



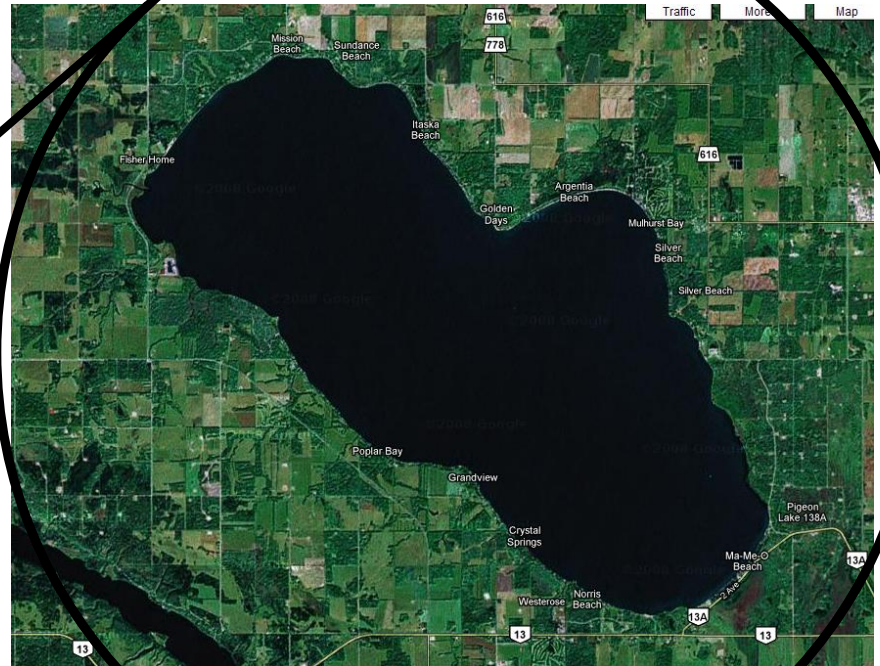
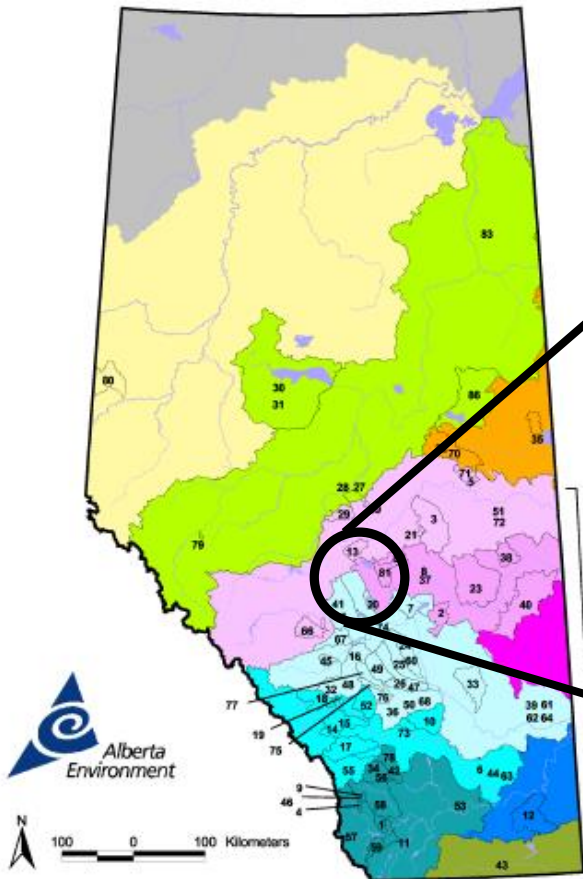
# Land Use Conference 2018

## Successful Partnerships in Action



# Pigeon Lake, Alberta

Watershed Groups in Alberta - 2005





PIGEON LAKE:

*"A place  
to cherish"*

3. Rundle Mission was  
established in 1847

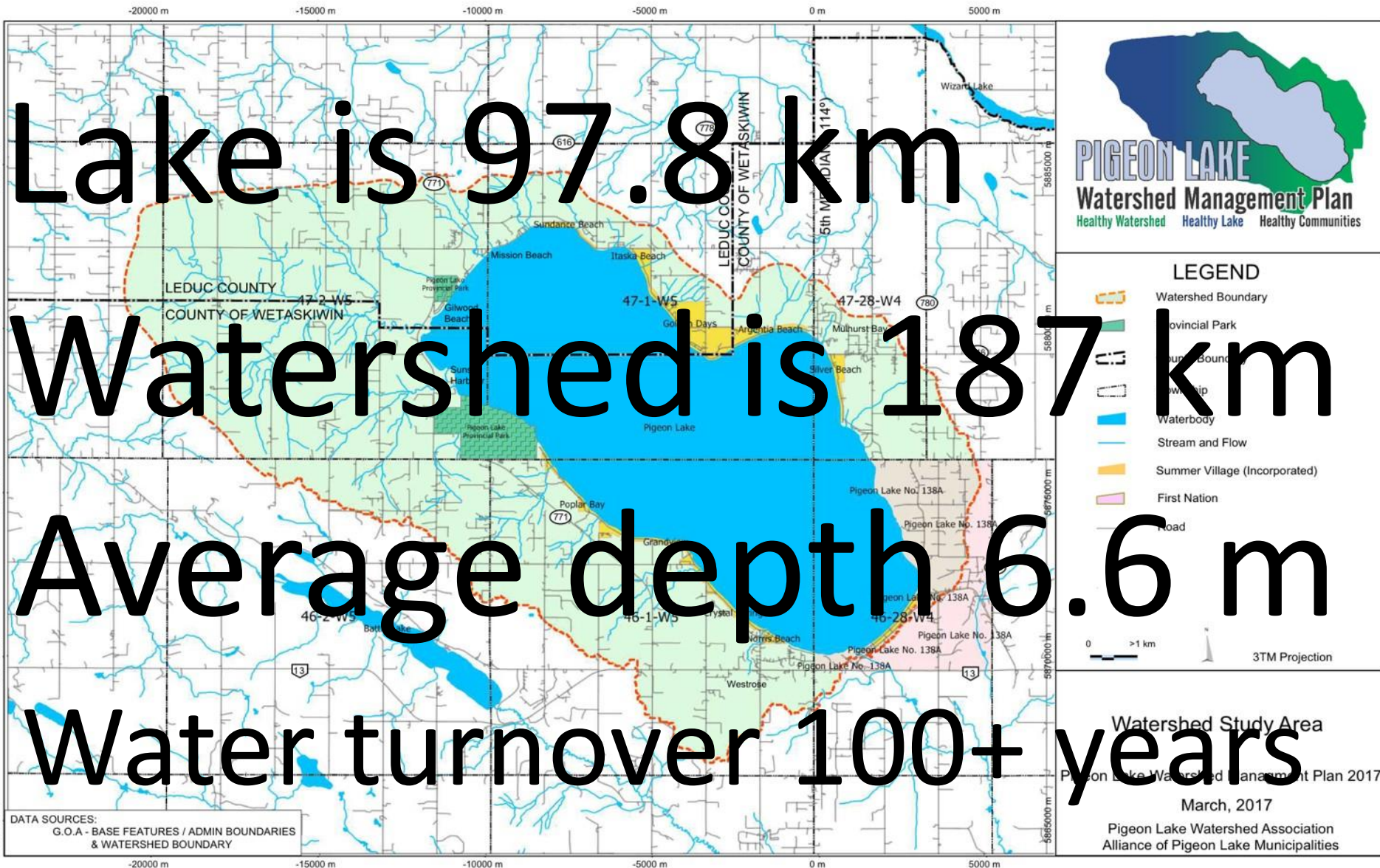
# Pigeon Lake Quick Facts

Lake is 97.8 km

Watershed is 187 km

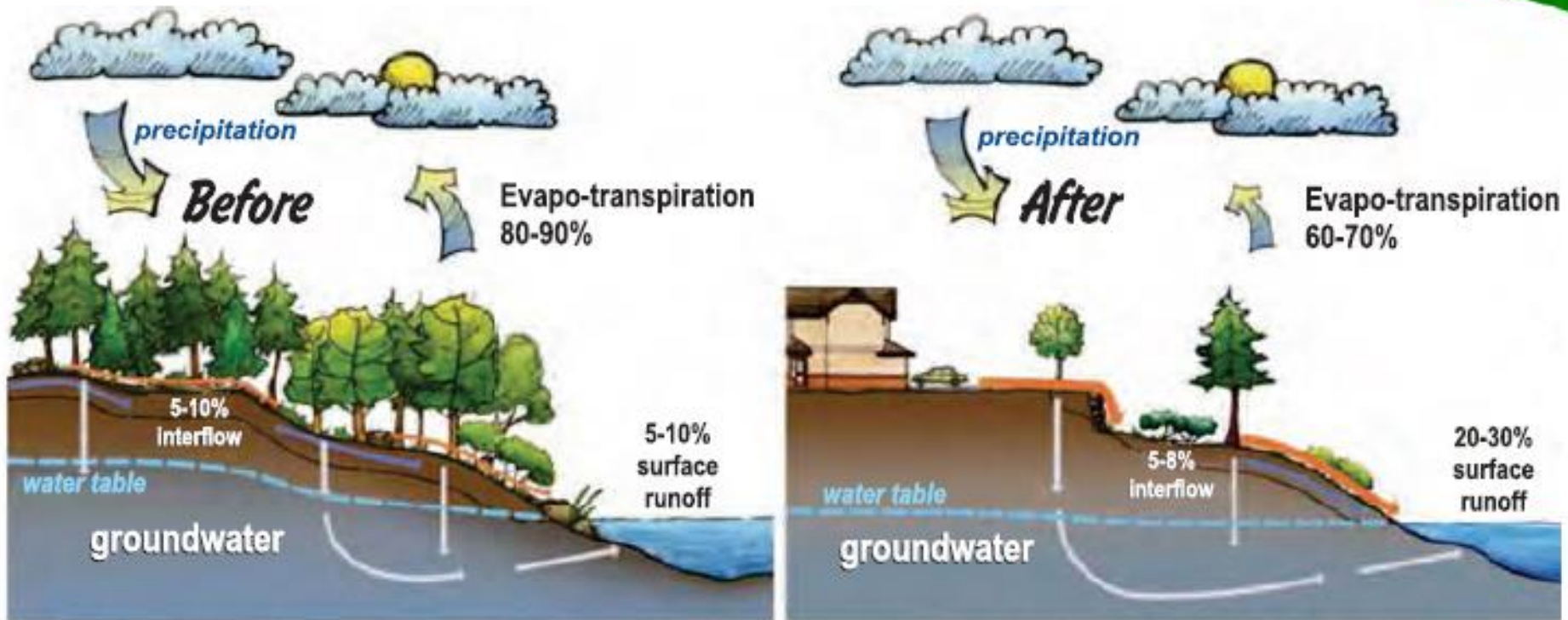
Average depth 6.6 m

Water turnover 100+ years

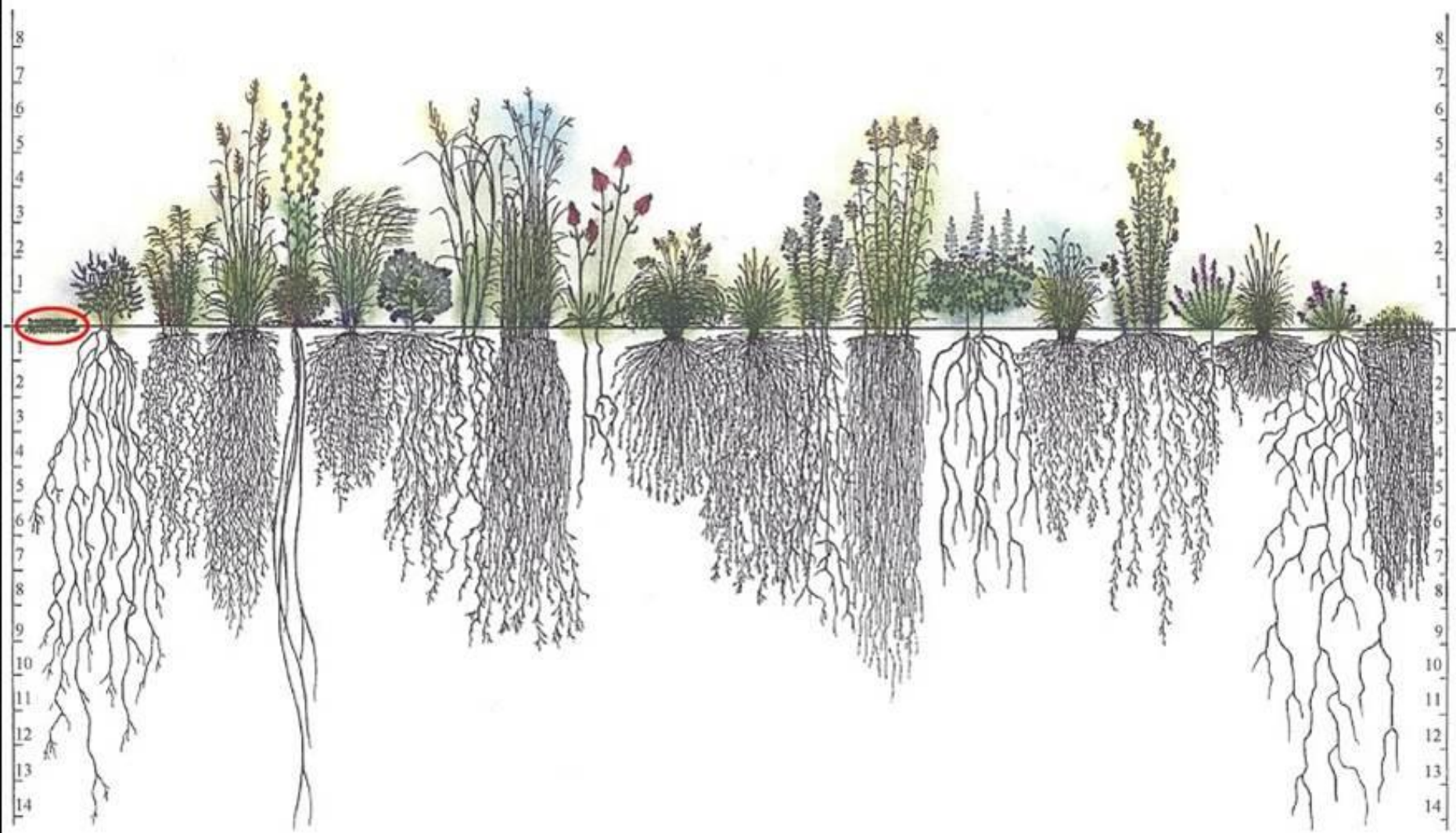


# Prairie Pothole

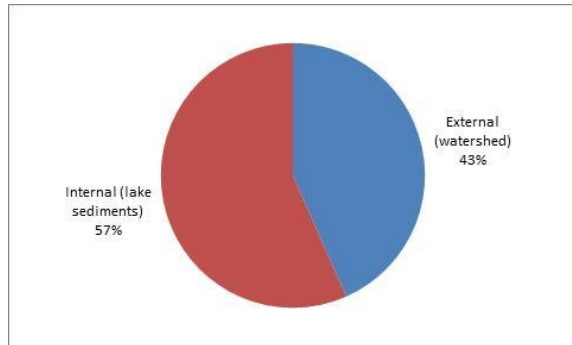
- Nutrient rich before development ...



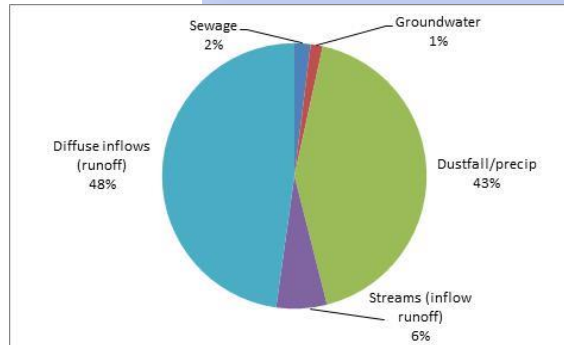
*Before development almost all rainfall is taken up by plants, evaporates or infiltrates through the ground. After development, surface runoff increases significantly, carrying with it nutrients and contaminants.*



# Probably most studied lake in AB

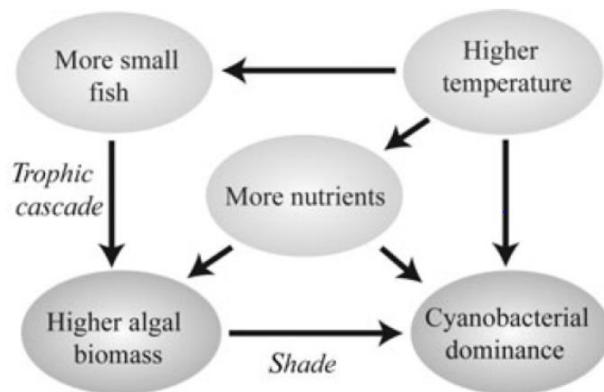


GoV of AB PL Phosphorus Report



## External Sources of Nutrients (Runoff, Dustfall, Wastewater, etc.)

Excess nutrients  
+  
In-lake dynamics  
+  
Changing Weather  
+  
Oxygen in the water columns

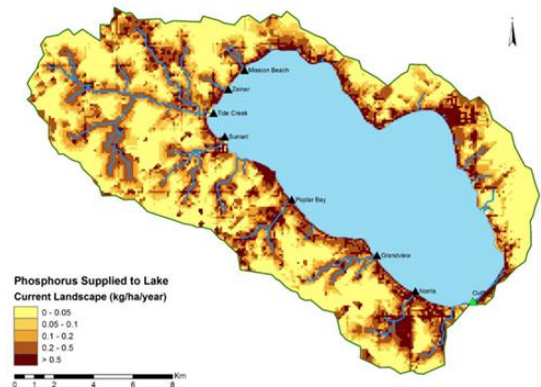


Source: Global Change Biology (2012) 18 article "Warmer climates boost cyanobacterial dominance in shallow lakes cited by Dr. Vinebrooke in 2015 ALMS Conference.



PL 2008 Shoreline Assessment, GOA, ACA Environment Canada

PL Phosphorus Runoff Modelling, Dr, Habib, Alberta Biodiversity Monitoring Inst 2016



# Living By Water (LBW) Homesite Consultations

**318 Consultations  
At Pigeon Lake  
2008 - 2015  
About 1/3 of all  
consultations done  
across Alberta**



**Janson Terfloth  
2015 Consultant**





**Tip 1: Find existing programs that could work for you too.**



In 2012 and again in 2014 a developer **proposed a 300 acre resort community**

- 1,149 dwellings (single family, multi-family and mixed use)
- Commercial area
- Recreation area
- Hotel
- Doubled the watershed population in a few years

#### Collaborators

- PLWA Directors
- Summer Village Councillors
- AB Fish and Wildlife
- PLWA Members
- Other residents

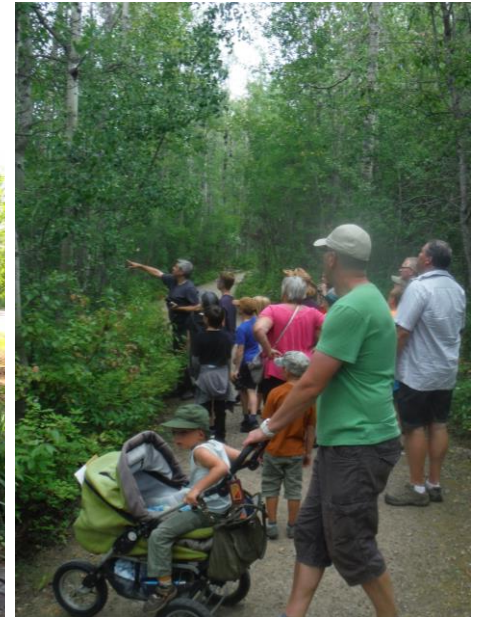


# Kids Healthy-Lake Education Programs



Visit [www.plwa.ca](http://www.plwa.ca) gallery to see more photos

# Love the Lake Family Fun Day at the Provincial Park



# Love the Lake Family Fun Day at the Provincial Park



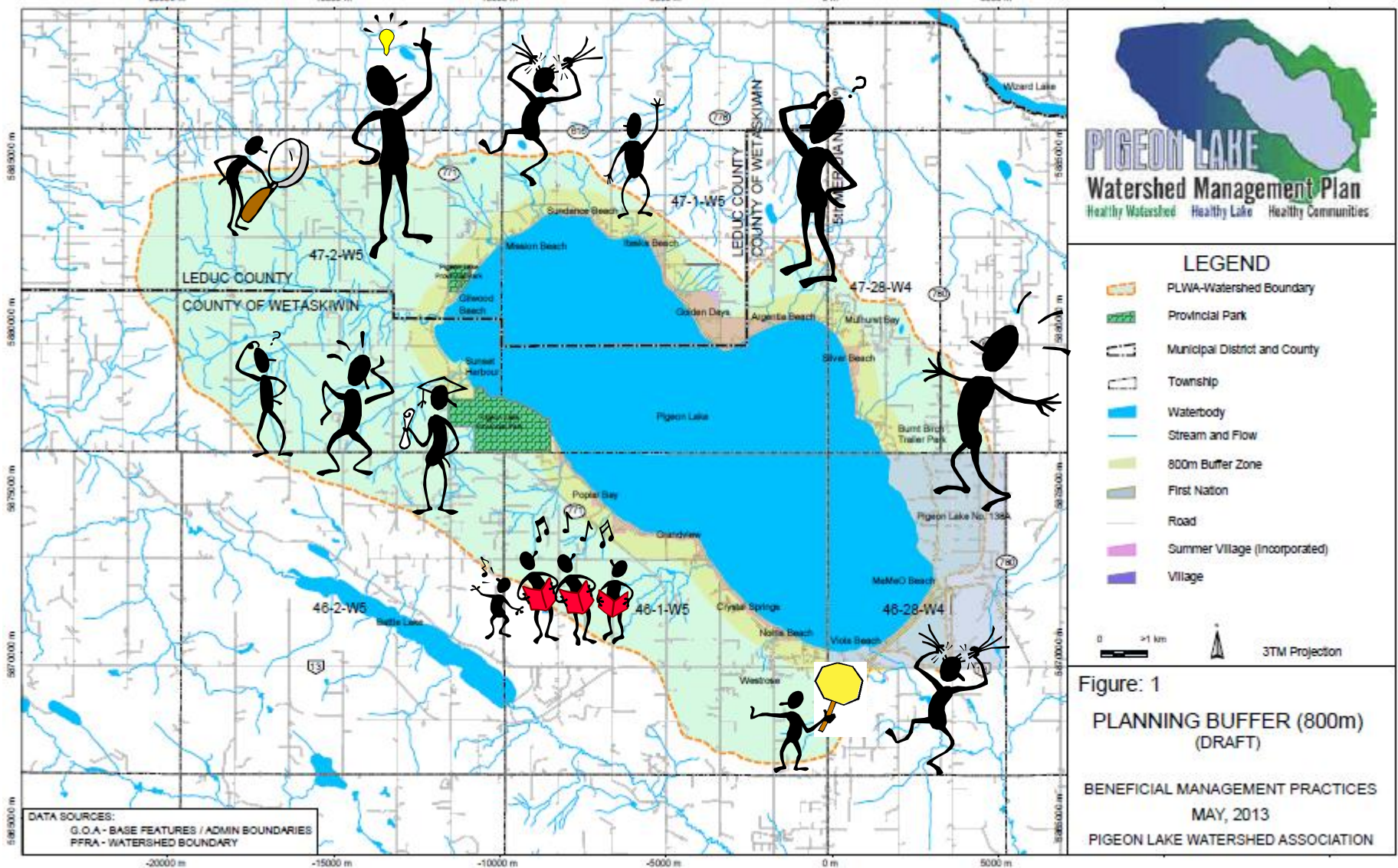
# The Team



*Alliance of Pigeon Lake Municipalities*

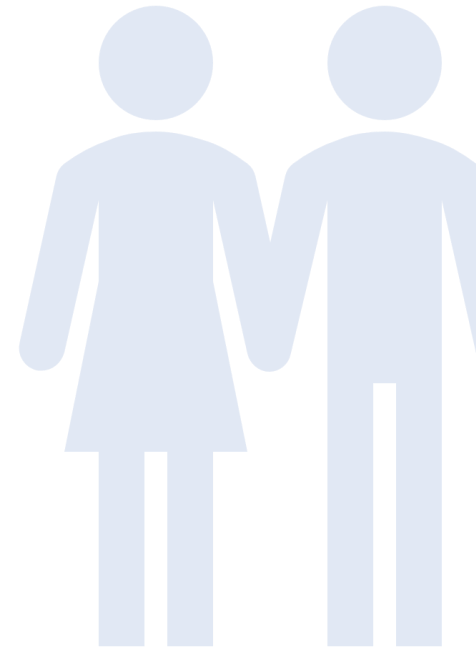


# The People Complexities and Challenges are Many



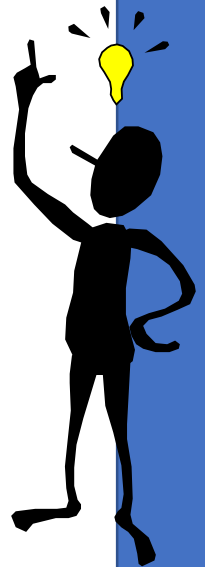
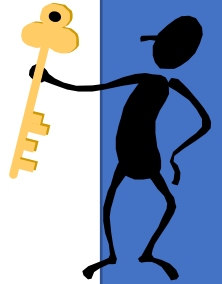


Tip #2: You do not  
need everyone, just  
enough people.




# To Make Changes Happen... Enough Individuals MUST ...

- BELIEVE changes should be made
- Be WILLING and,
- Be ABLE to make the changes



# Tip 3: Ask people what they think.



**PIGEON LAKE**  
Watershed Management Plan  
Healthy Watershed Healthy Lake Healthy Communities

## PLWMP Water Runoff Survey Results


*Water Runoff in the  
Pigeon Lake watershed*

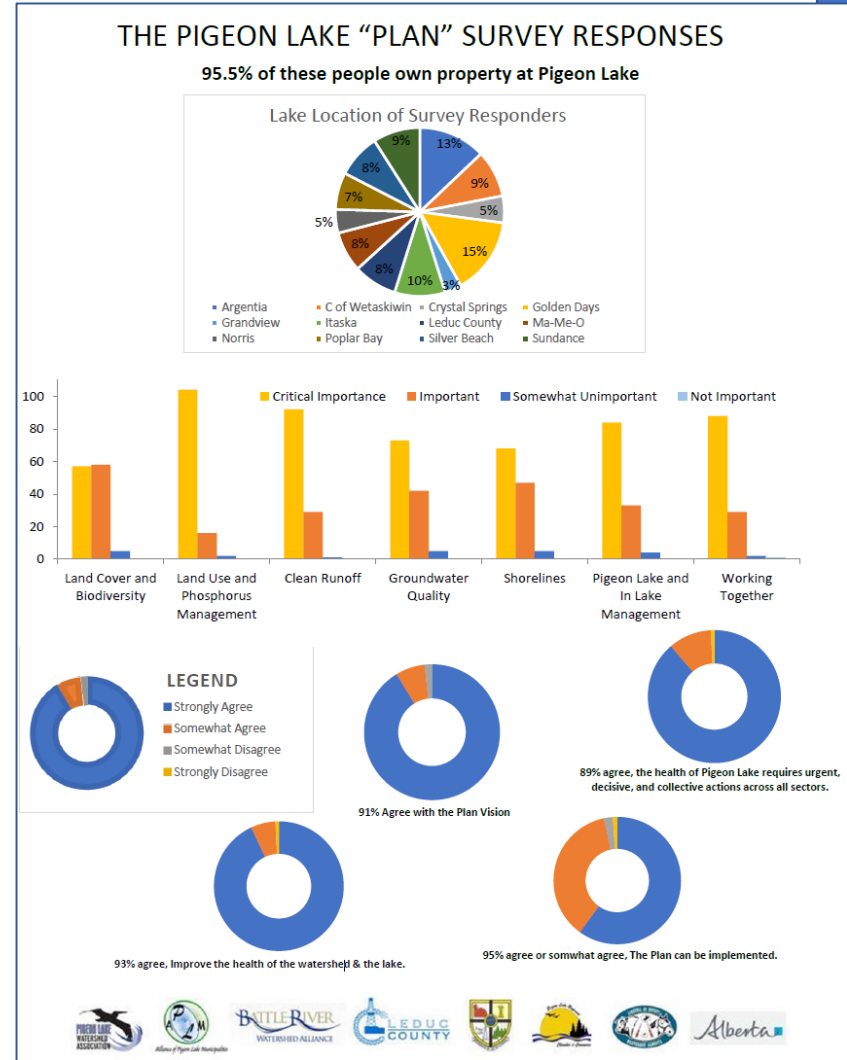
❖

*What  
Watershed Residents  
Said*









**Summer 2015 Survey**  
*October 2015 Report*

Email: [plwmpinfo@gmail.com](mailto:plwmpinfo@gmail.com) Website: [www.plwmp.ca](http://www.plwmp.ca)





# Force Field Analysis (Kurt Lewin)

Driving Forces Towards Desired Situation		Barriers To Achieving Desired Situation	Desired Situation
	<b>Current Situation</b>		Lake Biologically and Recreationally Good
			
			
			
			



Get creative



**Clean Runoff Survey**  
**We asked and People said ...**  
**tell us what,**  
**show and tell us how,**  
**make it easy,**  
**so that as many of us as possible will**  
**make a difference for the lake.**

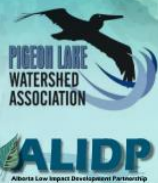


LOW-IMPACT DEVELOPMENT  
PRACTICES FOR BETTER  
STORMWATER MANAGEMENT

ALBERTA

# Clean Runoff Action Guide

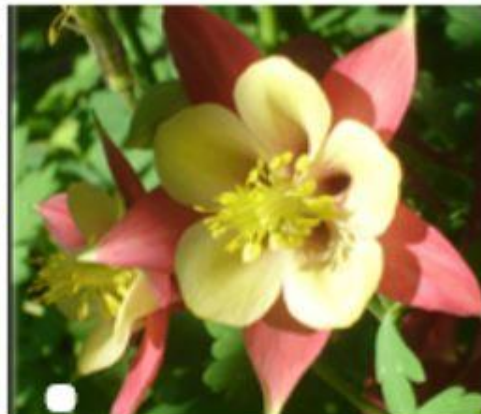
Preliminary Draft (March 31, 2016),  
For Internal Circulation and Comment



## What About Mosquitoes?

Mosquitoes require water that is left undisturbed for a minimum of 7 days to successfully breed. The best way to keep the pests out entirely is by making sure the rain barrel has a lid or screen in place. Alternatively, simply stirring the water regularly will help prevent mosquito breeding. Other preventative measures include adding soap or a half-cup of bleach to the barrel water (these minimize your plants). Better yet, don't leave the water sitting there —





# Native Pollinator Guide





Tip 3: Seek people and organizations with expertise.

Like the ALIDP, Cows and Fish, a CA or a Judy Stewart



# Build Capacity

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**Tip #4 Submit grants**



**Tip #5 Hire summer staff/students**



**Tip #6 Make friends with an accountant**





Tip #7: Do what you can to get local leaders singing off the same song sheet.



# PLWA Work is now ...

Implement the PL Watershed Management Plan recommendations.



# PLWA Recommendations

## The Land, the Shoreline & the Lake

**SHORELINES**



**LAND USE  
&  
PHOSPHORUS  
MANAGEMENT**



**PIGEON LAKE  
& IN-LAKE  
MANAGEMENT**



**LAND COVER  
&  
BIODIVERSITY**



**CLEAN  
RUNOFF**



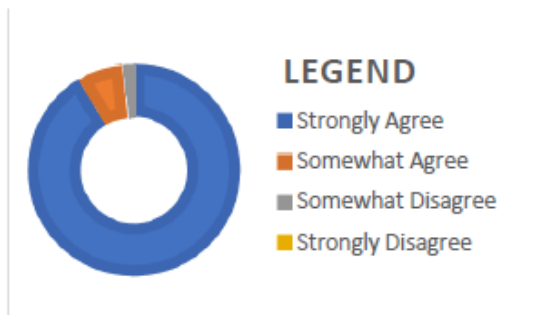
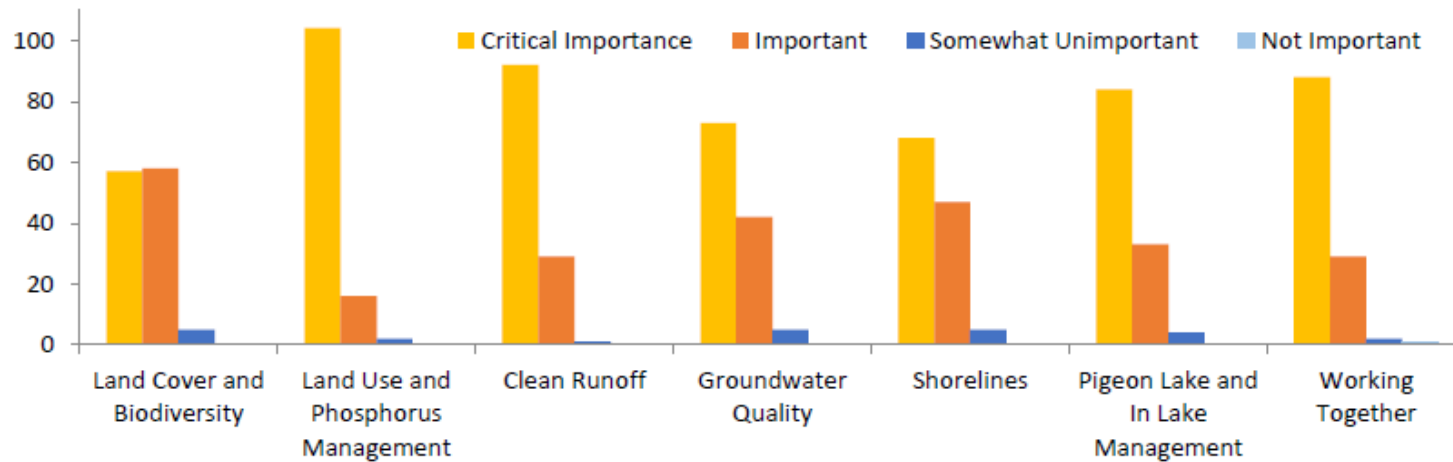
**GROUND  
WATER  
QUALITY**



**WORKING  
TOGETHER**



# Do Enough People Believe?



91% Agree with the Plan Vision



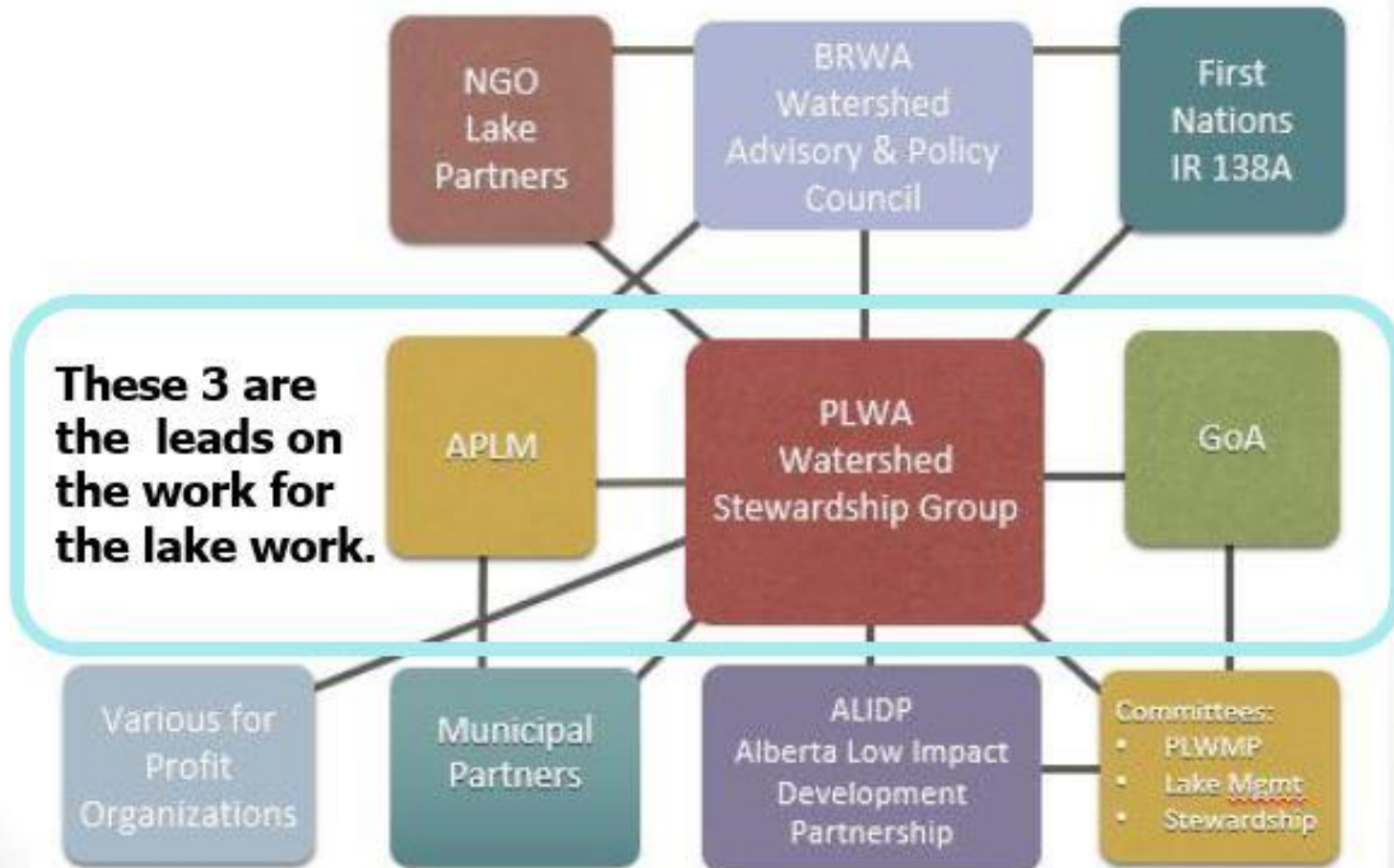
89% agree, the health of Pigeon Lake requires urgent, decisive, and collective actions across all sectors.



95% agree or somewhat agree, The Plan can be implemented.

93% agree, Improve the health of the watershed & the lake.

# The Pigeon Lake Team



# Engaging Communities

**Heightening Awareness**

**Moving people to action**

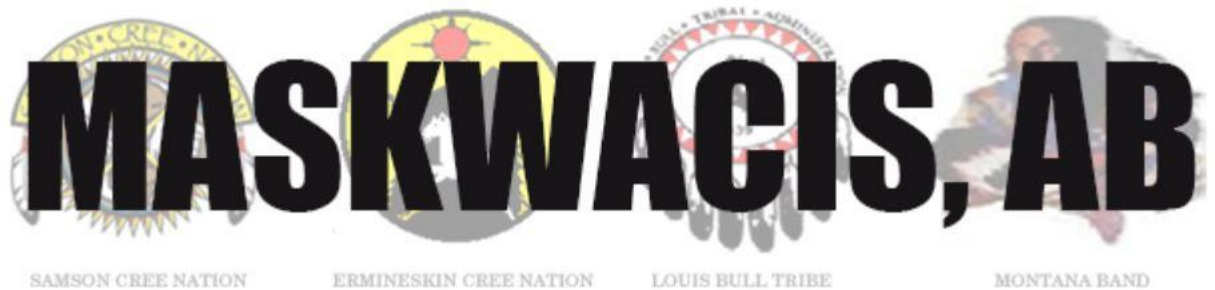
**Growing the Support**

**Recognize Efforts**

**Motivating More People  
to Make Changes**



Shared  
Vision  
Mamawo  
Working  
Group  
Working  
Together



SAMSON CREE NATION

ERMINESKIN CREE NATION

LOUIS BULL TRIBE

MONTANA BAND

# Final Tips

Ask Ask questions

Be Be inclusive: Good, better, best practices.

Spread Spread the work around.

Take Take holidays

Find Find time to enjoy the lake.



# PLWA

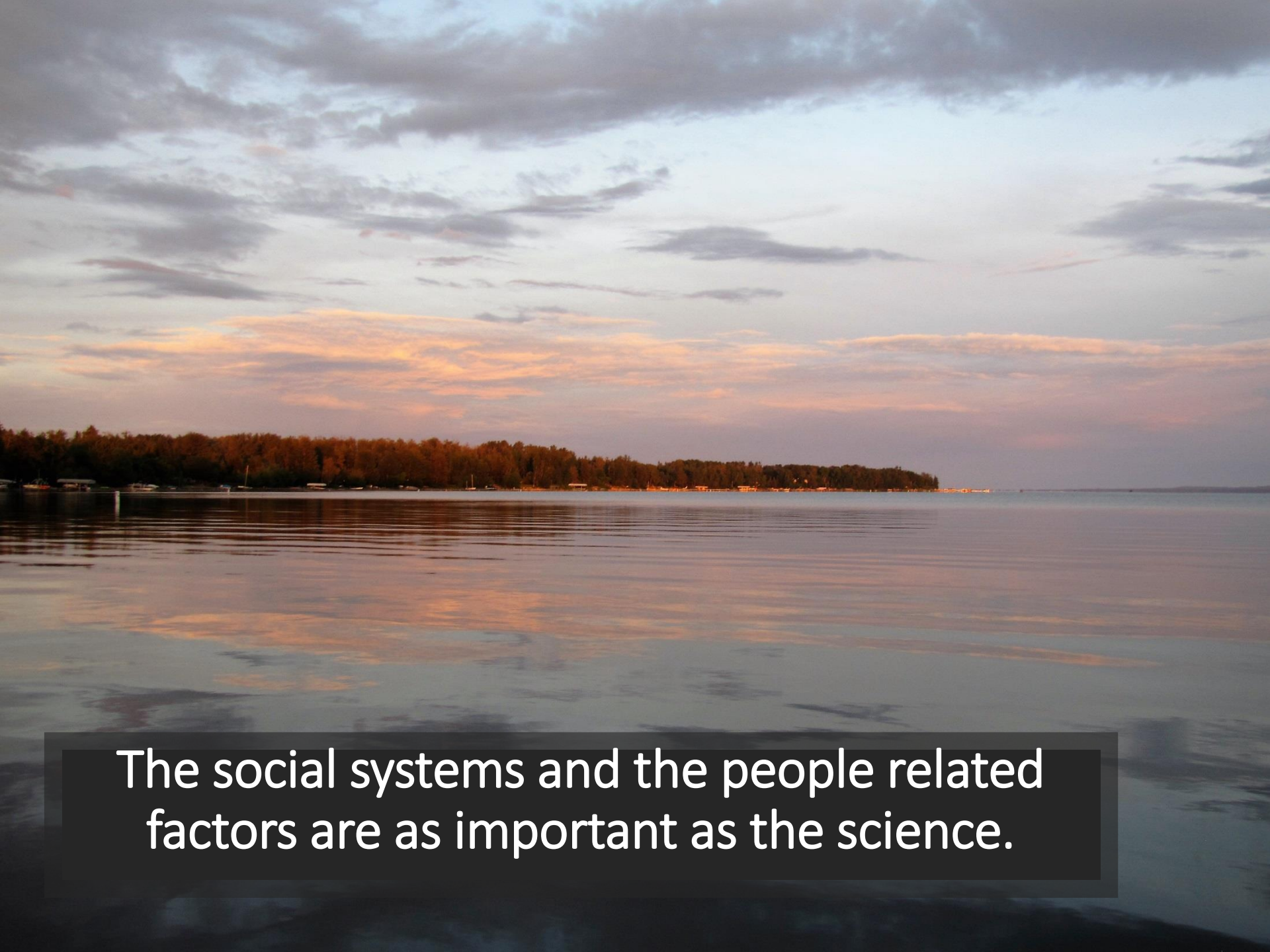


To enhance, preserve and protect Pigeon Lake and its watershed

[www.plwa.ca](http://www.plwa.ca)

## Be Part of the Solution!



A wide-angle photograph of a calm body of water, likely a lake or bay, during the "golden hour" of sunset. The sky is filled with soft, wispy clouds in shades of blue, purple, and orange. The water's surface is still, acting as a perfect mirror for the sky and the distant shoreline. On the horizon, a dense line of trees in autumnal colors (browns, oranges, and yellows) stretches across the frame. A few small, dark structures, possibly houses or boats, are visible along the shoreline. The overall mood is peaceful and contemplative.

The social systems and the people related factors are as important as the science.

“Just a note of thanks for all of the good work you people are doing.

I’m currently involved in a couple of projects attempting to get people to do the right thing, and I’ve learned how difficult and thankless a task that can be.

I suspect you guys wonder at times whether or not anyone is listening, or if its making a difference.

Please know that more and more people ARE listening, and it IS making a difference.”



# Find more PLWA Information

[www.plwa.ca](http://www.plwa.ca)

[www.plwmp.ca](http://www.plwmp.ca)

For further details...

See 2017 Annual Report

**FB:** PigeonLakeWatershedAssociation

**Twitter:** @PLWAinfo

