Souris & Area Branch of the PEI Wildlife Federation

PEI Water Act Presentation
October 20, 2015

Water is a resource and not a commodity; It’s the basis of life on our planet.

Scope of Presentation

We are reliant on groundwater:

Present issues:

- Nitrates
- Sedimentation
- Pesticides
- Climate change
- Deep water wells

Collaboration is necessary

Scope of Presentation Continued

White Paper suggests water management on a watershed basis:

- Impossible with lack of governance
- Watershed staff expertise

Water Act consultation process is flawed

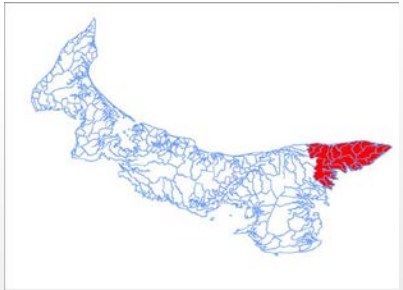
- Rushed
- Poorly organized
- Timing issues

ABOUT US

The Souris & Area Branch of the P.E.I Wildlife Federation (SAB) is a non-profit environmental organization that has been in continous operation for over 60 years. We have in excess of 300 members representing the angling , hunting, trapping, conservationist and naturalist sectors of our community.

OUR MANAGEMENT AREA

Encompasses 62,000 hectares which is approximately 11% of the total area of PEI which includes 27 watersheds.



Scope of our work

- Stream Enhancement
- Research and Monitoring
- Outreach
- Watershed Planning
- Liaison with the community on environmental issues
- General habitat Improvement

Rich History With Agriculture

Souris & Area Wildlife Branch has partnered with Agriculture and Agri- Food Canada, Provincial Agricultural Dept., Universities, etc. with several projects at aiming to improve the environment.

•PEI Ecological Goods and Services Pilot Project (ALUS)

•Project WEB's



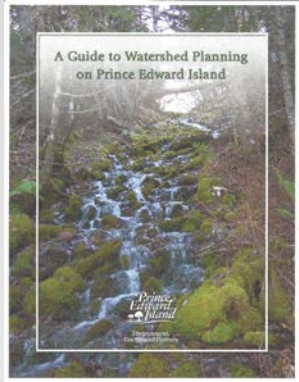

Rich History With Agriculture

- Farmers in this area do a very decent job in their attempt to keep soil on their fields (berms , grassed waterways, terraces, cover crops, etc).
- We want to make it clear our plight is more with the industry than with the farmers.

Issues with the Process

- We are going too fast with this process
- We believe that the majority of Islanders are not educated enough on the water issues to give the type of input necessary to draft legislation for the future.
- We believe the PEI government has put the, “cart before the horse”.
- First comes collaboration, then knowledge and then comes input.

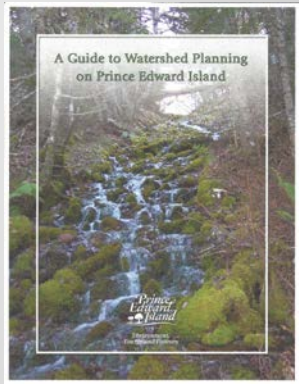
Issues with the Process



- Unfortunately, to attain this knowledge, one must have the skills and time to search through various websites (gov't) and the ability to extract and comprehend the info.
- Little or no effort has being put forward through various media outlets advertising the times and location of these meetings.

Issues with the Process

- The timing of public meetings is poor, we are in the midst of harvest season, which hinders the opportunity for farmers input.
- The timing of these public meetings during a federal election campaign also restricts individuals from attaining info from federal researchers.



Too many issues to cover in 30 mins

This process is not only important, it is highly complex and encompasses issues of water quality, quantity and land use.

In order to completely cover the issues, The PEI Watershed Alliance (umbrella Group) will be formulating a paper which we will offer input and support. This paper will be made widely available via press and social media.

WATER ACT

Water is an essential common good – it does not belong to Government, industry, or any individual.

All beings are entitled to what they need to exist.

No one has the right to profit from or degrade this public resource.

Water Issues on PEI

http://www.gov.pe.ca/environment/whats-in-the-water

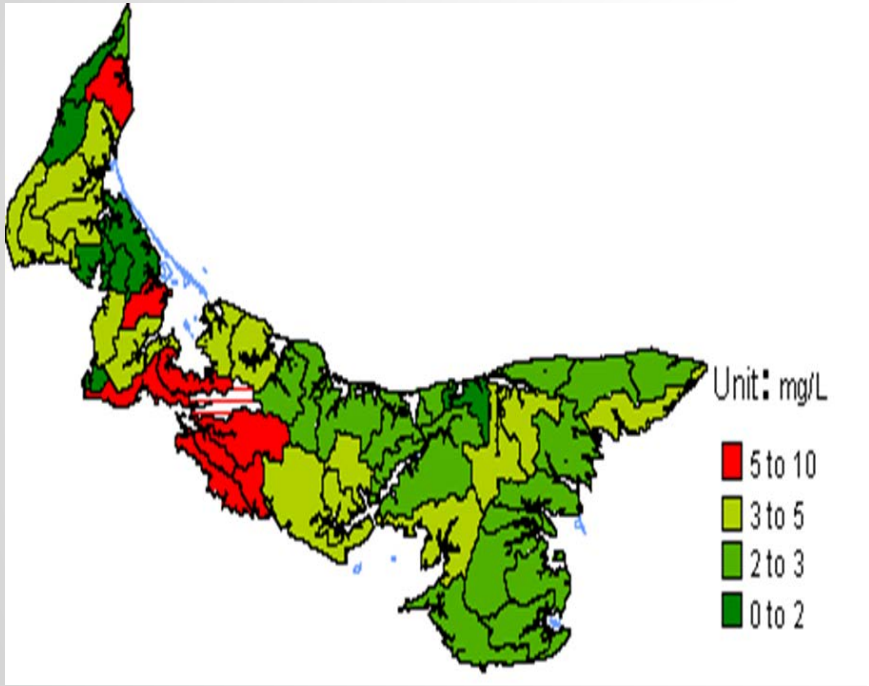
Ulva (Sea Lettuce)

• Sea Lettuce is increasing in most of our estuaries, which is caused by increased nitrates upstream mostly from unused fertilizer from row crops.

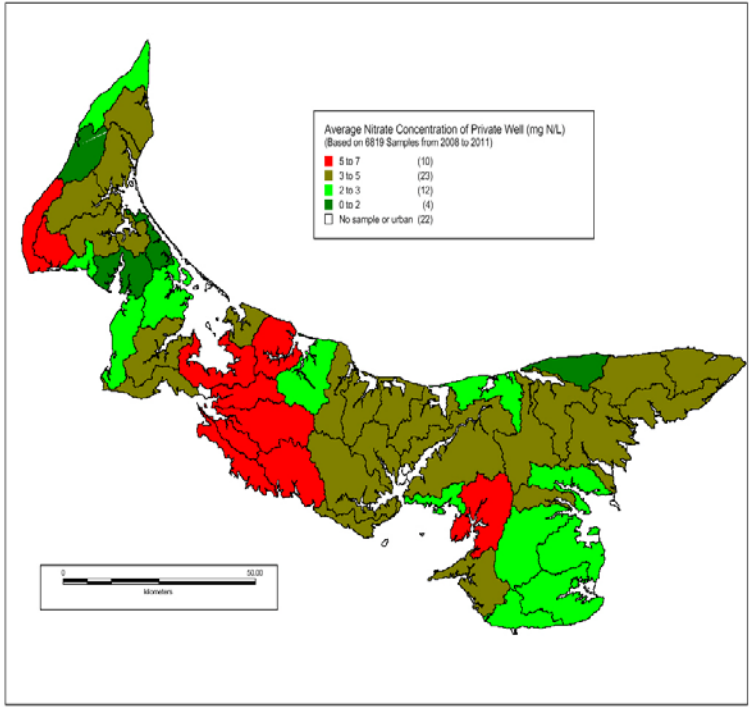
•When ulva decays, rivers become anoxic (DEAD)

•Picture below is of Basin Head (MPA)

Nitrates In Drinking Water



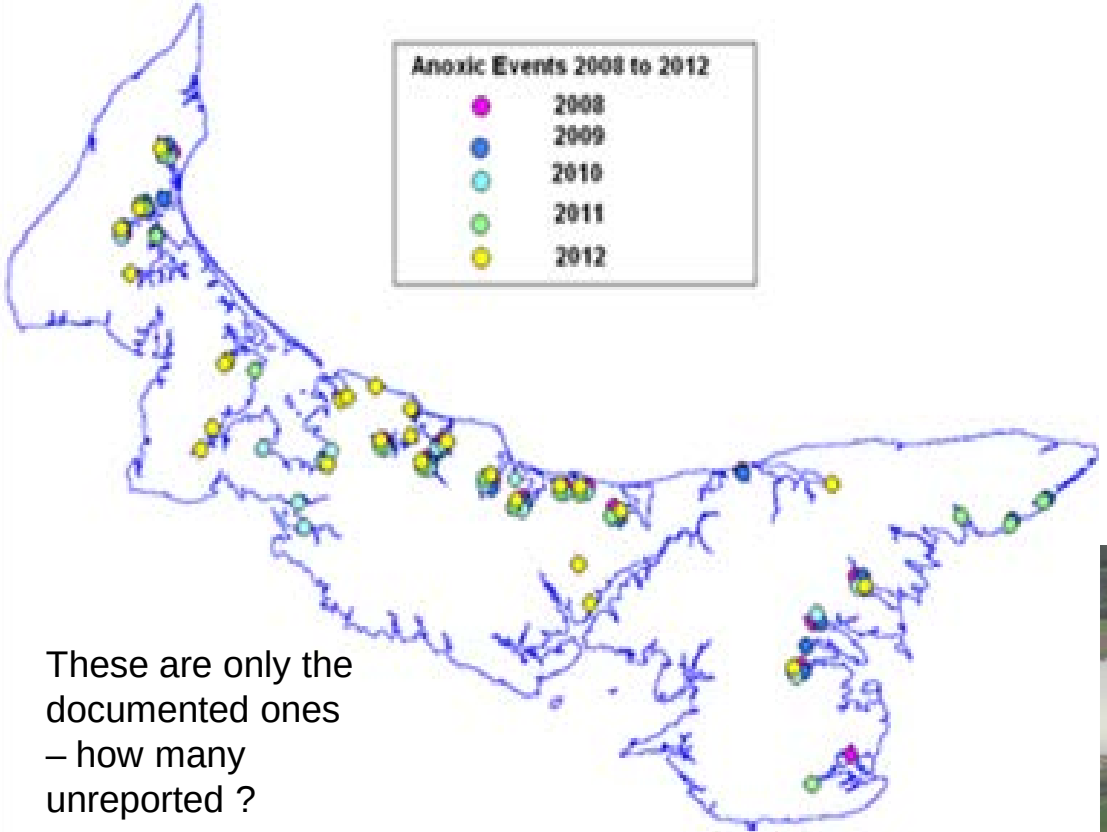
Prior to 2010



After 2012

Water Quality

Anoxia



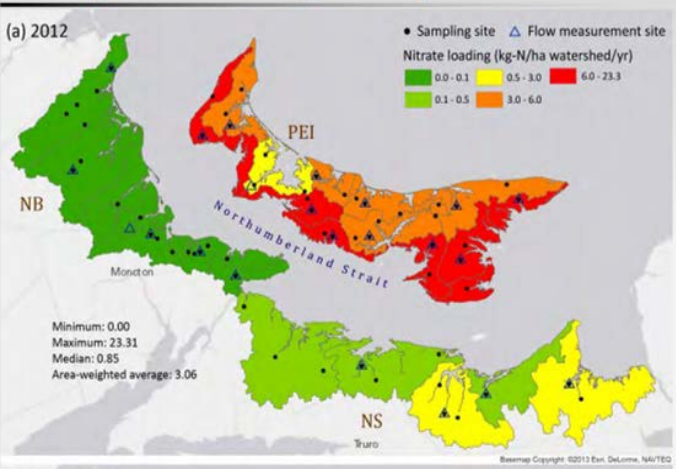
These are only the documented ones – how many unreported ?

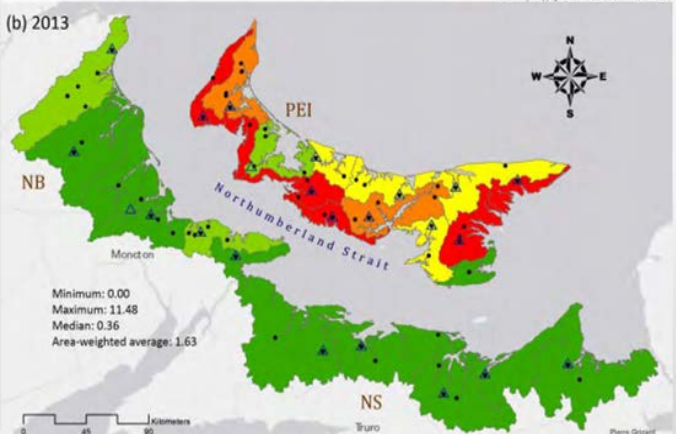
2015 Anoxic Events

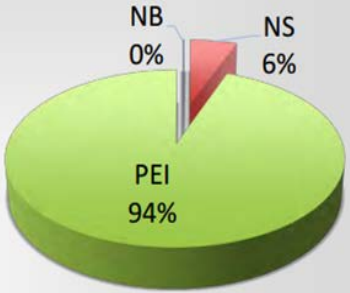
Darnley Basin (Hunter's Creek)
French River
Hunter-Clyde River
Little Harbour
Mary's River
Mill River (incl. Hills River)
Montrose/Kildare River (Large area of River from Montrose to Kildare Bridge)
Oyster Creek (Cascumpec)
Souris River
Southwest River (upper Southwest and Durant Creek)
Trout/Stanley River (Gunn's Bridge, Founds Creek, Granville Creek)
Wheatley River
Winter River
Tignish River

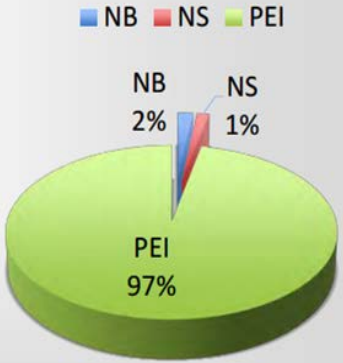
Northumberland Strait Nitrate Loads

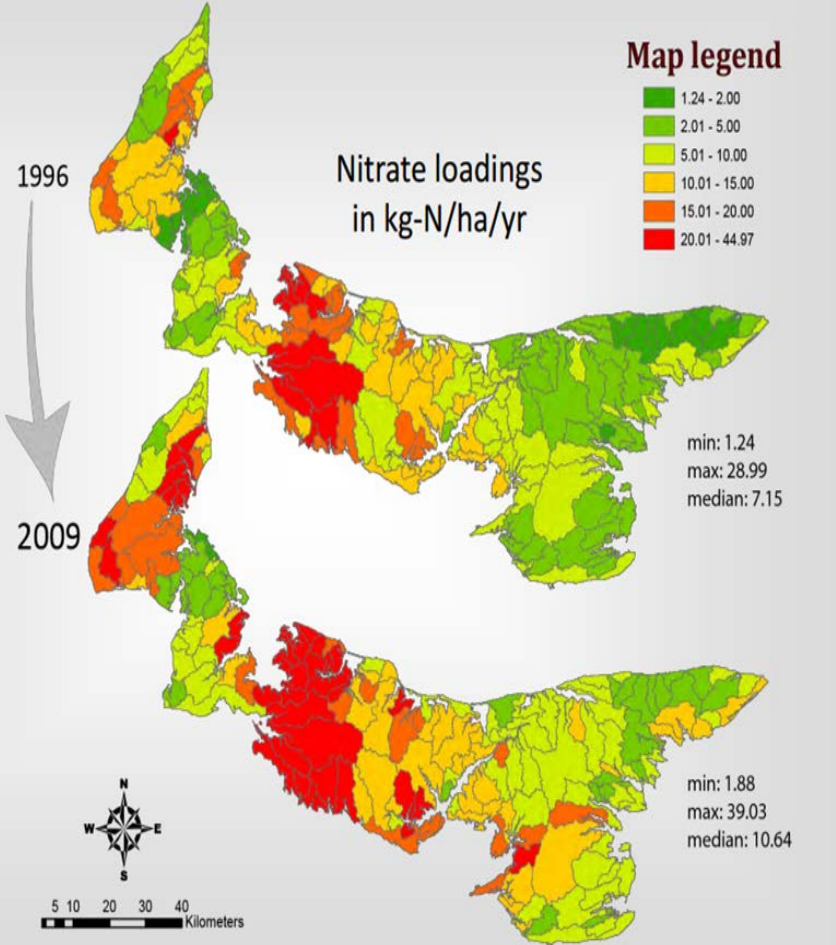
Why focusing only on PEI?











Excessive Erosion and Sedimentation

Issues with Sedimentation

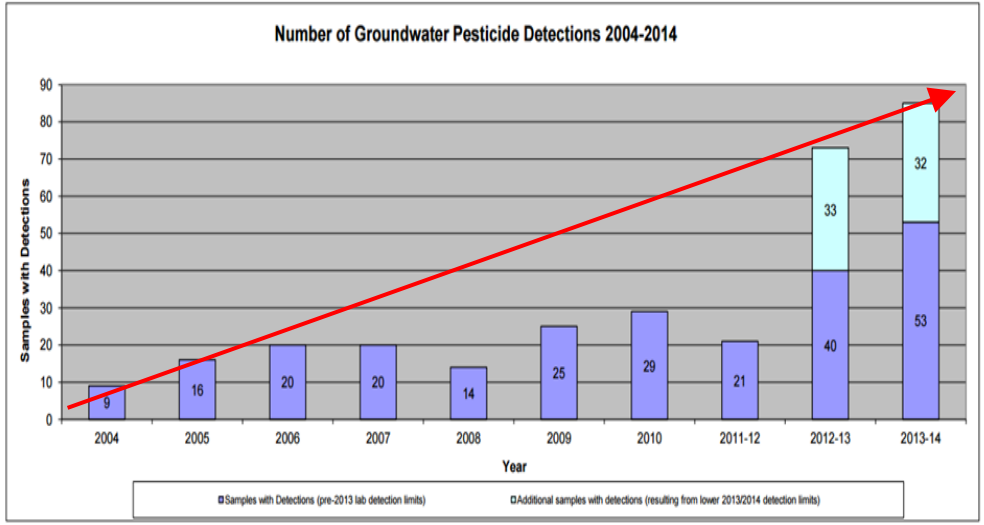
-Changes hydrology and stream function
-Smothers living organisms
-Covers spawning areas
-Decreases water quality
-Can impact entire watershed including estuary and harbours

Stream Sedimentation

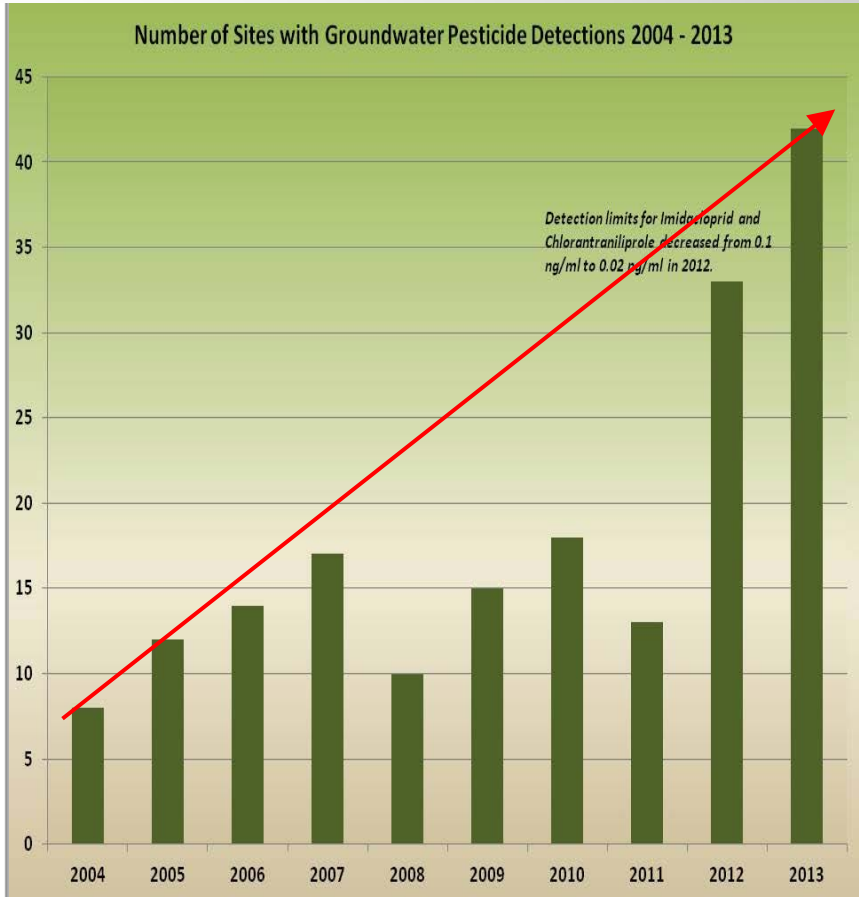
- If we are going to continue to grow potatoes on PEI we need to look at varieties other than russet burbank, varieties that can be harvested earlier and that don’t require as much fertilizer and chemicals.
- Cover crops need to be utilized in the fall.
- Sensitive land needs to be removed from potato production, especially sloped land bordering watercourses.
- A minimum 3 year crop rotation needs to be enforced with no exceptions.
- We need to examine minimum percentages of soil organic matter in fields for crop production.
- There is a need for better municipal development (Wright’s Creek).
- TIR needs to take responsibility for their inputs of sediment from clay roads..

Pesticides in Drinking Water

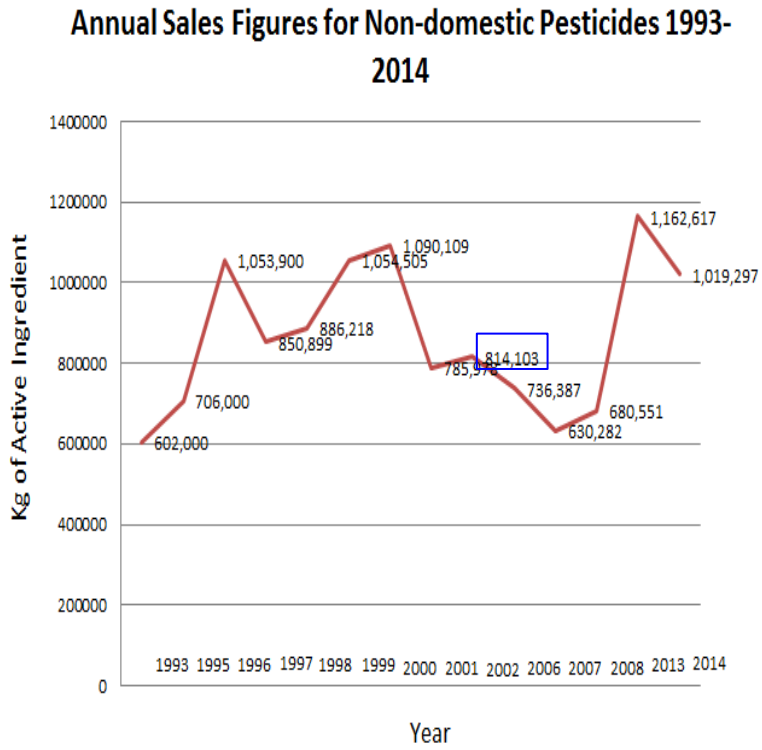
Summary Analyses ALL SAMPLES (several analyses per site)											
	2004	2005	2006	2007	2008	2009	2010	2011-12	2012-13	2013-14	Total
Total	2660	2083	1992	2561	2571	2725	2900	2521	2642	2674	**25329**
Non-detect	2651	2067	1972	2541	2557	2700	2871	2500	2569	2589	**25017**
Samples with Detections (pre-2013 lab detection limits)	9	16	20	20	14	25	29	21	40	53	**247**
Additional samples with detections (resulting from lower 2013/2014 detection limits)									33	32	**65**
% detect (using 2013 lab detection limits)	0.3%	0.8%	1.0%	0.8%	0.5%	0.9%	1.0%	0.8%	2.8%	3.2%	**1.2%**
% above guidelines	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**



NOTES: The lab detection limits for Imidacloprid and Chlorantraniliprole decreased from 0.1 ng/ml to 0.02 ng/ml in the 2013 sampling season.
This resulted in additional lab detections that would not have been detected using the 2013-2014 detection limits.
The darker blue bar represents the number of detections using the 2004-2012 lab detection limit of 0.1 ng/ml.
The lighter blue bar (top) represents the number of additional detections using the lower lab detection limit of 0.02 ng/ml implemented in 2013.

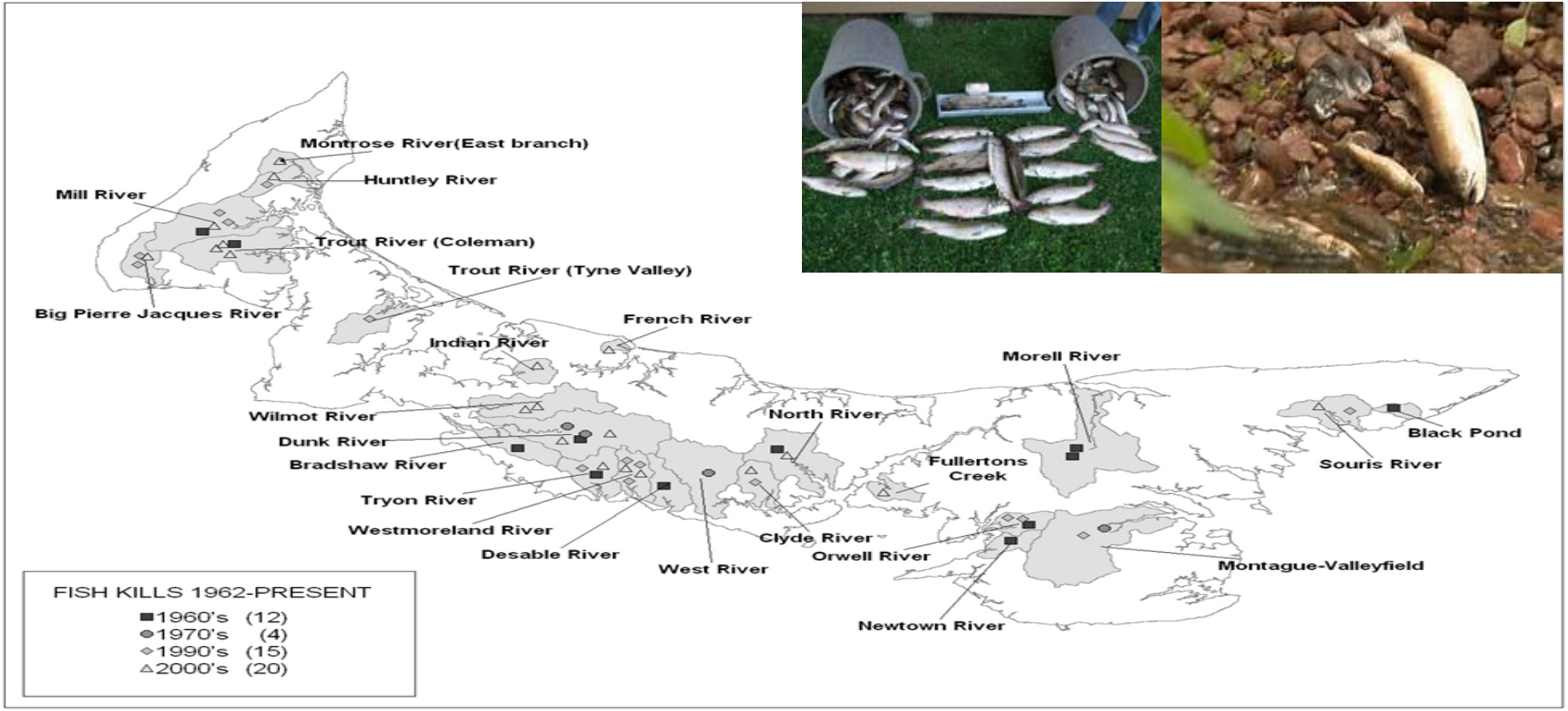


Pesticides in drinking water



	Population	Area	Kg	Kg/person	Kg/km2	Main poison
PEI	145,000	5,660	814,103	5.61	143.8	Fungicide 82%
NS	953,000	55,284	441,609	0.46	8	Herbicide 68%
NB	759,000	72,908	781,923	1.03	10.7	Fungicide 52%
BC	4,400,057	944,735	4,666,709	1.06	4.9	Wood preservative 72%
AB, SK, MB	5,886,906	1,963,698	9,300,508	1.58	4.7	Herbicide 76%
ON	12,851,821	1,076,395	4,218,238	0.33	3.9	Herbicide 79%
QC	7,903,001	1,542,056	3,276,257	0.41	2.1	Herbicide 52%

FISH KILLS


Montrose River(East branch)
Huntley River
Mill River
Trout River (Coleman)
Trout River (Tyne Valley)
Big Pierre Jacques River
French River
Indian River
Morell River
Wilmot River
North River
Black Pond
Dunk River
Bradshaw River
Fullertons Creek
Souris River
Tryon River
Westmoreland River
Clyde River
Desable River
Orwell River
West River
Montague-Valleyfield
Newtown River
FISH KILLS 1962-PRESENT
1960's (12)
1970's (4)
1990's (15)
2000's (20)

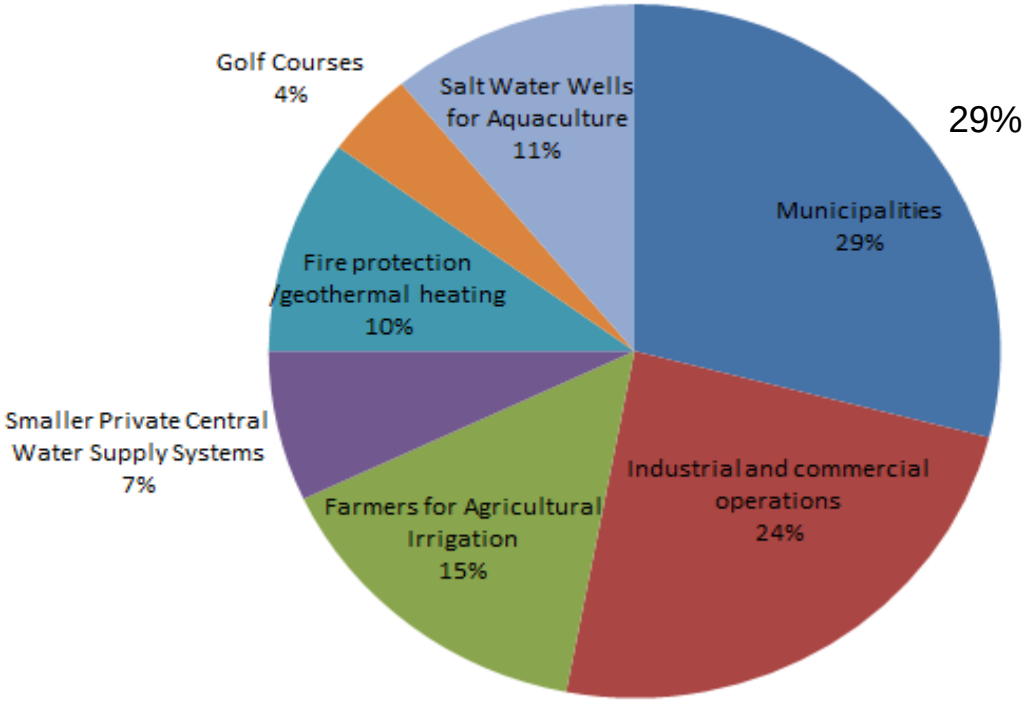
Climate Change

Water Quantity: A History of Overuse

- Over-extraction concerns (reverse flow from springs, salt water intrusion, impact on domestic wells and aquatic habitat).
- How can we look at high capacity wells when our wildlife is already suffering in some regions of PEI due to low water conditions during critical times (July – Sept)?
- Clearly we have not satisfied our first priority needs (humans, wildlife).

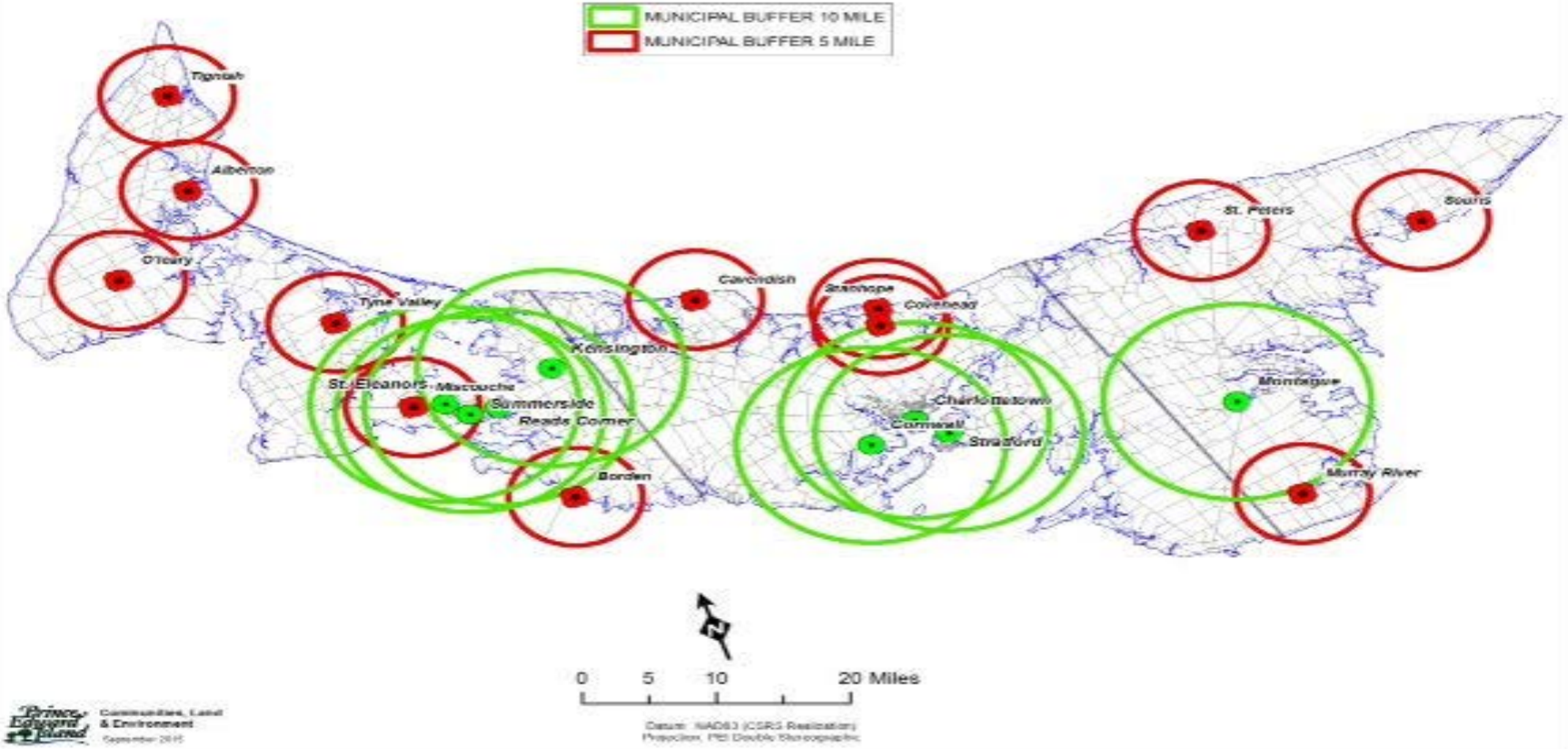
We need a Water Act that protects stream health and aquatic environments, and regulates water use during times of scarcity.

Industrial Water Use



29% = 10,000,000 m^3 /year

PRINCE EDWARD ISLAND



Town of Souris

- 4 deep water wells (1)
- Study shows annually a recharge that illustrates sustainability of aquifer.
- Norris Pond Creek affected over the last 20 years during summer months.

History Pumping Wells

- SAB has a an extensive history collecting water samples from wells.
- We have pumped 22 wells (at peak) bi-weekly over the past 8 years.
- We have observed dramatic drop in water levels in many of these wells during dry season.

Deep Water Wells

- SAB believes that deep water wells will have an impact on 1st order of streams (small ones) during dry season. (Winter River)
  - Critical Habitat for Brook Trout
- Deep water wells will increase the nitrate levels in our drinking water. (Western USA)
- Deep water wells will increase tensions between farmers and their neighbours.
- Many unknowns -*Deep water wells are not worth the risk.*

PEI WATER ACT

Our Water Act must:

- Protect the resource
- Value the resource
- Penalize abusers

Protection & Monitoring

- There is a need for aquatic ecosystem health monitoring, including indicators.
  - Monitoring activities include the collection, analysis, interpretation and distribution of information to stakeholders.
  - Report regularly on key quality and quantity indicators.
- Use monitoring information to set water quality targets, with timelines and make changes if trends continue in the wrong direction.
- Who is going to this? Who's paying? What is the baseline?

Protection

•Identify and protect key wetlands, wellfields, and aquatic habitats from incompatible uses (i.e. the most critical areas can be identified, mapped and considered off-limits).

•Who is responsible? What is the designation? Are the players aware and knowledgable? How do we balance economic vs natural?

Priority Access to Water Resources

Before considering water access to an increased number of users, we have to discuss access to our water resources:

•Human and environmental needs: water to sustain life and remain healthy.

• Maintain environmental flows for healthy ecosystems

•Safety needs such as fire and waste disposal.

•Other users.

Value of the Resource

Public water use must be sustainable.

For-profit large users of water must realize the fair market value to Islanders; this is not an infinite resource.

- Fish plants, potato processing, car washes, golf courses, etc.

Avoid waste- preserve the resource

- low-flow toilets, showerheads, rain barrels, etc.
- Water meters, reuse of stormwater runoff.

Value of the Resource

- Don’t reward poor practices (not only agriculture - other industries, municipalities).

  Examples: are municipalities required to meet water reduction targets and prohibit wasteful practices? Are car washes required to reuse wash water? Are agricultural users required to implement best management practices and meet targets such as increased organic matter?

Penalty

Contamination and overuse of our water must not be seen as just the cost of doing business.

Abusers must pay the actual cost associated with the damage.

eg. Fish kills- salaries, mileage, equipment, surveys, restocking costs, etc.

Fees for Water Usage?

Are we going to charge for water? Who is going to charge? Who has the power to charge? Governance? Pricing formula? Same for each watershed? Where does the money go? What will it be used for?

PEI Water Act

With Regulation, comes Responsibility and Repercussions.

The Water Act needs to safeguard our most important resource.

This process cannot be rushed.

Data must be made accessible.

We need to do what is best for islanders.

Water is a resource and not a commodity: it’s the basis of all life on our planet.