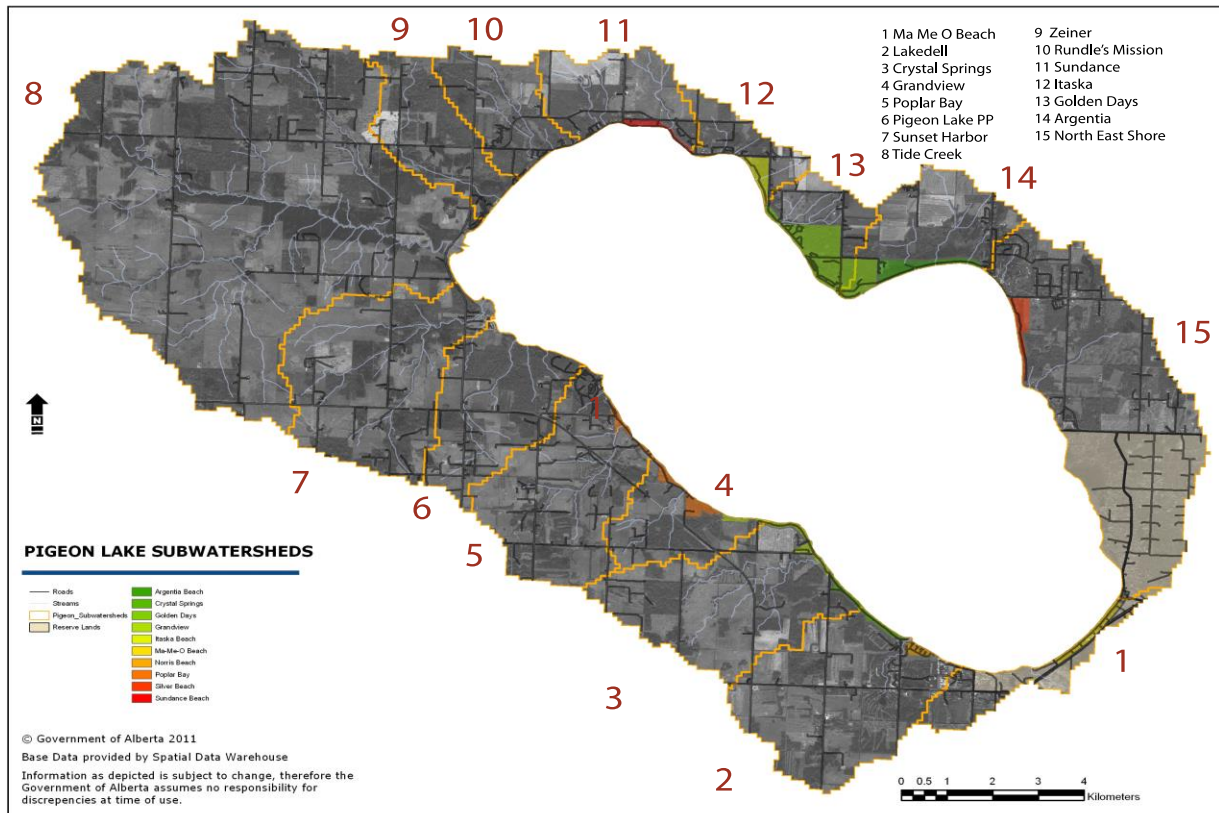
View the PLWA 2013 March Water Update, April 2013 on the PLWA website “www.plwa.ca”.

Pigeon Lake Watershed Management Plan (“PLWMP”)

The goal of the PLWMP is to promote the watershed’s natural environment and water quality by recommending action-oriented watershed policies and best practices that support the long term health, protection and restoration of the watershed.

A WMP is a strategy and a work plan for achieving water and land goals. It will provide assessment and management information for the Pigeon Lake watershed area. Through funding received from donations, primarily the RBC Blue Water Project and Leduc County, the plan is moving forward.

Below is a view of the Pigeon Lake and the watershed area.



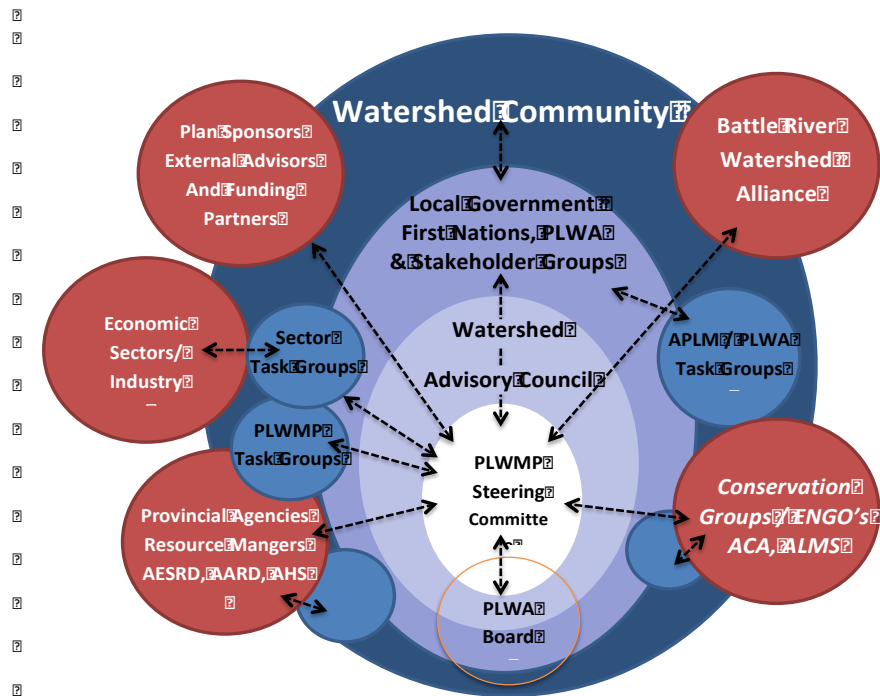
A WMP is complex and includes science, analysis, actions, participants and resources related to its development and implementation. The plan will be a roadmap for all Pigeon Lake stakeholders to use with specific recommendations and best practices to improve the natural systems and enhance water quality.

PLWA has been engaged over time in developing a terms of reference for this document. It has been critical to name “how”, “what”, “when”, “why”, and “who” relative to the plan.

Steering Committee & Stakeholders

The PLWMP steering committee is sponsored by PLWA with support from many government and non-government organizations including representative from Alberta Agriculture and Rural Development, Alberta Environment, Battle River Watershed Alliance, Leduc County, and several Summer Villages. Interaction between these stakeholders has been crucial to ensure all factors are taken into account. Subcommittees with the various stakeholders and experts are formed and recruited as the various modules move forward.

WMP Circle of Involvement



Topics

The WMP is proceeding topic by topic to research and produce recommendations and best practices on each of the proposed topics:

- model land use bylaws;
- cosmetic fertilizer;
- land development practices;
- storm/surface water management;
- riparian/shoreline restoration and management;
- agricultural best practices;
- oil and gas sector;
- land conservation and stewardship; and
- Pigeon Lake watershed atlas and protecting priority landscapes.

Model Land Use Bylaw

The PLWMP Steering Committee has developed a comprehensive draft bylaw for land use of land within 800 metres of the shoreline. The goal is to develop a set of model land use bylaws that will be recommended to Pigeon Lake municipalities for consideration and adoption. It will address:

- restricted land uses within the lakeshore development area;
- building development setbacks from the legal bank;
- construction management and landscaping;
- storm drainage and rainwater harvesting;
- protection of riparian lands and wet lands; and
- use of environmental reserve lands.

The key purpose is to conserve and manage of the natural ecological infrastructure that protects and sustains water quality on private and public lands in the watershed.

The steering committee is on its 3rd draft of the document and has presented the information at various meetings and gatherings around the lake.

Cosmetic Fertilizer

Two primary fertilizer nutrients, nitrogen and phosphorus are carried into the lake through ground water and surface water. Phosphorus creates algal blooms and nutrients through the process of eutrophication turns the lake water green.

The fertilizer strategy will involve:

- individual property owners - education on alternative practices;
- local government - institute policies and bylaws; and
- PLWA - broad policy leadership and education for alternative practices.

Watershed Community Engagement

An engagement strategy was developed with a simplified version of the International Spectrum of Public Participation. Extensive outreach had been undertaken to encourage people to attend. Three local hall meetings in 2013 where interested parties were given the opportunity to learn, converse and provide input into the PLWMP and the first two topics.

Three surveys are underway to further engage and collect input on the work to date. Development of a PLWMP website is also underway.

Restoration, Enhancement and Protection of Shorelines

Striving to foster a better understanding of how improving of riparian areas can enhance landscape health and productivity, PLWA partnered with the Summer Village of Grandview and secured Alberta Riparian Habitat Management Society (Cows & Fish) to work with a local land owner to fence and restore Grandview Creek. This project was funded by the TD Friends of the Environment Foundation and the Summer Village of Grandview and was completed in 2013.



Financials

The 2012 financial year ended with an increase in members' equity of \$28,485, bringing PLWA's equity to \$117,890. The revenues were up substantially with large donations received from the RBC Foundation, TD Friends of the Environment Foundation and Summer Villages. Grants were received from the Land Stewardship and Government of Alberta Community. Generous donations from 41 individuals were also received. Extensive fund raising was undertaken in 2011 and 2012 for expenses associated with the Pigeon Lake Watershed Management Plan in 2013 and subsequent years.

The Association continues to raise funds from environmental groups, corporate foundations and individuals to fund stewardship, education and other programs.

Due to the struggle in 2013 with getting funding and in order to ensure the Association remains viable, the Board passed a new cash reserve fund policy in March. The objective of this policy is to ensure that the Association can sustain operations through periods of delayed or lower streams of revenue. The policy states:

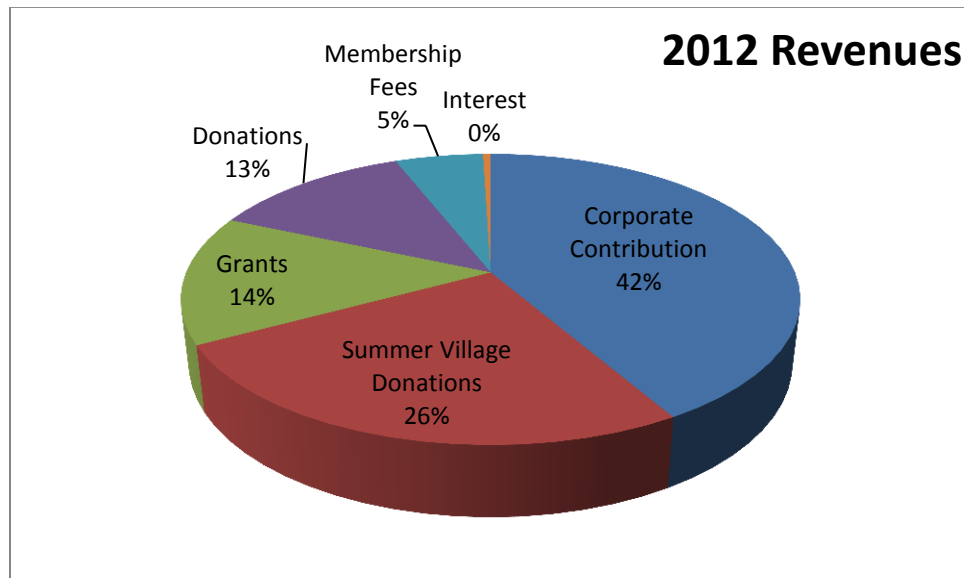
“The PLWA must maintain a 67% of the previous year ending cash balance at all times, and that balance shall not be reduced to less than \$50,000”.

The statements were audited by Pennock, Acheson, Neilsen and Devaney. A summary of the financials is below. The audited financial statements can be viewed on our web site at www.plwa.ca



Pigeon Lake Watershed Association Statement of Financial Position As at December 31, 2012		
	December 31, 2012	December 31, 2011
Assets		
Cash	\$ 119,189	\$ 90,698
Total Assets	\$ 119,189	\$ 90,698
Liabilities & Members' Equity		
Accounts Payable	\$ 1,300	\$ 1,294
Members Equity	117,889	89,404
Liabilities & Members' Equity	\$ 119,189	\$ 90,698

December 31, 2012	December 31, 2011
\$ 72,107	\$ 49,995
\$ 12,300	\$ 451
10,346	-
8,486	10,344
5,000	-
3,853	1,790
1,564	893
1,365	1,100
708	4,164
44,330	18,742
\$ 27,777	\$ 31,253



Memberships

As of May 1, 2013 the Board of Directors approved that PLWA membership renewal fees are set to zero. The goal of the PLWA is to have all residents, both full and part time, as members of the PLWA. Membership enables residents to:

- Support projects that require collective action for the health of the lake;
- Ensure sustainable development recommendations for development applications;
- Increase the weight of the PLWA collective voice on issues that require the PLWA to advocate;
- Stay informed on current situations that could impact the health of the lake; and
- Ensure that the PLWA is able to do all they can for the health of the lake.

The zero renewal fee ensures people continue to be connected and helps to ensure all residents and users of Pigeon Lake are informed, know what they can do to enhance the health of the lake and have a voice in the choices the PLWA poses to members. Members are instead requested to make a donation to the Association in lieu of an annual membership fee. As the PLWA is a registered charity donations are tax deductible a tax receipt for all donations will be issued. In addition the PLWA receives a grant from the province's Community Spirit program for a portion of individual donations made.

Assuming a 50% matching grant a \$33 donation (about \$20 after tax) results in approximately \$50 of revenue to the PLWA.