Lesser Slave Watershed Council

2012-13 Annual Report

April 1, 2012 to March 31, 2013

Written for the LSWC
By Meghan Payne, BSc.
LSWC Executive Director

Devonshire Beach on a beautiful summer day.

The West Prairie River south of High Prairie.

Get to know the Lesser Slave Watershed

Sawridge Creek meets the Lesser Slave River.

Protecting critical Walleye spawning habitat near Buffalo Bay.

The Heart River Dam spillway.

Supporters, Sponsors and Friends

The LSWC would like to recognize all of our supporters. Each year the list gets longer and we are proud to work with each organization in different capacities.

Town of High Prairie

Town of Slave Lake

The South Peace News

93.5 Prairie FM

Designs By Tam

Peace Country Beef and Forage Association

TransCanada Corporation

The High Prairie Riparian Action Team

Lesser Slave Forest Education Society

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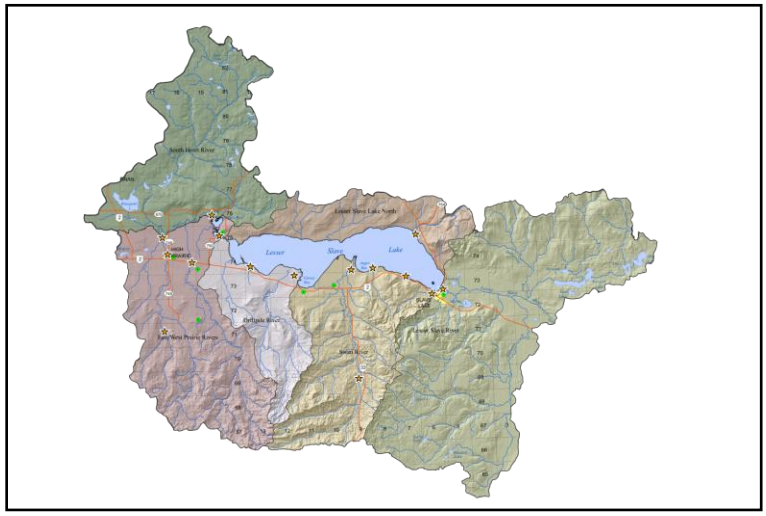
Who is the LSWC?

The Lesser Slave Watershed Council is a charitable, non-profit group of volunteers who work with the provincial government to maintain the health of the Lesser Slave Watershed.

Members of the council include representatives from towns, municipalities, First Nations, Métis Settlements, industries, cottage owners, non-profit organizations as well as recreation and tourism groups who have an interest in how the waters of Lesser Slave Lake and its tributaries are managed.



A map of the Lesser Slave Watershed showing major sub basins and tributaries.

In January of 2007 the LSWC was recognized by the Government of Alberta as the Watershed Planning and Advisory Council (WPAC) for the Lesser Slave watershed under the *Water for Life Strategy.* The LSWC was granted charitable status under the Canada Income Tax Act April 1, 2010.

Mission Statement

The Lesser Slave Watershed Council will be a proactive organization working towards the sustainability of the Lesser Slave Lake Watershed with regard to the economic, social and environmental health of the region and its citizens.

Vision

"The Lesser Slave Watershed, including its lake and rivers, is a bond that brings communities together, is a part of each citizen's life, is a prime asset and renewable resource, and is a generator of economic development."

Guiding Principles

- Be accountable to all stakeholders and citizens within the watershed.
- Work collaboratively with stakeholders and citizens to improve the health of the lake and its watershed.
- Share responsibility for the health of the lake and its watershed by involving communities and stakeholders in watershed management.
- Promote a better understanding of natural watershed processes and the interaction between land, water, ecosystem and human activities.

LSWC Board of Directors

The LSWC Board of Directors are self selected by their sector to sit on the LSWC board. In the case where no one is appointed or selected to represent a sector an election is held at the LSWC AGM. To be eligible for a board seat you must be an LSWC member in good standing prior to the AGM, be nominated by another member in good standing, and the nomination must be seconded by an additional member. All voting members of the LSWC can vote at the AGM.

2012-13 LSWC Board of Directors

Name:	Sector or Organization Represented:
Wilfred Willier	Town of High Prairie
Rob Irwin (Mark Missal)	Town of Slave Lake
Brian Rosche (Jeff Cummins)	MD of Lesser Slave River
Guy L'Heureux (Ray Dupres)	MD of Big Lakes
Vacant	First Nations
Mary Onukem	Métis Settlements
Gordon Sanders (Todd Bailey)	Forest Industry
Tammy Kalita	Fishing Tournaments & Recreation
Monica Dahl	Alberta Environment
Michelle Keohane (Myles Brown)	Alberta Sustainable Resource Development
Vacant	Federal Government (DFO)
Bonnie Raho	Environmental Non-Government Organizations
Sherrie Hay	Tourism Operators/Groups
Murray De Alexandra	Commercial Fisherman's Association
Brian & Nona Elliott	Cottage Owners/Country Residential
Lynn Sandquist (Lorne Pratt)	Agriculture
Carl Chykerda	Oil and Gas Industry
Gary Couch	Member at Large

LSWC Executive Board Members

LSWC Chairman: Murray De Alexandra
LSWC Vice Chairman: Guy L'Heureux
LSWC Treasurer: Lynn Sandquist
LSWC Secretary: Gordon Sanders

The LSWC currently has 42 general members and two employees, the Executive Director Meghan Payne and Watershed Coordinator Lindsie Fairfield.

Pictured above is the majority of the LSWC Board at our October 2012 meeting in Kinuso after receiving LSWC jackets as a token of appreciation for the time and effort put into volunteering for the organization.

LSWC Summary of Operations

From March 31, 2012 to April 31, 2013 the LSWC worked to deliver Water for Life goals in addition to our own goals and messages across the Lesser Slave Watershed. Again we gratefully acknowledge the financial and in kind support provided to our organization by the government of Alberta. Each year since 2007 the LSWC has received an operational grant that allows the organization to effectively carry out our goals. In addition to the core support received from Alberta Environment and Sustainable Resource Development, the LSWC was recipient of several additional grants including $25,000 from Pennwest, $8,500 from TD Friends of the Environment Foundation, $15,000 through the MD of Big Lakes Agricultural Service Board, $15,000 from the MD of Big Lakes to support water quality work, $7,500 from the Smokey Applied Research and Demonstration Association (SARDA) for water quality work, $5,000 from the MD of Lesser Slave River for water quality, and a $2,000 RBC Blue water grant to support education and outreach.

In the 2012-13 fiscal year the LSWC re-wrote our rolling Strategic three year plan to better reflect our goals and mission statement. This plan has 4 main goals that encompass the work we do and the things we want to achieve.

1. Establish an ongoing collaborative planning and management framework for the Lesser Slave Watershed.
2. Facilitate watershed research that addresses issues and enables management actions within the watershed.

3. Promote watershed education, awareness and stewardship in the watershed
4. Establish a strong operational model in which the LSWC is sustainable, has clear governance, capacity and funding.

Each year we prepare an operational plan with action items that will allow us to achieve these four broad goals through our year's activities and projects.

Getting Out There

Throughout 2012-13 the LSWC board and staff attended many events, conferences and meetings related to watersheds, water policy, WPAC's and more. Meghan Payne, the LSWC's Executive Director attended the Canadian Water Summit in June 2012 in Calgary Alberta. This event featured speakers from across Canada and a day of learning, discussing and networking about the future of water in Canada. The WPAC's of Alberta also sponsored the Water Summit to show our support for Canada wide water events like this.

Meghan and Wilfred Willier attended the Assembly of First Nations National Water Conference in Edmonton in March 2012. This event was very educational for both First Nation and non First Nation people in attendance. One of the highlights of the event was having National Chief Shawn Atleo give a keynote address and talk about the importance of water in his life. There was a lot of discussion about water rights, treaty rights to water and how First Nations and existing governments can work together despite differing positions and put the future of freshwater first and foremost. Stephen Kakfwi, former North West Territories Premier and Dene Nation President spoke to the group about the North West Territories Water Strategy. In this project, First Nations and governments across the territories came together to develop a plan to address water issues and concerns without any mention of water rights or treaties. This strategy looks on past and present water and what is wanted for the future. It has an action plan that includes a monitoring program to measure progress over time. The completion of this plan was deemed a huge success for everyone involved. The hope is that First Nations across the rest of Canada can work within their watersheds to create similar plans.

LSWC Agricultural representative Lynn Sandquist attended an AEPA forum on the organizations behalf in Leduc, Alberta. The Agri-Environmental Partnership of Alberta (AEPA) is an inclusive multi-stakeholder partnership of government, industry and public stakeholders working together to proactively address agri-environmental issues from a policy perspective. Their strategic priorities include:

- Engage in land-use, water, and agri-environmental policy development processes.
- Provide policy input on innovations and business models that will help the agriculture industry achieve AEPA desired outcomes.
- Engage and build understanding among our partners to enable the agriculture industry to be a credible contributor to agri-environmental policy development.

WPAC's and the AEPA have several common goals for water protection and sustainable practices in agriculture. The LSWC strives to stay in contact with them about projects and provide input to them when requested.

Each year Alberta Environment and Sustainable Resource Development (ESRD) host a WPAC forum where the ESRD department and WPAC Staff and Executive board members gather to share information and project updates. The 2012 Forum agenda included the following topics and presentations:

- Water for Life Implementation Review - Tom Davis and Lisa Fox
- Joint Canada - Alberta Implementation Plan for Oilsands Monitoring - department update.
- ESRD Evaluation and Reporting Branch - Monitoring and Science branch update.
- Wetland Policy in Alberta - update on the status of Alberta's wetland policy.
- Alberta's Wet Areas Mapping Initiative: empowering spatial decision making within government, industry and community groups - Barry White
- The Protocol for Watershed Management Planning in Alberta - Dug Thrussell
- The Guidebook for Watershed Management Planning in Alberta
- Moving from Planning to Doing: Implementation of Watershed Plans

The WPAC forum each year provides WPAC's with updates on many ESRD projects and initiatives that are in the works and are related to WPAC functions and activities.

In addition to attending conferences and forums the LSWC also attended two local trade shows within our watershed this year. Both the High Prairie Gun and Sportsman Show and the Slave Lake Chamber of Commerce Trade show were successful in Spring 2013. LSWC board and staff spoke with many people from around the watershed at these events, and provided them with more information about the LSWC and the work we do. This year we encouraged new membership by having a members raffle for an iPod and a Garmin GPS system. The kids in attendance really loved the promotional water drop stress balls this year at the trade shows. In addition, the LSWC and our neighbors, the Mighty Peace Watershed Alliance, partnered to share a booth at the April 2013 SARDA Agricultural tradeshow in Falher. This event is always well attended and the audience is made up of farmers and producers from around the Peace country.

Faust Osmose Contaminated Site

In 2012 our Board of Directors raised discussion and concerns about a local site that has been contaminated for 40 years. The old Osmose plant site is located near the shores of Lesser Slave Lake in the Hamlet of Faust, Alberta. This site has been contaminated from the chemicals used in the treatment of power poles and rail way ties as a means to preserve them. Some of these chemicals include PCP's, diesel fuel, chromium, copper and arsenic. In 1970 the plant burned down and the remains were bulldozed, potentially spreading soil contamination. Alberta Environment took possession of this site in 1973, put a fence around it and ordered that testing of soil and ground water be carried out. A number of studies have been done over the years and indicate that there is soil and ground water contamination at this site. For the past 40 years the Government of Alberta has been "risk managing" the site with a fence around the perimeter. Little reclamation or remediation has been done to remove or treat the contaminated soils which are dangerously close to our lake and the community. Many residents

of Faust and the surrounding area have expressed concerns about the site, its impact on the lake and would like to see it properly reclaimed as soon as possible.
The LSWC sent a letter to Minister Frank Oberle expressing the organizations concerns regarding the site in relation to the health of our watershed and requested that a cleanup effort be coordinated. A site like this in a community neighboring one of the largest lakes in Alberta is unacceptable and 40 years is a lengthy amount of time to have left it in its current state. The letter received in response stated that the site is being risk managed by ESRD to reduce the chances of spreading the contamination and that the LSWC will be updated on any reclamation efforts. This is something that our board members feel strongly about and the LSWC will continue to advocate for proper remediation of this controversial site.

Water Conversations Across Alberta
During the month of March 2013 Alberta Environment and Sustainable Resource Development hosted 20 public water conversations and 11 facilitated stakeholder forums. These public conversations with the Government of Alberta were the beginning of an ongoing discussion on the future of Alberta's water. The input from Albertan's through these conversations will help shape the strategic direction on four priority areas:

- Healthy lakes;
- Hydraulic fracturing and water;
- Drinking water and wastewater systems; and
- Water management.

A water conversation guidebook was produced by ESRD to give people more information and background on the four topic areas and better prepare them for the public conversations.

On March 12, 2013 members of the LSWC board and representatives from other sectors in the region joined ESRD at the Sawridge Inn and Conference Center in Slave Lake, Alberta for a facilitated stakeholder session focusing on the above four topic areas. Murray De Alexandra, Monica Dahl, Guy L'Heureux, Sherrie Hay, and Lynn Sandquist were in attendance and expressed that the forum was well organized and facilitated but that the people of Alberta need significantly more information on hydraulic fracturing, which is largely unavailable. Summaries of the Slave Lake conversation and others from across Alberta are posted online for public viewing. Here are the highlights identified from the Slave Lake event:

Healthy Lakes
- Polluter should pay for damage
- Lots of discussions have been had – time for action

Drinking water and wastewater systems
- Include ecosystem management in school curriculum
- Partnerships are important to source protection
- Lots of positives to regional planning

- Integrated management
- Time to take action

Hydraulic fracturing

- Albertans need more information and transparency
- Should look for ways to use non-potable water
- Water quality should come before economics

Water management

- Emphasis on regional planning – listen to local knowledge
- Protect watershed and ecosystem
- Drinking water should not be used by industry
- Need to take action now – we've talked enough
- Start with small steps, if necessary

In addition to having our board members participate in the facilitated stakeholder sessions the LSWC sent a letter to the Minister of ESRD with a more thorough explanation of our thoughts, views, and concerns on the identified topic areas.

In Summary 2012-13 was a successful year for the LSWC. We raised our organization's profile within the watershed and Alberta. We strived to participate in events across the province where possible for networking and information sharing benefits. The LSWC has had the most successful year to date in terms of receiving non government project funding. This has allowed us to expand and increase the number of stewardship and awareness activities we deliver. The LSWC looks forward to many successful projects and activities for our watershed in the upcoming year.

"The Lesser Slave Watershed, including its lake and rivers, is a bond that brings communities together, is a part of each citizen's life,...." - LSWC vision

Watershed Planning & Reporting

The Role of WPAC's and Integrated Watershed Planning

Integrated Watershed Management is a comprehensive approach to managing water and land resources. This involves looking at what affects the health of rivers, wetlands, and riparian areas, particularly in relation to water quality and quantity. It combines local and scientific knowledge about watersheds into environmental, social and economical sustainable contexts. This means bringing scientists together with people who live and work within a watershed to identify watershed issues and goals, and develop and implement plans for improving watershed management.

Alberta's *Water for Life* policy emphasizes that watershed management is a shared responsibility. Successfully achieving the goals of *Water for Life* demands that all sectors, authorities, and stakeholders take action to protect their watershed and ensure the sustainability of our water resources. Although, there are no formal requirements upon anyone in Alberta to develop a watershed management plan, WPAC's in Alberta have been designated as the lead organizations to facilitate and lead the process in each respective watershed across the province.

Published by ESRD, the *Guide to Watershed Management Planning in Alberta* is intended to lead local communities and *Water for Life* partnerships through the steps of developing and implementing a watershed management plan and encourages active participation from all stakeholders through the process. The planning process includes the development of defensible recommended actions toward the protection, restoration or maintenance of watershed conditions while supporting the water needs and uses valued by the broader community. However, plan development does not bring about change unless implemented. This guide outlines the iterative process of adaptive management from planning through to implementation and evaluation stages, and back to planning. It will therefore serve to lead the user through a coordinated process of continuously identifying and addressing priority issues and opportunities within watershed management.

Preparing for Watershed Planning in the Lesser Slave Watershed

The LSWC received WPAC status in 2007 and began full operations with staff in summer 2008. Some of the other WPAC's in Alberta have a long history and are significantly further along as organizations than the newer WPAC's like the LSWC. However, regardless of age, status or the lead organization, watershed planning must begin the same way in every watershed. WPAC's are encouraged to prepare a State of the Watershed report prior to starting an Integrated Watershed Management Plan (IWMP). The purpose of a State of the Watershed report is to evaluate the health of the watershed based on current available data for a select, standardized set of indicators. Part of the process of reporting on the state of the basin is also identifying where there are significant knowledge or data gaps. Some of the missing watershed data is critical for proper watershed assessment and future planning.

With a State of the Watershed report as a starting point, WPAC's must then engage with stakeholders and community members to develop an Integrated Watershed Management Plan that sets desired outcomes and establishes achievable action items. Once implemented, the IWMP provides a foundation of commitment to the future health of the watershed.

Water for Life planning primer workshop

The Lesser Slave Watershed Council contracted Lisa Fox of Sustainability Resources to facilitate a one day workshop in High Prairie on April 17, 2012. The intent was to explore the roles and functions of the provincial water governance structures, the *Alberta Land Stewardship Act (ALSA)* as it relates to sub-regional planning, watershed objectives, resource conservation plans, and how watershed planning and municipal water management strategies integrate into setting and achieving watershed goals.

The intended audience for this workshop was the LSWC board members as well as municipal elected officials, planning mangers, development engineers, agricultural land owners/operators, parks and facility staff, water & utility (infrastructure) related groups, community developers, planners, NGOs – water, government staff and elected officials, First Nations community leaders, and acreage owners. The attendance for the event was twenty people from around the watershed.

Challenges and concerns identified:

- Water consumption and water quality
- Jurisdictional confusion - who's role is what?
- Wastewater impacts on the lake
- Stop drainage of wetlands
- Managing multiple needs
- Inputs/outputs to LSL and associated water quality
- Agricultural impacts on water quality

The morning portion of the workshop was made up of four presentations. Lisa Fox of Sustainability Resources lead the discussions by giving a quick overview of Alberta's Water for Life strategy, the Land Use Framework and how WPAC's in Alberta integrate these government initiatives. Alberta Environment and Water staff member Sharron Willianen followed this section with an update from the Government of Alberta and affirmed the department's commitment to Water for Life and all its partners. Abdi Said-Omar then spoke about Integrated Watershed Management Planning in Alberta. It was explained that the watershed plans that WPAC's develop with stakeholders and communities in their watersheds will be important input for regional land use planning. WPAC watershed plans will have specific watershed goals and outcomes while regional plans will have broader scale goals for entire regions.

LSWC Executive Director Meghan Payne finished the discussions by sharing the main points from the LSWC's 2010 State of the Watershed report, including data gaps and recommendations for future work.

After lunch the participants were divided into two groups for some break-out sessions. Participants were asked to brainstorm and list all of the assets we have in our watershed and include a governing body, law, act, rule, legislation etc. that would play a role in managing these assets. Table 1.1 provides a summarized version of the lists developed by the group.

Table 1.1 Lesser Slave watershed assets and governance management tools.

Assets in our watershed	Current Management Tools for our assets
Wetlands & Riparian Areas	• Wetland Policy • Riparian Setbacks (Benchmark Research, Fisheries Act, Prairie Protection Act, Forestry Act) • Municipal Reserves (Bylaws) • Parks and Protected Areas • Fisheries Act (Provincial Fishery Regulations, Navigable Waters Act) • Migratory Birds Act (SARA, Shoreline Management Policy) • Economic Development Policy • Tourism & Development • Water Act, Water For Life • Biodiversity Framework, Wildlife Act, Hunting Regulations, SARA, ABMI • Prairie Forest Fire Act, Fire Fighters, SRD Fire Smart Program, Air Tankers, Municipal Fire Department, Volunteer Fire Fighters • Weather Monitoring Stations (LSWC, SRD, GOA) Environmental Policies • Best Management Practices• Wet Area Management • Government Standards • Federal & Provincial Guidelines • Education • Environmental Farm Plans, Range Improvement Plans, ARA, Mandated Provincially • Land Use Framework, Water Act, Species at Risk Act • Recreational Groups, Non-Profit Organizations, Water for Life, ROL, RTL • Climate, Water Conservation Objectives, Government MGT Practices (Codes) • Wildfire Hazard Updates, Fire Permits• Watershed Management Plan – Habitat, Water Quality • Watershed Management Plan • Regulation, Land Management Plan, Land Use Planning (LUF) • Research (State of the Watershed) • Forest Management Planning
Wastewater treatment facilities	
Marina's Boat Launches	
Commercial Fisheries	
Agriculture	
Industry (Forestry/Oil & Gas/Other)	
Parks/Green Areas	
Healthy Fisheries & Wildlife	
Organizations (Ducks, LSWC, ACA)	
Infrastructure (Weir/Railways/Water Intake)	
Water Quantity	
Social Benefits (traditional knowledge, festivals, fishing tournaments, recreation)	
Fire Protection	
Spiritual benefits of natural landscapes	
Fisheries	
Tributaries of LSL	
Industry	
Land Owners	
Municipalities and First Nations	
Soil quality	
Wildlife Biodiversity	
Recreation	
Forests / Trees	
Mines	
Campgrounds/Parks	
Boreal Center for Bird Observation	
Clean drinking water	
Water For Industry (Ag/Forest/Fish/Tourism)	
Wildlife & Biodiversity	
Fire Protection	
Education and stewardship – LSWC	

The workshop successfully raised the level of knowledge and understanding of Water for Life, the Land Use Framework, the roles of WPAC's in Alberta, and the process and context of watershed planning amongst the different stakeholder groups.

Watershed Visioning and Identifying Issues

The LSWC developed a set of interview questions used by staff and volunteers to conduct one-on-one interviews with pre-selected watershed stakeholders. Interviewees were selected to reflect a broad cross-section of perspectives and experiences of people living and working in the watershed. The 23 interviewees represented members from 10 sectors**:** agriculture, fishing, landowners, tourism, municipalities, oil & gas, forestry, non-government organizations (NGOs), education, and youth.

Most interviewees were long-term residents of the watershed: nine have lived in the watershed for more than 40 years, eight have lived here for 20 to 39 years, while four have lived in the watershed for less than 19 years. Two interviewees were young people in their teens attending school in the watershed.

Interviewees were asked to identify changes they had noticed in the watershed over their time of residence, the concerns they have, and what they consider to be the greatest risks to the watershed. The following list includes key issues identified, as well as issues and concerns that were raised:

- Algal blooms
- Agricultural activities impacting the watershed:
  - Cattle in the water
  - Fertilizers and pesticides
  - Land clearing and loss of wetlands
  - Riparian management
- Development pressures on the watershed:
  - Sewage treatment
  - Overall water quality and increasing pollution levels
- Impacts on the fishery
- Industrial activities impacting the watershed:
  - Oil and gas activities
  - Forestry activities
  - Stream fragmentation
  - Potential for railway spills
  - Faust Osmose site
- Destruction of habitat and unhealthy riparian areas:
  - Erosion along river banks
  - Degradation of riparian areas

  - Forest fires
- Lower water levels, increasing sedimentation (siltation), and climate change
- Groundwater levels
- Concerns about planning in the watershed, and the need for:
  - An integrated access management plan
  - Sustainable development plans
  - Monitoring
- Upgrade to the weir
- Education

Interviewees were then asked to rate their overall level of concern about the future of the watershed; 16 of the 23 people interviewed said that they have a **significant concern** about the future of their watershed.

Interviewees were asked to specify what they believe needs to be done to address their identified concerns and risks, and who they feel is responsible for taking action. Interviewees stressed the need to enforce existing regulations and/or improve regulations and bylaws. They also stressed the need to improve monitoring, data collection, reporting, and the need to work together to plan for sustainable development. Many also identified the importance of educating those living and working in the watershed, and building awareness regarding the importance of a healthy watershed.

Finally, interviewees identified the following key areas in the watershed that need to be protected or preserved:

- Buffalo Bay, Mud Creek and South Heart River, for fish spawning
- Sawridge Creek, for Arctic Grayling
- Joussard area specifically along the south shore, for Western Grebe and Tundra Swans
- Mouth of the Driftpile River, for Pelicans
- Provincial parks

Less specifically, interviewees also identified important natural ecological areas along the north shore of Lesser Slave Lake that need protecting, as well as key wildlife areas and corridors in the watershed, riparian areas, and areas on First Nations land.

The online survey questions were developed based on information collected through the in-person interviews. The online survey was open from November 4 to December 1, 2012. It was accessible through a link posted on the LSWC website and was promoted via the LSWC Facebook social media page, posters, media coverage and local events. Fifty-three (53) individuals responded to the six-question survey.

Respondents were asked to rate the impact of a list of activities on the watershed based on the following five-point scale: substantial negative impact, somewhat negative impact, neutral impact, somewhat positive impact, and substantial positive impact.

While over half of all respondents felt that all the activities listed had a substantial or somewhat negative impact, the results indicated that on average, **the most negative impacts** were associated with *clear cutting*, followed by *cattle in the water*, *fertilizer and pesticide use in agriculture*, and the *use of fresh water for oil and gas extraction*. *Sewage treatment,* followed by the *recreational use of waterways,* were thought to have the least negative impact.

When asked about specific areas to be protected or preserved, respondents were very supportive of the list provided by the in-person interviews. Respondents **strongly agreed** with protecting or preserving *Buffalo Bay* (for fish spawning), followed closely by *Mud Creek and South Heart River* for fish spawning, and *provincial parks.* Respondents were more evenly divided between **strongly agreeing and agreeing** that the following areas need to be protected or preserved: *Mouth of the Driftpile River* (for Pelicans), *Sawridge Creek* (for Arctic Grayling) and *Joussard South Shore* (for Tundra Swans). Additions to the list of areas needing to be protected or preserved included: Hilliard's Bay Park, Swan River Drainage for Arctic Grayling, Marten River for Grayling, Joussard Little Grassy and Joussard Point, and Winagami Wildland Park.

Meetings with Stakeholders

To share and conclude the project, the LSWC and its consultant's conducted two open houses, one in Slave Lake and one in High Prairie.

Slave Lake Open House

The consultants, Susan Abells and Michael Henry of Abells Henry Public Affairs, hosted a community open house at the Slave Lake Inn and Conference Centre on January 15, 2013. Twelve (12) watershed residents attended, including seniors, municipal representatives, environmentalists, and the media.

Meghan Payne explains the role of WPAC's in watershed planning and discusses the results of the online survey with the group at the Slave Lake open house.

In addition to issues already identified on the panels, the following issues and concerns were raised:

- The dump on the south shore, which is uphill from Lesser Slave Lake, has streams from each side of the dump running into the lake.
- The *Fire Smart Program*, which promotes tree and land clearing, creates run-off issues.
- Hydraulic Fracturing (fracking) which allows for the use of 1 million barrels of fresh water per well is an unacceptable level of use.
- Water licensing regulations that do not allow farmers to access water from the lake during periods of drought.
- Concern over the creation of a market for water licenses (a system in which individuals with water licenses who do not use their full allocation are allowed to sell the allocation they do not use).
- The Swan Hills plant, including the burning of PCPs.
- The time and energy needed by volunteers to implement an IWMP.
- The values of the organization, *Keepers of the Athabasca,* were identified to be in harmony with the *Idle No More* movement.
- LSWC's State of the Watershed (2009) is short on data.

High Prairie Open House

The LSWC and Abells Henry hosted a community open house at Smitty's Restaurant in High Prairie on January 16, 2013. Twelve watershed residents attended, including individuals from agriculture, commercial fishing, cottage owners and the media.

In addition to issues already identified on the panels, the following issues and concerns were raised:

- Lack of protection for riparian zones.
- Lakeshore land development, and modifications made to the beaches and shoreline: *"People do not have regard for the rules and regulations, and municipalities do not have enough money to do the inspections needed."*
- Access to trails for different types of recreational uses (walking, horses, ATVs, biking, etc.)
- Government is not listening to concerns raised regarding fisheries management. Water extraction permits are hurting fish bearing lakes. Water in these lakes need to be conserved.
- What do we want the watershed to be like in the future? *What will keep our kids here when the oil and gas is gone? The lake and the watershed will become our most important resource.*

Meetings with High School Students

The consultants visited three classrooms and had a discussion with high school students at two schools in High Prairie:

January 16: EW Pratt School in High Prairie, Grade 10 science class. 25 students.
January 16: EW Pratt School in High Prairie, Grade 11 biology class. 25 students.
January 17: St. Andrews School in High Prairie, Grade 11 biology class. 20 students.

The consultants presented short videos about what a watershed is, and then had a discussion with students about Integrated Watershed Management Plans and how they are developed and implemented. The consultants then asked students to work in groups to answer the following questions:

Students from the Grade 10 science class

- What do we do as human beings that impact the watershed?
- What can you do to help improve water quality?
- Who should be involved in decisions that affect the watershed?
- How do we connect with you to tell you what is going on in your watershed?

Meeting with First Nations

On January 17, 2013, Executive Director Meghan Payne and former LSWC staff Kelly Chalifoux made a presentation to the Lesser Slave Lake Indian Regional Council (LSLIRC) in Slave Lake. The LSLIRC is a regional board representing the five First Nations in the Lesser Slave watershed, with Chiefs and band members on the board. The purpose of this presentation was to introduce the LSWC, talk about the Government of Alberta's *Water for Life* Strategy, and ask for their participation in working on an IWMP.

The Board had many questions about the LSWC, including what it does and how it is funded. Meghan requested their participation in the watershed planning process. The LSLIRC suggested that the LSWC reach out to each First Nation individually because they are independent governments and each have their own interests.

Meeting with the LSWC Board of Directors

A third open house was scheduled for the Kinuso community on the evening of January 17, 2013 to complement an LSWC Board meeting scheduled for earlier in the evening. Unfortunately, both meetings were cancelled due to freezing rain and unsafe road conditions.

The consultants prepared a narrated PowerPoint Presentation to briefly summarize what was heard over the course of the stakeholder consultation project, and to suggest next steps in planning the IWMP. Executive Director Meghan Payne delivered the presentation to the Board on February 21, 2013.

The PowerPoint Presentation reviewed the following points:

1. Component parts of watershed planning
2. Principles of an IWMP
3. Steps in developing an IWMP
4. The role of consultation in the implementation of an IWMP
5. What we heard – issues raised during the consultation
6. What we learned from the consultation.

What was Learned from the Consultation

An IWMP generally addresses five main areas of concern: Water Quality, Water Quantity, Aquatic Ecosystem Health, Groundwater, and Watershed Planning. Most of the issues and concerns identified by residents and stakeholders in the Lesser Slave Watershed relate to Water Quality, Aquatic Ecosystem Health and Watershed Planning. In terms of a vision for the watershed, a participant at the High Prairie Open House summed it up this way:

> *"What will keep our kids here when the oil and gas is gone? The lake and the watershed will become our most important resource. "*

Going forward, there are four main planning issues that will need to be addressed:

1. The role of the LSWC Board of Directors in driving the development of an IWMP.
2. Frustration with provincial government department representatives, and with current policies and processes.
3. The need to find a meaningful and respectful way to engage First Nations in the development of the IWMP.
4. The role of young people, who are interested and understand the importance of a healthy watershed, but need to be more actively engaged.

Water Management Plan Recommendation: Weir modification project

In the 2012-13 year little progress was made on made in implementing the recommendations made in the approved water management plan for the Lesser Slave River. The department of ESRD worked with one of the local First Nations who had initially appealed the approval to modify the weir. Once the scope of the project was explained and clarified the First Nation agreed to withdraw their appeal and the LSWC has been informed by the Department of ESRD that the project is scheduled to go ahead when lake levels permits. This modification project requires relatively low water levels so the anticipated date is now spring 2014.

Science and Technical Projects

Watershed Nutrient Budget Project

Over the past few years, residents in the Lesser Slave watershed have been increasingly concerned with the health of their lake, and the quality of life that it provides. Concern has perhaps been greatest for the high productivity of the lake reflected by a high density of algae, undesirable algal blooms and for the potential deterioration the lake as a source of drinking water and as a fishery. The lake is a source of drinking water for the Town of Slave Lake, the hamlets of Grouard, Faust, Joussard and Kinuso and First Nation communities located around the lake therefore water quality is very important to these communities.

State of the Watershed Report 2009 recommendations:

•Since phosphorus is the limiting factor, to avoid increases in algal growth it is important to ensure phosphorus levels do not increase. The phosphorus budget of Lesser Slave Lake should be monitored regularly to ensure inputs are not increasing.

•Increased consistency and regular water quality assessments of Lesser Slave Lake and its tributaries are highly recommended. The data collected during these assessments should be complete enough in order to calculate the Alberta River Water Quality Index for all major tributaries. This will allow an easily understood and comparable index that corresponds to a rating system of water quality used throughout Alberta.

LSWC Tributary Water Quality Report

From 2007-2010 the LSWC, in partnership with Alberta Environment Monitoring Branch, sampled 16 tributary sites once during three different flow regimes. Samples were collected during spring runoff, after a summer rain event in June, and in the fall during low flows. In addition, samples from sewage lagoon discharge were also collected from municipal lagoons in the watershed to account for major point sources of nutrients.

Aquality Environmental was hired to do a basic water quality report on the results of these samples. This report is available from the LSWC office. Here are some of the key findings:

Nutrients

- Total phosphorus exceeded ASWQ PAL guidelines at *all* sampling locations.
- Total nitrogen exceeded ASWQ PAL guidelines at *most* sampling locations.
- Ammonia concentrations exceeded a conservative CCME PAL guideline at *most* sites.

Dissolved oxygen

- Dissolved oxygen concentrations were *below* the ASWQ PAL *minimum* guideline for samples taken at Grouard Channel, South Heart River and Swan River.

Recommendations from Aquality report include:

•Continued and more frequent monitoring of LSL tributaries for metals, nutrients, fecal coliforms and *E. coli.*

Meghan Payne fills sample bottles on a chilly May morning at the South Heart River.

In 2012 the LSWC and ESRD formed another monitoring partnership for the purpose of determining a nutrient budget for Lesser Slave Lake and its major tributaries. A nutrient budget for Lesser Slave Lake will use the information collected in our nutrient samples, the river flow data from Environment Canada flow river stations, and other parameters such as dissolved oxygen to quantify the amount of phosphorus and nitrates entering our lake. We can also estimate nutrient loadings in each of the five sub basins allowing us to see if some areas of the watershed have higher concentrations. As we move into developing an Integrated Watershed Management Plan for the watershed, nutrient data and a nutrient budget for the lake will be key technical information that will feed into the planning process.

The LSWC is working with many partners on this project. The Municipal District of Big Lakes has provided significant financial support as well as allowing the LSWC access to their effluent samples. The Municipal District of Lesser Slave River has provided financial and data support; the Smokey Applied Research and Demonstration Association (SARDA) has donated financially; and a portion of our 2012 AESA grant was allocated to this project as well. ESRD water quality specialist Alina Wolanski has helped the LSWC select water quality parameters for this project and provides ongoing technical expertise in kind as a member of the LSWC's technical committee. Monica Poultranko has been very generous in helping out with field procedures, lab and field sheets, sample numbers and much more. The LSWC appreciates all of the support for this ongoing project.

ESRD lent the LSWC the use of this water quality probe for the 2012 field season. This instrument measures water temperature, pH, dissolved oxygen and conductivity.

LSWC staff were trained by ESRD monitoring branch field staff to ensure proper sample collection and safety protocol are followed. In 2012 samples were collected once a month from May to October at sites on the South Heart River, West Prairie River, East Prairie River, Driftpile River, Swan River, and the Lesser Slave River. A second season of nutrient water quality samples will be collected from May to October of 2013. This will provide a better data set for nutrient budget calculations or future water quality modeling work. During fall of 2012 four municipal effluent lagoons were sampled during discharge and the intent is to sample the remaining lagoons in fall of 2013. Samples are sent to ALS laboratories for analysis and the data is sent to Alina at ESRD for validation and input into the government data system for storage.

When data collection is complete the LSWC will hire a contractor to put all of the data together, complete analysis on nutrient loadings, and use the lake BATHTUB model to project future loading scenarios. The final report will discuss the project, the findings, and make recommendations for managing nutrient loading in our watershed to minimize impacts on Lesser Slave Lake.

In late summer algal blooms can be detected via satellite from outer space. This image is from Google Earth. The west basin is shallower and has more tributaries than the east, resulting in larger blooms.

Education, Outreach & Stewardship

Working with the Lesser Slave Forest Education Society

Since 2010 the LSWC has been working with the Lesser Slave Forest Education Society (LSFES) to bring curriculum related water and wetland programming to our schools as well as water and environmentally focused events to communities in the watershed. The LSWC has been able to provide funding to the LSFES 3 out of the 4 past years and will provide funding again in the 2013 year. The funding from the LSWC allows the LSFES to employ environmental educators for spring and summer programming and to develop new water education programs. In addition to financial contributions, LSWC staff Meghan and Lindsie participate as instructors for field trips. The Grade 3 and 5 students learn about life cycles and freshwater ecosystems in the marsh invertebrate collecting "marsh monsters" program. Grades 5 and 8 learn about water quality and perform their own water sampling with LSWC guidance.

LESSER SLAVE FOREST EDUCATION SOCIETY

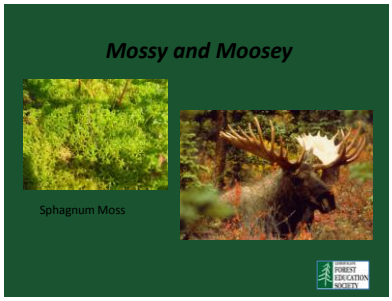
2011 – 2012 Accomplishments

This year the LSWC delivered 63 curriculum based school presentations and fieldtrips, interacting with a total of 1598 students from Grades 1 – 9 in 5 different communities. In addition, 275 individuals were reached during community focused programming on fishing in Lesser Slave Lake. New programming was also developed as an online webinar for 20 adult learners from various communities across Canada. The webinar is entitled “Exploring the Mystery of a Spruce Bog” and was in partnership with Northern Lakes College.

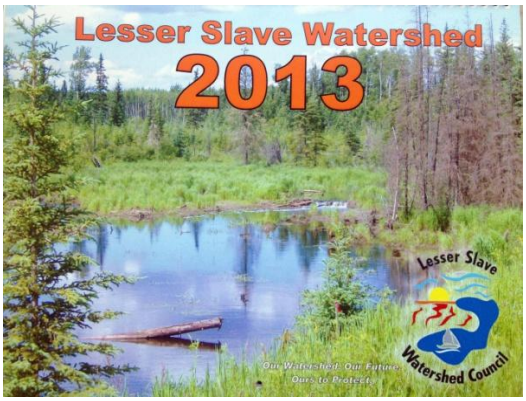
Searching for Invertebrates

Exploring Spruce bogs

Testing Water Quality



2013 Watershed Calendar



The LSWC produced our first watershed calendar for the 2013 year. This calendar featured photographs from two local artists who are friends of the LSWC. Nelson Lutz of Widewater and Ron Davis formerly of Peace River both provided some excellent images to be included in the calendar. These captivating images illustrate the true beauty of the Lesser Slave area.

The cost of producing this calendar was offset by the generous donations from community sponsors. The LSWC appreciates the support and would like to create a calendar annually with local photos and art work of the watershed.

Thanks to our 2013 Calendar Sponsors

Town of Slave Lake	J. Quartley Trucking	HP & Area Dental Center
The Boondocks Grill	HP Community Health Foundation	NAPA Auto Parts
Pantara Contracting	Springburn Oilfield Services	CX Energy Services
ROVE Engraving	ROVE Upholstery	The South Peace News

Working with the Peace Country Beef and Forage Association

The Peace Country Beef & Forage Association (PCBFA) is a producer group with the goal of improving the profitability and sustainability of the forage/beef industry in the Peace Region through the transfer of leading edge forage and beef technology through innovative extension activities, demonstrations, and applied research projects. PCBFA has an extension coordinator who works with producers to develop riparian grazing plans which can include stream watering, riparian fencing, rotational grazing, etc. The goal is to provide knowledge and tools to local farmers so that they can operate efficiently while protecting the health of the watershed as well.

In 2010 the LSWC purchased a portable solar and wind powered watering system with grant funds from Pennwest. This unit is being used in PCBFA projects where it will provide water to cow calf pairs rather than allowing them free access to streams and riparian areas. Last year the unit was stationed with Tom Kascnic at his farm along the West Prairie River and provided an off stream water source for about 100 cows.

Celebrating Canada Water Week

Since 2011 the LSWC has been promoting and celebrating Canada Water Week in our watershed. Canada Water Week is a coast to coast celebration of freshwater in Canada. It is held in mid-March each year and various groups coordinate and plan events to promote water awareness and stewardship. In 2012 the LSWC held a youth coloring contest, the winners of which won a helicopter ride courtesy of **Remote Helicopters**. We waited until the summer months to enjoy our ride and the 3 winners greatly enjoyed the experience.

Michael Roberts (left), Chad Strebchuk (center), and Angele Gauthier (right) pose in front of the Remote chopper with LSWC Executive Director Meghan Payne before the ride. Big thanks to our pilot Gordon Favagne for the tour west of High Prairie.

In 2013 Canada Water Week was held from March 18-24. This year the LSWC challenged youth to create a poster that related to the Water Week theme "I love my water body". Thanks to the generosity of community sponsors the prizes for the contest winners included 2 mountain bikes for first place in each age category, iPod Nanos for second place and an iTunes card for third place. We received some really great entries and they are on display in the LSWC office.

In addition to the kids contest we reached out to our Facebook followers and held a trivia contest using the LSWC Facebook page. Each day three questions about water would be posted. The first person to correctly comment the answer was entered into the draw for a brand new iPad mini. Throughout the week there was 21 chances to enter and at the end of the week Marilyn Delorme took home the prize.

The LSWC hosted a movie screening of Robert Redford's documentary about the Colorado River called Watershed. The Park Theatre in High Prairie hosted a group of water enthusiasts who

also took home some great door prizes from the LSWC after the show. Those who attended the movie screening had an edge on the trivia competition because the questions for the day following were drawn from the documentary.

Lindsie (right) presents Julianne Gutowski (left) of Slave Lake with a mountain bike for her first place poster submission in the 11-14 age group.

Hunter Lateroute (left) of Gift Lake poses with his new bike. He won first place in the poster contest in the 8-10 age category.

Meghan (center) presents Rhys (far left) and Elle MacIntosh (left) with their second and third place prizes for their awesome Water Week poster submissions. Hailey Gardner (far right) with Meghan received a second place iPod Nano for her excellent poster submission.

Meghan Presents the Facebook trivia contest winner Marilyn Delorme of High Prairie with her brand new iPad Mini. Marilyn shared that throughout the week by following the FB contest she learned a lot about our watershed and water resources. Some Facebook posts were reaching up to 850 people during CWW.

The LSWC would like to thank our generous community Canada Water Week supporters:

TransCanada Corporation
Pennwest - High Prairie
Keay Farms
Pantera Contracting
ROVE Laser
The Park Theater

Celebrating RBC Blue Water Day

On June 14, 2012 the High Prairie Royal Bank Branch staff and the Lesser Slave Watershed Council held a lunch time BBQ for the residents of High Prairie to raise awareness about the RBC Blue Water Project program and to promote and raise awareness about the LSWC.

Over the course of the afternoon we served around 200 burgers and hot dogs and approximately $415 was donated to the LSWC by participants. The RBC staff provided Blue Water Day promotional items including reusable water bottles, pens, and more.

The Lesser Slave Watershed Council has been the recipient of two RBC Blue Water grants and we value the support of our local branches in High Prairie and Slave Lake. In 2010 we also partnered with the Slave Lake RBC branch to celebrate Blue Water Day.

Carla Kindratiuk (left) with RBC and LSWC's Meghan Payne (right) grill up some burgers and hot dogs for the hungry folks in High Prairie.

Meghan Payne and Krista Parker with the RBC prepare burgers and hot dos as fast as they can for the hungry passersby's.

Collaboration and Cooperation

WPAC Summit 2012 - Milk River

Each year one of the 11 WPAC's hosts an annual summit to share successes, discuss challenges, and learn from colleagues around the province. In September 2012 the Milk River Watershed Council hosted the other 10 WPAC groups and their directors for the annual WPAC Summit. The LSWC was fortunate to be able to have staff and board members in attendance; Meghan Payne, Sherrie Hay, Guy L'Heureux and Gary Couch took in the WPAC summit and southern Alberta for the three day event.

Writing on Stone Provincial Park interpretive center set a wonderful southern Alberta atmosphere for our day of learning and discussions. Pictured here is the group of Summit attendees outside the interpretive center along the Milk River hoodoos.

Summit Summary prepared by:
Tim Romanow, BSc.
Executive Director
Milk River Watershed Council

September 24th 2012 – International Headwaters Tour, Montana (optional)
This session of the Summit included discussion with representation from the United States Bureau of Reclamation (USBR) regarding infrastructure on the Swift Current Creek and the Sherburne Dam Site. The Dam backs into Glacier National Park Montana and is an important reservoir that feeds late season flows for critical water allocations to the St Mary River and the Milk River Diversion. Challenges at the site result in fish habitat below the dam that is only seasonally available. Mike Hilliard, Resource Specialist with USBR described a fish salvage project along the creek during dewatering which involves annual removal of stranded fish from the creek and relocation to larger over wintering waters in the St Mary River below the confluence with Swiftcurrent. It was suggested that an eventual solution may include the remediation of the dam structure with fish ladders and maintenance of some minimum flows to create conditions suitable for additional live stages.

Dawn LaFleur Restoration Biologist with Glacier National Park Montana presented to the group a short history of invasive species management in Montana and how policy and management of invasive species was almost non-existent in Glacier until it was almost too late. Invasive species such as Spotted Knapweed displace native plants, simplify the plant community and reduce rangeland and riparian heath. The park now focuses resources to contain these species and works with the areas of colonization with citizen science based monitoring in backcountry areas of the park and tries to prevent the establishment and introduction of new invaders with programs like the park weed free forage and hay usage. Dawn also outlined the history of cooperation and exchanges of resources between Glacier and Waterton Lakes National Park Canada. Dawn noted the importance of transboundary partnerships in issues like invasive species and successful initiatives like the Crown Guide to Invasive Plants that is considered the standard for weed identification and management. It was also noted that there are over 3 million acres of Spotted Knapweed in Montana and it's important for Alberta to continue to strengthen control and monitoring initiatives especially at the WPAC scale to prevent potentially hundreds of millions of dollars in lost production and impacted acres of native grasslands.

Attendees visited the huge water diversion pipeline while on the headwaters tour that took them down into Montana and back.

Participants then viewed the diversion site and canal from the Highway and access roads on route to the First Siphon structures along the St Mary Canal system. Noted were the challenges with the diversion condition and that an upgraded diversion site and fish barrier are planned for in the next few years. Budget constraints were noted as reasoning for the "Fix on Fail" state of infrastructure along the system.

The next site for the tour was at the top of the diversion siphon over the St Mary River. History of the site was discussed, as well as concerns over capacity, age of infrastructure, and reliability. Ken Miller of the Milk River Watershed Council Canada also shared history of International agreements, apportionment, and ongoing negotiations of the international joint commission. Ken also outlined the progress of the Joint Initiative Taskforce (JIT) and personal perspectives as an irrigator on the Milk River and the importance of Security of Water Resources for his operation and the community along the Milk River in Canada.

Upon return to Canada, the tour met with Kevin France of ESRD – Public Lands, and viewed the recent Del Bonita to Milk River fire. Kevin led a discussion regarding the fire intensity and grassland recovery. The fire was over 15,000 acres in size, burning less than two weeks prior to the tour. The fire intensity was higher than any previously observed by public lands staff for a grassland fire. Noted was that in some areas 100% of organic materials were burned and the mineral soil remaining was virtually sterilized. The fire encompassed nearly 95% native grassland. Following Kevin France, Uldis Silins from the University of Alberta outlined interest in studying the effects of prairie grassland fire on watershed health integrity and water quality. Professor Silins indicated that to the best of his knowledge no one has archived runoff from a grassland fire of this intensity and characteristics and also outlined the potential impact of heavy metals, released phosphorus, and organic carbon on water quality and the aquatic ecosystem. Professor Silins also indicated there are potential complications due to dissolved organic carbon within chlorination treatment systems and potential for the formation of carcinogenic compounds. The MRWCC in cooperation with ESRD, University of Alberta, and University of Waterloo are undertaking a project to monitor watershed recovery with a series of recovery monitoring sites of different intensities within the burn as well as the impact of potential contaminants from runoff and wind erosion events.

September 25 – Respect the Past, Stewarding the Future Writing on Stone Provincial Park

Participants were provided a variety of options for select a sessions on the day, including:

Milk River Stewardship Project Implementation Tour – Brad Downy

Participants had the opportunity to learn about how not-for-profit conservation organizations such as ACA and MultiSAR are supporting livestock producers in the watershed; developing wildlife friendly projects that also improve riparian and rangeland health. Brad explained how groups like theirs have a responsibility to foster good relationships with the local community in order to help keep functioning landscapes intact for both agricultural production and species at risk in the watershed.

Defining a Watersheds Cultural Identity – Paulette Fox (Naatawawaohkaakii)

Paulette led a discussion with the group that examined the history of the Blackfoot People, reflecting on historical accounts and examined the use of GIS to link Blackfoot environmental knowledge with ecological and cultural databases. Paulette shared her perspective on watershed management and planning exercises. Key messages and insight was shared with the group regarding how to engage First Nations in State of the Watershed (SOW) Reporting; Paulette encouraged all WPACs to stop trying to "integrate" First Nations and traditional

knowledge, and start to build linkages. Using tools like Digital Storytelling would be beneficial to capture perspectives, and knowledge; Paulette recognized that one approach would be to include traditional knowledge as a separate section in SOW reports. For example, the Milk River Watershed Council included this as a stand along section in their 2008 SOW prior to the analytical analysis and scientific data within the report. The MRWCC recognized that the 2008 edition was not fully inclusive as possible, but thought the exercise identified knowledge gaps. The 2013 edition will include stronger and additional information. Paulette also noted the importance of building linkages with First Nation youth and leaders, as too often First Nations are looked at as a historical perspective and stories of current linkages and direct involvement of youth are sometimes lost or unrecognized. Paulette encouraged all WPAC's to continue to foster working relationships with First Nations in all of the watersheds, and recognized the benefit of non-government led planning exercises like Alberta WPAC's in managing our landscapes.

Paulette (bottom right) shares some of the stories and traditions of the Black Foot people with the summit attendees.

<u>Digital Storytelling a tool for stewardship promotion and the Real Beef Initiative – Norine Ambrose</u>

Norine introduced participants to the Process of Creating Digital Stories and their applications in delivering messages to a diverse audience. Digital Stories are short videos that use graphics and digital media techniques to assist participants in producing short, first-person narratives that can be presented in a variety of traditional and social media formats.

The ritual of sharing insights about life can be immensely valuable both to those who speak and those who bear witness. People who believe they are mundane, uninteresting, or unmemorable possess beneath this mask a vivid, complex, and rich body of stories just waiting to be told. Listening is hard. Most people are either too distracted, or too impatient, to be really good listeners. Yet anyone can learn to listen deeply. When they do, they create space for the storyteller to journey into the heart of the matter at hand. People see, hear, and perceive the world in different ways. This means that the forms and approaches they take in telling stories are also very different. Sharing stories can lead to positive change. Personal narratives can touch viewers deeply, moving them to reflect on their own experiences, modify their behavior, treat others with greater compassion, speak out about injustice, and become involved in civic and political life. Whether online, in social media, in local communities, or at the

institutional/policy level, the sharing of stories has the power to make a real difference. To view stories or to learn about the Real Beef Initiative, go to: www.cowsandfish.org.

The Crown of the Continent Managers Partnership & Aquatic Invasive Species Project - Ian Dyson and Bill Dolan

The Crown Managers Partnership (CMP) is unique; there are two provinces, one state and two countries involved, it is a trans-boundary partnership; formed in 2001-2002 in hopes of improving the management of a large complex ecoregion containing multiple jurisdictions. This is accomplished by management agencies working together in the Crown of the Continent (COC), across all jurisdictional boundaries. The CMP built on the successes of the Waterton/Glacier International Peace Park working relationship.

The Crown Managers Partnership seeks to demonstrate leadership in addressing the environmental management challenges in the Crown region by adopting transboundary collaborative approaches to environmental management. The voluntary partnership seeks to build common awareness of Crown interests and issues, shape relationships, and identify collaborative and complementary tasks that the various participating jurisdictions can pursue.

The CMP recently released a Strategic Plan that will help guide their projects and actions from 2011-2015. The CMP promotes strategies and activities that will help achieve the long-term outcomes to maintain or improve the ecological health of the CCE. The Plan is available for download from the CMP website: http://www.crownmanagers.org/strategic-plan.

Bill Dolan then proceeded to discuss the CMP role, interest, and actions, in Aquatic Invasive Species (AIS) throughout the Crown Ecosystem. AIS is a key initiative of the CMP resulting from the 2011 Crown Managers Forum. The CMP conducted a risk assessment workshop recently in Waterton, which focused on the introduction of zebra or quagga mussels into the COC, acknowledging that they could already be there. Main threats include boats, firefighting equipment, or any other equipment that will be in the water, fishing equipment, float planes, water transport via trucks, transboundary water flow, and government inaction. Most concerning is the boats. Controls in Idaho and Montana were studied. In Alberta we are relying on controls in Montana, Idaho and Waterton Park. Legislation is slow moving, and education is key. Once mussels are introduced, there is very little we can do to prevent the spread; the best form of control is to keep it out of the country. Consequences of invasive species such as the zebra mussel include the cost to government and stakeholders to repair infrastructure, economic losses in agriculture, declined tourism and recreation, social and cultural losses, possible human health impacts, and contamination of irrigation headwaters. Bill also presented on the Montana and Idaho experiences with Aquatic Invasives, and the direction we need to move towards to better manage invasive species within the Alberta watersheds.

Transboundary Watershed Cooperation – Opportunities and experiences – Sandi Riemersma

Sandi outlined the Milk River Watershed Council Canada's approach to transboundary management and State of the Watershed reporting. Sandi reflected on experiences of the MRWCC and the challenges and opportunities of working with different jurisdictions in Montana and Saskatchewan. Sandi also looked at transboundary partnership project examples

from across Western Canada and the lessons that can be applied to Watershed Management in Alberta.

Aquaculture Centre of Excellence Tour – Lethbridge College – Clay Boyes

Upon return to Lethbridge, participants were able to attend an optional tour of the Lethbridge College Aquaculture Centre of Excellence (ACE) prior to dinner. Clay Boyes, facility manager provided a short history of the facility noting that Triploid Grass Carp Production and Tilapia were the initial impetus for developing the project. ACE is the only licensed facility within the province that rears Grass Carp for Biological Control of Aquatic Weeds, primarily in manmade lakes, dugouts, and irrigation systems. Clay then explained the procedure for pawning and Triploiding the Grass Carp eggs. Clay then showed the facility operation and participants were able to view newly hatched fish through to 60 lbs spawning brood stock. Clay explained the bio filtration system of the facility prior to demonstrating the aquaponics greenhouses attached to the facility to use excess nutrients and waste produced by the fish culture side. At the time the greenhouse was producing tomatoes, cucumbers, various lettuce/herb species and aquarium trade pond plants.

Visiting the aquaculture center and green houses at Lethbridge Community College was an added bonus to for attendees from around Alberta.

September 26th Cooperation and Science: Supporting our Partners

WPAC Chairman (or representative) updates

Representatives from all 11 WPAC's provided a 5 minute fly over of the major successes, challenges, and opportunities facing their WPAC. The presentations highlighted the diverse sets of challenges throughout the province and emphasized the importance of local sub-regional scale watershed planning exercises. Notably, there is no one size fits all approach to watershed planning within the province, some larger area WPAC's identified the significant challenges of reaching out to the different communities within their watersheds. Other highlights included a number of WPAC's recently completing or nearing completion of management plans and State of the Watershed reports. Numerous communication and outreach activities are occurring and some WPAC's are beginning to challenge implementation of their watershed plans, and are fostering on the ground initiatives to improve watershed health. Some common concerns also involved clarification of the role of WPAC's in a GOA cumulative effects management system, and security of funding for core WPAC activities and projects.

Sharing the Water within the SSRB – University of Lethbridge Dr. Henning Bjornlund

Dr. Bjornlund shared his experiences with water use and management in context with experiences in Australia, and reflected on the history of water policy and management within Alberta. Dr. Bjornlund summarized the results from a number of social science projects to review the positions of initial Irrigation managers in 2005. His results include:

- Use of market based instruments
  24% agreed with the use of economic instruments.
- Where should saved water go?
  26% agreed that saved water should go the environment
  36% that it should go to local industry, 44% that is should go to cities and municipalities, 69% that it should be used to irrigate dry land.

In contrary, further study of irrigators in 2007 and 2012 market based instruments were seldom used, with less than 5% of irrigators buying, selling or trading water rights. Though high numbers anticipated purchasing or expanding irrigated acres within the next 5 years.

Dr. Bjornlund then continued his presentation outlining work reviewing general influences on policy preferences:

- The importance of context,
- Water-based recreation - support for government intervention in most urban location and for environmental protection in most rural locations,
- Working in recreation – support for environment protection in most urban locations, working in primary industries no support for environmental protection in Strathmore.
- WPAC or watershed stewardship - no support for government intervention in water stressed region and for environmental protection in most rural location.
- Conservation groups - no support for irrigator rights in the overall model, support for government intervention in least water stressed region.

Urban dwellers regard the environment as intrinsically valuable and are more likely to support government intervention to protect the environment. Rural residents hold more instrumental values towards the environment - the rights of irrigators and the continued viability of rural communities take precedence over the environment.

However context matters: The influence of scarcity implies that environmental values and policy preferences are formed, in part, by the experience people have of the environment. This is confirmed by regression analysis: Work, Recreation, membership of WPAC, Land Stewardship and Conservation groups. Values also matter, especially environmental values and those associated with water as a tradable commodity. Many factors also influence policy preferences differently along the urban rural gradient and dependent on scarcity.

DNA Fecal Source Tracking on the Milk River – Tool for guiding water quality improvement projects - Lisa Tymensen, ARD

This project was initiated in 2012 to characterize concerns from high fecal bacteria counts during summer months within some areas of the Milk River. The local agricultural community was being blamed for the problem, though these claims were unsubstantiated. The partnership project was undertaken by Alberta Agriculture with support of the Milk River Watershed Council Canada. Field season collection of water samples from 4 locations along the Milk River have recently wrapped up and analysis is currently underway. Initial results have been interesting and already providing important insight into contributing factors along the river. E. coli and Fecal Library analysis is still being completed though different groups of markers are beginning to be teased out fairly clearly. Initial data is showing that the E. coli communities are not overly different throughout the 4 sample sites. The 'A' group, primarily domestic poultry and semi aquatic birds, such as shore birds and geese are very low contributors, though high numbers were being reported at the Down Stream Milk River Site. 'B2' contributors, primarily Human/Dog markers, were not a major influence though they are being noted in some sites. Over 70% of E. coli are of the 'B1' group which needs to be further teased out, though it does contain markers for many wildlife and livestock species and groups. Focus now is to further classify these markers and refine the classes of the samples.

Watershed Recovery from an Accidental Hydrocarbon Release - Chris Teichreb -ESRD

Chris was the lead water quality specialist for the Pembina and Plains pipeline oil spills on the Red Deer River in 2008 and 2012 respectively. Chris shared with the group the history and timeline of the 2012 spill; July 7th 2012 500,000 L of light sweet crude oil was released into the river. The pressure loss was undetected in the line and a passerby first noticed and reported the crude on the surface of the river near Sundre, Alberta. The pipeline was licensed to carry sour oil, and many lines are licensed to carry multiple products which makes initial response difficult until the product is identified. Stop block was placed in the pipeline, and booms installed on Glennifer Lake. The break occurred during the flood stage as the pipeline was only 0.8 m below the river bed when it became exposed and ruptured by floating debris.

July 8th Water Quality monitoring and Wildlife monitoring was initiated. Visible product was stopped by the booms, however the dissolved components continued to move and toxic effects below are continuing. Dissolved hydrocarbons tend to be more of a risk to public health, and can cause problems for municipal treatment systems. Most notably Toluene was above aquatic life protection guidelines. None were above drinking water guidelines.

Long term monitoring is ongoing and Plains has taken steps to directionally drill all lines a minimum of 15 m below rivers and water bodies to prevent similar accidents. Industry grandfathering of standards should and most likely will be reviewed by ESRD and the ERCB. Response inquiry and recommendations are still ongoing.

Drywood Yarrow Conservation Partnership & Beaver Creek Watershed Group – A model for preserving the rural character and working as a community for watershed management - Dennis Lastuka and Dixon Hammond

Dennis presented on the formation and workings of the Drywood and Yarrow Creek Conservation Partnership (DYCP) and how the community drives stewardship through many key projects within their watersheds. The DYCP is located in the Oldman Watershed north of Waterton Lakes National Park and has, and continues to undertake a number of projects from Riparian Health Inventory and improvement work, to managing bear and wolf attractants around farm yards and calving grounds. The group has been active for nearly 10 years, and most recently has started hosting an annual watershed education day where 200 to 300 youth from local schools come out to one of the ranches on the creek for the day and learn about wildlife, livestock and topics like fish and riparian areas. Dennis believes that connection of the new generation to the land is lost in the school systems and these projects are important to rebuild relationships with both the agricultural community and conservation groups. Dennis also mentioned the importance of providing a portal for researchers to gain access and information from private lands within their watershed and feel that too many institutions and research groups focus on forestry and public lands without considering the impact on private landowners and lease holders that are making their homes and livings in these watersheds.

Following Dennis, Dixon Hammond told the story of the Beaver Creek Watershed Group, and how his community was one of the first local watershed groups to be established in the Oldman Basin. Over the years they have seen declines in riparian health and range conditions, but with the assistance of groups like Cows and Fish, have worked on projects to reduce agricultural impact on the watershed, many off-stream watering systems, spring developments, corridor fencing projects, relocation of wintering sites, and rangeland management plans. Conditions in the watershed are beginning to improve. Though Dixon noted it's no longer only a rancher or livestock problem that is visibly impacting the watershed, but the headwaters in the forest reserve are affected by random camping, trails, and off road vehicles, which are tearing up the headwaters. Landuse continues to change in the area, and additional fragmentation from oil and gas, wind developments and acreage development affects the conditions of the landscape and watershed. Dixon emphasized the need to craft and implement better management in these areas. Their community is doing it and its time for other organizations and agencies including ESRD and WPACs to set up and provide the tools needed to improve conditions before it's too late.

Dixon and Dennis noted that over the years a number of programs, funding, organizations, and people have come and gone all wanting to "help" but in the long term, its critical to have people committed to prevent volunteer burn out and be prepared to unite over a common issue and to provide the tools necessary for the community to take actions. Dixon noted writing watershed management plans and reports are useless expensive paper exercises if you have no intent or idea how you're going to implement those ideas. It's critically important for WPACs to support on the ground producer driven stewardship initiatives and build on our capacity.

September 27th Alberta Watershed Planning and Advisory Councils: Success at Work

Provincial Guidebook for Watershed Management Planning – Robert Wolfe, ESRD

Robert led the group through a discussion on the progress of the provincial guidebook, examining the chapter content and layout of the book. A number of good suggestions were provided. The guidebook is anticipated to be completed within the next 6 months. There will likely be additional opportunities for WPAC's to provide feedback on the next draft of the guide. Notably, the guide will not likely be a significant departure from the processes that a number of WPAC's have already undertaken across the province and will include some case studies, lessons learned, and a terms glossary to clarify potential concerns.

Alberta Watershed Toolkit – Lisa Fox

The Alberta Center for Sustainable Rural Communities (University of Alberta) and Sustainability Resources Ltd. have developed a base inventory of initiatives and literature for water and watershed management in rural Albertan Communities. This website and resource directory is complemented by content-rich workshops that focus on knowledge and resource sharing. This base inventory of resources has been developed for and by rural communities in Alberta specific to interventions around water quality and water quantity.

To help the group define the utility of these resources log in, add resources, comment, and take part in discussion. The goals of this is to understand what resources you and your community needs to be an effective water manager. This is an online community network hosted for the development of relationships between rural community leaders, watershed councils, stewards, and citizens interested in advancing water & watershed management in Alberta.

Watershed Resources Workshops: One of the key priorities of this initiative is the communication of available resources to Alberta water managers and decision makers. These half day workshops and their content have developed to address critical knowledge and capacity gaps requested by water leaders and rural community decision makers across Alberta. For more information visit www.sustainabilitycircle.ca.

The view from the Writing on Stone Interpretive Center was breathtaking. The Milk River valley is a unique landscape in Alberta with many hoodoo's and traditional sites to visit. A great place to gather for water discussions.

WPAC's of Alberta Collaborate

The 11 WPAC's in Alberta share many things in common. We follow the same format of watershed assessment and planning in our respective watersheds across Alberta. We are all made up of a volunteer Board of Directors from various sectors or stakeholder groups around our basins. Some of the WPAC's are older, like the Bow River Basin Council, and predate the Water For Life policy. Some of the WPAC's are new, like the Mighty Peace Watershed Alliance and came into existence after the 2003 Water for Life Strategy. All of the WPAC's are non-profit societies of Alberta and some have obtained Charitable Status under the Canada Revenue Agency.

At the 2010 WPAC Summit held in Cypress Hills from October 20-22, 2010, Alberta WPAC groups held their annual meeting to inform each other about their current initiatives and experiences. At this Summit, the Alberta WPACs explored challenges and opportunities related to their ability to collaborate on common activities and initiatives. One Alberta WPAC believes 'that together, the Alberta WPACs could provide a formidable presence in provincial water management'. Another believes that 'the opportunities to work with other Alberta WPACs to promote watershed planning, protection and services are endless'.

Alberta WPACs

The Summit participants demonstrated a significant desire to work together, build a cost effective and efficient collaborative network and increase public awareness. In order to begin this process the participants charged the Alberta WPACs network of Executive Directors and Managers to develop key recommendations to move collaborative efforts with each of the Alberta WPACs' Board of Directors.

The WPAC Executive Directors are pictured here at the 2010 WPAC Summit in Milk River presenting Dug Major with an award of thanks for his time on the Alberta Water Council on behalf of the Alberta WPAC's

On January 18, 2011, the Alberta WPACs Executive Directors and Managers met in Red Deer to review the recommendations resulting from the Summit 2010 and to explore the possibility of formalizing collaboration. The Executive Directors and Managers concluded that it was in their best interests to begin the process of determining the key components of an 'action plan' with specific tasks and timelines that would result in a more formal working relationship, and thus help them meet their individual goals and priorities. They also recognized that in doing so, it was important to capitalize on the respective attributes of each of the Alberta WPACs while building a solid foundation for collaboration in a practical and phased manner.

The Executive Directors and Managers met again in Red Deer on May 4 and September 7, 2011 and finalized this Action Plan with specific immediate actions, responsibilities and timelines assigned. It was also agreed that progress on the implementation of this action plan will be a standing agenda item at future Executive Directors and Managers meetings including the 2011 Summit.

The following key elements constitute the action plan:

1. Governance
2. Strategic Alliances
3. Communications and public awareness
4. Resourcing and financing

Each of these four elements has an associated list of short term action items that the various WPAC managers and staff have agreed to take the lead on.

2013 CWRA/WPAC Conference

The Canadian Water Resources Association (CWRA) and the 11 Watershed Planning and Advisory Council's of Alberta partnered to host a watershed conference in Red Deer, Alberta at the Black Knight Inn from March 12-14, 2013. The CWRA is a national organization of individuals and organizations from the public, private and academic sectors committed to raising awareness of the value of water and to promoting responsible and effective water resource management in Canada. CWRA membership consists of water users and water resource professionals including managers, administrators, scientists, academics, students and young professionals.

CWRA ACRH
Canadian Water Resources Association
Association Canadienne des Ressources Hydriques

Each year the CWRA hosts a provincial branch conference and this year the WPAC's in Alberta worked with the CWRA to put together the Alberta branch conference. The theme of this year's conference was "Water and the Environment: Watershed Planning and Management in Alberta", which reflects Alberta's growing emphasis on the integrated planning and management of land and water resources.

The conference addressed a wide range of topics concerning water resources and watershed

management, including technical aspects as well as the policy and implementation side of watershed planning and management.

Honorable Minister of Environment and Sustainable Resource Development Diana McQueen brought well wishes and messages from her department.

Conference topics included the areas of common interest between the two organizations in water resources and watershed management with a commitment to environmental, economic and social sustainability. The primary themes for discussion included:

- Scientific Advances in Water Resources Management;
- Watershed Planning: Technical Progress in Alberta;
- Watershed Management: Implementation Challenges;
- Water Resources Policy Development;
- Local Stewardship Successes;
- Education and Public Awareness Programs;
- Inter-jurisdictional Approaches.

All of the conference presentation were video recorded and combined with the PowerPoint's that the presenters prepared and are now available online at: http://cwra-ab-events.org/conference/program. The LSWC's Executive Director Meghan Payne gave a presentation about the Lesser Slave River and the water management challenges and management planning process that has occurred to date. This video is available online at: http://youtu.be/HW-mFQHmR3E.

The WPAC's and the CWRA were both satisfied with the conference and would like to work together in the future to host another event or possibly take on a joint project in Alberta.

The conference attendees had many chances to network and meet others from the water business around Alberta. The banquet dinner keynote address from Lorne Fitch was particularly captivating.

2012-13 Financial Statements

As prepared by Bobby & Associates professional Accounting June 20, 2013

Revenue	**2013($)**	**2012($)**
Grant Income	257,400	188,016
Miscellaneous Income	3,674	15,099
Donation Income	1,712	10,200
Revenue Deferred from previous period	162,722	208,582
Revenue deferred to subsequent period	(71,176)	(162,722)
	$354,332	**$259,175**

Expenses	**2013($)**	**2012($)**
Administration	1,200	1,200
Advertising and Promotion	5,934	5,055
Amortization	701	892
Donations made by the LSWC	16,790	-
GST Expense	2,841	-
Insurance	1,012	4,312
Interest and Bank charges	56	323
Office expense	2,907	6,050
Office Rental	12,673	10,908
Project Expenses	112,108	126,332
Professional Development	9,294	-
Professional Fees	3,975	1,850
Salaries and Wages	100,515	97,140
Telephone and Internet	3,587	3,522
Travel	17,562	11,351
	$291,155	**$268,935**
Excess(deficiency) of Revenues over Expenditures	$63,177	($9,760)

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