Presentation to the Water Act Consultations, October 6, 2015

" We Don't Want Another Winter River": Lessons for the Water Act

By Don Mazer

Thank you for the opportunity to speak to the EAC tonight. I was fortunate to have the opportunity to serve in a role similar to John Paul Arsenault's for the watershed consultations in 2007 resulting in the "*We are all upstream, we are all downstream"* report. I believe you will find this a very interesting and challenging and worthwhile process.

Introduce myself:

-an educator, now retired after many years of teaching psychology (my training) at UPEI. Involved in developing and teaching in the Environmental Studies programme, and served as its first coordinator.

-a longstanding interested in environmental and watershed issues.

Environmental Coalition of PEI Board

Winter River-Tracadie Bay Watershed Association – founding member,

Co-chair for 5 years, Board member until May, 2015

Member of the Coalition for the Protection of PEI Water

You will hear from all of these groups during these consultations. And while I'll be drawing on my valuable experience with these groups, I am voicing my own perspective and opinions in this presentation.

It's appropriate that these consultations begin in Charlottetown, and to be talking about the Winter River, the source of virtually all of the water used by this City and its residents, businesses, institutions, worker and visitors. One could say that the reason for these consultations actually begins with Charlottetown and with the Winter River. The Standing Committee hearings about the impact of high capacity wells and the proposal to lift the moratorium led to the recommendations for a Water Act. And the Winter River watershed is the home

of 14 of such high capacity wells located in Brackley, Union and Suffolk that operate all day every day of the year, pumping more than 18 million litres per day from the watershed to the City of Charlottetown. There is much to be learned from the experience of the Winter River with water extraction that is valuable for a new Water Act.

My aim here to not present detailed evidence about all aspects of the problems on the Winter River and the attempts that the Winter River –Tracadie Bay Watershed Association (WRTBWA) group has made to address them. That case has been made many times in the past, and I leave it to the watershed group to provide you with more detailed data about that. And it's important to note that there are some voices that don't acknowledge that there is a significant problem in the watershed.

But of course, I do see problems on the Winter River as I know the watershed group and many other citizens do. Our watershed has become the poster child for the impacts of high capacity wells. Even representatives of the potato industry have said at the Standing Committee hearing: " We don't want another Winter River."

That's my focus in this presentation. How can we develop a Water Act that can prevent another "Winter River?" This is a difficult challenge. I'd encourage the committee to keep this question in mind and return to it often during this process and in all steps leading to the development of the Act. Preventing another "Winter River" requires looking far beyond the specific issues of water extraction by the City, beginning with our core values about our relationship with water and the natural world. Much would have to change to achieve this. But if we can take the steps to prevent another "Winter River," I believe we will also be taking steps to prevent all the other problems we have in our waters, such as fishkills, anoxic conditions, and nitrate contamination.

Tonight, I'll offer a brief summary and perspective on City water extraction and its impacts on the Winter River watershed, and discuss some of the ways the WRTBWA has addressed this issue.

Then, I'll review some of the key factors that I believe have contributed to creating "the Winter River". I'll conclude with lessons from this experience that

suggest what we need in a Water Act so that there will be no more “Winter Rivers”.

Being a teacher, I’ll begin with a favorite teaching story of mine:

Two mean are relaxing by a river on a beautiful, sunny June day. Their peacefulness is disturbed when they hear cries for help coming from the river. They look up and see a person caught in the turbulent waters. One man jumps in and swims with great difficulty through the strong current, reaches the person and manages to get him up the bank and pulls himself out of the river. As he’s trying to catch his breath and recover, he hears the calls of distress of another person caught in the waters. He rescues this person with great difficulty. More exhausted now, he hears another person and manages to rescue him with his last ounce of strength. And then, he hears still another cry of distress coming from the river. And he sees that his companion, who has been there all along, is getting up and walking away. With exasperation and astonishment, he asks “But where are you going.?”

And his companion replies: “ I think I’ll head upstream to see who’s throwing all these folks in.”

I began to tell this story in psychology classes, to help students reflect on the way that we think about and attempt to help people with problems. It’s a good metaphor. But here the story becomes more than a metaphor. First, it provides a good description of much of the work of our watershed groups, dealing with the recurrent issues in our waterways -siltation, anoxia, nitrates, fishkills, dry streams and springs -that rarely seem to get solved. It also provides us with a chance to explore two very different perspectives on how to think about and address the problems in our waters.

We have generally focussed our attention on *downstream* solutions when it comes to water and to the environment. We take our problems as they come to us one by one. We respond and react to problems and crises as they appear. Our aim is to make things better, to reduce these problems, to mitigate negative impacts. I’ve heard provincial official refer proudly to the progress we’re making when we go a year without a fishkill. We tend to understand and respond to these problems in isolation and often miss seeing the connections between

problems. We avoid two fundamental questions. Why are these problems so recurrent? And why are there so many problems?

The *upstream* perspective is focussed on addressing these two key questions. What are the factors that lead to these recurrent and frequent problems? We seek the deeper, root causes (to mix my metaphors) that are responsible for these problems. Our aim is not to mitigate problems, but to prevent them. Not just to reduce fishkills, but to end them.

So what we require is an 'upstream' Water Act with a clear vision and goal like the one proposed by the Coalition for the Protection of PEI Water; "to protect and ensure the health of all aquatic ecosystems." Only such healthy ecosystems can provide the quantity and quality of water to support the needs of all beings, human and nonhuman alike for current and future generations.

The Winter River Story in brief. The Winter River is a cautionary tale about the collective failure "to protect and ensure the health of an aquatic ecosystem." It is a story of official reluctance to acknowledge problems, and failure to take meaningful actions to protect the river by all levels of government. It is a story that reflects our resistance in accepting that the world of water, and the world of nature, is a world of limits. Our officials tell us that PEI has plentiful and abundant groundwater, much as people were told in California ten years ago. Last month in Charlottetown, and today in the **Guardian** Maude Barlow, talked about the world crisis in the availability of good water, recounting the many instances of drying and dying lakes and endangered watersheds around the world. We may be an Island, but we are not exceptional. We need to see our situation with water in the context of the larger global community.

If there's an image that captures the "Winter River" and the impacts of more than 80 years of City water extraction, it would be the image of a dry stream bed on the Brackley branch, a major tributary of the river. In the summer of 2012, you may have seen such an image which appeared several times on CBC: Bruce Smith, the watershed coordinator, standing somewhere along 5 km of a stream bed dry enough to make a good hiking trail for up to 5 months, explaining how the springs had dried up, how the City needs to reduce their water use, and how a whole generation of fish were lost. While this a less visually dramatic fishkill that one resulting from runoff and pesticide contamination, it is a fishkill nevertheless.

There are a number of reasons why taking 18 million litres of water a day is problematic besides the sheer volume of water taken. First the demand for water is continuous, while the supply is not. The demand is greatest during the drier months of the summer when recharge and resupply is at its lowest, as it would also be in 'drought' years. This is the same situation with supply and demand related to the use of high capacity wells for agricultural irrigation. Our streams are entirely dependent upon groundwater discharge to support aquatic life during these months, just at the time when Charlottetown residents and businesses and Island potato farmers need water the most.

But most significant is the fact that the City obtains its water by pumping it out of our watershed, contrary to its flow. The water used by our own watershed residents returns to recharge our aquifer. The water taken by Charlottetown is pumped out, used and winds up in the Charlottetown harbour -- 18 million litres, lost to the watershed each day as a source of recharging our groundwater.

You can't take all of this water over all these years without consequences. Over the years, residents have observed a steady decline in the amount of water in the river, and a degradation of the surrounding habitat. Water temperatures are higher. Spawning areas have been affected. There has been a decline in fish numbers, and biodiversity. The Winter River was once one of the major fishing rivers on PEI. Salmon, once plentiful in the river, are long gone. Some residents have needed to dig new wells when the City was updating its wells in Brackley: a sawmill at Hardy's pond almost lost their business for lack of water when the Union wells opened in 1948.

While I'll talk extensively about the City, it's important to recognize that the province permits all this extraction. The province issued a permit in 2010 for the amounts of water that could be extracted at different wellfields. The city has largely stayed within its permit, using an average of above 90% of what's permitted. But the major problem is that this permit allows the city to extract water at far beyond sustainable levels. The generally accepted standard for sustainable extraction is 50% of recharge, but over the years, the average extraction by the City is more than 60% of recharge across the whole watershed.

But the extraction rates are of greater concern when individual wellfields are examined. In recent years, extraction at Brackley has ranged from 90-100% of

recharge, close to twice the sustainable amount. Extraction at Union is about 70% of recharge, 40% above the standard for sustainability. The *Water Act Backgrounder* for the White Paper acknowledges that extraction at these well fields actually exceeds the amount allowed by the government's 2010 water policy. The Backgrounder indicates that the province has now asked the city to develop a new "pumping rate plan," although there is no mention of any provincial requests for a "water use reduction plan".

2012 was, pardon the pun, a watershed moment on the Winter River, when the evidence for the impacts of extraction became most dramatic, and the watershed group made every effort to get help for the river. Bruce Smith and I presented a paper about this to the Canadian Heritage Rivers conference in Charlottetown the next year. We described 2012 as a "case study in trying to save a river which appeared to have had little success." In that paper, we detailed all of the activities the WRTBWA had taken over the years to get help for the Winter River – public education through talks to diverse groups and schools; developing videos about water conservation; op-eds and newspaper articles; numerous letter to officials in the municipality, the provincial Environment department and federal Fisheries and Oceans; meetings and requests for meetings with these officials; offers of partnership and collaboration in programs and policies. We even issued a "water challenge" to the city on World Water Day in 2012, calling on them to set systematic targets to reduce water use to sustainable levels.

In this 'crisis summer' of 2012, the City was taking virtually all the water they could from the Winter River watershed: they even opened an older auxiliary pumping station in Malpeque. During this time (or any other time), the province never asked the city to reduce their water extraction. The City did develop summer guidelines for water use which later became bylaws. Residents were required to limit watering of grass and gardens to two hours early or late in the day, and not to wash your driveway. Residents could still fill their swimming pools when there was no water running in several kilometres of the streams at Brackley.

The City was actively involved in developing important public education campaigns and raising awareness about water use. The instituted some excellent

water conservation programs, such as subsidizing the costs of installing low flow toilets and showerheads and rain barrels.

But unfortunately their programs were not accomplishing what was immediately needed to help the river – a significant reduction in the amount of water being used. These programmes just didn't save much water. An illustration: A successful low flow toilet program that ran for three years resulted in changing enough toilets to only save about 1 ½ days of water, a .13 % reduction. While the watershed group did collaborate with the City on public education programmes, no one wanted to talk with us about sustainable water extraction.

The dry streams began in 2001 when the main branch of the river dried up, and have continued each summer from 2011-2015. Who would have thought that the streams would go dry in 2015, after the record snowfall and plentiful recharge we had last winter?

What I find most disturbing about this narrative has been the reluctance of public officials to acknowledge the problems on the Winter River. We had long been concerned about the issues with our underlying ground water, and felt that by the time the springs and the surface water dry up, you have a real watershed crisis on your hands. Many citizens shared our alarm. Municipal and provincial officials responded far more casually to this situation, some arguing that such dry stream beds are normal, common occurrences all across PEI. Both the Mayor of Charlottetown and the Minister of the Environment voiced opinions that things were basically fine on the Winter River. There was no sense of urgency, but then, if you don't see a problem, then there's nothing to be urgent about.

In summary, there was no help for the Winter River from any level of government. How can we develop a Water Act to address the problems in our water, when we can't get acknowledgment about whether these problems even exist?

What lessons can be learned from this cautionary tale? How did we get to this point? And how can we avoid being here again?

We need to start by examining some of our shared assumptions and beliefs about the natural world and about water. These values become reflected in the policies and practices that have threatened the health of the Winter River.

We commonly talk about water as **"a resource",** often **"**our most precious natural resource." But when water is seen as a resource, its value lies in how we humans can use, exploit and develop it for our own purposes. Resources are there to extract. Our principle relationship with water is as "takers" and "consumers", rather than as stewards or guardians. The intrinsic value of water and its role in supporting and maintaining healthy ecosystems for all other species is not our focus. City and government officials reflected this resource perspective. They saw their role as providing good, abundant water for their users. The protection of the health of the watershed was seen as the responsibility of the watershed group. Their principal accountability was to their users rather than to the ecosystem. They encouraged us to work on the issues that would protect the quality of their resource (e.g. nutrient management), while they would look after the quantity.

When water is **"ours",** we assume ownership and can do what we want with it. It's our water and our business what we do with it. This perspective is very evident in the Winter River experience. We buy and own the land, dig the wells and extract the water. And if we feel like we have ownership, there is little reason to be responsive to use less. We will restrict the right to use all that we want only under extreme circumstances. If we believe that we have abundant water, and see few problems, there will be little reason enact such restrictions or to collaborate with the watershed group about water reduction programmes.

But we humans have no more claim to water than do the fish or the plants

Seeing water through the lens of private ownership (rather than as a public trust) also contributes to an unwillingness to share information and to a general lack of transparency and accountability. Releasing information about who the "big users" of water were (28 use 19%), or about cruise ship water use was regarded as a violation of client privacy. It was difficult to obtain the yearly water use data. It was June, 2015 before the WS group got the data from 2013 and 2014. These issues of access to information about water use are particularly problematic for the watershed group, when one of the two major goals of the official Watershed Management Plan for the WRTBWA is to reduce water extraction to sustainable levels. It's difficult to work toward this goal without accurate information.

A final illustration of the impact of "ownership": there was no public consultation with residents of the watershed and the community when wells were dug in Suffolk.

Another contributing factor is that water and the environment are generally **managed through a risk assessment approach**, leading to a willingness to tolerate levels of risk to the ecosystem (e.g. nitrate levels) until there's a crisis that requires action. We court such risk by taking nature to its limits. In this instance, the province issues a permit that allows the city to extract water at unsustainable levels and the city continuously takes water close to the upper limit of its permit. And even when crises arise, there can be resistance to acknowledging a problem and taking meaningful action. This approach contrasts markedly with the precautionary principle, where we will do all we can to refrain from engaging in actions with the potential for harm to environmental health.

The recurrent environmental problems we face come from a willingness to accept such risks : high nitrate levels, siltation, anoxic conditions, fishkills,. We continue to take such unacceptable risks with 'our most precious natural resource'.

Another important factor is that the City, like a large corporation, is a **powerful interest** with great influence with government. The province will want to meet the needs or such interests and be reluctant to intervene and impose limits. Such large corporation, or a large municipality then can operate with few constraints, and with limited public oversight and accountability. A powerful interest like the City has no compelling reason that they should respond to the urging of a small and powerless watershed group from a largely unincorporated area. We often proposed the language of partnership, but we were the only ones using that language.

Issues of water are under the control of a **small group of managers and experts** within governments that can become insular, and resistant to input, collaboration, challenges or criticism. An issue of concern for these consultations is whether those who develop the Water Act will be the same persons who have been responsible for the policies that have contributed to "the Winter River."

And finally, the reluctance of public officials to accept and value **the perspective, knowledge and concerns of the watershed group,** was one of the key factors in creating the problems on the Winter River. If we are to rely on watershed groups

to do some much of the work in caring for the environment on PEI, it is essential that we trust and empower the people on the ground.

How to Prevent another Winter River is a difficult question. What are some of the directions for change that can be learned from the Winter River experience?

First, we need to shift our perspective from viewing water as a resource for our own use to **seeing water more respectfully** as an essential feature of ecosystems that support all life.

We need to commit ourselves to a **clear goal** in the Water Act: to protect and ensure the health of all aquatic ecosystems. Any actions or practices that pose a threat to ecosystem health would not be accepted or supported

This goal requires a commitment to the **Precautionary Principle**. Rather than operating on a risk management model, where we push nature to its limits, we will act with far greater care, and with an obligation to protect the environment.

-The Canadian Environmental Law Association offers the following statement of this principle. "If an action or policy has a suspected risk of causing harm to the public or the environment, in the absence of scientific consensus that the action or policy is not harmful, the burden of proof that it is not harmful falls to those taking the action." This is a challenging standard.

The **Water Act should also reflect key shared values**. Water is a human and nonhuman right, part of the right of all citizens to a healthy environment. Water is a common good and a public trust. No one owns water. These values have many important implications for policy and practice. When water is seen as a common good and public trust:

-We are all *guardians* of watershed ecosystem. It is the primary obligation of all water users -municipalities, corporations, businesses, institutions, individuals - to protect water.

-We will have *open access to information*. We are all entitled to know how water is used, particularly among those big users like municipalities, corporations, and businesses. There will be greater citizen oversight.

- We will have *transparent and public processes* with active citizen involvement in decision making and governance of water.

The Water Act consultations are a good starting point in viewing water as a public trust. But this process should continue through the development and administration of the Water Act. A *"Water Board*" could be one means to continue this public involvement in governance. Such a board could include representatives from environmental and watershed groups, First Nations, the scientific and academic communities, government and other persons who have a primary commitment to ensuring and protecting the health of ecosystems.

The White Paper suggests a watershed based plan for a Water Act. If we are to have such a plan, **the perspective of watershed groups must be valued and trusted.** They are the on the ground experts who are most knowledgeable about our aquatic ecosystems. They are tasked with a tremendous responsibility for environmental work, along with having limited resources, and no authority. A strong commitment by the provincial government to regulation and enforcement is required to support the work of watershed groups

If we are to ensure healthy ecosystems, and to prevent another Winter River, we must exercise far greater care in the water that we use. We must truly conserve and **use the water that we need rather than all that we want**. Canada has the second largest water footprint in the world, and water use on PEI is consistent with the Canadian averages. We use 4-8 times what is required to support each of us.

There is a large, passionate and well informed community of concern about water and the environment on PEI. We all welcome these consultations as a means of providing a forum for voicing these concerns. In this process, much positive energy is being mobilized. Now it is imperative that this energy must be used and not wasted. Our voices are now an important part of the new conversation about water, rooted in some clear and essential values. I am certain that you will hear us well. But the larger challenge for you and policy makers to find ways that these voices are reflected in the Water Act and in the governance of water as we go forward.

The Water Act is opportunity to forge a different relationship with water and with the natural world, one that is grounded in an attitude of respect for something that is truly 'precious' to us. We require a new water ethic, where the wellbeing of water is central to all of our decision making and policies. We must all take care

of water, and demand a Water Act that ensures the ongoing health of all aquatic ecosystem and takes decisive actions to end the recurrent problems in our waterways.